

The Bulletin of the
UNIVERSITY of MINNESOTA

The Biennial Report of the President
of the University of Minnesota
to the Board of Regents
1942-1944

Volume XLVII, Number 57

December 31, 1944

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THE PRESIDENT'S REPORT

*To the Honorable Board of Regents
University of Minnesota*

GENTLEMEN: I have the honor to present to you the biennial report of the University of Minnesota, 1942-44.

Last Report—This will be my last official report as president of the University of Minnesota. Normally, my retirement would have coincided with its preparation. However, circumstances prompted the Board of Regents to extend my term of office one year, and, having completed four years of service, I am now scheduled to yield the presidential office to my duly-elected successor on June 30, 1945.

War Activities—Much of the 1940-42 biennium involved war activities which were highlighted and magnified in importance with the attack on Pearl Harbor and the declaration of war which followed shortly afterwards. I reported on them in considerable detail two years ago (*see* 1940-42 Report, pp. 1-5). During the biennium ended June 30, 1944, campus war activities were greatly accelerated until they reached a maximum, and then began to taper off as victory appeared nearer and training goals approached fulfillment. Yet, during the entire period, these war activities constituted the most outstanding feature of our university life. (For complete report see pp. 5 to 26.)

The University of Minnesota was in the forefront in meeting the needs of the armed services, government, industry, and business during the biennium. It began early the training of naval enlisted men for electrician's and machinist's mates and for cooks and bakers; it was the first institution to give the widely diversified training offered men under the Army Specialized Training Program; it provided for increased enrollments in medicine and dentistry and put instruction in both on a basis of compulsory acceleration to assist in meeting the critical shortages in these fields which existed in the armed services; it rendered and continues to render important service in the Army Area and Language Program, especially in Japanese; it had one of the largest and most comprehensive programs for the training of Army, Navy, and Air Forces personnel; and it trained men and women in numerous critical fields for government agencies and private employers.

The high quality of the training which was given and its value to the war effort is a matter of public record and has been attested to officially on numerous occasions. For this recognition the bulk of the credit should go to those individuals who richly deserve it—the members of the university staff who made substantial sacrifices, carried extra loads, often gave instruction in other than their regular fields, and rendered unselfish service to the end that an early victory might be assured.

The importance of the war work and the effort devoted to it should not, however, be allowed to obscure the fact that the University continued to discharge its normal obligations to civilian students, the majority of whom were women; to carry on important research, not necessarily war-related, in all the areas of knowledge; and to render those services to the state which, from the beginning, have constituted an important part of its peacetime contributions.

A Distinguished Institution—There is one fact which is a source of considerable satisfaction to me as I prepare to step aside for my successor: it is that, despite the drastic effects of war from which none has escaped, the University of Minnesota is still today one of the great educational institutions of the nation. Its primary aim continues to be, as always, what Paul Schrecker, eminent philosopher of history, rescued from Nazi Europe by the Rockefeller Foundation, termed “educating good average citizens, useful specialists, not creative geniuses.”¹ European universities, it would appear, have believed their function to be that of research institutes for the elite; but Mr. Schrecker thinks that the better we in America can prepare our average citizen, “the more chance there will be of really great individuals emerging from the crowd.”² That seems to be a sound, democratic philosophy, and, from the very beginning, has been a guiding principle in the University’s development.

Staff Achievements—On the pages which follow appears substantial evidence as to the outstanding job being done by the members of the university staff. The teaching, research, and service activities of this distinguished body of scholars have continued on a high level despite the unavoidable war-time losses of individual staff members to the armed forces and to war-related government agencies, which totalled 618 leaves of absence, alone, as the bi-ennium closed. Reports concerning those who are on leave reveal that the service they are giving their country always maintains and often even surpasses the records of high distinction which characterized their prewar service to the University and to the state. The high caliber of this staff in which the university administration and the Board of Regents take particular pride is revealed frequently and from various sources. Their teaching has been the inspiration for thousands of successful men and women; their research has accelerated progress in many fields; their services are sought by industry, business, and government; they are held in high esteem by their colleagues in other institutions; many honors have been bestowed upon them; large numbers have won places in important biographical dictionaries—in *Who’s Who in America*, in *American Men of Science*, in *Leaders in American Education*, and the like.

The faculty is not perfect; keeping it strong, building it, making it ever better—these constitute a continuing process. Individual members die, retire, are lured away to better posts. Competition with other institutions is always keen. Already the struggle for postwar faculties has begun. Institutions with greater financial resources have a distinct competitive advantage. Industry and government are now factors in the situation because of their increasing need for scholars and other research workers. Adequate financial support is the key to the situation. The future of the University for many years to come may be determined, not in the next few years, but perhaps even in the next few months.

Paths to Success—The progress which has taken place in America constitutes a source of constant amazement to visitors from other lands. Our peacetime achievements in the production of cars, radios, refrigerators, vacuum cleaners, and other labor-saving and comfort-giving devices might have served as warning clues to potential enemies that, though a peace-loving nation, we had unplumbed depths of latent power. But they misunderstood. They gained the impression that we had grown “soft” through long dependence on those

¹ Paul Schrecker, “American Diary.” *Harpers Magazine*, 189:119; July, 1944.

² *Ibid.*, p. 119.

very products and services which our industrial genius and resources had provided. Now they are only too well aware of their error. As a matter of fact, the speed with which we girded ourselves for war has probably surprised most of us as much as it has our enemies.

America's success is the reward of patient study, of a disbelief in the impossible, of a judicious use of the critical faculty of self-examination. Our production men were never entirely satisfied with a product whether it were a plane, a ship, a gun, or a tank. Before the best previous model was off the assembly line, an improved one was already on the drawing boards. So it is with the best of our educational institutions. Any educator worthy of the name knows that it is through study, self-examination, and staff co-operation that an institution grows and fits itself to meet the new problems and issues which rapidly expanding knowledge constantly raises.

Self-study—The University of Minnesota staff has been carrying heavy loads during the biennium, especially while war-training programs were at their peak. Yet, throughout the greater portion of the last two bienniums, members of the administration, committees of the University Senate, and individual faculty members have been making careful studies of the complex problems which the institution will face with the termination of hostilities. Predictions have been made of postwar enrollment; of available sources, needed numbers, and necessary compensation of staff; of possible extension of audio-visual aids to instruction; of sound tenure policies; of problems of returning veterans; of standards of accreditation; and the like. Preliminary reports have been made in some of these areas; but further study, refinements, and revisions in the face of new data are constantly being prepared. Thus the University keeps abreast of the times and readies itself for whatever the future may bring.

Expansion of Research—The past biennium has witnessed great progress in research. This progress has been considerably accelerated by federal grants, especially those provided through the Committee on Scientific Research and Development. But much credit is due also to the 1943 Legislature which continued the appropriations for various agricultural and mining research projects; and which provided \$10,000 for the Minnesota Institute of Research, raised the appropriation for general research from \$25,000 to \$50,000, and for medical and cancer research from \$25,000 to \$40,000. These appropriations, relatively small though they are, have supported important investigations. They point the way toward the realization of the goal which every state university is obligated to attain—that of being, in fact, the laboratory of the state. Given an adequate staff, laboratories, and financial support, no state agency is better equipped than the University to serve the homes, the farms, industry, and business. The contributions it makes in its three-fold area of operations—teaching, research, and services—bring returns for the state's monetary investment which far exceed the dividends from any commercial investment on which the same funds might have been used.

In Appreciation—In closing this, my last report as president of the University of Minnesota, I wish to extend grateful thanks to the Regents for the excellent co-operation they have accorded me during my entire administration and especially in these critical months. Their confidence and support have, on many occasions, given me new vigor when the presidential load seemed almost more than one human being could carry. I wish also to express my appreciation to the administrative staff, to the faculty, and to the Civil

THE PRESIDENT'S REPORT

Service staff for their invaluable assistance and continued confidence. And to the people of the state whose servants all of us are, I tender my deep gratitude. Without the assistance of every individual, success would have been impossible. May I urge upon each of you the same friendly spirit of co-operation with my successor. The University, your University and mine, must continue its advance. Should our appreciation of its importance be any less than that of one of its graduates, now an officer serving overseas, who, in a recent letter to me, wrote: "It is rather amazing that in the relatively short span of three fourths of a century, such a large and great educational institution as the University of Minnesota should evolve into its present-day place in our North Central states. It serves as a continuing challenge to those of us of the present generation to attempt to mould the future."



Minneapolis, Minnesota
June 30, 1944

THE UNIVERSITY'S WAR-TRAINING PROGRAMS

The University of Minnesota, like others of comparable size and distinction, has two great resources: (1) a highly trained technical staff of teachers and research workers whose competence covers a wide range of human knowledge; (2) physical facilities for carrying on instructional and research programs. It was inevitable, therefore, that under the exigencies of war, the federal government, through various departments, should turn to this and similar institutions for assistance in meeting wartime problems. The services that could be given fall into two general types. On the one hand, the University of Minnesota was in a position to assist in the training of the rapidly expanding personnel needed by the federal government in the prosecution of the war, and notably by the Army and the Navy. On the other hand, in the laboratories, it was possible to conduct secret war researches that aimed to find answers to problems that were pressing for solution. The rapidity with which training had to be expanded, and the need for speed in the extension of research, forced the federal government to utilize the rich resources that were to be found in great universities. This section of the biennial report will summarize briefly the various training and research programs that were undertaken at the University of Minnesota. Major emphasis will be given to the training programs, since in complexity, scope, and numbers of individuals involved they loomed far larger in the university war effort than did the research and production programs, important as these others were.

In a joint statement of the Secretaries of War and Navy, issued December 12, 1942, which contained the outline of the proposed college training programs, the declaration is made:

With the demands of a mechanical war and of steadily growing armed forces, the Army, Navy, Marine Corps, and Coast Guard are in need of a flow into their respective services of large numbers of young men who require specialized, educational, technical training. Their own facilities of teaching staff and equipment are not sufficient for these needs. The colleges and universities will have such facilities available. Consequently the armed services have together formulated plans to utilize for these needs to the maximum practicable extent the resources of these colleges and universities.

It is important to remember that it was the needs of the armed services, rather than the needs of the educational institutions themselves, that gave rise to the college war-training programs in their various forms. At the same time, the presence of the Army and Navy upon campuses, including the University of Minnesota, gave considerable relief to acute financial problems. This is because staff members who were engaged in teaching on the training programs were paid with funds provided under the standard contract that governed all such programs—and thus savings were effected in the regular budgets of the institutions; and also because the standard contract provided for payments for use of facilities, in addition to operation and maintenance, and this constituted a source of income not normally found.

Without attempting in this report to introduce all of the details of the several programs that were in effect at the University, some background may provide a setting in terms of which the summaries that follow can be interpreted.

The Enlisted Reserve Programs—War inevitably has a disruptive influence on higher education. The student population is within the age groups on which the brunt of war falls most directly. It was certain, therefore, that as the shadow of war enlarged, student bodies, especially the male members, would become increasingly restless and disturbed in mind. This process began with the passage of the Selective Service Act in September, 1940, which, although it affected only those who had attained the age of twenty-one, brought home the fact that normal educational progress was subject to interruption. The reduction in Selective Service age to eighteen in November, 1942, introduced difficult problems both for the students and for the institutions at which they were studying; for obviously, with most students entering college at about eighteen, there would be serious diversions from the classrooms to the armed forces, and the question was how to ensure the continuous training of the men needed to operate the modern technical war machine. Selective Service itself made provision for deferments in the scarcity technical fields, but such deferment did not give assurance to the Army and the Navy that their own needs would be adequately and systematically met.

It was between the introduction of Selective Service and the reduction of the age limit to eighteen that the Navy and the Army, including the Army Air Forces, took the steps out of which later were to emerge the college training programs that are now functioning. These steps were all toward the establishment of enlisted reserve programs.

Since these are now wholly of the past, they need not be described in detail. The essential feature of all these plans, however, was enlistment in a given branch of the service, with immediate assignment to inactive status, during which the student was permitted to continue his regular college education, with certain minor modifications relating to required courses.

Unquestionably the attack on Pearl Harbor stimulated the formation of these student programs, although the framework for them had been previously approved in some instances, as in V-7. Likewise, Pearl Harbor stimulated the enrollment of students who sought to continue their education and at the same time have identification with the armed services. Following December 7, 1941, both the Navy and the Army Air Forces quickly began aggressive campaigns of enlistment on college campuses. The full scope of these college enlisted reserve programs was achieved in the spring of 1942, with the announcement of the Navy V-1 program and later the Army Enlisted Reserve Corps. Marine and Coast Guard Reserves were also available to the college students.

Early announcements of the army college reserve program indicated a desired strength of 198,000 men, and the Navy stated that under V-1 it would accept up to 80,000 men a year. These figures were never achieved; in fact, there is reason to believe that enlistments in these programs fell far short of expectations. There is temptation to digress into a discussion of why this was so. Some of the original navy announcements of V-1 contained statements that were interpreted by men to indicate that chances of success in the program were only 50-50 or even less. As competition for men grew, the services changed requirements and there was a tendency on the part of students to hold back to learn what advantages another branch might soon be offering. Emphasis on mathematics and physics frightened many students. Whatever the reasons, students did not move into the programs according to expectation. Those who did enter did so with the anticipation that they would remain in college to the completion of their courses, and in the belief that they were taking the first step that would lead them eventually to a commission. These two expectations were basic appeals in the literature that was circulated by the services.

By the fall of 1942 the needs of the Army and the Air Forces were such that, exercising the emergency proviso that had been made a part of all announcements, men in the enlisted reserves began to be called for active duty. On September 8, 1942, the Secretary of War issued a statement to the effect that the exigencies of war had developed to a point that by the end of the college term beginning in September, members of the student reserves who had reached Selective Service age would for the most part be called to active duty, as would reservists reaching eighteen during subsequent terms. The Navy, on the other hand, did not remove its V-1 and V-7 student reservists from college.

At the time, this difference in treatment caused considerable dissatisfaction among students who felt that the Army had broken an implied pledge. In fairness it must be said, however, that the need of men by the Army was obviously greater at the time than by the Navy, and that real differences in the situations confronting the two services underlay the difference in treatment of the enlisted reservists.

Emergence of War-Training Programs—It is evident that the enlisted reserve programs did not meet the needs for which they had been developed. It was further evident, even in the fall of 1942, that a more systematic plan for ensuring flow of trained personnel was required if the Army, the Army Air Forces, and the Navy (including the Marines) were to have the manpower they required. The services were expanding with enormous rapidity; even though for the moment there were available the men to do the technical jobs and to assume the commissions, the available supply would certainly diminish rapidly, and some systematic program for replenishing it was clearly demanded. To meet these needs, the two major college training programs were devised: the Army Specialized Training Program (ASTP) and the Navy College Training Program (V-12). A third program, that of the Army Air Forces, embracing pre-flight, meteorological, and pre-meteorological training, was also evolved, and actually began operating before the other two.

The joint statement of the Secretaries of War and Navy, on December 12, 1942, promulgating the plan for utilizing college facilities in a co-operative training program sketched the general outline in accordance with which ASTP and V-12 were set up and are now functioning. To quote from the official statement,

Both plans contemplate that the educational training will be carried on while the men are on active duty, in uniform, receiving pay and under general military discipline. The armed services will contract with colleges and universities which will furnish to the men selected by the services instruction in curricula prescribed by the services, and also the necessary housing and messing facilities.

The essential features of the plans center in the fact that the student-soldiers were to be in uniform, on active duty, and receive the regular pay of enlisted men, and that the services prescribe the curricula which in turn the institutions agree to teach.

Interesting as the problems are, there can be no discussion here of the contracts in terms of which the colleges and universities agree to provide the use of their instructional and physical facilities for these training programs. To ensure uniformity of treatment, a Joint Army-Navy Board has been established to work out the contract principles. There is much misconception both on and off campuses concerning the contracts. The fundamental principle involved is reimbursement on a cost basis.

The uniform unit training contract, as finally executed, provides payment for the use of college facilities, cost of instruction, subsistence of army enlisted personnel, cost of plant maintenance and operation, and cost of medical care and service.

The principle quoted above also covers navy contracts and air forces contracts. One point of difficulty in contract negotiations has centered in the teaching load required of staff members, which is now set either at eighteen hours a week of contact hours, or, at institutions where the prevailing load was less, at an increase of at least 25 per cent over the normal teaching load.

Selection of the institutions to participate in the programs was made a responsibility of a joint Army-Navy-War Manpower Commission committee, which utilized institutional data covering teaching, housing, and messing facilities.

The ASTP began to function with assignments of men to a limited number of institutions in March, 1943. The University of Minnesota was in this original group, and was thus among the very first to be selected for participation. The program became really effective June 14, 1943, with the inauguration of its regular 12-week-term cycle of instruction. The Navy V-12 program started at all of the participating institutions on July 1, 1943.

For a general picture of the nature of the various army and navy programs, with discussion of student selection, curricula, and related matters, reference is made to an article by Vice President Malcolm M. Willey of the University of Minnesota, "The College Training Programs of the Armed Services," which appeared in the January, 1944, issue of the *Annals of the American Academy of Political and Social Science*.

There were many problems associated with the training programs of the Army and the Navy. Particularly difficult to meet were the many shifts in army plans, with the result that students were launched upon courses of instruction and withdrawn from them with unpredictable suddenness. In general, there was greater stability in the navy programs. This may reflect a basic difference in the needs and functions of the two services.

From the foregoing it must not be assumed that the college training programs were the only ones on the campus. There were others, as the summary to follow will reveal: a Naval Training School for electrician's mates, machinist's mates, and cooks and bakers; special training courses of a specialized nature for all the services, some at subcollegiate level, some of a highly advanced nature; courses for training civilians for war production jobs, and many others.

Administrative Organization—Administratively the organization for handling the various training programs involved dual, but carefully co-ordinated, responsibilities which centered in the offices of the academic vice president (on all matters relating to instruction and instructional personnel) and the business vice president (in matters relating to contracts and use of facilities). For each of the training programs a co-ordinator was named, and the details of administration in each instance fell to this co-ordinator. In the summaries that follow, the name of the co-ordinator is given. The success of the programs was dependent upon the co-operation of the university administrative officials, the faculties who gave the instruction, and the army and navy officials, or other governmental representatives. Only as all of these worked together, could success be expected from programs that were set up under such pressures, and in the face of rapidly changing circumstances. Numerous letters in praise of the University of Minnesota programs from responsible governmental heads, testify that teamwork was achieved with praiseworthy results.

Summarized data on enrollments in army and navy programs, and in other training units, will be found in the report of the Office of Admissions and Records elsewhere in this volume.

There now follow summaries of each war program, prepared by the co-ordinator responsible for that program:

Army Air Forces College Training Program (Aircrew)—In February, 1943, the University received notice that in response to its offer to the War Department it had been designated as a college training center for 500 aviation students. The unit, to be

known as the 88th College Training Detachment, was to be activated March 1 and was housed in the Memorial Stadium, which had been remodeled to provide living and office quarters. The students were divided into quintiles of 100 men each, and one quintile was to be shipped from the University to an army air base pre-flight school at the end of every four weeks, with replacements immediately assigned to the University. Thus the program was continuous, with a "flow-chart" which proposed a turnover of 100 men every month. The total period of training for each quintile was supposed to be twenty-one weeks, consisting of one week of military orientation, sixteen weeks of academic instruction, and four weeks of flight training at Victory Airport at Osseo.

Academic curriculum—The prescribed academic curriculum consisted of physics, 180 hours; mathematics, 80 hours; geography, 60 hours; history, 60 hours; English, 60 hours; medical aid, 20 hours; and civil air regulations, 18 hours. In addition to a full program of studies each student was required to take one hour of military drill and one hour of physical training each week day and a specified number of hours of military subjects during his period of residence.

The purpose of aircrew training, as stated by various air corps officials, was three-fold: military, physical, and academic. The College Training Program was a substantial part of a total training plan, over a year in length, which was to provide pilots, navigators, and bombardiers for the rapidly expanding Air Forces. The college phase was to provide the basic technical and cultural background to prepare these young men to become aircrew commissioned officers.

Army supervision—The immediate military command to which the 88th CTD was responsible was the Western Flying Training Command with headquarters at Santa Ana, California. This in turn was one of the four training commands in the United States under the chief Flying Training Command at Fort Worth, Texas. The unit at the University was in charge of Major E. O. Sheldon as commanding officer, with a staff of four other commissioned officers and 12 enlisted men as a permanent party. Military inspectors from both Santa Ana and Fort Worth visited the University at intervals and made recommendations in regard to the military, flying, and academic activities of the detachment.

The academic program was administered through the College of Science, Literature, and the Arts, with H. T. Morse and William Randel acting as co-ordinator and assistant co-ordinator, respectively. The co-ordinator's office relayed requests affecting academic instruction to a supervisor within each department, who in turn made specific staff assignments to conform to the schedules set up by the co-ordinator's office. The University awarded a maximum of 20 quarter credits to aviation students who completed the total academic program of sixteen weeks with passing grades. Proctored study halls and remedial instruction during the daytime as well as four evenings a week, were provided as a means of assisting the aviation students with the preparation of their assigned studies.

Difficulties encountered—A number of major factors prevented the program from functioning in an orderly fashion as originally planned. There were many scheduling problems, since separate classes in some subjects had to be provided for each of the four flights in each of five quintiles. It was difficult to find classroom space and there were continued difficulties in providing sufficient staff, especially in scarcity fields such as physics and mathematics. Some academic subjects, at first English and history, changed later to physics and mathematics, were continued through the flying period of the final four weeks of each quintile in residence. For various reasons not within the control of the University the flight training schedule was frequently changed, with consequent confusion within the academic program. The flow charts originally planned also failed to operate, so that replacements were very irregular, with the result that some groups had to be accelerated and completely new schedules had to be devised for tardy replacements. Occasionally a directive from the Flying Training Command would necessitate a shift of schedule, which frequently disrupted the whole program temporarily. The frequency of various changes and interruptions was such that it seemed impossible at times that the program would ever become stabilized. As a matter of record, out of the 1,863 aviation students who were assigned to the University throughout the duration of the program, only 236 finished the complete period of training as outlined in the master schedule.

Some other difficulties arose because of a lack of flexibility within the University. The staff found the nature of the instruction required to be very different from that in regular university classes, since usual lecture and outside assignment methods were not suitable in view of the type of training expected by the Army. The insistence of the military authorities upon the strict observance of military procedure and discipline in the conduct of classes was distasteful to many staff members, who regarded such procedures

as unnecessary and unwelcome. The involvement of the University with many civilian students and with other military training programs necessitated a frequent shifting of instructors assigned to aircrew classes, with resulting breaks in continuity.

Contract terminated—Notice of termination of the training contract was received by the University at the end of January, 1944. The program was supposed to close out gradually with the dropping out of 100 men each four weeks thereafter, since no replacements were to be assigned. The original closing date of June 17 was, however, advanced to May 20, and all remaining aviation students were shipped to the air base at that date. As each quintile left at intervals after January, the supervisory, clerical, and teaching staffs were reduced in proportion to the number of trainees remaining, so that there was much less disruption in the closing than in the activating period of the program.—H. T. MORSE, *co-ordinator*.

Army Air Forces "B" Pre-Meteorology Program—Regular instruction began May 31, 1943. There were two terms of twelve weeks each: May 31-August 28, 1943; and September 6-November 27, 1943. The men arrived about two weeks before the scheduled opening of the program, and were given an intensive review of mathematics.

The predicted quota was 150 men. The number actually assigned was 173. The enrollment by terms was: 173 and 158. At the end of the program 126 men were graduated.

Academic curriculum—There were five principal courses of instruction. Course I, Mathematics, covered differential and integral calculus and selected topics in advanced calculus and differential equations. Course II, Vectorial Mechanics, gave an introduction to vector calculus, and a more thorough treatment of mechanics, largely in vectorial notation. Course III, Physics, was a course in general physics at the sophomore level. Course IV, Geography, was a course in world regional geography, with considerable emphasis on place geography. Course V, Communication, included written and oral communication. In the College of Science, Literature, and the Arts, academic (quarter) credits in the different courses were assigned to a man completing the program, as follows: Course I, 12 credits; Course II, 8 credits; Course III, 12 credits; Course IV, 6 credits; Course V, English 3 credits, speech 1 credit; physical training 2 credits, or a total of 44 quarter credits.

The program was designed to continue for six months, and was carried out as planned.

For special comments, see the description of the "C" program which follows. The remarks made there are, in the main, applicable to the "B" program.—R. W. BRINK, *co-ordinator*.

Army Air Forces "C" Pre-Meteorology Program—Instruction began March 22, 1943. There were four terms of twelve weeks each: March 22-June 12, 1943; June 21-September 11; September 20-December 18; December 27, 1943-March 11, 1944.

The predicted quota was 300 men. The number actually assigned was 295. These men were supposed to have passed an officer's "63" physical examination before their arrival, but had not done so and were required to have it during Term I. This and other disabilities resulted in the elimination of 46 men or 16 per cent of the detachment for physical reasons. The high standards of the program resulted in many other eliminations because of academic failure. The enrollment by terms was: 295, 247, 218, and 164. The number graduated at the end of the program was 157.

Academic curriculum—There were five principal courses of instruction. Course I, Mathematics treated, during the first term, algebra, trigonometry, and analytic geometry; in the second and third terms it gave an adequate treatment of differential and integral calculus and an introduction to differential equations; in the fourth term, it treated selected topics of advanced calculus and differential equations. Course II, Vectorial Mechanics, during the first term merely supplemented Course I in the treatment of analytic geometry; in the remaining three terms it gave an introduction to vector calculus and a more thorough treatment of mechanics, largely in vectorial notation. Course III, Physics, was a collegiate treatment of general physics extending somewhat beyond an ordinary sophomore course. Courses I, II, and III were closely co-ordinated, the order of topics in one course being such as to assist in other courses; and results obtained, for example, in scalar form in Course I were also given their vectorial interpretation for the strengthening of Course II. Course IV, Geography, was a course in world regional geography, with considerable emphasis on place geography. Course V, Humanities, was a co-ordinated course in American history and written and oral communication. The work in history furnished much of the material for exercises in English and speech. Military training and physical education were also included in the program. In the College of Science, Literature, and the Arts, academic (quarter) credits in the different courses were as-

signed to a man completing the program, as follows: Course I, 26; Course II, 6; Course III, 16; Course IV, 12; Course V, history 5, English 6, speech 2; physical training 4, or a total of 77 quarter credits.

The program was designed to continue for twelve months, and was carried out as originally planned.

Programs planned co-operatively—An unusual feature of the pre-meteorology programs was the joint formulation of the national program by the academic directors in the colleges and universities and the national consultants. The entire group of academic directors and consultants held frequent meetings at Chicago which resulted in an ambitious but practicable program of instruction and a clear understanding in the colleges of its objectives. Uniform examinations were prepared by the national consultants who had outlined the courses, and a close correspondence between the examinations and the course content was thus secured. The examinations stimulated the men to make their best effort and also indicated a high level of achievement.

Locally an unusual degree of co-operation existed between the academic and military authorities. An understanding was reached early in the program, with the result that military demands rarely were allowed to interfere with the academic work. On the few occasions when such interference was necessary, it was arranged for by agreement and never by arbitrary authority. The effect of this harmony was to increase the respect that the men held for the prime importance of their class work, and to heighten their morale as students.

Another factor contributing to the success of the program was the excellent arrangement for housing and messing the men in Pioneer Hall.

Plans changed—The discontinuance of the advanced courses in meteorology, for which the courses in pre-meteorology were originally planned as preparation, was a serious blow to the morale of the students. Fortunately the courses had been designed as courses in fundamental science and humanities and had not been centered narrowly about specific applications to meteorology alone. The students were soon made to realize that their training would not be wasted, but was excellent preparation for service as communications officers, to which many of the men were assigned on graduation, and for many other useful tasks in army and in civilian life.

At the end of their program a large majority of men indicated their intention to return to some college after the war for general or professional training, for the most part in physical science and mathematics or engineering, supplemented with social sciences—programs strongly resembling the programs followed in pre-meteorology.—R. W. BRINK, *co-ordinator*.

ASTP, Basic Phase—The basic phase of the Army Specialized Training Program consisted of three terms and was designed to prepare men for advanced phases of ASTP, principally engineering. For this reason the men in the basic phase were commonly known as "Basic Engineers."

The first group, filling the announced quota of 250 men, arrived during the week of June 14, 1943. Between June 18 and July 2 they were given a refresher course in mathematics, with eleven hours of instruction each week. On July 10 the summer term began. After five weeks 33 of the men showed evidences of inadequate background and were put into a remedial section for the remainder of the term. Other men were separated from the program because of poor grades at the fourth week, the eighth week, and the twelfth (or final) week. When the term ended on October 2, 143 of the original 250 were certified for advancement to the second term.

The fall term opened on October 10. Replacements brought the total to the peak of 275 men (143 in the second term, 132 in the third term). The term ended on December 31 with 207 survivors. The attrition rate, of nearly 25 per cent, reflects inefficient screening by the assigning agency (the STAR unit) and the Army's ruling that men be dropped for failing in any subject. There was evidence of improved STAR unit screening in the superior academic quality of the last men to be sent to this training unit.

The winter term was from January 10 to March 30, 1944. The announced curtailment of ASTP produced a general slump in morale and grades. Although most of the best students continued to work hard, there were more failures than would ordinarily have been predicted. Of 122 men in the third term, 94 passed all their subjects; but of 87 in the second term, only 48 avoided failing.

The instructional program consisted of twenty-four contact hours each week. Mathematics included algebra in the first term, analytic geometry in the second term, and calculus in the third term. The three terms of physics covered mechanics; heat, light, and sound; and electricity. The chemistry, given in the first and second terms, was a general

inorganic course. Engineering drawing was taught in the third term. In all three terms there were continuous courses in English, history, and geography.

In common with other military programs, the basic ASTP presented problems of schedule, budget, staff, and the interpretation of army orders. Horace T. Morse, as co-ordinator, directed the program in its general aspects, particularly in matters of policy, while the assistant co-ordinator handled the details. This arrangement, used also in the aircrew and the AST pre-professional programs, has had certain advantages, of which the most obvious was that the two men could give their combined attention to one program in its hours of particular stress. The dual management also made possible considerable informal counseling, mostly about grades but to a certain extent about personal matters. Letters were sent to the parents of all the men in the program, explaining the course sequence and inviting comments and inquiries; the response was approximately 10 per cent. As the letters pointed out, the co-ordinators tried to treat the men as much like civilian students as was possible.—**WILLIAM RANDEL**, *assistant co-ordinator*.

ASTP, Pre-professional—The pre-professional Army Specialized Training Program, the last to be assigned to the University of Minnesota, got under way on April 10, 1944. The present expectation is a three-term course, to be completed at the end of 1944. The exact dates of the terms are as follows: April 10-July 1; July 10-September 30; October 9-December 30.

The spring term opened with an enrollment of 148 men; 118 of these were premedical students, the balance, pre dental. The basis for assignment to this program was threefold: satisfactory work in ASTP basic phase, high score in an aptitude test for medicine and dentistry, and a favorable interview with the dean of a medical or dental school. The pre-professional students are here because they have the ability and seriously aspire to become physicians and dentists; there has been no blind or haphazard selection.

Flexible programs—The curricula provide some flexibility of programs to take into account differences of background. Forty-six men who had completed the third term of the basic phase were put in a special 4-P curriculum with qualitative analysis, quantitative analysis, and biology, the three courses totaling 25 hours a week. Two of these 4-P's, of their own volition, are also taking German. In the summer term the course work of the 4-P's will be much the same as that of the fourth term of the regular curriculum.

The majority of the men assigned to this unit had completed only two terms of basic phase and were therefore assigned to the third term of the regular curriculum (P-1). This term is quite similar to the third term of basic phase, with the same physics, English, geography, and history, but with two new courses, qualitative analysis and biology. In the fourth and fifth terms the required courses are organic chemistry, English, psychology, biology, and comparative anatomy. The premedical students will take quantitative analysis in the fourth term and physical chemistry in the fifth term, while the pre dental students will choose two of the following selected courses: public administration, economics, French, German, Spanish.

A group of sixteen men with previous college courses in biology were put in a special curriculum (P-1A) with two of the selected courses instead of biology. In the summer term they will take comparative anatomy, and in the fall, embryology.

Curricular difficulties—The variety of possible course sequences and the differing academic qualifications of the men multiplied the problems of scheduling. The army curriculum outlined each required course in a sentence or two but gave nothing about the selected courses; as a result, some departments have had to set up courses with no other guide than their conjecture of probable army needs.

As in the basic ASTP, the co-ordinator, Horace T. Morse, and his assistant have tried to make the students feel at home and have welcomed their individual questions and comments. Letters sent to the parents have described the curriculum and invited responses.

This report is necessarily brief because the program has only just begun; such details as rate of elimination, replacements, and student achievement cannot be recorded until the program is older. It is our hope that most of the students upon the completion of their three terms will be adequately prepared for their subsequent training as physicians and dentists.—**WILLIAM RANDEL**, *assistant co-ordinator*.

ASTP, Advanced Engineering—This program was instituted at the University of Minnesota on March 29, 1943, and was among the earliest in the country. It continued for a year, being terminated April 1, 1944. The maximum enrollment, 446, was reached in the summer quarter of 1943. In the fall quarter, 1943, the enrollment was 415, in the winter quarter, 1944, 412.

While the program was planned for students who could enter the advanced course, Term 4 or above, the first registrants were not prepared to enter Term 4, and two review

or refresher courses, Terms 4a and 4b, were organized so that men would be prepared to go on into the advanced courses after completion of one to two quarters of this work.

The program outlined by the Army committee was a heavy one and some doubt was held at the beginning about the ability of the students to carry these loads and at the same time to conform to Army routine, but it was found that while the program was exceedingly exacting the students applied themselves intensively and achievement was comparable to results in regular Institute of Technology courses. Students who failed were separated from the course by the Army and assigned to active duty. This was an influential factor in keeping the standards at a high level of attainment.

In September, 1943, the University was requested to take into the program a group of former students who had been in the ROTC at this University and some from Iowa State College. The Army at that time was reducing the number in some of its officers training camps and wished these men to have additional training while waiting for further assignment. In the fall quarter, 1943, there were 68 of these students distributed between the departments of civil (31), electrical (18), aeronautical (7), chemical (7), and mechanical (5) engineering. In the winter quarter, 1944, the total number was reduced to 34, distributed as follows: electrical engineering (18), chemical engineering (3), mechanical engineering (4), Term 5c (special) (9).

In July, 1944, it was requested that we receive students who had graduated from some institution with a Bachelor's degree in order that they might carry some graduate studies and refresher courses while it was being determined where they could best serve in the Army. It was necessary to arrange special instruction in many cases. Personal and grade reports were rendered for these men, which were assembled by the co-ordinator and sent to the Army. The normal period for this group was one quarter.—S. C. LIND, *dean*.

ASTP, Personnel Psychology—The AST personnel psychology program at the University of Minnesota started officially July 12, 1943, and continued until January 1, 1944. However, the majority of the men who participated in this program arrived on the campus June 13, 1943. They were given refresher courses in abnormal psychology, statistics, and mental measurements until the opening of the formal AST program. One hundred twenty-five men were assigned to take part in this training. Eleven of these were dropped at the end of the first term, leaving 114 to start the second term of the course. Of these 114 men, 109 successfully completed both terms of the program.

During the first half of the period, four courses were given: (1) Statistics, involving four hours of class lectures and five hours of laboratory work per week. This included the usual topics given in a statistics course through multiple correlation and analysis of variance. (2) Tests and Measurements, consisting of four hours of class lectures and five hours of laboratory work per week, covering the basic principles of measurement, test construction, administration, and evaluation. (3) Occupations and Vocational Psychology, made up of four hours of class lectures and five hours of laboratory work, covering the clinical approach to vocational guidance and selection. The majority of the laboratory time was devoted to administering, scoring, and critically evaluating existing psychological tests. (4) Social Psychology, consisting of two one-hour lectures a week, covering the basic principles of social interaction with major emphasis upon the problems a soldier is likely to meet in his army life.

Practical experience provided—During the second half, five courses were given: (1) Work, Fatigue, and Efficiency, four lectures a week dealing with the problems of time and motion study, the measurement of fatigue, hours of work, and related problems, and the part played by motivation in relation to success on the job. (2) Normal and Abnormal Personality, two lectures per week covering the major psychoses and neuroses with special emphasis upon the part war plays in developing these types of disorders. (3) Personnel Methods, two lectures and three laboratory periods a week, covering the use of psychological techniques in selecting and maintaining an adequate working force. Laboratory practice was given in the construction and evaluating of job analysis, trade tests and the compilation of a battery of tests to be used for selection purposes. (4) Learning and Perception, nine hours a week, the lectures covering the major problems in efficient learning, while in the laboratory actual learning experiments were performed. The part of the course devoted to perception covered the traditional topics in this field with laboratory demonstrations and practice in the measurement of various perceptual processes. (5) Advanced Tests and Measurements, practical experience in interviewing, testing, and making up case histories. Part of this time was spent at the Induction Center at Fort Snelling actually interviewing and classifying soldiers.

The program was terminated January 1, 1944. A follow-up study has been made of the actual positions now being held in the Army by individuals who finished this program.

In practically every case the men are now doing psychological or closely related work and are unanimous in their agreement that the training received here at the University of Minnesota has been beneficial to them in professionalizing their subsequent army service.—R. M. ELLIOTT and HOWARD LONGSTAFF, *co-ordinators*.

ASTP, Japan and the Southwest Pacific, Language and Area—The program of area and language study on Japan and the Southwest Pacific was initiated on July 12, 1943, as advanced phase: curriculum 705, term 4. Originally contemplated as a nine-month program, it was extended to twelve months, to the satisfaction of the faculty and soldiers. The term dates were as follows: July 12-October 2, 1943; October 11, 1943-January 1, 1944; January 10-April 1, 1944; April 10-June 30, 1944.

A quota of 125 men was assigned. Actual enrollment by terms was as follows: 120, 110, 100, and 75. Two men were transferred to the University of Minnesota from Stanford University at the beginning of the second period. Of the total of 47 men separated from the unit before the beginning of the last term, 5 were transferred to other types of training, 4 were dropped because of ill-health, 13 because of failure in their studies, and 25 at the end of the previous term, in conformity with the general reduction of AST personnel. Of the last-named 25 men, 10 would have been dropped because of failure in studies. Thus 23 men or 19.16 per cent failed in studies during the first three terms of the program.

Curriculum—The program of studies was composed of three courses: Japanese language, area study, and modern history and contemporary world affairs. Approximately one half of the time allotted for instruction was devoted to the language, in which the objectives were comprehension of and capacity to use colloquial speech. However, in the last two terms some attention was given to Japanese and Chinese written characters. Approximately one third of instructional time was devoted to area study, in which the geographical, cultural, social, political, and economic characteristics of the territory and people of the assigned area were studied. Area study also included "survey techniques," i.e., methods of analyzing and reporting upon current news and propaganda. The remaining one sixth of instructional time was given to the recent history and international relations of Europe, the United States, and the Far East. All three courses were continuous for the first three terms. History and contemporary affairs were omitted in the last term.

The members of the university faculty who participated in the instruction were, in area study: Mitchell V. Charnley, William S. Cooper, Darrell H. Davis, Lennox A. Mills, Ralph O. Nafziger, Harold S. Quigley, Roland S. Vaile, and Wilson D. Wallis; in history and contemporary affairs, Herbert Heaton. Assistants were Nicholas Efimenco and Werner Levi. Language instruction was given by seven persons secured especially for that purpose: C. W. Hepner, Yoshiko Arimatsu Uragami, Kikuo Endo, Francis Hayashi, Noboru Inamoto, Ruby Sakoda Inamoto, and Ganna Syro. Although trained and experienced teachers of Japanese were unavailable, the work of the young *Nisei* (Japanese-Americans), obtained in war relocation centers, proved to be quite satisfactory. Colonel Kai E. Rasmussen, commandant, Military Intelligence School, Savage, Minnesota, rendered invaluable service as adviser and special lecturer, and through the loan of texts, films, maps, and other aids to instruction. Several members of the university faculty, and wives of others, delivered lectures. They were: Donald Ferguson, Robert Jones, W. A. Riley, Mrs. D. E. Minnich, and Mrs. Maurice Visscher.

Special teaching techniques—All courses were especially prepared. New procedures included intensive language drill in sections of ten men or fewer; use of the microphone and phonograph records; the showing of Japanese feature films, with sound, and of slides and film strips; extensive use of mimeographed excerpts and outlines; lectures by informants; and the provision of a small library and current periodicals in the barracks reading room. Area and history instruction was given through lectures and discussion meetings, the latter of groups not exceeding thirty men.

With due allowance for morale factors, such as uncertainty regarding future assignment, and disappointment over diminished opportunity to enter officers' candidate schools, it is believed that the record of attainment is satisfactory and that the men were well satisfied with the program. It may be hoped that the experience with new approaches and procedures will have a beneficial effect upon our regular curricula and teaching methods. Plans are under way to provide instruction in area studies; language instructors are debating the applicability of intensive drill and other features of the new methodology.

On the whole the co-ordinator found his colleagues highly co-operative and sincerely interested in the work. Some of them devoted far more time to preparation than was registered in contact hours. The soldiers were a highly interesting group, many of them mature, well educated, and critical. The faculty agreed that it was a pleasure to work with them.—HAROLD S. QUIGLEY, *co-ordinator*.

ASTP, European, Area and Language—"Training in the field of foreign areas and languages is intended to develop the soldier for a wide range of uses in the war effort. Soldiers who receive this training will be available for responsible assignments in one of the arms of the Army Ground Forces or in any of the following: Army Air Forces, Military Intelligence Service, Provost Marshal General's Department, and the Signal Corps. They will be expected to attain fluency in the language of the area of their anticipated assignment. In addition, they will be instructed in the historical background as well as in social, political, and economic conditions, and in the current situation of the area." This general statement of purpose was explained in more detail in curricula prepared by the Army Specialized Training Division, which listed the points to be covered in a typical program, recommended methods of instruction especially for the teaching of language, and defined the specific objectives of the training program. The participating institutions were given a great deal of leeway in adapting the program to local conditions, and stress was laid on results more than on any specific teaching techniques, but it was repeatedly emphasized that merely "warming up" conventional courses would not satisfy the needs of the Army.

In June, 1943, the University of Minnesota was assigned a quota of 125 men for the advanced phase foreign area and language study, to begin instruction on July 12 in German, Finnish, Norwegian, and Swedish. The men began to arrive in the third week of June and refresher courses in French, German, and Spanish were set up to help occupy them until the opening of the official term. The regular course included three terms (4, 5, and 6) of twelve weeks each with an interval of one week between terms. At the request of the military authorities, actual instruction in the first term was ended on March 25, 1944 instead of on April 1. The number of trainees varied from time to time as men were withdrawn for failure to meet academic standards or were assigned to military duties elsewhere.

An emergency arises—Plans for instruction had been begun in the spring of 1943 at a time when it was understood that the purpose of the program was to train officer candidates for the Provost Marshal General's Military Government Division, at which time the Norwegian and Swedish languages were not included. In the meantime, the program was transferred to the AST division to meet the demands from other branches of the service. It was not until July 9, three days before the scheduled beginning of class work, that we received the new curriculum 704, plan "B." It was too late to make any material changes in our arrangements for the first term so we sought and received permission to carry on the work of that term under the old curriculum 705, plan "A." Before the beginning of the second term we received information of a compromise curriculum 71 which was used for the remaining two terms.

The distribution of contact hours per week (not including 5 hours of military instruction given by army officers and 6 hours of physical training) was: term 4—language, 14, area characteristics, 12, police science and law enforcement, 4; terms 5 and 6—language, 14, area characteristics, 9, history and current world affairs, 3.

Language distribution—Because a quota of 125 men had to be divided into four language groups, it was impossible to follow the procedure recommended by the Army of having one senior instructor and four drill masters for each 80 trainees. We assigned approximately 65 men to study German, 13 to Finnish, and 23 and 24 to Norwegian and Swedish, respectively. The arrangement of language instruction was similar to that used at the University of Wisconsin whose area and language unit began work one month earlier than ours. Five hours per week in sections of approximately 20 trainees were used for "memorizing and mimicry," three hours for "interpretation and analysis" of the language material, one hour for testing, and five hours in groups of 10 for oral drill and conversation.

In the early part of February, 8 men were sent here for "special term 4 (Finnish)." These men knew the language well enough so that they could be reported "competent" at the end of the term of instruction in progress and were given instruction with the other trainees in Finnish in language, area, and history.

Additional quota assigned—In December, the University was assigned an additional quota of 200 men to start instruction on January 10, 1944 in Norwegian and Swedish. Actually, 100 were sent for Swedish but only 80 for Norwegian. Instruction began on January 17 and the term ended on March 25. With this larger number, we could follow the recommended organization of language instruction more closely: four hours per week in sections of 50 were planned for demonstration of the language by senior instructors and one hour for tests while ten hours per week were devoted to oral drill sections of not more than ten men each.

The distribution of contact hours for academic instruction was: term 4—language, 15, area characteristics, 8, contemporary history, 2; term 5 (in progress)—language, 14, area characteristics, 8, contemporary history, 3; term 6, to begin on July 10, will probably have the same distribution as term 5.

At the end of term 4, as part of a general reduction in the Army Specialized Training Program, our quota for terms 5 and 6 was reduced to 100 men, 50 each for Norwegian and Swedish.

Satisfaction evidenced—It is impossible at this time to appraise the results of the training program. Most of the men graduated in German have been assigned to Air Force Intelligence; most of those in Finnish, Norwegian, and Swedish to Signal Corps or Infantry units. Some are already overseas. In all cases, however, regulations of military security have prevented them from giving us information about the details of their work and the use made of their training. We have the impression that the instruction given at the University of Minnesota has satisfied the responsible military authorities for they have continued the program here even after a drastic reduction of the number of men authorized for training in the country as a whole.

In conclusion, I should like to call attention to the generous support given to this program by the members of the staff who have taken part in it. They have carried more than normal teaching loads, have had to prepare entirely new lectures and teaching materials; they have had to abandon or reduce research and writing plans; and they have worked on most of the customary university holidays.—LAWRENCE D. STEEFEL, *co-ordinator*.

AST, 9L Program—The term 9L of the ASTP was established in June, 1943. To this group were to be assigned men who speak fluently one or more languages included in the AST program, and who, by virtue of previous study or experience, have unusual knowledge of the areas in which these languages are used. They were men who in the opinion of the STAR unit selection board were "overqualified" for assignment to a regular ASTP curriculum in area and language study. In view of the diverse background of the trainees assigned to 9L, the Army deemed it undesirable to specify a rigid program for them. It was left to the judgment of the University to determine the instruction to be received by these trainees, who, since most of them had already received undergraduate degrees, required the individual attention normally accorded to postgraduate students. The Army did require 24 contact hours of instruction a week divided between consultation, class, laboratory, and problem periods as the institution believed desirable. In the original plan, the length of the term was fixed at not more than 12 weeks, but this limitation was not observed as the program developed. The responsibility was laid upon the University of appraising the qualifications of these trainees, their bearing, personality, and especially their proficiency in speaking, reading, and writing foreign languages, and their knowledge of the corresponding areas. The University was required to report to ASTP headquarters, within four weeks of a trainee's arrival, the results of this appraisal together with a recommendation for his future assignment in some branch for which his qualifications best fitted him. The performance of this duty would have been impossible without the generous co-operation of those members of our staff in whose courses the trainees were enrolled, for it was upon their regular reports of the trainees' attitudes and abilities that the co-ordinators had to rely in forming their opinions.

The first group of 9L men, numbering about 40, was sent to the University during the months of June, July, and August, 1943, and was placed under the direction of Professor Lawrence D. Steefel, who was in charge of the European Area and Language section, ASTP, with whom, beginning in August, the undersigned was associated as assistant co-ordinator and afterwards as co-ordinator. Since practically all these men were graduates of colleges in Europe or in this country, and since there were few suitable graduate courses offered during the second term of the Summer Session, it was necessary to give the men individual assignments. Some were used as instructors in the language courses in term 4A; others enrolled in such courses in language and area study as were available. A special seminar in German was set up under the direction of Professors Meessen and Holske, and later, as the number of German-speaking trainees increased, the seminar was put in charge of Julius Lichtenstein. A similar course was arranged in French under the direction of Professor Fermaud, and also a seminar for the study of propaganda methods, under the direction of Professor Casey. Several students were qualified to enroll in Russian courses offered by Professor Reichardt, and a few Polish-speaking students formed a class for practice in conversation and study of Polish. Out of the original 9L group, 25 were withdrawn before the beginning of the fall quarter, but others had been sent during July, August, and September so that by the beginning of the fall quarter or shortly thereafter, the number of men in 9L was 68. Since these men

were sent here primarily because of their ability to read, write, and speak one or more foreign languages, emphasis was laid upon a continuation of their language and area studies. The seminars in German and French were continued and advanced courses in Italian and French composition were set up. Similar courses were open in Spanish as well as lectures on Spanish-American relations, chiefly under the direction of Professor Cuneo. Courses in Russian under Professor Reichardt continued. Students who wished to begin the study of another foreign language had the opportunity of beginning the languages mentioned above and also Portuguese. In addition to their courses in language, these men were enrolled chiefly in advanced courses dealing with history, geography, economics, political science, and journalism, including the study of contemporary affairs and communication agencies.

By the end of the fall quarter, 50 of these men had been withdrawn, and in addition to the 18 men remaining, a new group of 47 was assigned to the University during the last week of December and the first week of January, bringing the total to 65.

During the winter quarter the special language courses, instituted during the summer and fall, were continued and there were set up also a seminar in the history of Germany since World War I, conducted by Professor Wolf, and one in techniques of journalism conducted by Professor Nafziger. Six of the trainees were withdrawn before the close of the quarter, but the others were able to complete their courses and take the final examinations. All of them were withdrawn by the middle of March.

The quality of the men selected for 9L was on the whole exceedingly high in regard both to intelligence and attainment. In spite of the overload of courses required by army regulations, most of the men made excellent records and their diversified experience and points of view added fresh stimulus to the courses in which they were enrolled. The fact that in many instances the men were allowed to enter advanced courses for which they did not have the necessary prerequisites and still achieved high standing, raises the question whether our system of prerequisites is not too rigid, whether also, departmental requirements might not be relaxed to enable a well-qualified student to have more freedom of selection, independent of departments.—MARBURY B. OGLE, *co-ordinator*.

ASTD Examination Program—Under invitational orders of the War Department, Army Service Forces, the Adjutant General's Office, through the director, Army Specialized Training Division, ASF, representatives of Harvard University, Ohio State University, Purdue University, Queens College, Stanford University, University of Iowa, and the University of Minnesota attended a conference on July 23, 1943 in Washington, D.C. The conference was called to consider the feasibility of inaugurating an experimental examination program under the auspices of the ASTD.

Previous to the meeting the War Department had made inquiries, informally and without commitments, as to whether or not the institutions would be interested, and, if so, asking them to assemble information concerning the facilities and resources of the institution for carrying out the examination project. With an enrollment of approximately 140,000 trainees in over 200 institutions it was highly desirable to determine what standards were being maintained in the program. The means employed for this determination included inspections and academic visits, analyses of instructional materials, analyses of attrition and graduation figures, the study of the composition of instructional staffs, the analyses of local examinations, and the administration of national examinations. While all of these devices were used, the construction of examinations, which measured the course and curricular objectives with such validity and reliability as to assure confidence in the examination results, was of primary importance.

Examinations constructed co-operatively—The earlier plan of the construction of the examinations by a special staff in the Adjutant General's Office gave way to the broader co-operative plan of construction on the part of the institutions represented at the Washington conference. At first experimental, the examinations are now in the process of being standardized and are administered near the close of each term. The results of these national examinations are given to the service commands. At a meeting on July 27, 1944, called by Malcolm M. Willey, vice president, Academic Administration, attended by all co-ordinators in the AST program, plans were presented and adopted for carrying out the examination program at the University of Minnesota.

The offices of the Bureau of Educational Research located in 301 Eddy Hall served as the headquarters for the examination program. The War Department agreed to pay the university salary of the equivalent of one man for one month per course per term for the construction of the examinations. The one man equivalent was composed in most cases of the subject-matter specialist, the test counselor who gave technical assistance in the construction of the types of examination items required by the War Department, and the co-ordinator for the program.

Objective examinations—The tests were of the objective type, machine scorable, four-alternative multiple choice items. The examinations were of a length suitable for administration in a period of three hours and such that from 90 to 95 per cent of the students could complete the test in the time allotted. The number of items per test ranged from 75 to 300.

Each test author received the detailed outline of objectives and content of the course for which his test was intended. This outline provided the basis upon which the test items were constructed. Where a number of instructors (the test author was in most cases an instructor in the course) were concerned with the same course, conferences were held to determine the proportionate distribution of items among the several objectives and content. In general, emphasis was placed on items testing for the ability to interpret or to make use of that which had been learned, rather than for sheer ability to recognize correct statements of fact. Diagrams, drawings, and maps were frequently used as the basis for a number of examination questions in some courses.

All items were edited and the test forms were set up in the central office. The examination stencils were prepared and the tests assembled after mimeographing. Each test was used as a final examination in the twelfth week of the course for which it was prepared. The examinations prepared for the first term were administered by the instructors or their assistants. All examinations at the end of the second and third terms were administered under the supervision of a trained test administrator, proctors, and a military officer assigned to each individual examination. The tests were scored by the scoring machine and the distribution of scores was sent to each instructor within a few hours after administration.

Examinations analyzed scientifically—A detailed statistical analysis was carried out on each examination to determine how well it had functioned. Included in the analysis were the determination of the reliability, the differentiating power of each item, the functioning of each of the distractors, and the appropriateness of the examination as a whole for the group tested. The findings of the analysis from each examination were presented and interpreted by the co-ordinator at conferences arranged with the test author, or authors, and test counselors. This information was used as the basis for improving the forms of the examination for the next term.

Fifteen copies of the examination were sent to the office of the Adjutant General, New York, N. Y., and fifteen copies to the office of the Commanding General, Washington, D.C. Both offices were also furnished with three copies of the analyses and the evaluations of the examinations made by the test author and counselor and the recommendations for improvement so as to deliver an examination which would prove as useful as possible to the War Department.

Examinations constructed—For the term beginning in July and ending September 29, 1943, 12 examinations were prepared for the following courses: chemistry 205, chemistry 206, English 111 (terms 1-3), structural drafting 408, geography 163 (term 1), history 133 (term 1), history 133 (term 3), mathematics 401, mechanics 401, occupational and vocational psychology 631, plane surveying 079, thermodynamics 401.

For the second term beginning in October and ending the last of December, 1943, 16 examinations were prepared for the following courses: chemistry 205, chemistry 206, electric and magnetic phenomena 405, English 111 (terms 1-3), structural drafting 408, geography 163 (terms 1-2), history 133 (term 1), history 133 (term 2), history 133 (term 3), mathematics 401, mathematics 407, mechanics 401, physics 305, plane surveying 078, thermodynamics 401.

The University of Minnesota was one of three of the original institutions with which a renewal contract was drawn by the War Department.

For the third term from January through March, 1944, 11 examinations were constructed for the following courses: chemistry 206, English 111 (terms 1-3), geography 163 (term 2), history 133 (term 2), history 133 (term 3), mathematics 401, mathematics 407, mathematics 408, mechanics 401, physics 306, engineering drawing 001.

For the fourth term from April to July 1, 1944, 15 examinations were constructed for the following courses: chemistry 205, chemistry 206, engineering drawing 001, English 111 (terms 1-3), geography 163 (term 2), mathematics 406, mathematics 407, mathematics 408, physics 304, physics 305, physics 306, history 133 (term 1), history 133 (term 2), mathematics 401, mechanics 401.

Since trainees in the ASTD basic phase and advanced engineering curricula were withdrawn at the end of the third term, examinations developed for the fourth term were not administered locally.

During the four terms, 54 examinations were constructed. Twenty subject-matter specialists and five test counselors in addition to the director and assistant to the director

were engaged in the examination program. The examinations were administered to a total of 3,829 trainees.—PALMER O. JOHNSON, *co-ordinator*.

Army and Navy Medical Training—The University of Minnesota Medical School formally initiated the training of military and naval medical students in June, 1943 and the training is still in progress. About 80 per cent of the places for students in the Medical School were and still are reserved for individuals in the military organizations. Aside from the fact that the usual one quarter of the year was no longer used for a vacation period so that now medical students can complete their course in three calendar years, very little change in the course content or the hours devoted to the various courses in the Medical School has occurred. In order to meet the needs of the military and to anticipate an increase in diseases unusual in this region such as malaria which may be brought back by discharged soldiers from the front in tropical regions, we have instituted a new course in tropical medicine and one in military medicine, each of which runs for one quarter of the year and is given to juniors or seniors. Because of the need for an increased number of doctors to cover active military needs, our quota of students was increased approximately 10 per cent as is the case with most other medical schools.

During the initial periods when the freshmen and sophomores in the army program were placed under barrack conditions, there was some dissatisfaction among them and some confusion in arranging good study conditions and satisfactory study hours. At the present time, adjustments made seem to be compensating reasonably well for these difficulties.—J. C. MCKINLEY, M.D., *co-ordinator*.

Army and Navy Dental Training—The Army AST program for training dentists began at the University of Minnesota on June 16, 1943, the Navy V-12, July 1, 1943. There were no assigned quotas for 1943 or 1944.

Enrollments during each of the five terms, including the summer of 1944, which have been held since the program began were respectively 311, 312, 258, 336, and 333. [The discrepancy between the enrollment in the third quarter and that in the others is due to the accelerated program, there being no junior class during that quarter.] Of the total enrollment for the five quarters, the Army furnished approximately 60 per cent, the Navy 30 per cent, and civilians 10 per cent.

Qualifications of students—Students who were instructed under the Army and Navy Dental Training programs were those who had been admitted to the University by the Board of Admissions because they met the requirements established for the regular four-year course leading to the degree of doctor of dental surgery.

The accelerated program in dentistry began with the summer quarter, 1942. Under it students are required to attend all four quarters of the calendar year. Opening and closing dates conform to the regular university calendar.

The Army and the Navy have given full co-operation in all matters related to student progress in the dental course. Army, Navy, and civilian students attend classes together and are required to complete the same curriculum for the degree of doctor of dental surgery.—W. F. LASBY, *co-ordinator*.

Navy College Training Program, V-12—A unit of the Navy College Training Program, or V-12 school, opened at the University as of July 1, 1943, in especially scheduled classes. The program was planned by the Navy as solely for the training of naval officers. It was designed as full-scale college work, following so far as practicable the usual pattern of college life. Naval duties were intended to supplement but not replace professional study. Within every calendar year, instruction is given in three special navy terms (or semesters) of sixteen weeks net each; therefore June 30, 1944, marks the completion of one and one-half normal academic years. Trainees assigned to upper-level engineering or medical specialties are allowed training for the number of semesters (usually a minimum of eight) ordinarily required for completion of degree work in the specialty.

The Naval Reserve Officers Training Corps at the University was absorbed into the more extensive V-12 program; nevertheless, the NROTC maintains its regular courses, naval instructors, and special curricula with its incoming students on full-time active duty at the University for the equivalent of at least seven semesters.

The trainees—At the time the V-12 program was activated numerous Naval Reserve students were in classifications such as the V-7 and the V-1. These men were called to active duty, though most of them were reassigned to the University, to continue largely in their original courses of study, on duty, in V-12 classes. Beginning freshmen in the V-12 program are of two groups: those selected by competitive examination of civilian young men and those assigned as outstanding men from the fleet or from naval establishments. These men have come to the University every four months on July 1, November 1,

and March 1. They have entered a number of curricula fully prescribed by naval authority.

As our former civilian students (those who were in college prior to opening of the program) terminate their instruction on naval duty, the contingent is composed more and more of individuals in special naval curricula. Indications are that the end of the war may find in the V-12 unit an overwhelming majority of men from the fleet, called back to college after combat service.

Enrollments—The University has an assigned quota of 787 trainees in various branches of engineering, in pre-medicine and pre-dentistry, and in naval science. Our actual contingent averaged 738 men the first semester, 762 the second semester, and 734 the third semester.

The major work of those preparing for medical or dental schools is centered in the College of Science, Literature, and the Arts, as is customary. In that college also are administered university courses of the general naval science group. The Institute of Technology assumes instructional responsibility for naval science trainees in the NROTC engineering option and provides specialized major study for large numbers in aeronautical engineering, architecture, chemical engineering, civil engineering, electrical engineering, mechanical engineering, and mining and metallurgy. One small group of our former civilian students was graduated from the School of Business Administration. Thirty academic departments or instructional divisions have been active in the V-12 program during a single semester.

Thus far there have come into our program a total of 1,142 different trainees, of whom 431 formerly attended this University. In the first year, degrees have been granted to 55 students on termination of assignment to the program. In addition, as of June 30, 1944, approximately 146 qualified officer candidates have completed their allotted time in college and have been commissioned or sent to midshipmen's schools for military training preparatory to commissioning. Fifty-three others have completed all requirements for admission to medical or dental schools.

The staff—Teaching in the first year of the Navy College Training Program required, at one time or another, 214 regular staff members on part-time or full-time service to the program. An additional regular 33 members of the classified service contributed to the project. One hundred fifty-five different individuals on miscellaneous appointment have participated, usually for short periods. Of those, 105 were teachers or teaching assistants.—R. E. SUMMERS, *co-ordinator*.

Naval Training School (Machinists)—A Naval Machinist's Training School was established at the University in the summer of 1942 for a normal contingent of 500 men. The unit was housed on the Agricultural campus, with Naval headquarters in Dexter Hall, and principal instructional offices were set up in the Agricultural Engineering building. Classes were conducted in a total of ten to twelve buildings on both campuses. Special shops equipped with Navy-owned machine tools were centered in the Agricultural Engineering building. Engines or power laboratories were variously located in the Agricultural Botany building and in the Oak Street Laboratory and in the Experimental Engineering and Mechanical Engineering buildings on the Main campus. Because of the critical need for certain of the facilities in possession of the University, some of the mechanical apparatus was used for instruction throughout fourteen hours during every week day.

Instructional supervisors were largely members of the regular staff. Six such persons were employed part time or full time. Men especially engaged for the duration of the project included a number of master mechanics, shop foremen, and stationary and operating engineers who took part as a patriotic service at financial sacrifice. Former high school teachers and older Naval veterans also gave invaluable service. An accredited short course in teaching methods was provided for all new teachers with the help of our Department of Trade and Industrial Education.

Curriculum—Any one trainee was allowed sixteen weeks in which to take the academic course of 480 contact hours of shop practice, laboratory instruction, recitation work, or lecture given by university staff members. In addition he pursued certain naval subjects and took part in physical drill. Classes were activated for the first company September 28, 1942; and the final company was graduated March 6, 1944. In all, 1,866 men, totaling 15 companies, were registered. Successful graduates earned ratings as machinist second class, machinist third class, fireman first class, fireman second class, or fireman third class, according to their scholastic records and as the result of consistent personality ratings by naval officers. While the majority of those completing the course were ordered directly to fleet duty, some went to advanced service schools for very specialized training. A few outstanding men were admitted to the V-12, or college program.

It is significant that 1,715 students, or 92 per cent of those admitted, received passing grades in all university-administered subjects. Fifty-six per cent of the trainees were high school graduates; all but 7 per cent had matriculated in high school. Four per cent had attended or completed college. A majority came with industrial, shop, or trade school experience. The greatest handicap, from the standpoint of prerequisites, was that students seldom had experience or training in power plants; yet operation of ships' machinery was an important part of the instruction.

Data on trainees—Thirty-seven per cent (685) of the men were of North Central origin, 41 per cent from the East, 12 per cent from the West, and 10 per cent from the South and South Central regions. Twenty-one per cent were married. The age range was 17 to 51, with the modal age group the 20-year olds. Seventy-three per cent entered the school at an age within the range of 18 through 22.

Subjects covered in the intense and highly practical course of study fell into five groups of short courses: theory and related trade knowledge, mathematics and blueprint reading, internal-combustion engines, steam power equipment, and shop practice of various types.

Instructional methods—Between 75 and 85 per cent of student-contact time was spent in direct application of specialized instruction, as in the laboratory. Great stress was placed on individual student work and on a high degree of organization of all student time. Audio-visual aids of every type were extensively used. Responsibility for selection of subject matter and for the methods of instruction devolved almost entirely on the University because of the haste required in initiating the project and because of lack of a standard naval curriculum in this field.—R. E. SUMMERS, *co-ordinator*.

Naval Training School (Electrical)—The Naval Training School (electrical) is conducted for the Navy by the Electrical Engineering Department of the University of Minnesota. The course is planned to prepare sailors to operate and maintain the warships and landing craft of the Navy. The men are sent here from basic training camps where they are selected by classification officers as specially qualified for this type of training.

The Naval Training School (electrical) has been in operation for over two years. The first group of trainees arrived on May 12, 1942, and classes were started on May 15. The course is four months long, and the quota of 500 was built up in four months and maintained constant thereafter by the arrival of a company of 125 trainees each month until December 7, 1942, when the quota was increased to 600. With this enlarged quota it was necessary to operate a portion of the laboratories in the evening. Because of congested housing conditions, the quota was reduced to 520 on April 5, 1943.

Quota increased—This method of operation was continued until December, 1943 when the quota was raised to 1,000 trainees. Under the new quota a company of 125 men graduates every two weeks. The quota is maintained by the arrival of a company of 125 trainees every two weeks to replace the company that graduates.

The first eight weeks of the course are conducted on the Agricultural campus and the second eight weeks on the Main campus. This arrangement was made so that the mechanical and shop facilities of the Agricultural Engineering building could be effectively and economically utilized in the primary phases, and the Electrical Engineering building in the advanced phases of the program. The trainees are housed in Dexter Hall on the Agricultural campus and in the old Minnesota Union building, now the U.S.S. Minnesota, on the Main campus.

Instructional program—This course requires 44 class hours a week. These hours are divided into 36 technical periods, 5 athletic periods, and 3 general naval instruction periods. Two hours in the evening, five days a week, are devoted to study. In a concentrated course of this nature, actual contact experience must be obtained in a relatively short time, and emphasis is placed throughout the course on individual participation; therefore, each company is divided into six sections of 21 men each. In the laboratory, individual participation is obtained by having adequate tools and equipment; in the classroom, it is accomplished by board work and recitation. A staff of 70 instructors is required to carry on the program. A very conscientious and capable group of men has been assembled, whose earnestness of purpose has contributed in a very large measure to the success of the school.

The subjects taught are electrical theory, mathematics, mechanical laboratory, wiring laboratory, and electrical laboratory. The class work in electrical theory is continued throughout the course. The subject material of electrical theory includes direct current circuits and machinery, alternating current circuits and machinery, and fundamental electronics. Shipboard applications are stressed. Mathematics is taught with the basic objective of the understanding of electric circuits and machinery.

In fundamental mechanical laboratory, hand tool and portable power tool operations are taught. The projects are selected so that the objects that are made are assembled into a small electric motor. In advanced mechanical laboratory considerable time is devoted to the maintenance and repair of motors, generators, switchboards, and all electrical equipment aboard ship.

In wiring laboratory, the installation and repair of electrical power and communication circuits aboard ship are taught. Emphasis is placed on special marine type wiring equipment and communication equipment; such as sound powered telephones which are widely used on modern ships.

In electrical circuits laboratory, each trainee is required to make the circuit connections and obtain meter readings so as to get direct knowledge of the equipment he is to use. In the machinery laboratory emphasis is placed on operating characteristics and control. Operating conditions and procedures, such as starting, stopping, and speed control for the various kinds of direct and alternating current motors, are emphasized. Power and lighting equipment is studied from the generators through the switchboard, power and lighting distribution circuits down to the motors, lights, appliances, and special devices.

School to close—With our present quota of 1,000 men we furnish the Navy with 250 trained men each month, a rate of over 3,000 a year. Orders have been received that the last company to be sent to the school will start the course on June 19. This company will graduate on October 9, 1944, at which time 32 companies, including 4,120 sailors, will have been trained in this program by the University of Minnesota.

Many of our graduates have come back to visit the school. We find that they are serving in the many areas where our Navy operates. They are doing all phases of electrical work on the various types of naval vessels. These graduates have proved that American youths have great adaptability and fine intellects; they can be trained in a relatively short time to man and operate our naval vessels which are equipped with the finest machinery and the most advanced electrical devices that science and engineering can produce.—ELMER W. JOHNSON, *co-ordinator*.

University of Minnesota—Minneapolis-Honeywell Regulator Company School of Aeronautical Electronics—The Technical Training Command of the U. S. Army Air Forces with headquarters in St. Louis, Missouri, instituted the University of Minnesota—Minneapolis-Honeywell Regulator Company School of Aeronautical Electronics on August 1, 1942. Because of the confidential nature of the instruction given, no university staff members participated in the instruction. Trained technicians from the Minneapolis-Honeywell Regulator Company were assigned to this task. In this program, as in the case of the Doall Trade School, the University of Minnesota furnished housing, messing, and hospital facilities.

The detachment quota varied from a low of 60 to a maximum of 70 students. The term was four weeks. This course terminated on March 30, 1943 after approximately 500 men had been trained.

All that can be revealed now is that the program was designed to train Army Air Forces personnel in the maintenance of the C-1 automatic pilot.—L. R. LUNDEN, *comptroller*.

Arctic Research Institute—On November 24, 1942 the U. S. Army entered into an agreement with the Regents of the University of Minnesota for the leasing of space in Northrop Memorial Auditorium for accommodating twelve highly skilled officers assigned for work in the Arctic Research Institute. This arrangement continued until October 15, 1943. At that time the office was moved to New York, N. Y., by direction of the commanding officer of the Seventh Service Command. In commenting on the move, Professor L. M. Gould, chief, wrote to President Coffey saying in part:

Your University has gained such a hold on the members of the Arctic Section that even our officers who live in New York and nearby regions prefer to remain here rather than return to the East. Certainly we shall not again in this war duplicate the fine working conditions which we have had here. Thanks to the good will and generous cooperation of your whole staff, the Arctic Section has felt itself a virtual part of the University of Minnesota and has been given free access to all of its resources. These have been important factors in the work we have done.

—L. R. LUNDEN, *comptroller*
Doall Trade School—The Technical Training Command of the U. S. Army Air Forces with headquarters in St. Louis, Missouri, sponsored a training program designed to develop mechanics for the Army Air Forces. Instruction in the operation of an all-purpose machine tool called Doall was emphasized.

The detachment of trainees numbered 60, and the course of instruction covered five weeks. The University did not participate in the actual instruction but because of the essential nature of the program co-operated by providing housing, messing, and hospital

facilities. The detachment arrived on this campus on July 1, 1942, and left on February 28, 1943.

This was one of the few programs conducted by the armed services and accepted by the University of Minnesota that did not involve the use of our instructional staff. Approximately five hundred students completed their training during the course of this program.—L. R. LUNDEN, *comptroller*.

Naval Research—At the request of the Naval Research Laboratory, Washington, D.C., the University entered into a contract to furnish direct-current voltages of 500,000 volts and higher for research on "Static Interference with Airplanes in Flight." We are also to carry on other research of our own direction along these lines and also upon the effect of lightning surges on airplane operation.

This work is under the direction of Ross Gunn of the Naval Research Laboratory. It is being carried on in a special hangar constructed by the U. S. Navy at Wold-Chamberlain Airport. The research is a combined one under both the Army and the Navy. Professor Morris Newman is in general charge for the University of Minnesota.

To carry on this work, the first contract was entered into in October, 1943; a second contract covers the fiscal year 1944. For personnel to assist Professor Newman we have used graduate students and others from time to time.

Equipment required—The equipment for this work consists primarily of a surge generator capable of giving up to 5,000,000 volts or 200,000 amperes in controlled surges similar to those of atmospheric lightning. Part of this equipment, together with instruments and auxiliary devices, was moved to the airport from the Electrical Engineering Laboratory. This surge generator has been reconnected and adapted to give up to 2,000,000 volts and 100 milliamperes continuously. This has required a redesign of the control equipment and construction of two large oscillators.

The importance of the research will be better understood when the results can be published after the war. The problems involved concern commercial aviation after the war as well as military aviation at present. These problems are especially acute in flights between the Minneapolis Airport, Alaska, and the Far Eastern coast of Asia. They involve safe commercial aviation to Siberia, China, and Japan by Pacific Ocean flights after the war. Our annual contract involves an operating cost of nearly \$25,000.—J. M. BRYANT, *head, Department of Electrical Engineering*.

Pratt and Whitney Fellowship Program—The Pratt and Whitney Fellowship Program began on June 15, 1943 and ended on June 15, 1944. A curriculum of four continuous quarters of academic work was proposed to train girls as engineering aides for the Pratt and Whitney Company, manufacturers of aircraft engines.

Eligibility requirements for the fellowships stipulated that the applicants either be college graduates of 1941, 1942, 1943, or have completed the junior year in college by June 17, 1943.

The fellowships were worth approximately \$1,500. Slightly less than \$1,000 was to be paid directly to the student, the remainder to be used to defray instructional costs and fees.

No prerequisites—The applicants were not required to have any special training in mathematics or the sciences. However, aptitude for this work was essential. The curriculum was designed to provide the necessary training so that the student would become proficient in the technical work of the company's plant. Aptitude tests were given by the University Testing Bureau.

Twenty students were accepted on the basis of tests and interviews by the University Testing Bureau and an interview by a representative of the Pratt and Whitney Company.

Curricula—The curricula for these students consisted mainly of courses selected from the regular curricula as given in the Institute of Technology. The exceptions consisted of special courses set up to assist the students in qualifying for special subordinate positions on the engineering staff of the company. These were special courses in drawing, mechanics, strength of materials, materials testing laboratory, industrial and mechanical engineering, metallurgy and metallography.

Special comment should be made regarding the visit of all the Fellows to the East Hartford plant of the company. This visit took place the week of September 20, 1943, and was for the purpose of acquainting the Fellows with the work of the plant and the objects to be achieved in their training. The students were accompanied by Professor Edward S. Loye, the university co-ordinator for the course at the time.

Seventeen Fellows completed the course satisfactorily and were employed by the company as assistants to various members of the engineering staff.—GEORGE C. PRIESTER, *co-ordinator*.

Engineering, Science, and Management War Training Courses—The War Training Program at the University of Minnesota was initiated in 1940 in co-operation with

the U. S. Office of Education under special acts of Congress "providing for the training of defense workers and designed to meet the shortage of engineers, chemists, physicists, and production supervisors in fields essential to the national defense." The following report includes courses started after July 1, 1942 and before July 1, 1944.

Students—The majority of the students taking these courses were employed in industries essential to the war effort or were preparing for such positions. Minimum entrance requirements were high school graduation or equivalent education, with additional prerequisites dependent upon the nature of the course. Some elementary courses required college mathematics, while more advanced courses required college degrees. Mature men and women predominated but ages varied from 18 to 60 years. Women enrolled during the first year of the biennium totalled 803 and for the second year, 807.

Classes were organized for all types of employees in war industries from top management to those preparing for positions as group leaders. Registrants included plant superintendents, accountants, personnel directors, statisticians, engineers, production supervisors, safety directors, designers, draftsmen, inspectors, foremen, group leaders, union stewards, and persons preparing for supervisory positions. Many students interested in self-improvement took a number of related ESMWT courses and development of their ability was evidenced by rapid advancement to positions of greater responsibility.

Regularly enrolled university students are not eligible for admission to ESMWT classes unless they are to enter a war industry at the close of the current university quarter. No university students were admitted except in courses in ultra-high frequency techniques which were offered to senior electrical engineers by special request of the War Department to prepare them for highly technical and specialized work in radio and radar.

Purpose—ESMWT courses are offered for the sole purpose of contributing to the production of essential war commodities by providing training in the fields of engineering and production management. The basic sciences of chemistry, physics, and mathematics commonly associated with engineering are also included. Some courses are designed to enable unemployed persons or those employed in nonessential industries to take positions in war industries; some are designed to train women to replace men; others are intended to enable those already employed in war industries to become more efficient in present jobs or to move into more important positions in their present organizations.

Because of the urgent need for a knowledge of radio by men in the armed forces, special provision was made in 1942-43 for courses in fundamentals of radio for men in anticipation of their induction. In short courses in radio 839 students were enrolled under the supervision of the Electrical Engineering Department. The demand for inductees with some radio background was completely filled by radio courses given under the ESMWT program in the various schools throughout the United States and radio courses for this purpose are no longer given.

Special provision was made also for short courses in mathematics and physics to alleviate a shortage of high school teachers in these subjects. Enrollees were certified by the school authorities as to the need for the teacher and her qualifications for such work. One hundred fifty-three were enrolled in these classes on the campus and 229 were enrolled in correspondence courses written for this purpose and furnished by the U. S. Office of Education. Correspondence courses were channeled through the Correspondence Study Department of the University.

Courses Offered—ESMWT instruction is of college level, occasionally of graduate level, but does not carry college credit. The instructional material seldom parallels that in any regular college course because it is designed to meet an immediate specific need rather than to provide a broad educational background. Certificates indicating that the student has completed a certain number of hours of training in a specific subject are issued to those who complete the work with a grade of C or better.

Each course is designed to meet a specific need, often for a particular industry. Typical examples of courses given for industries are: Marine Drafting and Marine Electricity, for the shipbuilding industry; Iron Ore Analysis and Mine Surveying, for the mining industry; Aircraft Wood-Working and Airplane Structural Analysis, for the aircraft industry; Chemistry of Powders and Explosives and Ordnance Inspection, for the War Department; Design of Railroad Mechanical Equipment and Traffic Management, for the railroads; Industrial Accounting and Cost Accounting, for the knitting industry; Electronics and Industrial Electricity, for manufacturers of electrical equipment; Heating and Ventilating and Refrigeration, for manufacturers of equipment for food preservation.

Students from 55 major war industries were enrolled in these courses in 1943-44, the maximum number from any one industry was 258. Representatives of the industry

and one or more of the university staff co-operate in planning the course content. A member of the faculty of the department in which the major portion of the work is given is in educational charge of each course but need not act as one of the instructors. Many instructors from industry are employed in addition to regular staff members. Where courses are offered off the campus, staff members of other colleges and junior colleges are often engaged. Instructors employed from the university staff totalled 85 for the first year of the biennium and 81 for the second. Outside instructors totalled 104 and 85, respectively.

Pari-Time Courses—The courses are classified as part time or full time. Part-time courses constitute the major portion of the ESMWT program. They vary in length from 8 weeks to 20 weeks, and with a few exceptions meet one to three evenings per week for a class period of from 2 to 4 hours. Most of these classes met on the campus: Classes for the A. O. Smith Corporation, Munsingwear, Inc., Minneapolis-Honeywell Regulator Company, Northwest Airlines, Inc., American Steel and Wire Company, Electric Machinery Company, and the Walter Butler Shipbuilders met at the plants in classrooms provided by the industries. The average length of evening courses for 1943-44 was 78 hours. Evening classes have been conducted continuously during the 24 months of the biennium.

Part-time courses were offered also in Albert Lea, Brainerd, Chisholm, Cloquet, Crosby, Duluth, Eveleth, Hibbing, Moorhead, Owatonna, Rochester, St. Paul, St. Peter, Virginia, and Winona. In these localities faculty members of Gustavus Adolphus College, Macalester College, St. Thomas College, and the respective junior colleges were frequently employed as instructors, and classes were held in the college buildings.

Full-Time Courses—The term "full time" indicates that students spend the entire working day, generally 40 hours per week, in class. These courses varied from one week to six months in length. A full-time course in Pre-radar was conducted by the Department of Electrical Engineering. Students were selected by the Seventh Service Command from various preparatory schools under its supervision. These trainees were civil service appointees and were paid regular salaries for attending school 40 hours per week.

This course started November 9, 1942 with 40 students. It was three months in length and a class of 40 students was admitted each month so that 120 students were in training continuously. This program closed September 25, 1943. After 8 classes, totaling 322 trainees, had completed the training, students were assigned to civil service positions, to the armed forces, or to advanced schools for further training in the testing, manufacture, or operation of radar detecting equipment.

Two full-time courses for Engineering Aide Trainees (aircraft radio) were also given by the Electrical Engineering Department. Each course ran 6 months. The first course started October 11, 1943 and the second started June 19, 1944. These courses were given to prepare women for technical positions in aircraft radio service. Sixty young women were enrolled in each of these courses, most of them college graduates—all of them with special aptitude and previous training in mathematics and the physical sciences. They were selected from Minnesota, Iowa, the Dakotas, and Wisconsin by a special representative from Wright Field, Dayton, Ohio. After completing the course at Minnesota, they were sent to Wright Field for a few weeks of special training and were then assigned to positions at the field, in Washington, D.C., or with some other technical branch of the aircraft radio service.

A full-time course in Quality Control by Statistical Methods was given by the School of Business Administration. This course started October 2, 1943 and continued for 8 days. Thirty business executives from the Northwest enrolled in this course. The faculty and the School of Business Administration were assisted by lecturers from the Office of Production Research and Development, and the Bureau of the Census, Washington, D.C., and several Northwest specialists in this field.

Enrollment data will be found in the report of the Office of Admissions and Records elsewhere in this volume.

When the ESMWT program first started, the majority of enrollees were preparing themselves for work in war plants. There has been a definite trend toward in-service courses during the past year. Approximately 90 per cent of the students enrolled in 1943-44 were employed in war industries. A large portion of the 10 per cent preparing for employment were women taking courses in engineering drafting or preparatory courses requested by the U. S. Civil Service Commission. Organized labor as well as management has shown an interest in instruction for the purpose of upgrading employees. Supervisors and union stewards have attended common classes in such subjects as Motion Study, Time Study, Production Methods, and the like. A greater number of classes has

been organized for individual industries. Closer co-operation between the university faculties, management, and labor has been achieved. University staff members now have a more intimate knowledge of the problems of industry; management has a clearer appreciation of the services a university can offer. Numerous instances of continuing promotions of ESMWT enrollees, some to high executive positions, and the increased requests by war industries for specialized courses are the best evidence of the contribution of this program to the war effort.—B. J. ROBERTSON, *institutional representative*.

Aeronautical Engineering Training Programs—During the biennial period, 1942-44, the Department of Aeronautical Engineering participated in the following training programs: Civilian and War Pilot Training Program, engineering course for cadettes of the Curtiss-Wright Aircraft Corporation, Naval Aeronautical Engineering School for U. S. Naval Reserve officers, and U. S. Army Air Corps Pre-flight Training Program.

The Civilian Pilot Training Program, later changed to the War Training Service Program, has been conducted by the Civil Aeronautics Administration through the Department of Aeronautical Engineering since the inception of that program in 1939. The department head was director of the program's flight and ground instruction. From June, 1941, until the end of the program—January, 1944, a total of approximately 822 students received full-time flight and ground work training in primary, secondary, and instructor's flight courses. Actual flight training was given by a flight contractor. This period of extensive and intensive training was completed without casualties of any kind to the students or instructors, thus continuing, since 1929, the casualty-free flying record under the supervision of the University of Minnesota.

The ten-month engineering cadette program for the Curtiss-Wright Aircraft Corporation lasted from February 15, 1943 to December 15, 1943. The 102 girls enrolled were trained in basic and aeronautical engineering subjects in order to be qualified for positions as engineering aides in the Curtiss-Wright factories. Their performance record in the positions they held during the year immediately following their graduation has been very satisfactory, according to statements made by their employers.

In the summer of 1941 the U. S. Navy Bureau of Aeronautics instituted a Naval Aeronautical Engineering Training School of eleven weeks' duration for junior officers of the U. S. Naval Reserve (AVS-7). The program was in progress at the University of Minnesota from July 1, 1941 to September 10, 1941, during which time 34 officers were enrolled. The same course was repeated in the summers of 1942 and 1943 (June 17-September 4, 1942, and July 26-October 16, 1943), with total enrollments of 78 and 81 officers, respectively. The course was designed to train officers, having different engineering degrees, in subjects pertaining to the design, maintenance, and operation of aircraft in order that those officers might qualify for administrative positions with aircraft maintenance units of the U. S. Navy.

The U. S. Army Air Corps pre-flight training was initiated on March 15, 1943, and continued until approximately May 20, 1944. A total of 1,879 students received their elementary flight training and ground training pertaining to flying under the supervision of the Department of Aeronautical Engineering. Each student received ten hours of flying given by a flight contractor. All groups completed their training without any casualties and finished their curriculum on time despite the adverse weather conditions and the fact that it was necessary for the University to create and provide new flying facilities.

The University also provided flying facilities for other colleges at the recently opened University of Minnesota Airport, New Brighton, Minnesota.—JOHN D. AKERMAN, *co-ordinator*.

War Production Work, Mechanical Engineering Department—During the early part of 1942, when many of the Twin City manufacturing plants were being converted to war production work, and new plants such as the Twin City Ordnance Plant and the Northern Pump Company were starting war production, there was an acute shortage of manufacturing facilities and of skilled mechanics for the production of tools, dies, and machine parts for operating these plants and also for producing many of the items required. A survey of the equipment and facilities in the Mechanical Engineering Department at the University showed that many of the machines in the departmental shops as well as heat treating and other equipment could be used to an advantage to supply these needs.

Colonel Hendricks, who was then the commanding officer at the Twin City Ordnance Plant, officially requested the University to assist them with their problems, using such shop equipment as was available in the manufacture of tools, dies, and machine parts. The Regents of the University gave favorable consideration to this request, taking precau-

tions not to place the University in competition with Twin City industrial shops equipped and able to do the amount of work required. This request from the Twin City Ordnance Plant was followed by similar requests from Northern Pump and other companies holding contracts for Navy and Army equipment. During the summer of 1942 and for about one year thereafter, a considerable volume of machine work was conducted in the Mechanical Engineering Shops. In every case, the jobs were taken at the direct request of either the Army, the Navy, or the War Production Board, and in each instance care was taken not to interfere with the work of regular, established industries. During the peak of the work, the shops were operated twenty-four hours per day. A large percentage of the work was done by students working on a part-time basis and there was the equivalent of twenty full-time employees. The amount of work has gradually tapered off, and little is expected to pass through the shops during the next few months.

The type of work was, for the most part, that requiring special skill or special machines which were available in the university shops. It consisted of making tools, dies, and the parts used by the Twin City Ordnance Plant, the Northern Pump Company, and several local manufacturing plants. There was also a considerable amount of direct production carried through the shops using some of the automatic machines, screw machines, turret lathes, and the like, to assist local industries in carrying out their army and navy contracts.

In addition to the parts which were manufactured, the mechanics constructed and calibrated many inspection gauges and contributed time and work to special manufacturing problems which arose in various local industries. The rates charged for the work were in line with those charged by local shops in order not to be competing with them. However, the object was not to make a profit, but rather to assist in war production.

While this manufacturing program was not strictly in line with the usually conceived purpose of university shops, it was a direct aid to the war production and a means of putting machines to work which might otherwise have been idle. It did not in any way interfere with the instructional program carried on in the University. In many ways it supplemented the instructional work and the students had an opportunity to observe machines in production and in many cases were employed on the job. The quality of work turned out was such that a high percentage of acceptance was obtained and this resulted in a rather urgent demand from industries for assistance.

While the department now looks back with pride on the various lines of production and the types of parts which were produced, a large amount of credit is due to the shop personnel and the trained mechanics who were employed in the shops.—FRANK B. ROWLEY, *head, Department of Mechanical Engineering.*

War Research—At the time the United States entered the war, and even before, the federal government had begun to call upon the universities of the country for help in solving basic fundamental scientific research problems related to the war. These problems came from the various branches of the government most directly involved in the war and required quick solution to be of value. Beginning in December, 1940, the University of Minnesota was called upon to help solve some of these problems. As the war has progressed, these requests have increased.

On June 30, 1944, 27 contracts totaling \$574,000 between the Office of Scientific Research and Development and the University had been completed or were in progress. These contracts provided that the University could carry on this research without cost to the University. Although these researches are of a confidential nature, it will do no harm to mention the general fields involved. They include studies in war surgery, blood plasma, healing of fractures, physics of sound, diet and nutrition, development of rations for the armed forces, diseases common to the fighting areas, explosives, development of aircraft equipment to provide greater protection and comfort to pilots, development of equipment for life rafts, and others.

In addition to grants from the Office of Scientific Research and Development, direct requests have come from other government agencies for the solution of such problems as those involved in rubber research for Rubber Reserve and in the production of penicillin for the War Production Board. Two contracts, totaling to date, \$181,000 have been involved.

In addition to the formally organized war research mentioned above, other projects with war-related significance have been under way. On the Agricultural campus, for example, problems centering on the all-important question of maintaining an adequate food supply are the objects of special attention and research. Closely related to this problem has been the distribution of labor throughout the state. Labor shortages in agricultural areas in certain parts of the state have been alleviated through the activities of this program.—LAURENCE R. LUNDEN, *comptroller.*

EVENTS AND ACTIVITIES.

ACTIONS OF THE BOARD OF REGENTS

University Labor Policy—Under date of June 5, 1942¹, the Public Building Service Employees Union, Local 113, filed with the Regents proposals relating to wages, hours, working conditions, and to collective bargaining and labor relationships including the following paragraph:

First, that an impartial commission familiar with labor relations be set up and established for the entire length of any future schedule as is practiced in most all industries coming under the Labor Relations Act. We are cognizant of the fact that the University of Minnesota is exempt as to the compulsory features of this Act, but we sincerely believe that you would not expect other private industries to abide by it and that you disregard it entirely. The City of Minneapolis, County of Hennepin, Ramsey County, and the United States Government itself has maintained and recognized collective bargaining and labor relationship as above defined in most all cases, and who like you are also exempt from the Wagner Act and the Minnesota Labor Relations Act.

Following receipt of this the Regents held six hearings with representatives of the Union. Most of the discussions at these hearings revolved around collective bargaining and arbitration. The Regents in these discussions maintained the position taken by them as set forth in their action of December 17, 1937 which reads as follows:

"The University of Minnesota has always maintained the right of any employee or group of employees or their authorized representatives to discuss with responsible administrative officials, including the Board itself, any matters pertaining to working conditions, wages, or employment at the University, and it will continue to maintain this right of the employees," under which action it is clear that every employee of the University possesses the inalienable right to be represented in his employee relationships by himself or by a representative or representatives of his own choosing; and further that every employee possesses the right to take up individually his own grievances or problems regardless of any organizational affiliation.

In October, 1942, the Union called a strike and was out for a day and a half. Governor Stassen intervened. The first question asked of Governor Stassen by the Regents when he met with them was whether or not it was the policy of the state to enter into collective bargaining and arbitration agreements with unions. His answer was that it was not. He referred to some agreement in the Highway Department which had been canceled. After conferences with the Union, the Regents proposed certain changes in methods of handling grievances and in rates of pay and took the necessary action to make these effective. In the statement of policy issued at this time, the Board of Regents stated:

a. An employee shall be free to join any lawful organization but the right to work in the University cannot be dependent upon membership or non-membership in any organization.

b. Employees must realize that the functions of the University as a public constitutional corporation involving the public welfare are necessarily continuous and no deliberate and concerted disruption of them can be accepted as a proper method of settling employment problems.

It was not until June, 1943, that the new grievance machinery was used. In the fall of 1943 the Regents endeavored to determine in what respects the machinery was unsatisfactory. During the week preceding October 12, 1943, it appeared, as a result of a meeting with union representatives, that the Union desired changes which would call for a report to the Union of all grievances of all employees, whether members of the Union or not, and the establishment of arbitration machinery. The demand of the Union at this time was as follows:

1. That all grievances of all University employees in the service groups (Group 9000) regardless of membership or non-membership in Public Building Service Employees Union Local No. 113 shall be presented only to the Grievance Committee.

2. That if any grievance in classes 1 to 4 is not disposed of by the Director of Non-academic Personnel to the satisfaction of Public Building Service Employees Union Local No. 113, then it may be referred by either party for recommendation directly either to an arbitration committee (membership, one named by the Union, one named by the University, and one selected by the two thus named) or to the State Labor Conciliator without appealing either to the Civil Service Committee or to the Regents, as the plan of the Regents now provides.

On October 12, 1943, the Labor Committee of the Board of Regents met with the Union before the U. S. Conciliation Service which, at the request of the Armed Services, had intervened in the negotiations. At this meeting the Union presented what it stated were its demands. These were in the form of an employment agreement calling for a signed

¹ Some of the material involved in this section antedated the 1942-44 biennium, and some extends over into the biennium which began July 1, 1944. However, in order to secure completeness and because of the lateness of publication of the current report, it has been included herewith.

contract and collective bargaining. This proposed employment agreement provided for arbitration machinery in the following language:

ARTICLE II

In any controversy arising from the interpretation of or adherence to the terms or provisions of this contract, an attempt of settlement shall be made as soon as possible between the Employer and the Union. If such controversy cannot be settled promptly by the Employer and the Union, such dispute shall be referred to a Board of Arbitration, consisting of two members selected by the Employer and two members selected by the Union. In the event this arbitration committee cannot agree to an adjustment of such dispute or grievance within five (5) working days, the four so selected shall select a fifth member who shall serve as an impartial chairman. In the event this arbitration committee cannot agree upon the selection of a fifth member within forty-eight (48) hours, application shall be made to the U. S. Labor Conciliator to appoint a qualified person to act as the fifth member.

The decisions of the fifth person, or impartial chairman so designated, shall be rendered on all cases as his final determination and as a recommendation only to all parties concerned. Should arbitration decision be acceptable to all parties, and should any employee or employees as designated under this contract and who have found to have been discriminated against under the provisions of this contract, such employee or employees shall be reimbursed for any loss of wages suffered as a result of such discrimination. (All disputes shall be settled within ten (10) days.)

The Regents took the following position relative to this proposal:

The Regents have included as Part IV of the Civil Service plan procedure for consideration and settlement of grievances of Civil Service employees. This procedure does not provide for the establishment of any arbitration or appeal agency *outside* of the University. The State Legislature has not provided for other state employees any outside arbitration or appeal agency on a recommendatory or other basis. The Regents therefore must take the position that the establishment of such an arbitration or appeal agency outside of the University organization is not in accord with existing state policy. The Regents, however, are anxious that full, fair, and prompt consideration be given to all grievances. The present rules provide that after disposition of a grievance by the Director of Civil Service Personnel the first appeal by any party shall be made to the Civil Service Committee; further appeal shall be from the Civil Service Committee to the Board of Regents. Although the use of the Civil Service Committee as a first appeal agency parallels the use of the State Civil Service Commission as an appeal agency for other state employees, the Regents, fully cognizant of the added duties thereby imposed, are willing that its membership be made the first appeal agency. To this end the Regents propose that the procedure for handling grievances be amended to provide that appeals from the Director of Civil Service Personnel be made directly to the Labor Committee of the Board.

The opinion of the Attorney General of Minnesota on the proposed employment agreement is perfectly consistent with legal opinions given elsewhere in response to this question, and also with prevailing public policy. For example, President Franklin D. Roosevelt in a letter on August 16, 1937 to Luther C. Steward, president, National Federation of Federal Employees, said, "All Government employees should realize that the process of collective bargaining, as usually understood, cannot be transplanted into the public service," and he also added, "Since their own services have to do with the functioning of the Government, a strike of public employees manifests nothing less than intent on their part to prevent or obstruct the operations of Government until their demands are satisfied. Such action, looking toward the paralysis of Government by those who have sworn to support it, is unthinkable and intolerable."

Wherever consistent with good Civil Service practices, the Regents endeavored to incorporate into the Civil Service rules pertinent provisions of the employment agreement as had been suggested by the Attorney General. In refusing the arbitration machinery proposed in the employment agreement, the Regents under date of November 22, 1943 reported to the U. S. Conciliation Service in part as follows:

After considering this proposal again the Regents are of the opinion that it cannot be accepted. Their opinion is based upon these considerations. The proposal involves the establishment of a permanent continuing board of arbitration with representation outside of the University. The State Legislature has not provided for other state employees any outside arbitration or appeal agency on a recommendatory or other basis. The State Civil Service Plan, like the University Civil Service Plan, makes no provision for any outside arbitration board. So far as the Regents are aware no federal or state civil service makes provision for this kind of arbitration machinery. The State Labor Relations Act which does provide arbitration machinery specifically excludes state employees.

The Regents, therefore, must take the position that the establishment of such an arbitration or appeal agency with membership outside of University organization is not in accord with existing state policy. The proposed departure from the public policy of the state here involved is a matter for primary consideration by the Legislature. A declaration by the Legislature of a change in the public policy of the state would deserve and receive the thoughtful consideration of the Regents in their governing of the University.

The Regents wish to state again that they desire that full, fair, and prompt consideration be given to all grievances and to renew their suggestion that their membership, through their Labor Committee, is willing to act as the first appeal agency in the handling of grievances.

At midnight on January 13, 1943, Public Building Service Employees Union, Local No. 113, for the second time went on strike which lasted through the night of January 18. In a public statement relative to the strike, President Coffey said in part:

The basic issues as represented by demands of the Union involve recognition of this Union as the collective bargaining agency and the establishment of arbitration machinery. The Regents cannot accept these demands for the reason that they are contrary to the established policy of the State of

Minnesota of which the University of Minnesota is a part. Any departure from such established public policy in the matter of recognition of unions and the establishment of arbitration machinery is a matter for primary consideration by the Legislature and not by the Regents. No agency of this state is granting this kind of recognition to any union nor does any agency of the state have arbitration machinery of the type demanded. Neither does the State Civil Service provide for them. If state public policy or civil service procedures of Minnesota are to be changed, the Regents cannot assume the responsibility for establishing the precedent. The Legislature should first consider such changes.

The strike was settled through modification of existing grievance machinery which called for the appointment of an impartial investigator to report findings and recommendations to the Regents in any grievance referred to him for consideration. The Regents' resolution of January 18, 1944, sets forth the conditions of the settlement of the strike in this language:

In view of the recommendation of the Governor, and in an effort to terminate the present strike, it is proposed:

1. That the Union withdraw its demand for a written collective bargaining agreement.
2. That for an experimental period of nine (9) months, unless such period is terminated or extended by mutual agreement, the civil service procedure of the University for the handling of grievances be amended to provide that appeals from the decision of the Director of Civil Service Personnel shall be made directly to the Labor Committee of the Board in lieu of the Civil Service Committee, with the understanding that any interested party, including the employee or his authorized representative, which may be Public Building Service Employees Union, Local No. 113, A. F. of L., shall have the further right to appeal from the decision of the Labor Committee to the Board of Regents. The Board, before hearing the appeal from the decision of the Labor Committee and at its next regular meeting, shall request the Governor of the State, in writing, with copy of such request to the Union, to appoint an impartial investigator, who shall meet with the parties concerned, review the facts involved, and file a report and recommendation with the Board within forty-five (45) days after the appeal and furnish a copy to the Union, which report and recommendation shall become a part of the record at the time the Regents give final consideration to the matter. Any interested party may file a written argument upon the report and recommendation of the Investigator before the matter is considered by the Board.
3. The Regents will direct that notice of public hearings held by the University Civil Service Committee on proposed additions to or revisions of civil service rules be mailed to the Union ten (10) days prior to such hearing.
4. That for an experimental period of nine (9) months, unless such period is terminated or extended by mutual agreement, the Union shall have the right to present to the Labor Committee of the Board of Regents written proposals with regard to wages, hours, and working conditions or any other matters of general policy affecting civil service employees, and to discuss such proposals provided a request for a hearing is made at least ten (10) days before any scheduled meeting of the Labor Committee of the Board of Regents, with the understanding that the Union shall have the further right to appeal from the decision of the Labor Committee to the Board of Regents. The Board of Regents, before hearing the appeal from the decision of the Labor Committee and at its next regular meeting, shall request the Governor of the State, in writing, with copy to the Union, to appoint an impartial investigator, who shall meet with the parties concerned, review the matter involved and file a report and recommendation with the Board within forty-five (45) days after the appeal and furnish a copy to the Union, which report and recommendation shall become a part of the record at the time the Regents give final consideration to the matter. Any interested party may file a written argument upon the report and recommendation of the Investigator before the matter is considered by the Board.

Under this procedure three impartial investigators have been appointed. The first was Ward Lucas of Winona. The cases referred to him were individual grievance cases. On June 10, 1944, Governor Thye requested Frank Gallagher of Waseca, to act as an impartial investigator on some seven (7) individual grievance cases and on certain proposals by Local No. 113 covering most of the provisions of the previously proposed employment agreement. On September 1, 1944, Mr. Gallagher filed a report covering only the grievance cases and concluded with this statement:

That the Board of Regents follow the policy adopted by the State of Minnesota and obtain the services of some competent organization to make a comprehensive survey of the wage classifications and working hours, conditions of the academic and non-academic workers of the entire University so that this survey can be completed before the meeting of the next Legislature in January with the suggestion that this survey be made for the purpose of improving the salary, classification, and working hours and conditions of said employees.

Your Investigator further recommends that if your Board should decide to make a general survey of the Civil Service Rules as recommended and if the above Union still wants the undersigned to make findings and recommendations on any of the proposed Articles submitted for consideration that part of their appeal in this matter remain open and that your Investigator be given at least an additional sixty days time to further study and consider the matters. I do not want to bar the Union from their right to have your Investigator make findings and recommendations in the matters appealed by them.

The Union objected that Mr. Gallagher had not fully completed his assignment and requested that he file a report governing wages, hours, and working conditions. Subsequently Mr. Gallagher filed his recommendations, and the action of the Regents relative thereto was set forth in their minutes of December 8, 1944. Particular attention is invited to the Union proposal designated Article I (a-1). In response to the Union proposal that this Union be "recognized as the representative of all employees of the University within the service group of the non-academic employees in all matters relating to wages, hours, working conditions or employer-employee relationships" and to Mr. Gallagher's

recommendation that this be provided in the rules with the further provision that "any employee may represent himself or herself if he or she so chooses in any matter pertaining to grievances, wage, hours, or working conditions or any other matters regarding employer-employee relationships," the Regents stated in part as follows:

The recommendation that Public Building Service Employees Union, Local 113, A.F.L. shall be recognized as the representative of all employees of the University within the service (9000) group fails to recognize the fact that in the opinion of the Regents each employee has a right to choose his or her own representative.

The Regents, therefore, accept only that part of the Investigator's recommendation which provides that any employee may represent himself. For the reasons previously stated, the Regents maintain the position that an employee has the right to choose his own representative, which representative may be Local 113. It is the belief of the Regents that this right is given employees as expressed by University Civil Service Rule 2A, Part IV, but to insure that there shall be no misunderstanding, it is proposed that this rule be amended to set forth that right unequivocally.

To avoid misunderstanding the Regents proposed modification of its existing rule to read as follows:

Any employee or his authorized representative (which may be a union) shall have the right at any time to present in writing and to discuss with the director of civil service personnel any facts pertaining to any grievance of any kind, or to any desired change in wages, hours, or working conditions; provided, however, that grievances involving wages, hours, vacation and sick leave must be presented within thirty (30) days after the pay day for the period in which the alleged grievance arose.

As the result of a threat to strike, the Governor called a meeting in his office at which were present the Union's committee and the committee of the Board of Regents. The Regents restated at this meeting their willingness to recognize this Union as the representative under civil service rules of its members and any other university employee who designated this Union as his representative. The Regents further indicated a willingness to incorporate this in their Civil Service Rules. This matter was referred for procedure and language to a committee to consist of a representative of the Regents, a representative of the Union committee, and a representative of the Attorney General's office. As a result of conferences between Mr. Youngquist, representative of the Board, and Mr. Goldie, representative of the Union committee, it was agreed that President Coffey should secure from the Board authority to address the following letter to Public Building Service Employees Union, Local No. 113:

I have been authorized by the Board of Regents to advise you that Public Building Service Employees Union, Local No. 113, A. F. of L., is recognized as the authorized representative in matters concerning wages, hours, and working conditions under the provisions of Part IV of the Civil Service Rules, of employees of the University who are members of Local 113 and such other employees who may authorize it in writing to represent them.

The Regents have indicated that there was no objection on their part. The Union has postponed further consideration until the scheduled meeting with the Governor which is to take place prior to January 28, 1945.

Pertinent to this discussion is a recent opinion of the Baltimore Circuit Court relative to a labor contract between the City Public Works Department and Local 825, A. F. of L. which denied the Department the right to bargain with any other organization.

The provision bringing about invalidation of the original contract, the court said, "would seem to establish the union in a preferred position expressly denied to any other organization; to deny to the employes . . . the right to belong to an organization and to deal collectively . . . except through the union. . . ."

"The contract would not be objectionable if it merely gave to the union the right to act as bargaining representative for its members employed in the department of public works, saving to the other employes of the department the full right to deal with the department on their own behalf either singly or collectively."

Administrative Reorganization—Some important changes in the administrative organization of the University were made during the biennium. The Board of Regents at the June 12, 1943 meeting approved the following resolution:

Resolved that the duly elected Chancellor of the University of Minnesota shall also be known and designated as the President of the University of Minnesota;

Resolved further that there is hereby created the office of vice president, Academic Administration, and the office of vice president, Business Administration, the incumbents to perform such duties and undertake such responsibilities in the administration of the University of Minnesota as may be assigned to them from time to time by the President of the University with the approval of the Board of Regents.

At the same meeting the Board, on the recommendation of the president, appointed Malcolm M. Willey as vice president, Academic Administration, and William T. Middlebrook as vice president, Business Administration.

President Coffey, in a formal statement announcing the changes stated:

The general administrative task of the University on both the academic and the business side has increased enormously in recent years and with it has come an ever greater burden on the president. The actual organization of the University to meet the changes in complexity and growth has not kept pace with the changes. This has been true of other large universities also, and at some of them administrative reorganization has been undertaken that parallels in large measure the steps that have now been taken here. For many years, in fact dating back to the administration of President Coffman and continuing with President Ford, the Regents have been aware of the problem, and from time to time it has been the subject of discussion. It has been recognized by the Board that an educational institution is as much in need of sound organization as any other large institution. The changes which the Board has approved will, it is believed, provide this organization, through a better definition of the duties and functions that the new officers have been performing and will continue to perform. The eventual result will be to free the president personally from an enormous and almost overwhelming burden that now comes to his desk and consumes effort that might be spent more advantageously in developing other aspects of the University's program. It will give the president more time for general educational leadership, and for developing a better understanding with the public of the work of the University which is so important in a state university.

It is the expressed will of the Regents that the creation of the two vice presidencies shall not modify the lines of relationship now existing between the president and the educational departments. The deans and directors of the several colleges and schools, as well as University Senate committees, will continue to be directly responsible to the president. There are, however, many separate offices and unattached university units which, as time goes on, can become a responsibility of the vice president of Academic Administration. The academic vice president will also be able to assist the president as a staff officer in many matters relating to the internal functioning of the University. Likewise, on the business side there are changes that seem desirable and which will achieve a greater economy of effort, and also permit on the part of the vice president of Business Administration greater time for consideration of the many questions involving general financial policy. No complete blueprint of organization has been prepared. Rather, it is my intention to study the many problems that are involved in a better integration of our internal administrative machinery as it directly involves the president's office, and present them to the Board for consideration.

I am confident that the changes which the Board has made come at an opportune time. Our administrative problems grow more difficult every day, in part because of the natural growth of the University, and more immediately because of the war programs that are now being carried for the Army and the Navy. Furthermore, we must look forward to the time when the war is over and we are suddenly called upon to meet administrative problems of even greater complexity and magnitude. Neither the Board nor I have felt that we were organized to meet these effectively or efficiently. The action of the Board in creating two vice presidents, both responsible directly to the president, provides an administrative framework within which we can gradually get ready to undertake the postwar job we shall be called upon to do, and at the same time it will permit us to move with greater surety in meeting the problems we face in our present day-to-day activities.

Later, at the July 9, 1943 meeting, the Board of Regents voted to make the following specific organizational changes proposed by the president to further implement the action of the month before:

Business Administration—The major units and activities of business administration are (1) accounting, (2) bursar, (3) investments, (4) purchase and stores, (5) field auditor, (6) buildings and grounds—operation, (7) buildings and grounds—new construction, (8) service enterprises, (9) non-academic personnel, (10) real estate and rentals, and (11) insurance and retirement.

After an examination of the Rules and Regulations of the University, Regents Minutes, and other sources setting forth the duties assigned by formal action to the comptroller, I should like to recommend for your consideration:

1. That the office of the comptroller be continued in the business administrative organization
2. That the comptroller under the general supervision of the vice president, Business Administration, be responsible for the following units and activities: (a) accounting, (b) bursar's office, (c) investments, (d) purchase and stores, and (e) field auditor.

Academic Administration—In the Academic Administration Organization Charts (March 1, 1940) (filed supplement to the minutes, page 3148) the over-all academic administration is shown to embrace:

1. Activities and departments immediately assigned to the university dean and assistant to the president
2. Separate offices and unattached departments
3. Colleges and schools
4. University Senate committees
5. Special committees

All of these, except (1), are diagrammed as reporting directly to the president, and are the source of the vast volume of detail that has gone to that desk. To achieve the purposes in mind in the creation of the vice president, Academic Administration, these recommendations are made:

1. That the departments and units now assigned to the university dean and assistant to the president be assigned to the vice president, Academic Administration.
2. That with certain exceptions the separate offices and unattached departments be placed under the general supervision of the vice president, Academic Administration. The exceptions, which would still report directly to the president are:
 - a. Alumni Office
 - b. Institute of Child Welfare
 - c. Department of Physical Education for Men
 - d. Department of Physical Education for Women
3. To the list of special committees shown in the chart, others have been added. Some of those listed have been discharged. It is therefore recommended that the president be authorized by the Board to study these committees and the tasks assigned to them, and then to retain or to assign to the appropriate vice president responsibility for such of them as are now active.
4. That the Center for Continuation Study, which is now budgeted with the General Extension Division, be made a part of that unit administratively.

The recommendations made here involve no changes in the two sections of the organization chart "Colleges and Schools" and "University Senate Committees." The lines of relationship involving them and my office are untouched.

Minnesota Institute of Research Established—The 1943 Legislature provided for the establishment of a Minnesota Institute of Research to "be organized and operated under the control and supervision of the Board of Regents of the University" and for the establishment of a research fund under the same control and supervision. "The purpose of the institute," according to the act, "is to assist in general research and in the discovery, development, promotion, and co-ordination of methods for the utilization and development of the products and natural resources of the state through scientific research, and to aid further studies for the purpose of developing the industries and resources of the state." In consequence of this action, the Board of Regents at the November 20, 1943 meeting voted to approve the following recommendations of President Coffey:

1. That the Minnesota Institute of Research be a unit of the Graduate School.
2. That the unit be under the direction of a director, to be recommended by the dean of the Graduate School and approved by the president and the Board of Regents.
3. That there be established an advisory committee to the director to be nominated by the president with the advice and counsel of the dean of the Graduate School.
4. That the funds provided by the Legislature be used for the promotion of research contemplated in the stated purposes of the Institute.

New School Created—The Board of Regents on December 10, 1943, changed the designation of the Department of Preventive Medicine and Public Health to the School of Public Health. This change does not in any way affect the relationships between this unit and other parts of the University. It remains a unit of the Medical School co-ordinate with the other departments.

Posts Combining Academic and Non-academic Duties—The Board of Regents on September 11, 1942, adopted the following principle for incorporation in the Rules and Regulations covering personnel:

A position which combines duties that are academic with duties that are administrative or non-academic may carry both the academic and the administrative or non-academic titles of the respective classes as shown in the official Class Specifications provided that the class title of the primary function of the position shall appear first in the position designation and that the status of such a position with regard to privileges, benefits, and administrative procedures shall be determined by its primary function.

Ten-year Building Program—The Board of Regents on March 10, 1944, approved three lists of buildings and improvements needed by the University during the next ten-year period. The action made clear that "the stated order of importance is of necessity tentative for the reason that the needs of the University must be dependent upon conditions as they develop in the postwar period."

I. Buildings and Improvements Requiring Legislative Appropriations

1. General Classroom Building, Main Campus, \$500,000.
Class and seminar rooms, administrative offices for Science, Literature, and the Arts and Graduate School, and additional library stacks and connecting underground unit with Library.
2. Library Building, Farm Campus, \$300,000.
3. College of Education Building, \$950,000.
4. Animal and Poultry Husbandry Building, \$350,000.
5. Chemical Engineering Building, \$500,000.
6. Boiler, Main Campus Heating Plant, \$225,000.
- 6a. Addition to Home Economics Building, \$250,000.
7. Medical Laboratory and Research Building, Mayo Memorial Supplementary, \$500,000.
8. Addition to complete Physics Building, \$300,000.
9. Building Improvements, Agricultural Substations, \$208,000.
Including Dairy Barn, Waseca, \$10,000; Dairy Barn, Duluth, \$18,000; Horse Barn, Duluth, \$18,000; Water Lanes and Sprinklers, Cloquet, \$12,000; Water Tank, Duluth, \$10,000; Heating Plant and Boiler, Morris, \$75,000; Road Construction, Cloquet, \$15,000; Sewage Disposal, Grand Rapids, \$25,000; Road Construction, Grand Rapids, \$25,000.
10. Completion of Vincent and Murphy Halls, Connecting Unit, \$350,000.
11. Addition to Main Engineering for Engineering and Architecture, \$450,000.
12. Pharmacy Building Addition, \$210,000.
13. Law School Addition, \$150,000.
14. Agronomy and Plant Pathology Addition, \$75,000.
15. Addition to Zoology Building to complete, \$150,000.
16. Addition to General Storehouse for chemicals, \$200,000.
17. New Heating System, Farm Campus, \$1,000,000.
18. Millard Hall remodeling and Anatomy Roofhouse, \$300,000.
19. Theater and Fine Arts, \$750,000.
20. New Armory, \$700,000.
21. Further Additions to Main Engineering for Engineering and Architecture, \$600,000.
22. Education Elementary School Building, \$250,000.

II. Improvements Other Than Buildings

Depression of Washington Avenue, \$3,000,000.

III. Buildings Not Requiring Legislative Appropriations

Through gifts and earnings from self-supporting enterprises the University hopes to construct the following buildings:

Medical-Biological Library	Men's Dormitory
School of Public Health Building	Farm Campus Union
Winter Sports Building	Cold Storage Plant
Laundry Building	Underground Garages
Women's Dormitory	

New Bureau Created—The University Concert and Lecture Bureau was provided for at the December 10, 1943 meeting of the Board of Regents when the following action was taken:

Voted that effective July 1, 1944 there be established a University Concert and Lecture Bureau, administratively responsible to the Office of the Vice President, Academic Administration, and that in this new unit there be centered the booking of all University convocation speakers and special lecturers, the University Artists Course, and the present functions of the Lyceum unit of the General Extension Division.

New Degrees and Curricula Approved—During the biennium the Board of Regents approved the establishment of four new curricula and the awarding of four new degrees. Two of these were approved on September 11, 1942 in the following action:

Voted to approve curricula for five-year program in agricultural education and home economics education leading to the professional degrees of master of education in agricultural education or master of education in home economics education.

The other two were ratified on May 14, 1943 in the following actions:

Voted to approve a five-year course in agricultural technology leading to the degree of agricultural technologist.

Voted to approve a course in X-ray Technology of four years, including two years of preprofessional work in the College of Science, Literature, and the Arts followed by two years of professional work in the Medical School, leading to the degree of bachelor of science.

Student Counseling Bureau—The Board of Regents on June 12, 1943 voted to change the name of the University Testing Bureau to Student Counseling Bureau. This change was made because the service, which included a reading clinic and provided personality and vocational guidance and testing and counseling work, had greatly broadened since the adoption of the earlier name.

Co-operative Research—The Board of Regents on February 19, 1943 approved the following resolution relative to co-operative research with outside individuals or organizations:

WHEREAS, the University of Minnesota, a state-supported institution for higher education, has a responsibility and interest in the advancement of scientific knowledge and in the advancement of the economic interest and welfare of the people, particularly the people of the State of Minnesota, and

WHEREAS, this responsibility and interest can from time to time be advanced by engaging in research, the results of which may have commercial applications which are patentable and should be patented in the interest of the public, and the income from which may be used for the promotion of further scientific research, and

WHEREAS, such research in some instances is co-operative in character, financially and otherwise, with outside persons and organizations, and

WHEREAS, such research undertaken at the University involves the use of staff and facilities not always accurately measurable in dollars,

Now, Therefore, the Regents of the University of Minnesota in an effort to promote such research for the advancement of science and the economic and social welfare of the people, indicates its willingness to undertake such research in co-operation with outside persons and organizations within the limitations of its staff and facilities under the following general conditions:

1. That, unless otherwise provided in the agreement, patents shall be controlled by the University.
2. That the University will be willing to consider the granting of a non-exclusive license (shop rights) to the co-operating person or organization which provides funds for the direct and operating overhead costs of the research.
3. That if the research undertaken by the University is a continuation of research already initiated by the co-operating person or organization, if the research results of the University require further development work for commercial application, or if for other reasons the public interest can thus be better served, the University will be willing to consider an exclusive license for a limited period (5 to 7 years of the 17-year patent life) or even for the life of the patent where it is clear that the public interest will be served, provided the University receives full reimbursement for all costs and a reasonable royalty with a minimum annual amount of such royalties guaranteed to insure that the patent is used by the licensee.

Latin-American Scholarships—The Board of Regents on March 14, 1941 authorized the creation of two fellowships carrying tuition exemptions for students from Latin America (see "1940-42 Report," page 22). Two students on these scholarships were at the University of Minnesota in 1941-42 and a third student was on a fellowship provided

directly through the Institute of International Education. Because of gratifying results these scholarships had produced in the establishment of better relationships with Latin America, the Board of Regents, on September 26, 1942 voted to increase the number of such scholarships to six; and on September 10, 1943 further increased the number to twelve.

Government Bonds by Payroll Deduction—The Board of Regents on February 6, 1942, upon the recommendation of the University Defense Savings Committee, took the following action:

Voted to approve the establishment by the University of Minnesota of a voluntary payroll deduction plan for the purchase by university employees of United States Defense bonds; and the president and the comptroller are authorized to proceed in formulating the detailed procedures necessary to put such a voluntary payroll deduction plan into effect.

Leaves of Absence for Military Service—The policy of the University with respect to leaves of absence for military service was further modified during the biennium (see "1940-42 Report," page 9). The Board of Regents on September 11, 1942 approved the following regulation:

Subject to the conditions hereafter prescribed any employee of the University who has been in full-time service of the University for not less than six months who shall be a member of the Minnesota State Guard or any other component of the militia of the State of Minnesota now or hereafter organized under state or federal law shall be entitled to a leave of absence without loss of pay, seniority status, efficiency rating, vacation, sick leave, or other benefits for all the time when he is engaged with such organization or component in training or active service ordered or authorized by proper authority pursuant to law, whether for state or federal purposes, but not exceeding a total of fifteen days in any calendar year. Such leave shall be allowed only in case the required military or naval service is satisfactorily performed, which shall be presumed unless the contrary is established. Such leave shall not be allowed unless the employee

- (a) returns to active service in his position with the University immediately upon being relieved from such military or naval service, or as soon thereafter as the terms of his employment require, or
- (b) is prevented from so returning by physical or mental disability.

Use of Memorial Stadium for War Show—Early in the biennium a request was made to the Board of Regents that Memorial Stadium be used for the presentation of a locally-sponsored and locally-identified war show. The Regents felt that the issue involved was fundamental and far-reaching, and in denying the request on July 10, 1942, they adopted unanimously the following resolution:

The University belongs to the State of Minnesota, and the Regents, elected by the Legislature, are its trustees, responsible for its government.

The fact that the University is located within the boundaries of Minneapolis in no way changes its status as a state institution, created by the people to serve the entire state.

The use of university facilities must, accordingly, be considered in reference to the general interests of the state as a whole, and not in reference to the interest of any single locality. The use of university facilities for other than the general educational purposes for which they have been created must, therefore, be determined and controlled by the Board, and its general policy covering such use has been defined and adopted by formal action.

On April 17, 1937, the Regents, having before them the matter of use of university buildings by non-university groups, and after careful and deliberate consideration, adopted a statement relating to the use of university facilities. Basic in this statement is the principle that no non-university organization shall be permitted the use of the university facilities except as the University itself, through the Board or the duly authorized administrative officers, extends the invitation and joins as co-sponsor.

The Board now has before it a request that its facilities be made available for the presentation of a war show, which presentation is locally sponsored and locally identified. The request is supported by petitions from the Council of the City of Minneapolis, the Board of Commissioners of Hennepin County, and other local organizations and individuals. This request, which fails to conform to the policy adopted by the Board, differs from other similar requests received in past years only in that it embraces the display of instruments of war and a demonstration of their use; and, therefore, that it has the support and approval of the War Department.

The Board has a high sense of appreciation of all the means that will further the conduct of the war in which we are now engaged, and which will develop public support for it, together with a strengthening of public morale. This is evident in the many ways in which the University is being utilized in furtherance of the country's war efforts. At the present time it has in large measure converted and geared its staff and its physical facilities to uses of the federal government. It has accepted assignments of a highly confidential and technical character, involving basic and fundamental research on war problems; and it is engaged with equal intensity in the training of personnel in specialized fields, drawn both from its own student body, and from the enlisted personnel of the armed forces sent to it on special assignment.

Although the Board is in full sympathy with all efforts that stimulate public interest in matters pertaining to the war, at the same time it is unable to conceive that the use of the University facilities for the purpose stated is suitable or appropriate.

Memorial Stadium is located in a thickly populated and heavily congested area. It is, moreover, in the center of a campus that is restricted to size, and hence crowded with institutional buildings. These are of many types and are used for a variety of purposes. In many of them, as indicated, highly important war research, involving the use of delicate scientific instruments, is being conducted, and at the request of the federal government itself. Some of these researches are housed within the stadium structure. Others are in buildings not far removed from the stadium. The Board is concerned with the effect of the proposed war spectacle and demonstration upon this highly important work, involving as it would the use of heavy war machines and the use of guns and other explosives with inevitable concussions. The Board is mindful, too, of the proximity of the University of Minnesota Hospitals, filled

with patients that come from all sections of the state. The Regents have concern, also, for the uses to which the stadium is put in connection with the physical education program, that involves not only the students, but also the enlisted men of the armed services who have been sent to the University for special and intensive training. The damage that would result to the property, including possible damage to buildings, is not the determining factor in the minds of the members of the Board, but it is a point that cannot be left out of consideration since the damage to grounds could not be repaired except over a very considerable period of time.

It is for reasons such as these that the Board states its judgment that regardless of the morale contribution the war show might make to the metropolitan area, Memorial Stadium is not the appropriate place for the showing, appropriate in the sense that a location more removed from congested areas would be, or a location that has surrounding it the associations one attributes to the army and its activities. In this connection the Board calls to attention the immediate availability of facilities offered at the central point of Fort Snelling, and the military background of that environment, which is in keeping with the occasion. Were such a site to be used, the Board of Regents would pledge itself to make available all facilities that it has at its disposal, such as bleachers and related equipment.

Friends of the University of Minnesota Library—The Board of Regents on March 10, 1944, at the request of the University Library Committee, approved the establishment of a new organization to be known as "Friends of the University of Minnesota Library." The purpose of the organization is to promote the growth and development of the University of Minnesota Library and to stimulate gifts of money and books for the enrichment of its collections.

Mayo Memorial—The 1943 Legislature created a Committee of Founders to carry out plans for a memorial to Doctors William J. and Charles H. Mayo. In connection with this legislative action, the Board of Regents adopted two resolutions during the biennium. The first action taken by the Regents on July 9, 1943 was as follows:

Resolved, That the Regents of the University of Minnesota express their very great appreciation to Dr. Donald J. Cowling, Chairman of the Committee of Founders of the Mayo Memorial, provided for in a resolution adopted by the Legislature of 1943 upon recommendation of Governor Harold E. Stassen, that definite steps are under way to provide for the construction and maintenance of a building which is to serve as an appropriate memorial for the late Doctors William J. and Charles H. Mayo. Because of the distinguished world-wide service which these men rendered to humanity through their contributions to medicine and medical education, it is most appropriate that the proposed memorial be erected. And since both Doctors William J. and Charles H. Mayo were deeply interested in the progress of the Medical School of the University and of the University in general, it is most fitting that this memorial be erected on the University campus.

Somewhat later, on February 11, 1944, the Board of Regents adopted the following resolution:

WHEREAS, By Laws of 1943, Resolution No. 10, the Legislature of the State of Minnesota created a Committee of Founders to carry out plans for a memorial to Doctors William J. and Charles H. Mayo, and

WHEREAS, The Committee has indicated a desire that such memorial shall be a medical structure on the University of Minnesota campus, and

WHEREAS, The Committee plans to secure the necessary funds for the construction and endowment of the proposed memorial and under the circumstances desires that such funds be paid to the University of Minnesota for the memorial, and

WHEREAS, By the State Constitution, the Regents of the University of Minnesota are elected by the Legislature in joint session, and are made a body corporate with the name and style of the "Regents of the University of Minnesota" and as such are authorized by law to accept and expend gifts, grants, bequests, and devices for educational purposes, and such gifts are recognized by federal laws as being to a non-profit organization, thus being deductible contributions for income tax purposes.

Now, therefore, be it *Resolved*, By the Regents that a fund be established under the custody of the "Regents of the University of Minnesota" to be known as the *Mayo Memorial Fund*, into which may be received private and public contributions and appropriations, and from which will be paid such expenditures as in the judgment of the Committee of Founders of the Mayo Memorial may be necessary in connection with the financing and endowment of the Memorial.

Union Board of Governors—Three amendments to the Constitution of the Union Board of Governors were adopted by the Board of Regents on September 10, 1943. They read as follows:

Number Three—For the duration of the war, the membership of the Union Board of Governors shall be enlarged to include one representative from each major unit of the military training groups stationed at the University of Minnesota.

The method of selection and the term of office of these representatives shall be determined by the commanding officers of the army and navy training programs.

The members selected in this manner shall constitute the only military representatives, and military students shall, therefore, not participate in the selection of the civilian student members to the Board nor shall they be eligible for election to the Board at civilian student elections.

All parts of the constitution which are inconsistent with the spirit of this amendment shall be considered modified.

Number Four—Article I, Section 3, to read: "The Union shall operate by delegation of the President as a department of the University directly responsible to the Vice President, Academic Administration."

Number Five—Article III, Section 2, to read: "Four non-student members of the Board shall be appointed by the Vice President, Academic Administration, with the approval of the President of the University."

Minnesota Alumnus—The Board of Regents on May 14, 1943, voted, on recommendation of the Board of Directors of the Alumni Association, to approve the act of that Board in transforming the *Minnesota Alumni Weekly* into the *Minnesota Alumnus*—a monthly magazine to be published each month of the year except July and August—commencing in April, 1943.

Admission and Employment of Japanese-Americans—The Board of Regents on November 20, 1943 adopted the following policy relative to the employment of individuals of Japanese ancestry and the admission of students of Japanese ancestry:

1. That the Director of the Employment Bureau be authorized to accept applications for employment at the University by individuals of Japanese ancestry provided they have executed the personal security questionnaire and with the further understanding that actual employment will not begin until clearance in each individual case has been received from the Office of the Provost Marshal General.
2. That the Director of Admissions be authorized to accept applications for attendance at the University of Minnesota from students of Japanese ancestry provided that the application is accompanied by the personal security questionnaire and with the understanding that actual registration will not be effected until such time as clearance is given by the Office of the Provost Marshal General.

Red Cross Benefit—The Board of Regents on March 12, 1943 voted to authorize that the annual spring football game between the Red and Gold teams of the football squad be used as a benefit to aid the Red Cross and that the receipts from this game be designated for the American National Red Cross.

Pratt and Whitney Fellowships—The Board of Regents on June 12, 1943 took the following action:

Voted to approve agreement with the Pratt and Whitney Aircraft Division of the United Aircraft Corporation establishing fellowships for twenty to fifty students who will be given technical training to fit them for employment in the factories of the Company, filed supplement to the minutes, page 3138.

Investment of Funds Belonging to Student Organizations—The Board of Regents on June 12, 1943 adopted the following policy with respect to the investment of funds belonging to student organizations:

1. Student Organizations Group Investment Trust Fund shall be established by the Board of Regents as trustee. Each organization participating in this group investment will receive semiannually its pro rata allocation of the income earned by the investment of such funds. With the approval of the Dean of Students, a student organization may withdraw part or all of its participation in the Fund, based upon its current financial needs, after giving thirty days' written notice immediately preceding the end of a fiscal quarter.
2. All student organizations, including fraternities and sororities, having surplus funds which they wish to invest in securities, will use the investment service of the University of Minnesota and make their transactions through the Office of the Dean of Students. Organization officers will confer with the Financial Adviser relative to the advisability of investing inactive cash.
3. Those organizations declared inactive by the Senate Committee on Student Affairs for the duration of the war and those organizations remaining active but which have inactive cash funds, that is, cash in excess of what is needed for current operations, shall be advised to invest such surplus cash according to Section 2. It shall be the responsibility of the student organizations' finance division of the Office of the Dean of Students to confer with officers of active organizations from time to time relative to the advisability of investing such surplus cash as may be expedient and feasible and to approve such investing.
4. All securities now owned by any and all student organizations shall be turned over to the Office of the Dean of Students of the University of Minnesota for registration and transmittal to the trustee hereinabove referred to. Such securities will be held in custody by the trustee until such time as it will be necessary and desirable to liquidate the investment in order to carry on current operations or for transfer into group investment funds or for other purposes approved by the Office of the Dean of Students. Written notice of request for withdrawal of an organization's securities shall require approval of the Dean of Students at least thirty days before action is taken by the trustee.
5. All student organizations now operating on the campus of the University of Minnesota and all student organizations approved by the Senate Committee in the future shall be advised of this policy. This policy shall be observed relative to all present and future investments of student organizations according to the authority vested in the Office of the Dean of Students by the Board of Regents of the University of Minnesota.

Vacation and Sick Leave for Civil Service Employees—The Board of Regents took two actions during the biennium with reference to vacation and sick leave for civil service employees. Both were taken on recommendation of the Civil Service Committee. The first, on April 9, 1943, established the following principles:

The daily rate for any employee designated on a monthly or yearly basis will be obtained by using the following formula: Monthly rate divided by number of calendar days in month equals daily rate.

Payroll deductions will be made for all Sundays (or other days taken, with the approval of the department head, as a substitute for same) and holidays occurring in the middle of any leave or absence without pay. No deductions will be made when Sundays (or other days taken, with the approval of the department head, as a substitute for same) and holidays occur either at the beginning or end of a leave or absence without pay.

University employees in the non-academic classified service on the regular payroll on a twelve months' full-time appointment shall, upon completion of their probationary period of six full months

prior to their first acquisition of Civil Service status, be entitled to vacation leave with pay accrued according to the following schedule:

- 2 work days per month for AIV appointments.
- 1½ work days per month for AIII appointments.
- 1 work day per month for AII appointments.

Vacation leave accrues during the probationary period and may be taken by employees upon completion of the probationary period at the discretion of the departmental head.

University employees in the non-academic classified service on the miscellaneous payroll for twelve months' full-time service shall be entitled to vacation leave with pay in accordance with the same schedule as that for employees on the regular payroll, except that they are not entitled to vacation leave until they have completed twelve months of continuous full-time service. Vacation leave shall accrue during this period of full-time service.

University employees who have rendered twelve months' full-time continuous service on both the regular and the miscellaneous payrolls shall be entitled to vacation leave under the same conditions as those for employees on the miscellaneous payroll.

For purposes of determining accrual of vacation leave, appointments beginning prior to the sixteenth of any month shall be as of the first of that month. Other appointments shall be as of the first of the following month.

Saturdays or any part of a day taken as vacation leave shall be counted as one full day.

Vacation leave with pay earned in any fiscal year must be taken by June 30 of the following fiscal year.

These provisions for vacation leave do not apply to employees in the skilled trades group receiving prevailing wages.

In addition to and upon attaining eligibility for vacation leave, university employees in the non-academic classified service shall be granted one working day of sick leave with pay per calendar month of service rendered. Sick leave may be accumulated to a total not exceeding twenty-four working days.

These provisions for sick leave do not apply to employees in the skilled trades group receiving prevailing wages.

These regulations governing vacation and sick leave shall become effective July 1, 1943. (Accruals of leave during the fiscal year, July 1, 1942 to June 30, 1943, under these regulations may be included in determining eligibility for leave and also in granting leave after July 1, 1943.)

The second, adopted May 14, 1943, took the form of the following amendment:

Any absence of an employee from duty, that is not authorized by a specific grant of leave of absence under the provisions of this rule or taken as earned sick leave or annual leave about to expire, shall be deemed to be an absence without leave. Any such absence shall be without pay and may be made grounds for disciplinary action. In the absence of such disciplinary action any employee who absents himself for three consecutive days without leave shall be deemed to have resigned, but such absence may be covered by a subsequent grant of leave if the conditions warrant.

CONVOCATIONS, CONCERTS, LECTURES, AND DRAMA

Convocations—Throughout the academic year and Summer Session no classes are scheduled at the fourth hour on Thursday mornings, thus permitting students to attend convocation exercises in Northrop Memorial Auditorium. The programs are carefully planned, so that during the course of the year there will be a balanced representation of subject matter and points of view. Attendance is large, rarely dropping below 2,000; and in addition, the University Radio Station WLB broadcasts the programs to a state-wide listening audience. The speakers and subjects during the biennium follow:

1942-43—October 1: Opening convocation—Walter C. Coffey, President of the University, "Address of Welcome"

October 8: Henry Scott, pianist, Program of Swing, Classics, and Concert Satire

October 15: Max Lerner, author and professor of government, Williams College, "Ideas Are Weapons"

October 22: Charles R. Knight, painter and sculptor of modern animals, "Life's Pageant through the Ages" (illustrated with colored slides)

October 29: Helen Clapesattle, editor, University of Minnesota Press, "The Doctors Mayo"

November 5: Mme. Suzanne Silvercrutys, sculptor, "Art and Self-expression"

November 12: Helen Kirkpatrick, London correspondent for the *Chicago Daily News*, "America and Britain: Allies in Arms"

November 19: Dr. Norman V. Peale, formerly minister of the historic Marble Collegiate Church, New York City, "How To Live in a Time Like This"

November 24: Student assembly for football awards—Louis F. Keller, acting director of athletics, "Athletics at Minnesota"; Dr. George Hauser, acting football coach, "Review of the Season"; Walter C. Coffey, president of the University, conferring of M's and other awards

December 3: Walter C. Coffey, president of the University, "The War Problems of the University and the Students"

December 17: Fall quarter commencement exercises—Deane Malott, chancellor, University of Kansas, "Careers in Crisis"

January 7: Angna Enters, author, actress, and painter, "The Theater of Angna Enters"

January 14: Carl W. Jones, former publisher, *Minneapolis Journal*, "Why Does a Magician Fool You?" Evening convocation, Dr. Harlan Tarbell, counselor and teacher of professional magicians, "Show Us Miracles"

January 21: Sir Norman Angell, author and journalist, "The Roots of the War and the Revolution"

January 28: Irwin Edman, author and professor of philosophy, Columbia University, "Cultural Priorities"

- February 4: Gerald Wendt, author and scientist, "The Science Front in Total War"
- February 11: J. Lawrence Lardner, professor emeritus of public speaking and literary interpretation, Northwestern University; Reading, "He Knew Lincoln" by Ida Tarbell
- February 18: Dr. Frank Kingdon, former pastor, Calvary Church, East Orange, New Jersey, and president, University of Newark, "What of Our Schools and Colleges"
- February 25: Walter Duranty, foreign news correspondent and staff member, *New York Times*, "When East Meets West in Battle"
- March 4: Dramatic motion picture, "Prelude to War" edited by Frank Capra; Walter Huston, narrator
- March 18: Winter quarter commencement convocation—Walter C. Coffey, president of the University. Attention is called to the fact that the accelerated program due to the war resulted in more than doubling the number of seniors graduating at the end of the winter quarter. There were 746 degrees granted. Circumstances apart from the size of the class appeared to justify the change from the usual convocation hour to an evening hour. The exercises were preceded by an academic procession from Coffman Memorial Union to Northrop Memorial Auditorium.
- April 1: William Hazlet Upson, author, "The Gasoline Cavalry"
- April 8: Lawrence McKinley Gould, professor of geology, Carleton College; now stationed on the University of Minnesota campus as chief, Arctic Section, Army Air Forces, Arctic, Desert, and Tropic Information Center, "Northward Ho"
- April 15: Jay Allen, war correspondent, North American Newspaper Alliance, in Africa, Spain, and France, "The North African Springboard"
- April 22: Frank Bohn, writer, lecturer, and specialist in international relations, "Inside Washington Today"
- April 29: Music convocation—University Symphony Orchestra and University Concert Band. Soloists—Caroline Brown, pianist, and Edward Berryman, organist
- May 6: Cleveland Grant, director of extension, Baker-Hunt Foundation, Covington, Kentucky, "American Birds and Big Game" (illustrated with color motion pictures)
- May 13: Cap and Gown Day convocation—Robert A. Larsen, president of the all-university senior class, "Presentation of the Class of 1943;" Walter C. Coffey, president of the University, "Response"
- June 6: Baccalaureate service—The Reverend Albert C. Knudson, Minnesota '93, dean emeritus, School of Theology, Boston University, "Religion as Spiritual Leaven"
- June 12: Commencement exercises—Walter C. Coffey, president of the University, "Charge to the Class;" conferring of honorary degree on Dimitri Mitropoulos, professor of music and conductor, Minneapolis Symphony Orchestra. The accelerated program which resulted in a large increase in the March class naturally reduced the size of the June class. There were 1,269 degrees granted.
- June 17: Henry Scott, "Swing, Classics, Concert Satire"
- June 24: Jack Morrow, "The Japan We Must Conquer"
- July 1: Stanley Johnston, "The Battle of the Pacific"
- July 8: Frederic Babcock, "Books and Authors in Wartime"
- July 15: Dr. Richard Struna, "German Morale—How It Rises and Falls"
- July 22: Commencement address: Frank L. Eversull, president, North Dakota Agricultural College
- July 29: Edgar C. Raines, "Alaska" (illustrated)
- August 5: Irving Scherke, "Memories of Twenty Years of Musical Life in Paris"
- August 12: Julian Gromer, "Hawaiian Paradise" (movies)
- 1943-44—September 30: Opening convocation—Walter C. Coffey, president of the University, "Address of Welcome"
- October 7: Lillian Gish, actress, "From Hollywood to Broadway"
- October 14: W. T. Benda, painter, illustrator, and creator of "Benda Masks," lecture-demonstration on masks
- October 21: Howard Higgins, dean, Emerson College, Boston, and head, Division of Psychology and Education, "Among the Spirits"
- October 28: Joe Fisher, adventurer, philosopher, and lecturer, "The Pacific Aflame" (illustrated with motion pictures)
- November 18: The Honorable Edward J. Thye, governor of the State of Minnesota, "The Individual's Responsibility in Peace Planning"
- November 30: Student Assembly for football awards—Louis F. Keller, acting director of athletics "Athletics at Minnesota;" Dr. George Hauser, acting football coach, "Review of the Season;" Walter C. Coffey, president of the University, conferring of M's and other awards
- December 2: Frederic Taubes, painter and author, "How To Enjoy Paintings"
- December 16: Fall quarter commencement exercises—Gideon Seymour, editorial editor, *Minneapolis Star Journal*, "A Task for Our Time"
- January 6: Hallett Abend, former chief Far Eastern news correspondent, *New York Times*, "America's Stake in the Pacific"
- January 13: Orville Prescott, literary editor, *Cue Magazine*, and literary critic, *New York Times*, "Books in the News"
- January 20: Howard Cleaves, photographer of wild animal life, "Midnight Movies in Animal Land"
- January 27: Cy Caldwell, military analyst, radio commentator, and aviation expert, "What Total War Means"
- February 3: Marcel W. Fodor, author and former war correspondent, "Plot and Counterplot in the Balkans"
- February 10: John Jacob Niles, "American Songs and Ballads"
- February 17: Charter Day—Louis Wirth, professor of sociology and associate dean, Social Science Division, University of Chicago, "Planning and Freedom"
- February 24: M. P. Greenwood Adams, journalist, "Stepping Stones to Victory"
- March 2: Baron Joseph von der Elst, former Belgian envoy to Vienna, "Flemish Art in the Fifteenth Century" (illustrated)
- March 16: Winter quarter commencement exercises—Stephen Duggan, director, Institute of International Education, "American Contribution to Postwar Culture"
- March 30: Emil E. Liers, "My Pals and Playmates"—a motion picture, with others (in person)
- April 6: Carl Sandburg, poet, "A Morning with Carl Sandburg"
- April 13: Erika Mann, author and lecturer, "Re-Education for Peace" (The Richard Olding Beard Lecture for 1944)
- April 20: Margaret Walker, poet and lecturer, readings from "For My People"

April 27: Maud Scheerer, teacher and dramatic reader, "For Victory and Beyond in the Current Plays." Evening convocation—dramatic recital, "Angel Street"

May 4: Music convocation—by students of the University, the University Chorus, the University Concert Band, and the University Symphony Orchestra

May 11: Cap and Gown Day convocation—Robert R. Carlson, president of the all-university senior class, "Presentation of the Class of 1944;" Walter C. Coffey, president of the University, "Response"

June 4: Baccalaureate service—The Reverend James Luther Adams, Minnesota '24, professor of philosophy of religion, Meadville Theological School, Chicago, "A Little Lower than the Angels"

June 10: Commencement exercises—Walter C. Coffey, president of the University, "Charge to the Class"

June 15: Major Thomas A. B. Ditton, "America's War Plan"

June 22: Robert Bellaire, "Jan Victory Plan"

June 29: Professor Paul M. Oberg and Orchestra, "Symphonette"

July 6: Hilda Yen, "Spirit of New China"

July 13: Herbert C. Lanks, "Overland to Alaska"

July 20: Captain James Lufkin, "Vacation from War in the South Pacific"

July 20: Commencement address: Charles E. Friley, president, Iowa State College, "Science and Human Relations"

July 27: Henry Hedges, "Bora Bora, Sentinel of the South Seas"

August 3: Maud Scheerer, "The Voice of the Turtle"

August 10: Gerhart H. Seger, "After This War—What?"

August 17: Bert "Yank" Levy, "Commandos and Global Warfare"

August 24: Commencement address: John O. Moseley, president, University of Nevada, "Leadership in a World Which Is To Be"

Graduation Exercises for Army and Navy Groups—During 1943-44, six special assemblies were held for graduates of Army and Navy training programs:

October 22: Navy ROTC and V-12 candidates

November 28: B Pre-meteorology, 53rd Army Air Forces, Technical Training Detachment

December 30: Army Specialized Training Unit, Service Command Unit, No. 3700

February 25: Navy ROTC and V-12 candidates

March 10: C Pre-meteorology, 53rd Army Air Forces, Technical Training Detachment

June 24: Navy V-12 candidates

The Sigma Xi Series—The Minnesota Chapter of the Society of the Sigma Xi (honorary scientific society) has presented annually since 1928 a series of popular lectures on scientific subjects of current interest. The following lectures were given during the biennium in co-operation with other scientific organizations:

February 10, 1943: Professor D. W. Bronk, University of Pennsylvania, "The Physical Structure and Biological Action of Nerve Cells"

March 11, 1943: Professor G. D. Birkhoff, Harvard University, "The Mathematical Nature of Modern Physical Theories"

April 1, 1943: Professor Henry Eyring, Princeton University, "The Drift Toward Equilibrium"

March 7, 1944: Professor Peter Debye, Cornell University, "The Magnetic Approach to the Absolute Zero of Temperature"

March 20, 1944: Professor Selig Hecht, Columbia University, "Energy and Vision"

Symphony—The season of 1942-43 found the University presenting the Minneapolis Symphony Orchestra in its twelfth annual series of concerts at Northrop Memorial Auditorium. The concerts, for the most part, were under the direction of the orchestra's world-famed conductor, Dimitri Mitropoulos. Thus the University continued in its good fortune of being the only educational institution in the land to have a major symphony orchestra as a vital part of its campus life, spreading the fame of Minnesota throughout the land.

The schedule of concerts included the usual eighteen evening subscription concerts, seven Sunday "Twilight" concerts, three afternoon Young People's concerts for the public, private, and parochial school children of the Twin Cities and vicinity, and nine special events, including three performances by the Ballet Theatre, an appearance by Paul Robeson, and a special program for the students of the University. In addition, the orchestra gave a concert for the soldiers at Fort Snelling, participated in Navy Day celebrations, Pearl Harbor Day anniversary, and in a Red Cross benefit program.

Its out-of-town activities, during which its affiliation with the University was given due prominence, included fifty concerts in thirty-eight cities located in fourteen states and the provinces of Ontario and Manitoba in Canada.

Distinguished artists who appeared with the orchestra in its regular subscription and "Twilight" concerts included the pianists Sergei Rachmaninoff, Rudolf Serkin, Claudio Arrau, Arnaldo Estrella, Leonard Pennario, Felix Witzinger, and Joanna Graudan; violinists Nathan Milstein, Jascha Heifetz, Zino Francescatti, Carroll Glenn, and Patricia Travers; and vocalists Dusolina Giannini, Paul Robeson, Polyna Stoska, and Hardesty Johnson. The annual appearance of the St. Olaf Lutheran Choir is another event not to be overlooked. Guest conductors who officiated during Mr. Mitropoulos' absence in the East were Bruno Walter, Sir Thomas Beecham, and Wilhelm Steinberg.

In the second year of the biennium, the season of twenty-six weeks shows a total of

forty-four concerts locally with a total attendance of 154,200, and forty-four concerts out of town in which 113,400 people heard the orchestra. During the Home Season, the Orchestra presented its regular eighteen subscription concerts, eleven Sunday "Twilight" concerts, six concerts for the school children (three of which were given at the Municipal Auditorium in St. Paul), and nine special events. The special events included three performances by the Ballet Theatre, three by the Ballet Russe de Monte Carlo, two performances by the Baccaloni Opera Company (the complete operas "Don Pasquale" by Donizetti and "The Barber of Seville" by Rossini), and an extra concert with Marian Anderson. Noted guest artists who were heard at the subscription concerts were Yehudi Menuhin, Isaac Stern, Zino Francescatti, and Josef Szigeti, violinists; Robert Casadesu, Claudio Arrau, Artur Schnabel, and Vladimir Horowitz, pianists; Marian Anderson, Helen Traubel, and Enzo Pinza, vocalists; and Carl Sandburg, who was narrator in a performance of Copland's "A Lincoln Portrait." Notable attraction of the "Twilight" concerts was again the St. Olaf Lutheran Choir of St. Olaf College, Northfield, Minnesota. On tour the orchestra appeared in thirty-three cities located in fourteen states and in three provinces of Canada where it made its first appearances at Montreal and Quebec with exceptional success.

A feature of the orchestra's concerts at Northrop Memorial Auditorium which deserves special mention is the attendance of both men and women in war service. Free tickets have been made available to the students of the ASTP and others, through the USO.

University Artists Course—During 1942-43 the University Artists Course, under the direction of Mrs. Carlyle Scott, presented Rise Stevens, contralto; Vladimir Horowitz, pianist; Richard Crooks, baritone; Carmen Amaya and Company, in scenes from three operas; Erica Morini, violinist; Vronsky and Babin, duo-pianists; and Baccaloni and Company, in scenes from three operas. In 1943-44, the artists were Anne Brown, soprano; Marjorie Lawrence, soprano; Philadelphia Opera Company, in "Die Fledermaus" by Strauss; Jascha Heifetz, violinist; and Richard Crooks, baritone.

The University Theatre—The University Theatre presents major plays, plays for young people, foreign language plays, and experimental and student plays. The major productions presented during the biennium follow:

1942-43		1943-44	
Aladdin	Charlotte Chorpensing	Heaven Can Wait	
Hedda Gabler	Henrik Ibsen	Ahi Radio	Joseph Beck
Still Waters Run Deep	Tom Taylor	Charley's Aunt	Brandon Thomas
Treasure Island	Robert Louis Stevenson	The Women	Claire Boothe
Hayfoot, Strawfoot	Kern, Harbach, Hammerstein	Peter Pan	James Barrie
The Eve of St. Mark	Maxwell Anderson	Anne of Green Gables	Alice Chadwicke
Alice in Wonderland	Lewis Carroll	Cry Havoc	Allan Kenwood
Abraham Lincoln	John Drinkwater	A Midsummer Night's Dream	William Shakespeare
Othello	William Shakespeare	Radio Rescue	Charlotte Chorpensing
Hit the Deck	Robbin, Grey, Youmans, Field	A Midsummer Night's Dream	William Shakespeare
Scenes from Shakespeare			

During the biennium, six children's plays were produced. Two of these, "Alice in Wonderland" and "Peter Pan" appeared on both the major and young people's season. These six plays were produced in co-operation with the Minneapolis public schools, and each play was attended by an audience of more than 4,000 elementary and junior high school pupils. Four foreign language plays, each attended by an audience of from 300 to 600, were produced in co-operation with the departments of French, German, and Spanish. In addition, each student of stage direction produced two one-act plays during the winter quarter and one full-length play in the spring.

Court of Honor—Because of war conditions, the usual Court of Honor banquet was not held in 1943. Instead, a radio program was broadcast over WCCO, Minneapolis, and KDAL, Duluth, June 10, at 9:30 p.m. This broadcast honored 144 outstanding seniors. The speaker was Walter C. Coffey, president of the University; and the Court of Honor Award was accepted by Mildred Nolte in behalf of the honor students. The twelfth annual event, May 31, 1944, honored 166 seniors. Arthur Uppgren, vice president and economist, Federal Reserve Bank of Minneapolis, was the principal speaker at a dinner held at the Nicollet Hotel. Other speakers were Walter C. Coffey, president of the University, and Marvin Iverson, representing the honor students. George T. Pennock, general chairman of the Court of Honor Committee, presided.

Commencement Changes—The University's war effort resulted in program acceleration whereby students in many colleges attended classes during the entire year, omitting the usual summer vacation. This led naturally to a modification in the number of seniors graduating at the close of each quarter. There was a large increase in the March and December classes and a decrease in the June class, and for the first time in

the history of the University, graduation exercises are to be held in August, 1944, at the close of the second term of the Summer Session.

Stassen Farewell—Governor Harold E. Stassen was the guest of honor at a banquet held in Coffman Memorial Union, April 26, 1943. The banquet signaled his resignation from the governorship and his expected early entrance into the service of the United States Navy as a lieutenant commander. Representatives of forty-eight statewide organizations took part in the farewell, which was sponsored in the first instance by the Minnesota Junior Association of Commerce. President Coffey was the principal speaker and his address was historical in nature and emphasized four separate dates: 1907, when Governor Stassen was born; 1923, when he entered the University of Minnesota; 1927, when he took his first degree from the University; and 1938, when he was first elected governor. President Coffey concluded his address with these words:

We do not know what the future will be; nor can we foretell what part Harold Stassen will play in fashioning it. From the pages of the past I have quoted newspaper headlines that have told of the world as it has been thus far during Harold Stassen's lifetime. I will now leave it to your imagination to write the headlines as they are to be from this time forward. But of this we can be certain—that wherever the future may find Harold Stassen, the imprint of his personality, his training, and his experience will be felt. The University of Minnesota is proud to number him among its graduates. The people of Minnesota are proud to regard him as one of them. We can admire him for all that he has accomplished thus far in life and for the decision he has now made to enter the service of his country in time of war. And as he enters the Navy and leaves the state he has served so well, we can join in saying, "Good luck and Godspeed!"

DEDICATION OF AIRPORT

There was only one dedication during the biennium—the University Airport, held on August 19, 1943. The ceremony was held at 4 p.m. at the airport, equidistant from St. Paul and Minneapolis, and lying just beyond the New Brighton arms plant. It was held in connection with the air conference of the Greater Twin Cities Chapter, National Aeronautical Association.

The dedicatory address was given by Regent Fred B. Snyder. Other speakers included Governor Edward J. Thye; Representative Joseph O'Hara, Glencoe; Lewis G. Castle, chairman, Metropolitan Airports Commission; John D. Akerman, chairman, Department of Aeronautical Engineering; and H. D. Henderson, chairman, Airports Committee, Twin City Chapter, National Aeronautical Association.

Regent Snyder, in concluding his dedicatory address, said,

In behalf of the Regents and faculties of the University of Minnesota, I dedicate the University Airport to the youth of our land who have been, are at present, and will be in the future, educated and trained in the Department of Aeronautics, with the invocation, that they may with honor to their *Alma Mater* loyally serve their country in times of war and in times of peace on "the Wings of Freedom."

The 1940-42 Report (p. 15) provides a brief summary of the early history of the University Airport. The Regents hoped earlier that it would be possible to secure WPA funds to aid in its development. Later, when it became evident that WPA funds could not be secured, the Airport was established as a licensed airport almost entirely from off-campus donations. This was due to the combined efforts of the Department of Aeronautical Engineering and the Board of Regents.

Usable runways were laid out and partially improved for the eight cardinal wind directions. The operators of the airport erected a hangar 120 by 160 feet in size, suitable for housing approximately 50 planes of the trainer type. They also made available in a separate building complete plane repair and service facilities.

Looking to the future, a runway and building layout plan was prepared. The central entrance driveways and car parking areas were laid out in accordance with that plan and a Studies and Administration Building for the use of war training students was constructed.

Thus far, in the war period, some 700 students have received their flight training at the University Airport. Also, a unit of the Civil Air Patrol is based there; and the General Inspection Division, Civil Aeronautics Administration, bases a department airplane at the field and maintains a regular schedule of days on which inspectors are at the airport to conduct flight testing for pilots' certificates and to make airplane inspection for airworthiness. Thus, pilots and airplane owners from all parts of the state come to the University Airport for this CAA service. The University Department of Aeronautical Engineering also has conducted project tests at the airport; a Flying Club of 87 student members has been organized; and club members also take flight instruction at the University Airport.

CERTIFICATE OF SERVICE AWARD

The Board of Regents, on June 10, 1944, received formal recognition from the United States Army for the work that the University had done in the training of Army Air Force personnel. This recognition, a Certificate of Service Award, was presented by First Lieutenant Peter F. McCarthy, Army Air Forces, and is explained in the following letter written by Brigadier General Martin F. Scanlon, Army Air Forces:

During an extremely trying period in our nation's history, the University of Minnesota has participated in the program of training Aviation students for the Army Air Forces. This undertaking was conceived and executed in haste to meet a swiftly-changing military situation.

The solutions to the educational problems arising from the training of Aviation students required the sound thinking and untiring efforts of your entire organization. In order to accomplish the desired results, it was necessary for you to jettison established practices and accept without hesitation or question demands which taxed your ingenuity and at times disrupted the University's normal civilian operation. The spirit of cooperation and teamwork which you have demonstrated under these circumstances have made the College Training Program an outstanding success.

It has been a most satisfying experience to me, personally, to witness the outstanding service you have rendered our Air Arm, and I desire that you and your faculty claim your just share of credit for the present successes of our combat air forces.

General Barton K. Young, Commanding General of the AAF Training Command, has presented a Certificate of Service Award in recognition of the manner in which the University of Minnesota has participated in the training program of this Command; as a symbol of conspicuous service to our country it represents the culmination of a united effort by you and your faculty. The formal presentation of this award will be made by First Lieutenant Peter F. McCarthy at an appropriate ceremony.

My most hearty congratulations go with this award. I regret that our association must be terminated. Please accept my personal best wishes for your continued success and leadership in the field of education.

UNIVERSITY RESEARCH

At a meeting of the University Senate, held on February 17, 1944, President Coffey presented the following statement on university research:

University research is rapidly increasing in importance, and what is more significant for a state university, it is coming more and more into the consciousness of the public that supports the University. This was clearly reflected in the attitude of the last legislature, which for the first time in its history gave the University general research funds, and created the Minnesota Institute of Research; as well as continued support for researches in agriculture, minerals, and medicine. It is reflected also in the often expressed interest of the Regents and in the desire of the members of that body to use their influence whenever possible in helping to secure additional research funds. They have effectively used this influence on several occasions. It is further reflected in the attitudes expressed by the members of the legislative committee that considered the bill for the support of the Minnesota Institute of Research and by those who appeared before it. All were in agreement that the University might properly become and should be a research laboratory for the entire state, not only with respect to specific problems that might face industry and agriculture, but in broad and fundamental research that looks toward an ultimate betterment of the economy of the state, and hence the welfare of its citizens. At the last session of the legislature, Regents Bell and Wood made strong statements in behalf of broad and fundamental researches bearing upon economic development. Their discussions before the Appropriations Committee of the House and the Finance Committee of the Senate, were followed closely by committee members and they, too, displayed an unmistakable interest in the place and importance of research.

Effective research involves some measure of organization. This is true particularly of researches of a complex nature, conducted on a fairly large scale. There is always a place, of course, for the individual research worker and the independent scholar and, consequently, there must always be a place reserved for him. But many problems go far beyond fields normally cultivated by the single worker. At the present time, here on our campuses research workers combine on some of the studies in the Agricultural Experiment Station, in the Hormel Institute, in the Northwest Research Foundation, and in the Minnesota Institute of Research under the directorship of Professor Montonna. Furthermore, there is a considerable degree of integrated co-operative endeavor in much of the best research in the Medical School. In these combinations of manpower it is gratifying to note that staff members from different schools and colleges are working together. In the Minnesota Institute of Research, for example, the Institute of Technology and the Department of Agriculture are co-operating. The same units work together in the Northwest Research Foundation. On the other hand, medicine and agriculture carry on joint endeavors in the Hormel Institute. Many other illustrations could be cited. Certainly the people who support research through special grants expect that every resource in the University regardless of departmental lines will be brought to bear upon each problem. Research in the natural and in the social sciences is moving definitely in this direction, and that it is doing so is most gratifying. It is possible that the humanities and the creative fields of art and literature may present somewhat different problems. There is, as my illustrations have indicated, already some organization of research in the University. In fact, the extent of organization is considerable. But I believe there is need for an overall University organization in this field.

For many years the research program in the University Department of Agriculture has been carefully organized under the supervision of the associate director of the Experiment Station. Proposed research projects are carefully outlined. The purpose of each project is defined, the personnel listed, the literature on the subject summarized, the facilities required for prosecuting the project described, and the cost and duration of the project estimated. At the close of each year a progress statement is filed with the associate director. The organization of the research program in agriculture has many advantages and I know of no instance in which it has tended to restrict the initiative and creative powers of the research workers. Although the associate director has the responsibility for requiring that research projects be carefully formulated and filed with him, it is not his function to dictate such fundamental aspects as lines of procedure or methods to be employed.

From my experience in connection with the research program in the University Department of Agriculture, I feel very definitely that there are advantages to be gained from an over-all University organization of research, provided its purpose is to encourage, stimulate, help to co-ordinate and integrate, and in general to promote and advance research without, at the same time, imposing crippling restrictions on either departments or individuals. In this connection may I give assurance that existing research institutions such as the Engineering Experiment Station, the Mines Experiment Station, the Agricultural Experiment Station, the Hormel Institute, the Northwest Research Foundation, and the Minnesota Institute of Research are not to be abolished. Rather, they should be included in the over-all organization.

Here are a few of the advantages to be gained from a general over-all university organization of research which occur to me:

1. It would permit the University to make available to the legislature, to the public, or to individuals, a statement of actual research in progress. At some central place on the campus there should be a complete file of all university researches under way and in the office where the file is located there should be someone familiar with it.

2. It would constitute a never ending source of excellent material for public relations. Research results, properly presented, are more effective, it has been demonstrated, than almost anything else in awakening an interest in the work and program of the University.

3. It would provide more complete co-ordination, eliminate undesirable overlapping, and, to a greater extent than ever before, would serve to bring together the various men who have a common interest in a specific project.

It would thus vitalize research. How important this is will become evident when one realizes that in many cases research problems possess phases that lie outside and far beyond the fields normally cultivated by the single worker.

4. It would provide an organization to which a citizen of the state might turn when he has a problem on which he needs help, and it would constitute a channel for providing that help.

5. It would be a factor of increasing importance in bringing influence to bear when a request is made to an outside agency for financial support of a research project.

I have given considerable thought to this matter of a general over-all organization of university research, first, because of my own personal interest, and, second, because the Regents requested that the matter be studied. On several occasions I discussed such an organization with Dean Blegen. He proved to be greatly interested, and had he not been called away he would undoubtedly be planning such an organization now. He had soon discovered that the allocation of research funds, now budgeted in the Graduate School, was a time-consuming matter. Some different plan of administration would have been required had registration in the Graduate School held up to normal levels. The continued good help of Dean Blegen in this matter is much needed now. Unfortunately, he is not here and since we do not know how soon he will return to the University, we are forced to proceed without him and plan what should be done.

Since the problem is one having an all-university character, and, in addition, involving research judgment and experience, its consideration demands an all-university point of view. Bearing this in mind I want to let the Senate know of my intention to appoint an all-University Advisory Committee to study and advise with me on this whole matter. Still more important, I urge the individual members of the Senate to give me suggestions. As the committee proceeds in its work, I shall probably want to discuss its work, its proposals, or its recommendations at subsequent Senate meetings.

Later, he appointed an all-University Advisory Committee which has since been studying the problems involved and preparing to make a report early in the ensuing biennium.

HONORARY DEGREE CONFERRED

At the spring quarter commencement, June 12, 1943, Dimitri Mitropoulos, conductor, Minneapolis Symphony Orchestra, was awarded the honorary degree, doctor of music. This award had been voted by the Board of Regents on May 14, 1943. Mr. Mitropoulos was presented by Professor Paul M. Oberg, chairman, Department of Music. The citation on the certificate reads as follows:

Dimitri Mitropoulos, beloved conductor of the Minneapolis Symphony Orchestra, whose musical career began in his native Greece but whose fame has become as international as the music that is his life; inspiring interpreter of timeless masterpieces who draws deeply from the past and yet sympathetically encourages composers of the present; virtuoso, whose brilliant performances at the piano profoundly move all who hear them; composer and teacher; scholar, whose understanding approach to every composition he plays wins respect and admiration of the members of his orchestra and of the world's greatest artists as well; above all, a man of genuine, universal human qualities which are the very soul of the sublime music he gives mankind; for all this, and especially for his unparalleled contribution to the musical life of this state, and to the University on whose faculty he serves with honor, the Regents of the University of Minnesota, upon recommendation of the faculties, confer upon Dimitri Mitropoulos, the degree of Doctor of Music, *honoris causa*, with all the rights and privileges belonging to that degree.

JOURNALISM RESEARCH DIVISION CREATED

During the second year of the biennium, the Board of Regents approved the creation of a research division in the School of Journalism. This new division is said to be the first of its kind in the country.

The purpose of the research division is to encourage the acquisition of new knowledge of the press and other communication agencies; to stimulate fundamental and applied research in the fields of these agencies; to direct and organize various researches undertaken under its sponsorship by journalism staff members; to encourage the grant of re-

search funds from various sources, including publisher and editorial groups and individual newspapers and agencies; and to seek to ally the division with the great research foundations which grant funds for study of such social agencies as the press.

BRIEFER ITEMS OF SIGNIFICANCE

Governing Boards Meet on Campus—The annual meeting and conference of the Association of Governing Boards of State Universities and Allied Institutions was held at the Center for Continuation Study on the University of Minnesota campus, October 29-31, 1942. Sessions were presided over by Regent A. J. Olson, University of Minnesota, president of the association.

University Insurance Contract Amended—The group life insurance policy between the Regents of the University of Minnesota and Northwestern Life Insurance Company and the Minnesota Mutual Life Insurance Company was amended to include research associates and research fellows as of October 24, 1942.

Graduate Student Exchanges with British Universities—Considerable discussion took place during the latter part of the biennium concerning the possibility of establishing exchange fellowships between the University of Minnesota and British provincial universities. The subject arose at the time of the visit to the campus of Dr. Stephen Duggan, director, Institute of International Education. Dr. Duggan, who delivered the winter quarter, 1944, commencement address, proposed to the president of the University and a small group of staff members that some specific British university might be "wedded" to the University of Minnesota, with the result that a specified number of students from Durham, for example, would be granted fellowships at the University of Minnesota and a corresponding number of students at the University of Minnesota would be granted fellowships at Durham. Such a plan, if adopted generally by American universities, would change the present practice under which American students tend to go exclusively to Cambridge, Oxford, or London. The proposal was discussed informally on April 4, 1944 with the Board of Regents. There is hope that the plan may be carried out, though arrangements are still in the preliminary stage.

UNIVERSITY PERSONNEL

CHANGES IN THE BOARD OF REGENTS

The 1943 Legislature reappointed to six-year terms expiring in February, 1949, the four members of the Board of Regents whose terms expired in February, 1943. The four are: Daniel C. Gainey, Owatonna; Dr. E. E. Novak, New Prague; A. J. Olson, Renville; and Dr. F. J. Rogstad, Detroit Lakes.

RETIREMENTS FROM THE STAFF

Each year some members of the faculty reach the age of compulsory retirement, bringing to a close long periods of active association with the University. Recognition of this service is given by a "retirement certificate." (The exact wording of this certificate appears on page 135, 1938-40 report.)

The following staff members retired during the biennium:

1942-43

Edward Monroe Freeman	
Scholar in pharmaceutical botany.....	1898-1899
Instructor in botany and pharmacognosy.....	1899-1901
Instructor in botany.....	1902-1903
Assistant professor in botany.....	1903-1905
Professor and chief, Division of Vegetable Pathology and Botany.....	1907-1912
Professor and assistant to dean and director, University Department of Agriculture.....	1912
Assistant dean, College of Agriculture.....	1912-1917
Acting dean and director, University Department of Agriculture.....	June-August, 1917
Dean, College of Agriculture, Forestry, and Home Economics and professor and chief, Division of Plant Pathology and Botany.....	1917-1940
Dean, College of Agriculture, Forestry, and Home Economics and professor of plant pathology and botany.....	1940-1943
Richard Rees Price	
Professor and director, University Extension Division.....	1913-1943
Frank Keller Walter	
University librarian and professor.....	1921-1943
Head, Department of Library Methods.....	1922-1928
Professor of library methods.....	1922-1943
Director, Division of Library Instruction.....	1928-1943
University archivist.....	1928-1943
Frederic Herbert Bass	
Assistant in civil engineering.....	1901-1903
Instructor.....	1903-1904
Assistant professor of municipal and sanitary engineering.....	1904-1911
Professor of municipal and sanitary engineering.....	1911-1943
Professor and head, Department of Civil Engineering.....	1918-1943
Peter John Brekhus	
Assistant instructor, College of Dentistry.....	1910-1911
Instructor.....	1911-1912
Assistant professor.....	1912-1915
Associate professor.....	1915-1923
Professor.....	1923-1943
Arthur Gordon Ruggles	
Assistant in entomology and assistant to state entomologist.....	1902-1910
Assistant professor of entomology.....	1910-1914
Associate professor of entomology and associate entomologist, Experiment Station.....	1914-1918
Associate professor of entomology and state entomologist.....	1918-1919
Professor of economic entomology and state entomologist.....	1919-1943
Samuel Amberg	
Associate professor of pediatrics, Mayo Foundation.....	1921-1943

Muriel Bothwell Carr	
Instructor in English	1921-1925
Assistant professor of English	1925-1943
Jean Taylor	
Instructor in public health nursing, Department of Preventive Medicine and Public Health	1926-1938
Clinical instructor	1938-1943
Algernon Hazlett Speer	
Head, Department of Correspondence Study, General Extension Division, and resident manager, Minneapolis down-town Extension Division registration office	1928-1943
1943-44	
Ora Miner Leland	
Dean, College of Engineering and Architecture and School of Chemistry	1920-1936
Dean of administration, Institute of Technology	1936-1944
Elting Houghtaling Comstock	
Instructor in mathematics, School of Mines	1906-1908
Assistant professor	1908-1909
Professor of mechanics and mathematics	1909-1935
Professor and acting assistant dean, School of Mines and Metallurgy	1935-1936
Professor and administrative assistant, Institute of Technology	1936-1944
Frank Earl Burch	
Helper in medical chemistry	1896
Clinical assistant in eye and ear	1907-1908
Clinical instructor in eye and ear	1908-1910
Assistant professor of ophthalmology and otolaryngology	1910-1920
Associate professor	1920-1927
Professor and head, Department of Ophthalmology and Otolaryngology	1927-1944
William Harvey Emmons	
Professor and head, Department of Geology	1911-1913
Professor and head, Department of Geology and Mineralogy	1913-1944
Director, Minnesota Geological Survey	1911-1944
Louallen Frederick Miller	
Instructor in physics	1917-1918
Professorial lecturer	1918-1921
Assistant professor	1921-1923
Associate professor	1923-1929
Professor	1929-1944
Carl Otto Rosendahl	
Instructor	1901-1902
Assistant, Geological and Natural History Survey of Minnesota	1902-1903
(Absent, in Germany)	1903-1905
Assistant professor	1905-1910
Professor	1910-1944
Acting chairman, Department of Botany	1914-1915
Acting chairman and chairman, Department of Botany	1917-1924
Acting chairman, Department of Botany	1930-1936
Chairman, Department of Botany	1936-1944
William Albert Riley	
Professor and chief, Division of Entomology	1918-1925
Professor and head, Department of Animal Biology	1925-1927
Professor and head, Department of Zoology	1927-1930
Professor and chief, Division of Entomology and Economic Zoology, and professor of zoology	1930-1944
Harry Burgess Roe	
Special lecturer in agricultural engineering and surveyor, Experiment Sta- tion, second semester	1907-1908
Instructor in mathematics	1908-1909
Instructor in agricultural engineering	1909-1912
Assistant professor	1912-1919
Associate professor	1919-1929
Acting head, Division of Agricultural Engineering	1928-1939
Professor of agricultural engineering	1929-1944

Edward Carl Rosenow	Professor of experimental bacteriology, Mayo Foundation.....	1915-1944
Frederick Hughes Scott	Assistant professor of physiology.....	1908-1912
	Associate professor of physiology.....	1912-1918
	Professor of physiology.....	1918-1944
Clinton Raymond Stauffer	Associate professor of geology.....	1914-1917
	Professor of geology.....	1917-1944
	Geologist, Minnesota Geological Survey.....	1922-1944
Henry Ludwig Ulrich	Assistant in clinical microscopy.....	1902-1905
	Instructor in clinical microscopy.....	1905-1910
	Instructor in clinical pathology.....	1910-1914
	Instructor in medicine.....	1914-1915
	Assistant professor of medicine.....	1915-1917
	Associate professor of medicine.....	1917-1927
	Professor of medicine.....	1927-1938
	Clinical professor of medicine.....	1938-1944
Robert C. Lansing	Assistant professor of English.....	1908-1939
	Assistant professor and chief, Division of Rhetoric.....	1922-1923
	Associate professor and chief, Division of Rhetoric.....	1939-1944
Archa Edward Wilcox	Assistant professor of surgery.....	1918-1933
	Associate professor of surgery.....	1933-1938
	Clinical associate professor of surgery.....	1938-1944
Haldor B. Gislason	Assistant in rhetoric.....	1903-1904
	Instructor in rhetoric.....	1907-1916
	Assistant professor, Department of Rhetoric and Public Speaking.....	1916-1918
	Assistant professor, Department of English.....	1923-1924
	Assistant professor and head, Department of Lyceum, Visual Instruction, and Drama, General Extension Division.....	1926-1944
Edward Moren	Instructor in obstetrics.....	1909
	Assistant in medicine.....	1909-1913
	Assistant in surgery.....	1913-1929
	Assistant professor of surgery.....	1929-1938
	Clinical assistant professor of surgery.....	1938-1944
Fred John Pratt	Instructor in eye, ear, nose, and throat.....	1914-1918
	Assistant professor of ophthalmology and otolaryngology.....	1918-1938
	Clinical assistant professor of ophthalmology and otolaryngology.....	1938-1944
Gertrude D. Ross	Instructor in art education.....	1920-1944

CHANGES IN THE FACULTIES

RESIGNATIONS, 1942-43

- Commander Joseph Baer, professor of naval science and tactics, effective November 19, 1942.
- Helge Kökeritz, visiting professor of English, effective June 15, 1943, to accept a Guggenheim fellowship.
- Abe Pepinsky, professor of education, effective June 15, 1943.
- Arthur R. Upgren, professor, School of Business Administration, effective November 16, 1942, to become vice-president, Ninth Federal Reserve Bank, Minneapolis.
- Charles A. Wiethoff, professor of dentistry, effective June 15, 1943, to devote full time to private practice.
- A. Louis Dippel, associate professor of obstetrics and gynecology, effective February 15, 1942, to accept a position at the University of Utah.

- Ralph V. Ellis, physician, Students' Health Service and associate professor of preventive medicine and public health, effective January 31, 1943, to enter private practice, Greensboro, North Carolina.
- Major Carl A. Jacobson, associate professor of military science and tactics, effective November 15, 1942.
- Lucile Petry, associate professor, School of Nursing, effective June 15, 1943, to accept the position as dean, Cornell University-New York Hospital School of Nursing, New York, N. Y.
- Nat N. Allen, Jr., assistant professor of dairy husbandry, effective August 31, 1942, to accept position as associate professor of dairy production, University of Vermont.
- John A. Anderson, assistant professor of pediatrics, effective March 15, 1943, to accept a position at the University of Utah.
- Wallace W. Brookins, assistant professor-extension agronomist, Agricultural Extension Division, effective August 31, 1942, to accept a position with the Central Fibre Corporation.
- Major Charles E. Calverley, assistant professor of military science and tactics, effective October 15, 1942, transferred to Camp Wallace, Texas.
- Belle O. Fish, assistant professor-extension specialist in family relationships, Agricultural Extension Division, effective August 31, 1942, to accept a position at Macalester College.
- Captain Eugene L. Hess, assistant professor of military science and tactics, effective November 23, 1942.
- Herman Kabat, scientist-physiologist, National Foundation for Infantile Paralysis Research and assistant professor of physiology, effective May 31, 1943, to accept position as pharmacologist, National Institute of Health, U. S. Public Health Service, Bethesda, Maryland.
- Lt. Commander Everett E. Pettee, assistant professor of naval science and tactics, effective August 15, 1942, transferred to Smith College.

RESIGNATIONS, 1943-44

- Russell A. Stevenson, dean, School of Business Administration, effective June 30, 1944, to accept a similar position, University of Michigan.
- John T. Tate, dean, College of Science, Literature, and the Arts, effective February 15, 1944 (continues on leave of absence as professor of physics).
- Eric K. Clarke, director and professor neuropsychiatry and pediatrics, effective June 30, 1944, to accept position as chief psychiatrist, Oak Ridge Hospital and Townsite, Tennessee.
- Arild E. Hansen, professor of pediatrics, effective January 31, 1944, to accept headship, department of pediatrics, University of Texas Medical School, Galveston.
- James M. Hayes, clinical associate professor of surgery, effective September 1, 1943, to enter private practice in California.
- C. Lowell Lees, professor of speech, effective June 15, 1944, to accept a position at University of Utah.
- Lester C. McCarthy, clinical associate professor, School of Dentistry, effective at close of 1943-44, due to ill health.
- Carl F. Otto, associate professor, School of Dentistry, effective at close of 1943-44, to devote full time to private practice.
- Major William C. Rindsland, associate professor of military science and tactics, effective June 15, 1944.
- Leo T. Samuels, associate professor of physiology, effective June 15, 1944, to accept a position at University of Utah.
- Gilbert J. Thomas, clinical associate professor of surgery, effective June 30, 1944, to live in Los Angeles, California.
- Richard H. Barnes, assistant professor of physiology, effective June 15, 1944, to accept a position as director of biochemical research, Sharp and Dohme Company, Glenolden, Pennsylvania.
- Captain Henry E. Bollman, assistant professor of military science and tactics, effective June 15, 1944.
- Ralph E. Comstock, assistant professor of animal and poultry husbandry, effective August 31, 1943, to become associate professor in the departments of experimental statistics and animal industry, North Carolina State College.
- Lt. Commander Joseph A. Flynn, assistant professor of naval science and tactics, effective July 20, 1943.

- Esther L. French, assistant professor of physical education for women, effective June 15, 1944, to accept the directorship of physical education for women, Illinois State Normal University.
- George K. Higgins, assistant professor of pathology, effective December 31, 1943, to accept a hospital staff appointment, South Bend, Indiana.
- Ferdinand L. P. Koch, clinical assistant professor of ophthalmology, effective December 15, 1943, to reside in New York, N. Y.
- Captain Robert S. Marvin, assistant professor of military science and tactics, effective February 29, 1944.
- Paul P. Merritt, assistant professor of agricultural biochemistry, effective July 1, 1944, to accept a position with Red Star Yeast Company, Milwaukee, Wisconsin.
- Julia Miller, assistant professor of nursing, effective September 15, 1943, to accept position as director of nursing, Emory University Hospital, Atlanta, Georgia.
- Rudolph W. Norvold, assistant professor of dentistry, effective October 23, 1943.
- Mellie F. Palmer, assistant professor of preventive medicine and public health, effective July 15, 1944, to become director of public health nursing, Peoria, Illinois.
- Betty Porter, assistant professor Psychiatric Clinic for Children, effective July 31, 1943, to serve as associate case supervisor, Minneapolis Family Welfare Association.
- Charles G. Snyder, assistant professor of agricultural engineering, effective July 1, 1944, to accept position as field engineer, Universal Atlas Cement Company, Chicago, Illinois.
- Louis G. Stuhler, assistant professor of urology, Mayo Foundation, effective June 30, 1944, due to illness.
- Charles G. Sutherland, assistant professor of radiology, Mayo Foundation, effective June 30, 1942, due to illness (reported June 15, 1944).
- Lt. Rudolph A. Weisbrich, assistant professor of military science and tactics, effective March 31, 1944.
- Wilfred W. Wetzel, assistant professor of physics, effective June 15, 1944, to accept a position with Minnesota Mining and Manufacturing Company.

APPOINTMENTS, 1942-43

Professors

- John J. Bittner as George Chase Christian Professor of cancer biology beginning November 9, 1942.
B.A. 1925, St. Stephen's College (Annandale-on-the-Hudson, New York); M.S. 1927, Ph.D. 1930, University of Michigan
- Captain John W. Gates as professor of naval science and tactics beginning June 22, 1943.
U. S. Naval Academy, Annapolis, 1911.
- Paul M. Oberg as professor and chairman, Department of Music, beginning September 16, 1942.
B.A. 1925, University of Minnesota; M.A. 1939, Eastman School of Music, University of Rochester; Ph.D. 1944, University of Rochester.
- Robert P. Warren as professor of English, beginning September 16, 1942.
B.A. 1925, Vanderbilt University; M.A. 1927, University of California; B.Litt. 1930, Oxford University, England.

Lecturers

- Sinclair Lewis as professorial lecturer in English for fall quarter, 1942-43.
B.A. 1907, D.Litt. 1936, Yale University.
- Richard G. Bond as visiting lecturer in preventive medicine and public health, January 1 to March 31, 1942.
B.S. 1938, University of New Hampshire; M.S. 1940, State University of Iowa.

Assistant Professors

- Captain Wesley J. Anderson as assistant professor of military science and tactics beginning October 14, 1942.
B.S. in Mechanical Engineering 1926, University of Minnesota.
- Alfred C. Caldwell as assistant professor of soils for 1942-43.
B.Sc. 1936, M.Sc. 1938, University of Alberta; Ph.D. 1941, University of Minnesota.
- Alice W. Clendening as assistant professor of sociology for 1942-43.
B.A. 1922, Sweet Briar College; M.A. 1938, University of Minnesota.
- Charles A. Evans as assistant professor of bacteriology for 1942-43.
B.S. 1936, M.D. 1937, Ph.D. 1943, University of Minnesota.
- Esther L. French as assistant professor of physical education for women for 1942-43.
B.S. 1935, M.A. 1936, Ph.D. 1942, State University of Iowa.

- Lester O. Gilmore as assistant professor of dairy husbandry beginning September 15, 1942.
B.S. 1932, Ph.D. 1939, University of Minnesota; M.S. 1933, Kansas State College.
- Rose Green as assistant professor of sociology for 1942-43.
B.S. in education 1921, University of Pennsylvania; M.S.S. 1929, School for Social Work, Smith College.
- Harold B. Hanson as assistant director, Psychiatric Clinic for Children and assistant professor of pediatrics and psychiatry for 1942-43.
B.A. 1925, Augustana College; M.D. 1929, Rush Medical College.
- Ambrose J. Hertzog as assistant professor of pathology for 1942-43.
B.S. 1928, Springhill College; M.D. 1932, Tulane University; M.S. 1937, Ph.D. 1938, University of Minnesota.
- Ferdinand L. P. Koch as clinical assistant professor in ophthalmology and otolaryngology for 1942-43.
B.A. 1928, Stanford University; M.A. 1931, University of Wisconsin; M.D. 1933, Johns Hopkins University.
- Allan E. Martin as assistant professor of mines and metallurgy for 1942-43.
B.Chem. 1935, Ph.D. 1940, University of Minnesota.
- Rudolph W. Norvold as assistant professor of dentistry for 1942-43.
B.S. 1931, South Dakota State College; D.D.S. 1939, M.S. in Dentistry 1941, University of Minnesota.
- Marguerite E. Paetznick as assistant professor of nursing beginning November 1, 1942.
B.S. in Nursing Education 1931, University of Minnesota; Master of Nursing 1942, University of Washington.
- Lt. Walter A. Reinhard as assistant professor of naval science and tactics beginning April 19, 1943.
U.S. Naval Academy, Annapolis, 1930.
- Myron M. Weaver as physician, Students' Health Service and assistant professor of preventive medicine and public health for 1942-43.
B.A. 1924, Wheaton College; M.S. 1926, Ph.D. 1929, University of Chicago; M.D. 1932, Rush Medical College.
- Lt. Rudolph A. Weisbrich as assistant professor of military science and tactics beginning November 3, 1942.
B.S. 1922, Texas Agricultural and Mechanical College.
- Captain Robert K. Williams as assistant professor of military science and tactics beginning November 12, 1942.
B.S. 1932, Sul Ross State Teachers College, Alpine, Texas; M.A. 1939, Texas Technological College.

APPOINTMENTS, 1943-44

Professors

- Ernst Gellhorn as professor of physiology (National Foundation for Infantile Paralysis Funds)
M.D. 1919, University of Heidelberg, Germany; Ph.D. 1919, University of Münster, Germany.
- Errett W. McDiarmid as professor, librarian, and director, Division of Library Instruction.
B.A. 1929, M.A. 1930, Texas Christian University; B.A. in Library Science 1931, Emory University; Ph.D. 1934, University of Chicago.

Associate Professors

- Ruth Ellen Grout as associate professor of preventive medicine and public health and education.
B.A. 1923, Mount Holyoke College; C.P.H. 1930, Ph.D. 1939, Yale University.
- Harland G. Wood as associate professor physiology research funds.
B.A. 1931, Macalester College; Ph.D. 1935, Iowa State College.

Assistant Professors

- Torfine L. Aamodt as assistant professor of entomology and economic zoology.
B.S. 1930, University of Minnesota.
- Captain Henry E. Bollman as assistant professor of military science and tactics.
B.S. 1940, Iowa State College.
- Berry Campbell as assistant professor of anatomy and pediatrics.
B.A. 1932, University of California (Los Angeles); Ph.D. 1935, Johns Hopkins University.
- Herbert G. Croom as assistant professor, West Central School and Station.
B.S. in Agriculture 1942, University of Minnesota.
- H. Phoebe Gordon as assistant to director and assistant professor, School of Nursing (U. S. Cadet Nurse Corps)
B.A. 1920, Wellesley College; M.S. 1933, University of Minnesota.
- Captain John S. Harvey as assistant professor military science and tactics.

- Charlotte S. Henry as assistant professor of social work and director of psychiatric social work in neuropsychiatry.
B.A. 1920, Hiram College (Hiram, Ohio); M.S.S. 1927, School of Social Work, Smith College.
- John T. Litchfield, Jr., as assistant professor of pharmacology.
B.S. 1935, M.B. 1936, M.D. 1937, University of Minnesota.
- John M. MacGregor as assistant professor of soils.
B.S. 1936, M.S. 1938, University of Alberta, Canada; Ph.D. 1942, University of Minnesota.
- Captain Martin B. McKneally as assistant professor of military science and tactics.
B.A. 1936, Holy Cross University.
- George A. Montelius as assistant professor of dentistry.
D.D.S. 1904, B.A. 1925, M.A. 1931, University of Minnesota.
- Paul S. Parker as clinical assistant professor of dentistry.
D.D.S. 1915, University of Minnesota.
- Elsmere R. Rickard as clinical assistant professor of preventive medicine and public health.
M.B. 1923, M.D. 1924, Northwestern University; M.P.H. 1935, Johns Hopkins School of Public Health and Hygiene.
- Donald E. Strout as assistant professor of library instruction.
B.A. 1930, Bates College (Lewiston, Maine); M.A. 1931, Ph.D. 1933, University of Illinois; B.A. in Library Science 1940, University of Michigan.
- Jean W. Taylor as assistant professor of nursing.
B.A. 1921, University of Minnesota; R.N. 1932, School of Nursing, University of Minnesota.
- Horace L. Thomas as assistant professor of agronomy and plant genetics.
B.S. 1926, M.S. 1927, Michigan State Agricultural College; Ph.D. 1931, University of Minnesota.

PROMOTIONS EFFECTIVE 1942-43

- Professor of Education and Associate Dean to Professor of Education, Associate Dean, and Acting Dean, College of Science, Literature, and the Arts*
T. Raymond McConnell
- Professor to Professor and Acting Chief*
Leroy S. Palmer (College of Agriculture, Forestry, and Home Economics—bio-chemistry)
- Professor and Acting Chief to Professor and Chief*
Leroy S. Palmer (College of Agriculture, Forestry, and Home Economics—bio-chemistry)
- Professor of Agronomy and Plant Genetics and Vice Director to Professor of Agronomy and Plant Genetics and Associate Director*
Forrest R. Immer (Department of Agriculture—Agricultural Experiment Station)
- Associate Professor of Education and Assistant Director to Associate Professor of Education and Associate Director*
Horace T. Morse (General College)
- Acting Superintendent to Superintendent*
Donald L. Dailey (Department of Agriculture—North Central School and Experiment Station)
- Associate Professor to Professor*
Huntington Brown (College of Science, Literature, and the Arts—English)
Arild E. Hansen (Medical School—pediatrics)
Louis F. Keller (Department of Physical Education and Athletics)
C. Lowell Lees (College of Science, Literature, and the Arts—speech)
Miles A. Tinker (College of Science, Literature, and the Arts—psychology)
Arthur R. Uppgren (School of Business Administration)
Edmund G. Williamson (Dean of Students—psychology)
- Clinical Associate Professor to Clinical Professor*
Lawrence R. Boies (Medical School—ophthalmology)
- Assistant Professor to Associate Professor*
Clifford P. Archer (College of Education)
Francis M. Boddy (School of Business Administration)
Charles F. Code (Mayo Foundation)
Samuel T. Coulter (College of Agriculture, Forestry, and Home Economics—dairy husbandry)
Robert E. Fricke (Mayo Foundation)
Joseph T. King (Medical School—physiology)

E. Fred Koller (College of Agriculture, Forestry, and Home Economics—agricultural economics)

Alex S. Levens (Institute of Technology—drawing and descriptive geometry)

James G. Love (Mayo Foundation)

Clarence E. Lund (Institute of Technology—mechanical engineering)

Francis M. Money (Medical School—social service)

Ralph A. Piper (Department of Physical Education and Athletics)

Stefan A. Riesenfeld (Law School)

Ella J. Rose (College of Agriculture, Forestry, and Home Economics—home economics)

Bertrum C. Schiele (Medical School—neuropsychiatry)

Clinical Assistant Professor to Clinical Associate Professor

Raymond R. Henry (School of Dentistry)

Instructor to Assistant Professor

Hugo L. Bair (Mayo Foundation)

John J. Boehrer (Medical School—preventive medicine and public health)

Carl Borgeson (College of Agriculture, Forestry, and Home Economics—agronomy and plant genetics)

Wallace W. Brookins (Department of Agriculture—agricultural extension)

John W. Clark (College of Science, Literature, and the Arts—English)

Ralph E. Comstock (Department of Agriculture—Agricultural Experiment Station)

Willis E. Dugan (College of Education)

William H. Easton (Institute of Technology—mechanical engineering)

Willard W. Green (Department of Agriculture—Agricultural Experiment Station)

Dale Harris (Institute of Child Welfare)

Herman Kabat (Medical School—physiology)

Charlotte Kirchner (Department of Agriculture—agricultural extension)

Arthur Kirschbaum (Medical School—anatomy)

Marie Lien (College of Education—art education)

David Mandelbaum (College of Science, Literature, and the Arts—anthropology)

Philip W. Manson (College of Agriculture, Forestry, and Home Economics—agricultural engineering)

Ralph E. Miller (Department of Agriculture—school of agriculture)

John M. H. Olmsted (College of Science, Literature, and the Arts—mathematics)

Clarence Osell (Department of Physical Education and Athletics)

Walter C. Popp (Mayo Foundation)

Betty Porter (Medical School—Psychiatric Clinic for Children)

Gerald R. Prescott (College of Science, Literature, and the Arts—music)

John A. Sanford (College of Science, Literature, and the Arts—English)

Garvin L. Von Eschen (Institute of Technology—aeronautical engineering)

Franklin G. Wallace (College of Science, Literature, and the Arts—zoology)

Clinical Instructor to Clinical Assistant Professor

Walter P. Gardner (Medical School—medicine)

John H. Moe (Medical School—surgery)

John F. Pohl (Medical School—surgery)

Louis Sperling (Medical School—surgery)

Agricultural Extension Specialist to be given rank of Assistant Professor

Daniel C. Dvoracek (Department of Agriculture—agricultural extension)

Eldred M. Hunt (Department of Agriculture—agricultural extension)

PROMOTIONS EFFECTIVE 1943-44

University Dean and Assistant to the President and Professor of Sociology to Vice President, Academic Administration and Professor of Sociology

Malcolm M. Willey

Comptroller and Secretary of Board of Regents to Vice President, Business Administration and Secretary of Board of Regents

William T. Middlebrook

Assistant Comptroller, Associate Professor, and Assistant Secretary of Board of Regents to Comptroller, Investment Counselor, Associate Professor, and Assistant Secretary of Board of Regents

Laurence R. Lunden

Professor of Education, Associate Dean, and Acting Dean to Professor of Education and Dean, College of Science, Literature, and the Arts
T. Raymond McConnell

Chief and Professor of Forestry to Dean of the College of Agriculture, Forestry, and Home Economics and Professor of Forestry
Henry Schmitz

Assistant Professor and Director of the Center for Continuation Study to Associate Professor and Director of the General Extension Division
Julius M. Nolte

Professor of Agricultural Biochemistry to Professor and Acting Chief of the Division of Agricultural Biochemistry
William F. Geddes

Professor of Pharmacology to Professor and Head of the Department of Pharmacology
Raymond N. Bieter

Associate Professor and Extension Specialist in Agricultural Conservation and Land Use to Associate Professor and Assistant Director of Agricultural Extension
Skuli Rutford

Associate Professor to Professor

- Paul Andersen (Institute of Technology—civil engineering)
Wallace D. Armstrong (Medical School—physiology, and School of Dentistry)
Edward S. Bade (Law School—law librarian)
Edward J. Baldes (Mayo Foundation)
Alice Biester (College of Agriculture, Forestry, and Home Economics—home economics)
Jesse L. Bollman (Mayo Foundation)
David R. Briggs (College of Agriculture, Forestry, and Home Economics—agricultural biochemistry)
Bryng Bryngelson (College of Science, Literature, and the Arts—speech)
Charles R. Burnham (College of Agriculture, Forestry, and Home Economics—agronomy and plant genetics)
Walter W. Cook (College of Education)
Harold C. Deutsch (College of Science, Literature, and the Arts—history)
Harriet Goldstein (College of Agriculture, Forestry, and Home Economics—home economics)
Alexander A. Granovsky (College of Agriculture, Forestry, and Home Economics—entomology and economic zoology)
Ambert B. Hall (School of Dentistry)
William T. Heron (College of Science, Literature, and the Arts—psychology)
George M. Higgins (Mayo Foundation)
Elmer W. Johnson (Institute of Technology—electrical engineering)
Howard C. H. Kernkamp (College of Agriculture, Forestry, and Home Economics—veterinary medicine)
Stanley V. Kinyon (Law School)
Jane M. Leichsenring (College of Agriculture, Forestry, and Home Economics—home economics)
Robert S. Livingston (Institute of Technology—chemistry)
Clarence C. Ludwig (College of Science, Literature, and the Arts—political science)
Thomas M. McCall (Department of Agriculture—Northwest School and Experiment Station)
Mark O. Pattridge (School of Dentistry)
Stefan A. Riesenfeld (Law School)
Adolph Ringoen (College of Science, Literature, and the Arts—zoology)
Robert E. Summers (Institute of Technology—mechanical engineering)

Clinical Associate Professor to Clinical Professor

- Ralph T. Knight (Medical School—surgery)
Harold A. Whittaker (Medical School—preventive medicine and public health)

Clinical Assistant Professor to Clinical Professor

- Erling W. Hansen (Medical School—ophthalmology)

Assistant Professor to Associate Professor

- Philip A. Anderson (College of Agriculture, Forestry, and Home Economics—animal husbandry)
 Albury Castell (College of Science, Literature, and the Arts—philosophy)
 Bryce L. Crawford (Institute of Technology—chemistry)
 John G. Darley (College of Science, Literature, and the Arts—psychology, and Student Counseling Bureau)
 Clarence Dennis (Medical School—surgery)
 Reuel Fenstermacher (College of Agriculture, Forestry, and Home Economics—veterinary medicine)
 Ruth B. Freeman (Medical School—preventive medicine and public health)
 Alfred L. Harvey (College of Agriculture, Forestry, and Home Economics—animal husbandry)
 Alexander C. Hodson (College of Agriculture, Forestry, and Home Economics—entomology and economic zoology)
 Andrew Hustrulid (College of Agriculture, Forestry, and Home Economics—agricultural engineering)
 Richard C. Jordan (Institute of Technology—Engineering Experiment Station)
 Evron M. Kirkpatrick (College of Science, Literature, and the Arts—political science)
 Charles E. McLennan (Medical School—obstetrics and gynecology)
 Paul R. McMiller (College of Agriculture, Forestry, and Home Economics—soils)
 George O. Pierce (Medical School—preventive medicine and public health)
 Leo T. Samuels (Medical School—physiology)
 Robert F. Schuck (Institute of Technology—drawing and descriptive geometry)
 William J. Simon (School of Dentistry)
 Helen M. Starr (Department of Physical Education for Women)
 Charles O. Wilson (College of Pharmacy)

Clinical Assistant Professor to Clinical Associate Professor

- Joseph T. Cohen (Medical School—pediatrics)
 Charles E. Connor (Medical School—ophthalmology and otolaryngology)
 Thomas J. Kinsella (Medical School—surgery)
 Carl W. Laymon (Medical School—medicine)
 N. Logan Leven (Medical School—surgery)
 Earl A. Nelson (School of Dentistry)
 Edward A. Regnier (Medical School—surgery)
 Frank W. Whitmore (Medical School—neuropsychiatry)
 Ragnvald S. Ylvisaker (Medical School—medicine)

Instructor to Assistant Professor

- Neal R. Amundson (Institute of Technology—mathematics and mechanics)
 Archie H. Baggenstoss (Mayo Foundation)
 George S. Baker (Mayo Foundation)
 Borghild G. Behn (Medical School—preventive medicine and public health)
 Hugh R. Butt (Mayo Foundation)
 O. Theron Clagett (Mayo Foundation)
 Clarence H. Christopherson (College of Agriculture, Forestry, and Home Economics—agricultural engineering)
 Bert A. Crowder (Institute of Technology—mechanical engineering)
 James A. Cuneo (College of Science, Literature, and the Arts—Romance languages)
 Paul L. Cusick (Mayo Foundation)
 Malcolm B. Dockerty (Mayo Foundation)
 John B. Erich (Mayo Foundation)
 Jacques A. Fermaud (College of Science, Literature, and the Arts—Romance languages)
 Mykola H. Haydak (College of Agriculture, Forestry, and Home Economics—entomology and economic zoology)
 Wallace E. Herrell (Mayo Foundation)
 Frederick W. Hoffbauer (Medical School—medicine)
 Norton C. Ives (Department of Agriculture—agricultural extension)
 Raymond J. Jackman (Mayo Foundation)
 Paul C. Johnson (Department of Agriculture—agricultural extension)
 Everett Laitala (Institute of Technology—mechanical engineering)
 Millard LaJoy (Institute of Technology—mechanical engineering)
 Ramer D. Leighton (Department of Agriculture—agricultural extension)

Edward S. Loye (Institute of Technology—mathematics and mechanics)
 Harry B. Macey (Mayo Foundation)
 William R. McEwen (Institute of Technology—mathematics and mechanics)
 O. William Muckenhirn (Institute of Technology—electrical engineering)
 Ralph G. Nichols (College of Agriculture, Forestry, and Home Economics—rhetoric)
 Benjamin S. Pomeroy (College of Agriculture, Forestry, and Home Economics—
 veterinary medicine)
 Ernest Rinke (College of Agriculture, Forestry, and Home Economics—agronomy
 and plant genetics)
 Alois Schmid (College of Agriculture, Forestry, and Home Economics—agronomy
 and plant genetics)
 Kinsey M. Simonton (Mayo Foundation)
 Ian W. Tervet (College of Agriculture, Forestry, and Home Economics—plant
 pathology and botany)
 Niels Thorpe (Department of Physical Education and Athletics)
 Amy M. Wessell (Department of Agriculture—agricultural extension)
 Frank M. Whiting (College of Science, Literature, and the Arts—speech)
 James D. Winter (College of Agriculture, Forestry, and Home Economics—horti-
 culture)

Clinical Instructor to Clinical Assistant Professor

James K. Anderson (Medical School—surgery)
 Hewitt B. Hannah (Medical School—neuropsychiatry)
 Thomas Lowry (Medical School—medicine)
 Alphonse Walch (Medical School—medicine)
 Willard D. White (Medical School—surgery)

Lecturer to Assistant Professor

Fulton Koehler (Institute of Technology—mathematics and mechanics)
 Siegfried Mickelson (College of Science, Literature, and the Arts—journalism)

Agricultural Conservation Agent to Assistant Professor and Extension Agronomist

Myron L. Armour (Department of Agriculture—agricultural extension)

LEAVES OF ABSENCE, 1942-43

Anne D. Blitz, dean of women, with salary March 16 to June 30, 1943, due to illness.
 John T. Tate, dean, College of Science, Literature, and the Arts and professor of physics,
 continuation of leave without salary for 1942-43, for research, National Defense Re-
 search Committee.
 Eugen Altschul, visiting professor, School of Business Administration, for 1942-43, for
 research work with the European section, Board of Economic Warfare, Washington,
 D.C.
 Gaylord W. Anderson, professor and head, Department of Preventive Medicine and
 Public Health, without salary for 1942-43, to serve as head, educational subdivision,
 Venereal Disease Control Division, U.S. Army.
 William Anderson, professor and chairman, Department of Political Science, half time
 without salary for 1942-43, to do research planning, Committee on Public Administra-
 tion, Social Science Research Council.
 Clara M. Brown, professor of home economics education, sabbatical furlough for fall
 and winter quarters, 1942-43, to make a survey of the home economics offerings in
 certain liberal arts colleges for the North Central Association and the American
 Home Economics Association, and to study at the University of Chicago on commu-
 nity educational programs.
 Winchell M. Craig, professor, Mayo Foundation, without salary, from January 1, 1942
 to June 30, 1943, for service in the U. S. Naval Reserve.
 Alvin S. Cutler, professor of civil engineering, leave for one-fourth time without salary,
 from September 15, 1942 to March 15, 1943, due to illness.
 William L. Hart, professor of mathematics, without salary for the winter quarter of
 1942-43, to serve as chairman of a subcommittee supervising B and C Pre-meteorologi-
 cal training programs (time to be spent at the University of Chicago).
 Rodney B. Harvey, professor of plant pathology and botany, without salary May 16, 1942
 to May 15, 1943, for research on food products and production of synthetic rubber.
 Arthur D. Hirschfelder, professor and head, Department of Pharmacology, with salary
 September 16 to date of his death, October 11, 1942, due to illness.

- Charles A. Koepke, professor of mechanical engineering and administrative assistant, Institute of Technology, without salary for 1942-43, for service with the War Production Board for this district and to act as part-time consultant with the Winkley Artificial Limb Company.
- Thomas B. Magath, professor, Mayo Foundation, without salary for 1942-43 for service in the U. S. Naval Reserve.
- George E. Montillon, professor of chemistry, without salary, September 3, 1942 to June 30, 1943, to work with the Tennessee Valley Authority.
- Alfred O. C. Nier, professor of physics, without salary for 1942-43, for research work with National Defense Research Committee.
- Abe Pepinsky, professor general education, without salary for 1942-43.
- Maynard E. Pirsig, professor of law, without salary, October 6, 1942 to January 3, 1943, to serve as associate justice, Minnesota Supreme Court (teaching duties to continue during leave).
- William L. Prosser, professor of law, without salary for 1942-43 to accept a position with OPA.
- Albert M. Snell, professor, Mayo Foundation, without salary January 1, 1942 to June 30, 1943, for service in the U. S. Naval Reserve.
- Elvin C. Stakman, professor and chief, Division of Plant Pathology and Botany, without salary from February 1 to April 30, 1943, to assist Rockefeller Foundation in their agricultural improvement program in Latin America, particularly Mexico.
- Lorenz G. Straub, professor and director of hydraulic laboratory, without salary for 1942-43 to serve as research coordinator, National Defense Research Committee (office in New York City).
- Arthur R. Upgren, professor, School of Business Administration, for one-third time without salary October 16, 1942 to June 15, 1943, to serve as economic adviser to the Economic Policy Committee, U. S. Chamber of Commerce.
- Roland S. Vaile, professor, School of Business Administration, without salary for 1942-43, to plan program for Consumer Programs Branch, Division of Civilian Supply, OPA.
- Warren C. Waite, professor of agricultural economics, without salary January 14 to July 1, 1943, to assist the Food Distribution Administration of the U. S. Department of Agriculture in the development of its war program with reference to dairy products.
- Waltman Walters, professor, Mayo Foundation, without salary for 1942-43, for service in the U. S. Naval Reserve.
- Charles A. Wiethoff, professor of dentistry, without salary for 1942-43, to devote full time to private practice.
- Russell M. Wilder, professor of medicine, Mayo Foundation, without salary January 1 to June 30, 1943, to serve with Food Distribution Administration, U. S. Department of Agriculture.
- C. Gilbert Wrenn, professor of education, without salary, for 1942-43, to serve in the U. S. Naval Reserve.
- Dale Yoder, professor, School of Business Administration, without salary, February 1 to May 31, 1943, to serve as chief, Planning Division, Bureau of Program Planning and Review, War Manpower Commission, Washington, D.C.
- Edgar V. N. Allen, associate professor, Mayo Foundation, without salary August 1, 1942 to June 30, 1943, for service in the U. S. Naval Reserve.
- Clifford P. Archer, associate professor of education, without salary May 24 to June 30, 1943, to accept a commission as major, U. S. Army.
- Joseph Berkson, associate professor, Mayo Foundation, without salary May 1, 1942 to June 30, 1943, for service in the Army Air Forces.
- Francis M. Boddy, associate professor, School of Business Administration, without salary for 1942-43, for special research in connection with the war effort in the lead, zinc, and tin division, OPA, Washington, D.C. Later this leave was changed to read beginning March 12, 1943 for a commission in the U. S. Naval Reserve.
- Guy L. Bond, associate professor of education, without salary, October 17, 1942 to June 30, 1943 to serve in Procurement Division, U. S. Navy, Baltimore, Maryland.
- Arthur M. Borak, associate professor, School of Business Administration, without salary November 16, 1942 to June 15, 1943, for service as senior price analyst, Price Division, OPA, St. Paul, Minnesota.
- John D. Camp, associate professor, Mayo Foundation, without salary for 1942-43, for service in the U. S. Naval Reserve.

- Asher N. Christensen, associate professor of political science, sabbatical furlough for the fall quarter of 1942-43 to lecture on American government, National University of the Litoral, Santa Fé, Argentina and to gain first-hand knowledge of government and politics in Argentina and adjacent Latin-American countries, and without salary for the winter and spring quarters of 1942-43, to remain in Buenos Aires, Argentina, as cultural attaché, U. S. Embassy.
- Harold C. Deutsch, associate professor of history, without salary, December 16, 1942 to June 15, 1943, for work with Board of Economic Warfare.
- William P. Dunn, associate professor of English, with salary for the winter and spring quarters of 1942-43, due to illness.
- Ruth E. Eckert, associate professor and associate director, Bureau of Educational Research, without salary December 16, 1942 to February 15, 1943, for treatment of a throat ailment.
- Anne F. Fenlason, associate professor of sociology, without salary for 20 per cent time for the spring quarter of 1942-43, to supervise the training of the director, Home Service Department, Hennepin County Chapter, American Red Cross and to organize the home service work as a future training for students who may receive fellowships from the American Red Cross.
- Philip S. Hench, associate professor, Mayo Foundation, without salary August 1, 1942 to June 30, 1943, for service in the U. S. Army.
- Chester A. Hughes, associate professor of civil engineering, without salary for 1942-43, for duty with the Canadian Army.
- Frank H. Kaufert, associate professor of forestry, without salary from August 8, 1942 to June 30, 1943, to serve as instructor in the Army Air Forces school for wood inspection, U. S. Forest Products Laboratory, Madison, Wisconsin.
- Emilio C. LeFort, associate professor of Romance languages, without salary April 16 to June 15, 1943, to serve as senior field program officer, Regional Division, Office of Coordinator of Inter-American Affairs, Washington, D.C.
- Benjamin E. Lippincott, associate professor of political science, without salary for 1942-43, to serve with the Army Air Forces school.
- Robert S. Livingston, associate professor of chemistry, without salary for 1942-43, to work on a National Defense Research Committee project.
- Charles W. Mayo, associate professor, Mayo Foundation, without salary January 1 to June 30, 1943, for service in the U. S. Army General Hospital No. 71.
- Lucile Petry, associate professor and assistant director, School of Nursing, without salary August 15, 1942 to May 31, 1943, to serve on U. S. Public Health Service committee for the administration of funds for nursing education.
- James T. Priestley, associate professor, Mayo Foundation, without salary January 1 to June 30, 1943, for service in the U. S. Army General Hospital No. 71.
- Emerson P. Schmidt, associate professor, School of Business Administration, without salary December 16, 1942 to June 15, 1943, to serve as economist, Committee on Economic Policy, U. S. Chamber of Commerce to conduct special research for the development of a program for postwar reconversion in industry.
- Otto H. Schmitt, associate professor of zoology, without salary for 1942-43, for research work on the national defense program, Office of Scientific Research and Development.
- B. Frederic Skinner, associate professor of psychology, without salary for 1942-43, for special war research work, General Mills, Minneapolis.
- Joseph R. Starr, associate professor of political science, without salary October 8, 1942 to June 30, 1943, for military service.
- George J. Stigler, associate professor, School of Business Administration, without salary for spring quarter of 1942-43 to serve as visiting professor, University of Chicago.
- Gershom J. Thompson, associate professor, Mayo Foundation, without salary November 1, 1942 to June 30, 1943, for service with U. S. Navy.
- Charles H. Watkins, associate professor, Mayo Foundation, without salary 1942-43, for service in the U. S. Naval Reserve.
- John H. Williams, associate professor of physics, without salary for 1942-43, to work on a research project for the Office of Scientific Research and Development.
- Edward W. Aiton, assistant professor and assistant state leader 4-H Club Work in agricultural extension, without salary March 19 to June 30, 1943, for military service (released July 1, 1943).
- Axel B. Algren, assistant professor and assistant director, Engineering Experiment Station, without salary for 1942-43, to continue his work as district assistant director of training within industry of the office of the War Production Board.

- Frank C. Andrus, assistant professor of pathology, without salary September 3, 1942 to June 30, 1943, for service in the U. S. Army.
- Elizabeth Atkins, assistant professor of English, sabbatical furlough for 1942-43, for research on the history of metaphors.
- Curtis E. Avery, assistant professor of extension classes, without salary for 1942-43, for service in the U. S. Army Air Forces.
- Philip W. Brown, assistant professor, Mayo Foundation, without salary November 1, 1942 to June 30, 1943, for service in the U. S. Army.
- Clyde M. Christenson, assistant professor of plant pathology and botany, without salary June 1 to September 30, 1943, to study problems in connection with the use of wood by various industries directly connected with the war effort at Forest Products Laboratory, Madison, Wisconsin.
- Rufus J. Christgau, assistant professor, Northwest School and Experiment Station, without salary October 1, 1942 to June 30, 1943, to serve as assistant field director of recreation for the American Red Cross.
- Walter B. Cline, assistant professor of anthropology, without salary for 1942-43, to serve as consultant in the Office of Strategic Services, Washington, D.C.
- Richard W. Cragg, assistant professor of pathologic anatomy, Mayo Foundation, without salary July 1, 1942 to June 30, 1943, for service with the U. S. Naval Unit No. 56.
- Thomas J. Dry, assistant professor, Mayo Foundation, without salary August 1, 1942 to June 30, 1943, for service in the U. S. Army.
- Willis E. Dugan, director of student personnel and assistant professor of education, without salary June 16-30, 1943, to accept a position with the American Red Cross.
- Millard S. Everett, assistant professor of philosophy, without salary January 1 to June 30, 1943, to serve in the U. S. Army.
- Marion L. Faegre, assistant professor and extension worker, Institute of Child Welfare, without salary January 21 to June 15, 1943, to organize federal training programs in child care centers.
- Arthur R. Ford, assistant professor of mechanical engineering, without salary for 1942-43, to continue as associate aeronautical engineer, Naval Aircraft Factory, Philadelphia Navy Yard.
- Ruth Harrington, assistant professor, School of Nursing, without salary October 4 to December 15, 1942, to serve as secretary to a committee on educational problems in wartime, National League of Nursing Education.
- Harold L. Harris, editor and assistant professor, Department of Agriculture, without salary June 7-19, 1943, for work with the National Committee on Boys' and Girls' Club Work, Inc., in connection with promotional materials for National Livestock Conservation and in editing projected publications.
- Robert G. Hinckley, mental hygienist and assistant professor, Students' Health Service and Department of Preventive Medicine and Public Health, sabbatical furlough for 1942-43, for study and research in the field of neuropsychiatry at Payne Whitney Psychiatric Clinic, New York, N. Y.
- Walter J. Huchthausen, assistant professor of architecture, without salary for 1942-43, for service with the Army Air Forces, Ellington Field, Texas.
- Reynold A. Jensen, assistant director and assistant professor of psychiatry and pediatrics (Psychiatric Clinic for Children) without salary October 16, 1942 to January 15, 1943, for special study provided by a Commonwealth Fund fellowship.
- Henry S. Jerabek, assistant professor of mines and metallurgy, without salary December 16, 1942 to June 30, 1943, to engage in research on defense problems in Washington, D.C.
- Tom B. Jones, assistant professor of history, without salary November 1, 1942 to June 30, 1943, for duty in the U. S. Naval Reserve.
- Earl G. Latham, assistant professor of political science, without salary, for 1942-43, for work on manpower mobilization project, Bureau of the Budget, Washington, D.C.
- Donald B. Lawrence, assistant professor of botany, without salary for 1942-43, to serve in the Army Air Forces.
- Parker Lesley, assistant professor of fine arts, without salary for 1942-43, for service with the armed forces.
- Alex S. Levens, assistant professor of drawing and descriptive geometry, September 3, 1942 to June 30, 1943, to serve as lecturer, University of California (Berkeley), and also do ESMWT work prior to army service.
- Alexander R. MacLean, assistant professor, Mayo Foundation, without salary February 15, 1942 to June 30, 1943, for service in the U. S. Naval Reserve.

- Charles K. Maytum, assistant professor, Mayo Foundation, without salary January 1 to June 30, 1943, for service in the U. S. Army General Hospital No. 71.
- Franz Montgomery, assistant professor of English, without salary for 1942-43, to serve in the Army Air Forces.
- Charles K. Otis, assistant professor of agricultural engineering, without salary April 22 to June 30, 1943, to accept a commission in the U. S. Naval Reserve.
- Olivia T. Peterson, clinical assistant professor preventive medicine and public health, without salary for 1942-43, for service with the American Red Cross.
- Edgar L. Piret, assistant professor chemistry, half-time leave without salary for the fall and winter quarters of 1942-43, to serve the Minnesota Mining and Manufacturing Company, St. Paul.
- Gerald R. Prescott, band master and assistant professor of music, without salary October 16, 1942 to June 30, 1943, to serve in the U. S. Army Specialist Corps.
- John A. Sanford, assistant professor of English, without salary for 1942-43, for service in the U. S. Navy.
- Louis Sperling, clinical assistant professor of surgery, without salary September 1, 1942 to June 30, 1943, for military service.
- Ralph R. Sullivan, clinical assistant professor of medicine, without salary for 1942-43 to attend Michigan School of Public Health.
- T. Ivan Taylor, assistant professor of chemistry, for 1942-43, to continue his research work at the Bureau of Standards, Washington, D.C.
- Faith Thompson, assistant professor of history, with salary May 1 to June 15, 1943, due to illness.
- Edward B. Tuohy, assistant professor, Mayo Foundation, without salary, June 1, 1942 to June 30, 1943, for service in the U. S. Army.
- Franklin G. Wallace, assistant professor of zoology, without salary for 1942-43, to serve in sanitary division, U. S. Army.
- Cornelia T. Williams, counselor and assistant professor, General College, without salary March 4 to June 30, 1943, for a commission with the U. S. Marine Corps Women's Reserve.
- Hedvig Ylvisaker, assistant professor of social studies, General College, without salary January 16 to June 30, 1943, to serve as associate editor, Central Administrative Division, OWI, New York, N. Y.

LEAVES OF ABSENCE, 1943-44*

- Theodore C. Blegen, dean, Graduate School and professor of history, without salary October 1, 1943 to August 31, 1944, to direct a new and important part of the educational program of the Special Services Division of the Army on behalf of the American Historical Association.
- John T. Tate, dean, College of Science, Literature, and the Arts and professor of physics for 1943-44 (see 1942-43 list).
- Eugen Altschul, visiting professor, School of Business Administration, for 1943-44 (see 1942-43 list).
- Paul Andersen, professor of civil engineering, without salary September 16, 1943 to June 30, 1944, for active duty in the U. S. Army.
- Gaylord W. Anderson, professor and head of preventive medicine and public health, for 1943-44 (see 1942-43 list).
- William Anderson, professor and chairman, department of political science, half time for 1943-44 (see 1942-43 list).
- Roy G. Blakey, professor, School of Business Administration, without salary for 1943-44, to serve as director of research for the Council of State Governments in Chicago.
- Harold C. Deutsch, professor of history, for 1943-44 (see 1942-43 list).
- Forrest R. Immer, professor of agronomy and plant genetics and associate director, Agricultural Experiment Station, without salary February 16 to June 30, 1944, to serve as Operations Analyst, Office of the Commanding General, Air Force Bomber Command.
- Stanley V. Kinyon, professor of law, for half time without salary for 1943-44, to serve with law firm of Doherty, Rumble, Butler, Sullivan, and Mitchell, St. Paul, Minnesota.
- Charles A. Koepke, professor of mechanical engineering and administrative assistant, Institute of Technology, for 1943-44 (see 1942-43 list).

* Wartime continuation leaves of absence for 1942-43 see June 12, 1942, pages 279-84 and for 1943-44 June 11, 1943, pages 644-52 of the minutes of the Board of Regents.

- C. Lowell Lees, professor of speech, without salary for 1943-44, to teach at the University of Utah.
- Robert S. Livingston, professor of chemistry, for 1943-44 (see 1942-43 list).
- Harold Macy, professor of dairy husbandry, without salary September 22, 1943 to June 30, 1944, to serve in the U. S. Army at the University of Pittsburgh Civil Affairs Training School.
- Thomas B. Magath, professor, Mayo Foundation, for 1943-44 (see 1942-43 list).
- Arthur W. Marget, professor, School of Business Administration, without salary for 1943-44, to serve in the U. S. Army.
- George E. Montillon, professor of chemistry, September 16-30, 1943 and January 1 to June 15, 1944 (see 1942-43 list).
- Alfred O. C. Nier, professor of physics, for 1943-44 (see 1942-43 list).
- William L. Prosser, professor of law, for 1943-44 (see 1942-43 list).
- Horace E. Read, professor of law, without salary for 1943-44, to serve as commander in the Canadian Navy.
- George W. Reynolds, professor, School of Dentistry, without salary for 1943-44, due to illness.
- Stefan A. Riesenfeld, professor of law, without salary April 1 to June 15, 1944, for service in the U. S. Navy.
- Lester B. Shippee, professor and chairman, Department of History, with salary for the winter quarter of 1943-44, due to illness.
- Edward H. Sirich, professor of Romance languages, with salary for the spring quarter of 1943-44, due to illness.
- Hubert J. Sloan, professor of poultry husbandry, sabbatical furlough January 1 to May 31, 1944, for study in the fields of biochemistry, physiology, and zoology, University of Chicago.
- Albert M. Snell, professor Mayo Foundation, for 1943-44 (see 1942-43 list).
- Elvin C. Stakman, professor and chief, Division of Plant Pathology and Botany, from March 1 to April 30, 1944 (see 1942-43 list).
- Lorenz G. Straub, professor and director, Hydraulic Laboratory, for 1943-44 (see 1942-43 list).
- Warren C. Waite, professor of agricultural economics, from July 1 to September 15, 1943 (see 1942-43 list).
- Waltman Walters, professor, Mayo Foundation, for 1943-44 (see 1942-43 list).
- Edgar B. Wesley, professor of education, sabbatical furlough from January 16 to March 15, 1944, to study the effect of the war upon the social studies curriculum of the schools and to examine the proposed programs for the postwar period.
- Russell M. Wilder, professor of medicine, Mayo Foundation, July 1 to September 30, 1943 (see 1942-43 list).
- C. Gilbert Wrenn, professor of education for 1943-44 (see 1942-43 list).
- Dale Yoder, professor, School of Business Administration, without salary for 1943-44, to serve as vice chairman, District VI, War Labor Board, Chicago.
- Edgar V. N. Allen, associate professor, Mayo Foundation, for 1943-44 (see 1942-43 list).
- Clifford P. Archer, associate professor of education, for 1943-44 (see 1942-43 list).
- Joseph Berkson, associate professor, Mayo Foundation, for 1943-44 (see 1942-43 list).
- Francis M. Boddy, associate professor, School of Business Administration, for 1943-44 (see 1942-43 list).
- Guy L. Bond, associate professor of education, for 1943-44 (see 1942-43 list).
- Arthur M. Borak, associate professor, School of Business Administration, for 1943-44 (see 1942-43 list).
- John D. Camp, associate professor, Mayo Foundation, for 1943-44 (see 1942-43 list).
- Asher N. Christensen, associate professor of political science, for 1943-44 (see 1942-43 list).
- A. Hamilton Chute, associate professor, School of Business Administration, without salary for 1943-44, for position in the war activities of the U. S. Department of Agriculture as acting chief, Programs Planning Section, Food Distribution Administration, Washington, D.C.
- John G. Darley, director and associate professor of psychology, University Testing Bureau, without salary June 10, 1943 to June 30, 1944, to participate in a technical psychology project concerned with the selection of Signal Corps personnel.
- William P. Dunn, associate professor of English, with salary fall quarter and without salary winter and spring quarters of 1943-44 (see 1942-43 list).

- Ruth E. Eckert, associate professor and associate director, Bureau of Educational Research, without salary for the fall quarter of 1943-44 to participate in the evaluation of the New York, N. Y., Junior College system.
- Philip S. Hench, associate professor, Mayo Foundation, for 1943-44 (see 1942-43 list).
- Chester A. Hughes, associate professor of civil engineering, for 1943-44 (see 1942-43 list).
- Lura C. Hutchinson, associate professor of library instruction, with salary March 11 to June 15, 1944, due to injuries.
- Frank H. Kaufert, associate professor of forestry, for 1943-44 (see 1942-43 list).
- Emilio C. LeFort, associate professor of Romance languages, for 1943-44 (see 1942-43 list).
- Benjamin E. Lippincott, associate professor of political science, for 1943-44 (see 1942-43 list).
- Charles W. Mayo, associate professor, Mayo Foundation, for 1943-44 (see 1942-43 list).
- George O. Pierce, associate professor of preventive medicine and public health, without salary October 1, 1943 to June 30, 1944, to serve with the U. S. Army Sanitary Corps.
- James T. Priestley, associate professor, Mayo Foundation, for 1943-44 (see 1942-43 list).
- Emerson P. Schmidt, associate professor, School of Business Administration, for 1943-44 (see 1942-43 list).
- Otto H. Schmitt, associate professor of zoology, for 1943-44 (see 1942-43 list).
- William J. Simon, associate professor, School of Dentistry, without salary November 13, 1943 to June 30, 1944, for service with the U. S. Army Dental Corps.
- B. Frederic Skinner, associate professor of psychology, for 1943-44 (see 1942-43 list).
- Wesley W. Spink, associate professor of medicine, without salary January 1 to March 31, 1944, to serve as consultant to Secretary of War on infectious diseases.
- Joseph R. Starr, associate professor of political science, for 1943-44 (see 1942-43 list).
- George J. Stigler, associate professor, School of Business Administration, without salary for 1943-44 to conduct a research study for the National Bureau of Economic Research, New York, N. Y.
- Gilbert J. Thomas, clinical associate professor of surgery, without salary January 27 to June 30, 1944, to take over the practice of his son-in-law in California.
- Gershom J. Thompson, associate professor, Mayo Foundation, for 1943-44 (see 1942-43 list).
- Harold F. Wahlquist, associate professor of dentistry, with salary February 23 to June 15, 1944, due to an injury.
- Charles H. Watkins, associate professor, Mayo Foundation, for 1943-44 (see 1942-43 list).
- John H. Williams, associate professor of physics, for 1943-44 (see 1942-43 list).
- Joseph A. Wise, associate professor of civil engineering, without salary for 1943-44, to take charge of a research project at New York University for the War Production Board.
- Axel B. Algren, assistant professor and assistant director, Engineering Experiment Station, for 1943-44 (see 1942-43 list).
- Parker O. Anderson, assistant professor and extension forester in agricultural extension, without salary September 16, 1943 to June 30, 1944, for appointment with the Office of Economic Warfare, Washington, D.C. with assignment to Ecuador, South America.
- Frank C. Andrus, assistant professor of pathology, for 1943-44 (see 1942-43 list).
- Curtis E. Avery, assistant professor of extension classes, for 1943-44 (see 1942-43 list).
- William A. Billings, assistant professor and extension veterinarian in agricultural extension, with salary November 26 to December 31, 1943, due to illness.
- Philip W. Brown, assistant professor, Mayo Foundation, for 1943-44 (see 1942-43 list).
- Frank L. Bryant, clinical assistant professor of ophthalmology and otolaryngology, without salary August 1, 1943 to June 30, 1944, for military service.
- Rufus J. Christgau, assistant professor, Northwest School and Experiment Station, for 1943-44 (see 1942-43 list).
- John W. Clark, assistant professor of English, without salary, March 22 to June 15, 1944, for military service.
- Walter B. Cline, assistant professor of anthropology, for 1943-44 (see 1942-43 list).
- Richard W. Cragg, assistant professor of pathologic anatomy, Mayo Foundation, for 1943-44 (see 1942-43 list).
- Watson Dickerman, assistant professor, General Extension Division, without salary July 1 to September 15, 1943 to work on doctoral dissertation.
- Thomas J. Dry, assistant professor, Mayo Foundation, for 1943-44 (see 1942-43 list).
- Willis E. Dugan, director of student personnel and assistant professor of education, for 1943-44 (see 1942-43 list).

- Daniel C. Dvoracek, assistant professor and extension economist in marketing, Agricultural Extension Division, without salary October 1, 1943 to June 30, 1944, for position as senior extension economist, livestock, wool, and grain marketing, Economics Section, U. S. Department of Agriculture, Washington, D.C.
- Millard S. Everett, assistant professor of philosophy, for 1943-44 (see 1942-43 list).
- Marion L. Faegre, assistant professor and extension worker, Institute of Child Welfare, for 1943-44 (see 1942-43 list).
- John T. Flanagan, assistant professor of English, sabbatical furlough for 1943-44, to accept a Guggenheim Fellowship.
- Arthur R. Ford, assistant professor of mechanical engineering, for 1943-44 (see 1942-43 list).
- Roy H. Giberson, assistant professor and district club agent, Agricultural Extension Division, with salary October 30 to November 30, 1943, due to illness.
- Edwin A. Hanson, assistant professor and extension dairyman, Agricultural Extension Division, with salary January 8 to date of his death, April 13, 1944.
- Walter J. Huchthausen, assistant professor of architecture, for 1943-44 (see 1942-43 list).
- Charles J. Hutchinson, clinical assistant professor of neuropsychiatry, without salary for 1943-44 for service in the Navy.
- Henry S. Jerabek, assistant professor of mines and metallurgy, for 1943-44 (see 1942-43 list).
- Tom B. Jones, assistant professor of history, for 1943-44 (see 1942-43 list).
- Earl G. Latham, assistant professor of political science, for 1943-44 (see 1942-43 list).
- Donald B. Lawrence, assistant professor of botany, for 1943-44 (see 1942-43 list).
- Parker Lesley, assistant professor of fine arts, for 1943-44 (see 1942-43 list).
- Alex S. Levins, assistant professor of drawing and descriptive geometry, for 1943-44 (see 1942-43 list).
- Alexander R. MacLean, assistant professor, Mayo Foundation, for 1943-44 (see 1942-43 list).
- Allan E. Martin, assistant professor of mines and metallurgy, without salary for the spring quarter of 1943-44, for a position with NDRC at the University of Chicago.
- Charles K. Maytum, assistant professor, Mayo Foundation, for 1943-44 (see 1942-43 list).
- Franz Montgomery, assistant professor of English, for 1943-44 (see 1942-43 list).
- Charles V. Netz, assistant professor of pharmacy, without salary for 30 per cent time, January 4 to March 15, 1944, to serve as acting secretary, Minnesota State Pharmaceutical Association.
- Sverre Norborg, assistant professor of philosophy, without salary October 16, 1943 to June 15, 1944, for confidential service in Washington, D.C.
- Charles K. Otis, assistant professor of agricultural engineering, for 1943-44 (see 1942-43 list).
- Edgar L. Piret, assistant professor of chemistry, without salary for fall quarter, 1943-44, and half time without salary January 1 to June 15, 1944 (see 1942-43 list).
- Olivia T. Peterson, clinical assistant professor of preventive medicine and public health, for 1943-44 (see 1942-43 list).
- Gerald R. Prescott, band master and assistant professor of music, for 1943-44 (see 1942-43 list).
- Charles E. Rea, clinical assistant professor of surgery, without salary for 1943-44 for military service.
- Louis W. Rees, assistant professor of forestry, without salary for half time May 1 to September 30, 1944, to serve as an agent for the Lakes States Forest Experiment Station.
- John A. Sanford, assistant professor of English, for 1943-44 (see 1942-43 list).
- Alois R. Schmid, assistant professor of agronomy and plant genetics, without salary April 15 to June 30, 1944 for Naval service.
- Harold H. Shepard, assistant professor of entomology and economic zoology, without salary, July 16, 1943 to June 30, 1944, to serve as senior industrial specialist, War Food Administration, Washington, D.C.
- Kinsey M. Simonton, assistant professor, Mayo Foundation, without salary for 1943-44, for active duty with U. S. General Hospital No. 71.
- Louis Sperling, clinical assistant professor of surgery, for 1943-44 (see 1942-43 list).
- Ralph R. Sullivan, clinical assistant professor of medicine, without salary for 1943-44 for military service.
- T. Ivan Taylor, assistant professor of chemistry, for 1943-44 (see 1942-43 list).

- Ian W. Tervet, assistant professor of plant pathology and botany, without salary August 28, 1943 to June 30, 1944, to serve as pathologist, Division of Mycology and Disease Survey, U. S. Department of Agriculture in the emergency plant disease prevention program.
- Edward B. Tuohy, assistant professor, Mayo Foundation, for 1943-44 (see 1942-43 list).
- Franklin G. Wallace, assistant professor of zoology, for 1943-44 (see 1942-43 list).
- Cornelia T. Williams, counselor and assistant professor, General College, for 1943-44 (see 1942-43 list).
- Hedvig Ylvisaker, assistant professor of social studies, General College, for 1943-44 (see 1942-43 list).

DEATHS

With deep regret and a profound sense of personal loss the following deaths are recorded during the biennium:

- Frank Clinton Andrus, assistant professor of pathology, November 14, 1942.
- George F. Brightman, instructor in geography, September 15, 1943.
- John Butler, associate professor of medicine, Division of Dermatology, September 18, 1943.
- Archibald B. Butter, clinical associate professor of dentistry, February 6, 1944.
- John Alfred Cederstrom, instructor emeritus of zoology, January 11, 1943.
- Louis Joseph Cooke, professor emeritus of physical education for men, August 19, 1943.
- Hans H. Dalaker, professor emeritus of mathematics and mechanics, May 20, 1943.
- Mary A. Foley, assistant professor of medicine (dietetics), Mayo Foundation, April 7, 1944.
- Ross Aiken Gortner, professor and chief, Division of Agricultural Biochemistry, September 29, 1942.
- George K. Hagaman, clinical instructor in pediatrics, July 11, 1942.
- Franklin Bell Hanley, instructor in geology and mineralogy, April 24, 1944.
- Edwin A. Hanson, assistant professor and extension dairyman, Agricultural Extension Division, April 13, 1944.
- Arthur T. Henrici, professor of bacteriology, April 23, 1943.
- Arthur Douglas Hirschfelder, professor and head, Division of Pharmacology, October 11, 1942.
- John Lewis Macleod, instructor in English and head, Duluth office, General Extension Division, July 18, 1942.
- Roger Sherman Mackintosh, assistant professor emeritus of agricultural extension, March 23, 1944.
- Jessie McFadyen, instructor in English, December 28, 1942.
- Henry Francis Nachtrieb, professor emeritus of animal biology, July 17, 1942.
- Charles Washburn Nichols, associate professor of English, February 15, 1944.
- Everett Ward Olmsted, professor emeritus of romance languages, November 14, 1943.
- Leroy S. Palmer, professor and chief, Division of Agricultural Biochemistry, March 8, 1944.
- Edward Joseph Peterson, instructor, School of Business Administration, May 23, 1944.
- Harry Parks Ritchie, clinical professor emeritus of surgery, September 3, 1942.
- John Lincoln Rothrock, professor emeritus of obstetrics and gynecology, July 5, 1943.
- Arnold Schwyzer, professorial lecturer emeritus of surgery, February 19, 1944.
- Lester Burrell Shippee, professor and chairman, Department of History, February 9, 1944.
- Charles Frederick Sidener, professor emeritus of chemistry, January 19, 1944.
- Arthur Carlton Smith, professor emeritus of poultry husbandry, August 7, 1943.
- Andrew Adin Stomberg, professor emeritus of Scandinavian languages, November 16, 1943.
- Ashley Van Storm, professor emeritus of agricultural education, October 27, 1943.
- Matilda Jane Campbell Wilkin, assistant professor emeritus of German, June 27, 1943.
- Louis Blanchard Wilson, director and professor emeritus, Mayo Foundation, October 5, 1943.

HONORS AND DISTINCTIONS

Administration—Walter C. Coffey was elected chairman, Agricultural Board, National Research Council; he was a member of the Executive Committee, Minnesota Commission to Study the Organization of Peace; of the Advisory Board, Minnesota Agricultural Awards Program; of the Midwest Regional Planning Commission, National

Resources Planning Board; of the Educational Policies Commission, Minnesota Education Association; and of the Committee to Study Organization and Procedures, Association of Land-Grant Colleges and Universities. He also served as a member of the following committees: Committee on Rural Scouting, Boy Scouts of America; Executive Committee, Minnesota War Service Fund; Minnesota War Finance Committee; National Advisory Committee to Promote Victory Farm Volunteers Program, U. S. Department of Agriculture; National Committee of Sponsors, United Seamen's Service, Inc.; Advisory Committee of the Minnesota Poll; and National Council of the YMCA. He was the recipient of the Sigma Alpha Epsilon Achievement Medal and of the American Farm Bureau Federation Distinguished Service Award. He was awarded the honorary degree, doctor of science, by Franklin College, Franklin, Indiana. He was elected president, Association of Minnesota Colleges, 1943-44; and served as chairman, State Committee on Postwar Planning for Education and of the Northern District Committee, North Central Area Council, National Council of the YMCA.

Laurence R. Lunden served as consultant on contracts to the Commanding General, Seventh Service Command, 1943-44.

William T. Middlebrook served as special consultant, United States Office of Education, on student loans, wartime acceleration, and wartime training, 1942.

True E. Pettengill was named as a member of the following committees of the American Association of Collegiate Registrars: Regional Associations Committee, 1942-45; Committee on Office Forms and Equipment, 1944-45; and subcommittee on military credit, 1942-44 (chairman, 1944-45). He was appointed consultant to the Association of Minnesota Colleges on questions of military credit, 1944-45. He served as a member, Advisory Committee to the U. S. Armed Forces Institute. He was co-chairman, Universities and Technical Schools Section, American Association of Collegiate Registrars' Chicago convention, 1944.

Malcolm M. Willey served as a member of the following committees: the Administration Committee and Executive Committee, American Sociological Society; the Postwar Planning Committee, National Association of State Universities; the Commission on Colleges and Universities, North Central Association of Colleges and Secondary Schools; and the Committee for the Selection of V-12 Candidates, Navy College Training Program, Bureau of Naval Personnel.

Dean of Students—Gordon V. Anderson was named regional director, Army-Navy Qualifying Examinations, 1943-44. He served on the Minnesota Higher Education Aid Committee, 1944; and gave advisory service to the U. S. Veterans Administration (vocational advisement work for veterans of World War II).

Gwendolen Schneider, served as secretary, Military Section, American Association for Applied Psychology. She was elected honorary vice president, Guidance and Personnel Association of the District of Columbia. She also served as chairman, Individual Analysis Section, National Vocational Guidance Association.

Edmund G. Williamson served on the Advisory Commission for the Recruitment and Training of Vocational Counselors, 1943-44; on the Bureau of Training, War Manpower Commission, Washington, D.C.; and was chairman, Subcommittee on Training Counselors. He served as chairman, Committee on Student Personnel Work, American Council on Education, since 1943; and also as chairman, Advisory Committee to the U. S. Armed Forces Institute. In October, 1943, he made a personnel survey at the University of Texas, and, in November, assisted in a survey of the New York City educational system (with Dean T. R. McConnell) for the Joint Legislative Committee of the State Education System. He was expert consultant on the Counseling Program for Demobilized Soldiers under the jurisdiction of the Personnel Research Section, Adjutant General's Office. He is president, American College Personnel Association.

Library—Elizabeth Bond, during 1943-44, served as retiring president, Minnesota Library Association and as a member of its Executive Board. She was elected secretary, Reference Librarians' Section, Association of College and Research Libraries, American Library Association. She serves as chairman, Public Relations Committee, 1941-45; and member, Joint Committee on State Relationships; both of the American Library Association.

Margaret Greer was elected second vice president, American Library Association, 1944-45.

Perrie Jones was a member of the Board, United Nations Committee for Minnesota.

Anne Kallio volunteered as a reader of reportorial Finnish to the Foreign Nationalities Branch, Office of Strategic Services.

Errett W. McDiarmid was chairman, American Library Association Committee on Constitution and By-Laws; served also as a member of the association's Committee on

Library Revenues; as a member of the Council, American Association of University Professors; and of the Editorial Council, *College and Research Libraries*.

Della McGregor has been a member of the Book Reviewing List Committee for the American Library Association Book List since 1932.

Mildred Methven is chairman of the Institution Libraries Committee of the APA. Helen Ranson was on leave, 1942-44, to assist in a bibliographical project at the Benjamin Franklin Library, Mexico City, Mexico.

Harold G. Russell served as a member of the Public Documents Committee, American Library Association. He acted also as chairman, Reference Librarians' Section, Association of College and Research Libraries; and was a member of the Minnesota Library Association Documents Committee.

Raymond H. Shove has served on the following committees and boards of the American Library Association during 1942-44: Book Buying Committee; chairman, Subcommittee To Investigate Co-operative Book Buying; and chairman, Acquisitions Department Heads of Research Libraries Round Table.

Carl Vitz was elected first vice president, American Library Association, and in July, 1944, he became president. He was on the following committees and round tables of the American Library Association during the biennium: chairman, Librarians of Large Public Libraries Round Table; vice chairman, Committee on Federal Relations; chairman, Committee on Boards and Committees; chairman, Committee on Library Architecture and Building Planning; chairman, Committee on Committee Appointments; Postwar Planning Committee; Budget Committee; and Program Committee. He was a member, Advisory Committee for Public Library Service and Defense, U. S. Office of Education. He was regional director, Victory Book Campaign; and chairman, American Library Association Regional Institute on War and Postwar Issues. He was a member, Planning Committee, Minnesota Library Association.

College of Science, Literature, and the Arts—Ernst C. Abbe was consultant to the USDA in its investigation of the rubber dandelion, *Taraxacum kok-saghyz*, 1943-44. He continued through the summer of 1942 as research associate at Gray Herbarium, Harvard University, under a grant from the Guggenheim Foundation. He was elected to the American Society of Naturalists, 1942.

Harold B. Allen was director, Key Center for War Information, Southern California, 1942-43, and was phonetician, in 1943, for the English Language Institute of *Casa Pan-Americana* at Mills College, California, a project operated on subvention from the U. S. Department of State.

William Anderson served as president, American Political Science Association, 1942; was chairman, Committee on Government, and Committee on Public Administration, Social Science Research Council; and was a member, Committee on Records of War Administration, U. S. Bureau of the Budget. He served as a member, Board of Editors, *Public Administration Review*, 1944. He was an associate fellow in political science for the Library of Congress in 1943-44.

Thomas F. Barnhart served as member of the Board of Judges, N. W. Ayer and Company, in a national newspaper typography contest, 1944.

Joseph W. Beach served as a member, Editorial Committee, Publications of Modern Language Association of America, 1940-44. He was on committees which awarded literary prizes under the auspices of the Minnesota Poetry Society.

Ralph Hall Brown was secretary, Association of American Geographers.

Bryng Bryngelson served as president, American Society of Speech Correction, 1942-44.

J. William Buchta was acting editor, *Physical Review* and *Reviews of Modern Physics*, 1942-44. He served as a member, Conference on Postwar Physics, National Research Council, May, 1944; and as a member, Executive Committee, American Association of Physics Teachers, 1944.

Alfred L. Burt was a member, Council of the Canadian Historical Association, until June, 1943. He was elected chairman, Panel of Judges, Klieforth Canadian-American History Prize of 1944.

Ralph D. Casey served as consultant, Office of War Information, Washington, D.C., summer, 1942; and as consultant, Administrative Management, U. S. Bureau of the Budget, December, 1942 through April, 1943. He is editor-in-chief, *Journalism Quarterly*.

F. Stuart Chapin served as vice president and chairman of Section K, American Association for the Advancement of Science, 1942-43. He was elected editor, *American Sociological Review*, 1944. He served on the Fourth Army Orientation Course at Command and General Staff School, Fort Leavenworth; was chairman of the subcommittee on the course "Problems of Social Adjustment" Armed Forces Institute; and prepared

an outline on Community Organization and Vocational Counseling for the Advisory Committee, War Manpower Commission, 1943.

Mitchell V. Charnley is a member, National Council on Education for Radio, 1944. He was elected managing editor, *Journalism Quarterly*. He was the recipient of the Alfred A. Knopf Publishing Company Prize of February, 1941.

Asher N. Christensen has been serving as attaché for cultural relations, U. S. Embassy, Buenos Aires, Argentina, since November, 1942.

Alice Clendening served as consultant in field work on the Education Committee, American Association of Medical Social Workers. She was elected chairman, for 1944-45, of the Minnesota District, American Association of Medical Workers.

Walter B. Cline has been serving with the Office of Strategic Services in Washington D.C. and is now overseas.

George P. Conger was elected president, American Philosophical Association.

William S. Cooper was elected a fellow in the Geological Society of America, December, 1943. He was a member of the Advisory Committee of the Foundation for the Study of Cycles, 1942-44, and also a member of the Committee on Glaciers, Section on Hydrology, American Geophysical Union, 1942-44. During 1942-43, he was a member of the editorial board of *Ecology*.

Ashton C. Cuckler was the recipient of a fellowship granted by the Association of American Medical Colleges for the study of tropical medicine, at the Army Medical School, Army Medical Center, Washington, D.C. and in Central American countries.

Frances K. Del Plaine served on the scholarship committee of the Minnesota Alumnae Club.

Richard M. Elliott is a member of the Social Science Research Council, and served on the Grants-in-Aid Committee of the council from 1939 to 1944. He is a member of the Subcommittee on Survey and Planning for Psychology, National Research Council.

Herbert Feigl served as assistant secretary, Humanist Association. He was elected to membership in the American Association for the Advancement of Science and in the American Association of Scientific Workers.

Anne F. Fenlason served as consultant to the Children's Bureau and co-chairman of a special committee of that bureau to consider undergraduate training for social work. She was elected chairman, Committee on Pre-Social Work Education, American Association of Schools of Social Work and is a member, Executive Committee, American Association of Schools of Social Work, 1944-46. She served also as a member of the chapter National Committee, American Association of Social Workers; of the Program and Institute Committee, Minnesota State Conference of Social Work; of the Minnesota Conference on Social Work Education; and of the Advisory Committee and Committee on Nutrition, National Defense Council. She is on the National Roster of Minnesota Women on Postwar Planning. She was chosen a delegate to the American Association of Social Workers Conference, Cleveland, May, 1944.

John T. Flanagan was awarded a Guggenheim Fellowship to write a history of middlewestern literature, 1943. He was awarded a Newberry Fellowship by the Newberry Library, Chicago, under the sponsorship of the librarian, Stanley Pargellis, 1943-44.

Charles S. French served, during 1944, as a research associate with the Office of Production Research and Development of the WPB on a penicillin research contract. He was also chairman, Minnesota Section, American Society of Plant Physiologists, 1944-45; and a member, Executive Committee, American Society of Plant Physiologists, 1944-45.

Howard Gilkinson carried on research in communications for the Army Air Forces. Adah Grandy was elected a member, Delta Phi Lambda, 1942-44.

Rose Green served as assistant chairman, Program Committee, State Conference of Social Work, 1943-44; and was appointed chairman of the same committee, 1944-45.

Frank F. Grout served on the Minnesota Defense Council. He was the recipient of a research grant from the Geological Society of America to support the Minnesota Laboratory for rock analysis, 1943.

John W. Gruner was elected vice president, Mineralogical Society of America in 1943.

Herbert Heaton was elected secretary, Social Science Research Council, for 1942-43; and served as a member, Committee on Research in Economic History of the council. He was director of research on the Role of Government in American Economic Development, 1942-43.

John L. Heller was appointed associate editor, *Classical Journal*; and was named a member, Executive Committee, Classical Association of the Middlewest and South.

Blanche Kendall was appointed National Program Counsel Chairman, Sigma Alpha Iota, the national honorary music sorority.

Fred L. Kildow served as director, National Scholastic Press Association; and as director, American Collegiate Press, 1942-44.

Evron M. Kirkpatrick served as a member, Personnel Committee, and as chairman, Committee to Consider Wartime Changes in Political Science Curriculum, American Political Science Association. He was a member of the Subcommittee of the Committee on General Education, Armed Forces Institute; of the National Advisory Committee for the Consumers' Union; and of the National Panel of Arbitrators, American Arbitration Association.

August C. Krey was elected associate editor, *American Historical Review*; and associate editor, *Social Education*. He served as a member of the Executive Council of the Minnesota Historical Society; of the Advisory Committee of the National Council of Education.

Earl G. Latham served as assistant director, Division of Field Operations, U. S. Bureau of the Budget, Washington, D.C.

Carl Lefevre served with the Office of War Information in New York, N. Y.

Emilio LeFort served as consultant, Regional Division, Office of the Co-ordinator of Inter-American Affairs, Washington, D.C.; and was sent to South America to inspect the work in the various offices there.

Clarence C. Ludwig was elected president, Minnesota Chapter, American Society of Public Administration, 1943-44. He was a member, National Committee of Municipal Accountants, 1943; and of the Airport Committee, American Municipal Association, 1944.

David G. Mandelbaum served in the Office of Strategic Services, Washington, D.C. 1942-43; and overseas, 1944.

T. Raymond McConnell was elected chairman, Committee on a Design for General Education for Members of the Armed Services; and as chairman, Committee on Measurement and Guidance; both of the American Council on Education. He was appointed associate director in charge of the College Section, Survey of Public Education in New York, N. Y., conducted by a joint legislative committee of New York State. He was a member of the Commission on the Survey of the University of Illinois. He appeared on the Littauer Lecture Series at Hunter College.

Tremaine McDowell served as a member, Subcommittee on Literature, Modern Language Association. He was a member, Committee on a Design for General Education for the Armed Forces.

Dwight E. Minnich was re-elected trustee, 1944-46, and vice president, Board of Trustees, 1944-45, Mount Desert Island Biological Laboratory. He is a member, Board of Directors, Minnesota League for Planned Parenthood. He served as representative of the American Society of Zoologists on the Division of Biology and Agriculture, National Research Council.

John W. Moore served as a member of the Council, American Association for the Advancement of Science, 1942-44. He was a representative of the Minnesota Academy of Sciences to the American Association for the Advancement of Science, 1942-44. He has a membership in Subcommittee G, Botanical Society of America. He was elected secretary, Minnesota Academy of Sciences, 1942-44; and editor, *Proceedings of the Minnesota Academy of Sciences*, 1942-44.

Ralph O. Nafziger served as director, Media Division, Office of War Information, summer of 1942, and as chairman, National Council on Research in Journalism, 1943-44.

C. Sverre Norborg served in the Office of Strategic Services, Washington, D.C.

Marbury B. Ogle was reappointed a member of the Council, American Academy in Rome. He was elected president, American Philological Association, 1943.

Clarence P. Oliver was elected to membership in the International Association for Dental Research, 1943.

Donald G. Paterson was elected editor, *Journal of Applied Psychology* of the American Psychological Association, Inc., for a six-year term.

Frank M. Rarig is a member, Committee on Publication, Midwest Committee on Education and Postwar Reconstruction, 1944; and is chairman, Committee on Interpretation, National Association of Teachers, 1943-44. He was a member, Editorial Board, *History and Criticism of American Public Address*, 1940-43.

C. Otto Rosendahl was made a life member, Biological Society of Washington, 1942.

Laurence Schmeckebier was the recipient of a Rockefeller Foundation Regional Writing Fellowship. He was appointed chairman, Committee for the Preservation of Historic Monuments in Minnesota, Minnesota State Historical Society. He is a member of the organizing committee, Folk Arts Foundation of the State of Minnesota; and was appointed a member of the Committee of the College Art Association to work as a consultative and liaison group with the American Art Research Council.

George M. Schwartz served as consulting geologist on water supply problems, U. S. Army Engineers Corps, Gopher Ordnance Plant, 1943; he was field geologist and geophysicist for the Office of the Commissioner of Iron Range Resources and Rehabilitation in Minnesota, 1942; and was appointed senior geologist for the U. S. Geological Survey, 1944.

Carl W. Sharsmith was the recipient of a research grant from the Yosemite Natural History Association, 1944.

Mary Shaw was a member of the conference to prepare courses in philosophy for the Armed Forces Institute (New York, 1943).

Alice Leahy Shea was elected president, Minnesota State Conference of Social Work, 1943-45. She is a member of the Board of the Accrediting Committee, American Association of Schools of Social Work.

Lloyd M. Short was senior review and negotiations officer, Administrative and Management Section, U. S. Civil Service Commission, 1942. He served as advisory member, Minnesota State Civil Service Council; as a member of the Council, Minnesota Institute of Governmental Research; and as chairman, Nominating Committee, American Political Science Association. He is engaged in a study of problems affecting social scientists in the national service, for the Committee on Public Administration, Social Science Research Council.

Raymond F. Sletto served as research collaborator, Bureau of Agricultural Economics, U. S. Department of Agriculture. He was elected chairman, Sociometry Section, American Sociological Society, 1944; and was a member, Social Research Committee of that society in 1943. He is Census Tract representative of the U. S. Bureau of the Census, Washington, D.C.

Lawrence D. Steefel did special work for the Office of Strategic Services, Foreign Nationalities Branch.

George M. Stephenson served as a member, Board of Editors, *Mississippi Valley Historical Review*; and of the Executive Committee, Mississippi Valley Historical Association. He did special work for the Office of Strategic Services.

Elmer E. Stoll was awarded the honorary degree, doctor of literature, from Yale University, 1941.

George A. Thiel was elected president, Minnesota Academy of Science, 1943-44. He served as a member, National Research Council Committee on Counseling Prospective Students of Geology, 1943. He was a member, Board of Electors, Society of Sigma Xi, 1942-44.

Miles A. Tinker was the recipient of a grant from the National Research Council for work on visual fatigue.

Louis H. Towley served as vice chairman and chairman, Twin City Chapter, American Association of Social Workers. He was nominated as chairman, Public Welfare Administration Section, National Conference of Social Work for the term ending in 1946. He is the recipient of a Rockefeller Foundation fellowship in regional writing. He was given a visiting professorship in Social Work at Washington University, St. Louis, Missouri, for the academic year, 1944-45.

Mary Turpie was the recipient of a grant from the American Council of Learned Societies for research in a study of Emerson.

Joseph Valasek was the co-recipient, with J. T. Tate and G. O. Burr, of a Rockefeller Foundation research grant for the study of the application of spectroscopy to the investigation of lipid metabolism. He served as chairman, Physical Science Division, Minnesota Academy of Science, 1942-43.

George B. Vold is co-editor, *American Sociological Review*.

Wilson D. Wallis was elected president, Central Branch, American Anthropological Association, 1942-43.

Robert Penn Warren received the Shelley Memorial Award, 1942. He was editor of some of the quarterly numbers of the *Kenyon Review*, 1943-44; and is now consultant on poetry, Library of Congress, Washington, D.C.

Dorris J. West is editorial assistant, *American Sociological Review*.

David H. Willson was the recipient of a Guggenheim Fellowship, 1942 and 1943. He delivered the annual Henry E. Bourne Lecture in History at Mather College, Western Reserve University, 1943; and participated in seminars at the Henry E. Huntington Library, San Marino, California, 1942 and 1943.

John B. Wolf prepared a pamphlet on France for the G. I. Round Table Series. *Institute of Technology*—John D. Akerman was elected to Tau Omega, national honorary aeronautical engineering fraternity, 1943. He was appointed official investigator, National Defense Research Council, 1942. He served as a member, Advisory Board, Insti-

tute of Aeronautical Sciences; as a member, Board of Directors, National Aeronautics Association; as chairman, Aviation Section, SPEE 1942, and as a member in 1943. In 1944 he was awarded the NAA certificate in recognition of his contribution to the advancement of aviation.

Axel B. Algren served as regional chief of training, War Manpower Commission.

Richard T. Arnold served as official investigator on anti-malarials for the Committee on Medical Research, Office of Scientific Research and Development. He was consultant on chemical problems for the Barrett Company.

George M. Baggs was elected to Tau Omega, national honorary aeronautical engineering fraternity, 1943.

Orville A. Becklund served on the Division of War Research, U. S. Navy Radio and Sound Laboratory, University of California.

John M. Bryant served as adviser on valuation, Minnesota Tax Commission. He is a member of the Minnesota Institute of Research; was elected to honorary life membership in the Illuminating Society; and was elected a fellow, American Institute of Electrical Engineers.

Robert Cerny was elected vice president, Minnesota Chapter, American Institute of Architects.

Bryce L. Crawford is the director of an NDRC project. He is associate editor, *Journal of Chemical Physics*.

Bert A. Crowder served as a member, Technical Advisory Committee, U. S. Office of Education, for the production of motion picture training films.

Ralph L. Dowdell served as director of a research project for the War Metallurgy Committee, National Research Council.

Robert English is research engineer, NACA, Cleveland, Ohio.

Robert H. Eustis served as research engineer, NACA, Cleveland, Ohio.

Albert Fisher is research engineer, OSRD, Cumberland, Maryland.

Arthur R. Ford is associate aeronautical engineer, Naval Aircraft Factory, Philadelphia Navy Yard.

Henry E. Hartig is directing research for the U. S. Radio and Sound Laboratory.

Louis S. Heilig serves as ore estimating and consulting engineer, Minnesota Department of Taxation.

Carl A. Herrick was elected president, Interprofessional Institute, 1943-44.

Fulton Holtby served as faculty chairman of the student chapter of the ASME.

Thomas P. Hughes served as a member, War Advisory Committee, American Society of Metals.

Robert T. Jones is a member, Postwar Planning Commission, AIA. He is vice chairman, Minnesota Construction Planning Committee; and serves as consultant on town planning in various Minnesota and Wisconsin towns.

Roy C. Jones was elected president, National Architectural Accrediting Board. He serves as a member, State Buildings Subcommittee, Minnesota Postwar Planning Commission.

Richard C. Jordan served as chairman, Twin City Section, American Society of Refrigerating Engineers; and as a member, Technical Committee on Instruments, American Society of Heating and Ventilating Engineers.

Thomas L. Joseph served as a member, War Metallurgy Committee, National Research Council; Governor's Advisory Committee to Minnesota War Industries; and Minnesota-North Dakota Resources Development Commission.

Miles S. Kersten was in charge of research projects for the Highway Research Board, Division of Engineering and Industrial Research, National Research Council.

C. Frederick Koelsch served as official investigator, National Defense Research Committee; and as consultant on chemical problems for Smith, Kline, and French of Philadelphia. He was chairman, Program Committee, Minnesota Section, American Chemical Society.

Charles A. Koepke was consulting engineer for the Winkley Artificial Limb Company and assistant to Mr. Bowen who is in charge of the district WPB, 1942-43. In 1943-44 he served as consulting engineer for the Northwest Airlines and for Holzer Cabot Electric Company, Boston, Massachusetts.

Izaak M. Kolthoff is director of research under the Office of Rubber Director. He served as chairman, Committee on Analytical Research Methods in the Production of Synthetic Rubber; as a member, Scientific Advisory Board to Minnesota War Industries; as director of a research grant from W. M. Welch Manufacturing Company; and as consultant to the Office of Scientific Research and Development. He is associate editor of

the following publications: *Journal of Physical Chemistry* (Analytical Edition), *Industrial and Engineering Chemistry*; and *Chemical Reviews*.

John H. Kuhlmann served as consulting engineer, Minneapolis-Honeywell Heat Regulator Company.

Everett Laitala served as management consultant, Region XII, War Production Board. He is president, Twin City Society of Industrial Engineers; and was elected to Pi Tau Sigma, honorary engineering society.

Millard H. LaJoy was engaged in research on an OSRD contract.

Edwin M. Lambert served as ore estimating and consulting engineer, Minnesota Department of Taxation.

Fred C. Lang was appointed a member, Board of Engineering Consultants to the U. S. Army.

Otis M. Larsen was engaged in research on an OSRD contract.

Walter M. Lauer was official investigator for the Committee on Medical Research on Anti-malarials, OSRD. He was consultant on chemical problems for the Minnesota Mining and Manufacturing Company; and served as a member, Executive Committee, Division of Organic Chemistry, American Chemical Society.

Samuel C. Lind served as consultant to the OSRD. He was a member of the following committees: Accrediting Committee, American Chemical Society; Committee on Electronics, Electrochemical Society; special committee to initiate the division in the field of geophysics, National Academy of Sciences; and Fellowship Committee for Chemistry and Chemical Technology, National Research Council. He was a member, Board of Directors, Engineering College, Research Association; and chairman, Educational Committee, National Society of Professional Engineers. He was elected editor-in-chief, *Journal of Physical Chemistry*; and served as a member, Editorial Board, *Scientific Monographs* of the American Chemical Society. He was elected to membership in the American Philosophical Society.

Robert S. Livingston was engaged on an NDRC project in 1942-43, and since 1943 on a project for the Armed Services.

Clarence E. Lund served as a member, Insulation Technical Committee and of the Technical Committee, Minnesota Section, American Society of Heating and Ventilating Engineers. He is a member, National Committee on Condensation Control.

Frank H. MacDougall directed an NDRC project for the Armed Services.

Charles A. Mann served as chairman, State Advisory Committee on Research and Development, Office of Production, WPB. He has been technical adviser for Smaller War Plants Corporation, Region XIII; consultant for the Twin Cities Ordnance Plant and for a Mexican company on the manufacture of acetone; and was adviser on war problems to the Smith Welding Equipment Company. He served as a member of the following committees: National Committee for Engineering Council for Professional Development; Inspection Committee for Army Specialized Training at educational institutions in Iowa, Minnesota, North and South Dakota; and Advisory Committee on Synthetic Rubber for the State Senate Interim Committee. He was named councilor, Minnesota Section, American Chemical Society, and lecturer, League of Minnesota Municipalities. He was elected a fellow, American Institute of Chemistry; and served as secretary, Electro-organic Section, Electrochemical Society. He was special lecturer for the Corrosion Symposium at Gibson Island under the National Corrosion Committee and delivered two lectures for the National Housing Agency, Federal Housing Administration. He was president, Minnesota Section, Society for the Promotion of Engineering Education, 1943-44; and in 1942 was invited by the Chinese Government to lecture on Chemical Engineering throughout China for one year.

Edward J. Meehan was engaged in research on synthetic rubber, Office of the Rubber Director, WPB.

George H. Montillon has served as director of research with the TVA on important war projects. He was elected an active member, American Institute of Chemical Engineers in 1944.

Ralph E. Montonna served as a member, Scientific Advisory Committee to Minnesota War Industries, 1942-44. He was councilor, Minnesota Section, American Chemical Society; and made a special lecture tour for the Society in 1943 and 1944.

O. William Muckenhirn was engaged in the Division of War Research, U. S. Navy Radio and Sound Laboratory, University of California.

Morris Newman was assistant director of lightning research, U. S. Naval Research Laboratory.

Herald K. Palmer was engaged in research on a Naval OSRD contract.

Edgar L. Piret served as publicity chairman, Minnesota Section, American Chemical Society, 1942-43. He was editor, Minnesota Section, *Chicago Bulletin of the American Chemical Society*.

George C. Priester was director and chairman of publications, Minnesota Federation of Engineering Societies, 1943-44.

Lloyd H. Reyerson was appointed to the Minnesota Scientific Advisory Committee for Minnesota War Industries, and was elected chairman of the committee. He was appointed to the Minnesota-North Dakota Resources Development Commission and was elected chairman of the commission. He was named chairman of the Canvassing Committee for Award Nominations for the American Chemical Society Award in Pure Chemistry, 1944-45; and was elected president, Minnesota Alpha of Phi Beta Kappa, 1943-44.

John F. Ripken served in the Underwater Sound Laboratory, Office of Scientific Research and Development, 1942-44.

Frank B. Rowley was a member, National Committee on Condensation Control; the ASHVE Technical Advisory Committee on Air Cleaning; ASHVE Technical Advisory Committee on Heat Requirements of Buildings; Scientific Advisory Committee to Minnesota War Industries; ASME Committee on Heated and Cooled Enclosures; ASTM Steering Subcommittee on Vapor Barrier Studies. He was elected chairman, Subcommittee No. 1, Joint Committee of Industries on Condensation Control; and chairman, Standing Committee, U. S. Bureau of Standards Committee on Structural Fiber Insulating Board.

Norbert F. Ruszaj was elected to Tau Omega, national honorary aeronautical engineering fraternity.

James J. Ryan was engaged in research under a Naval Ordnance Laboratory grant, two OSRD grants, and in special engineering development and research problems for the Twin City Ordnance Plant, the Army Air Forces, and smaller war plant corporations.

George J. Schroepfer served as a member of the committee to prepare a manual for the operation and maintenance of water and sewerage plants in U. S. Army camps.

Robert F. Schuck was engaged in a review and criticism of machine scored examinations for the War Department, 1944.

E. Neil Shawhan was employed in the Naval Ordnance Laboratory, Washington, D.C., 1942-44.

Lee I. Smith was appointed associate editor, *Journal of the American Chemical Society* and served as a member, Board of Editors, *Journal of Organic Chemistry* and *Organic Syntheses*. He was consultant on chemical problems for Merck and Company, Inc.; and was director, Project on Vitamin A, jointly sponsored by Merck and Company and the University of Minnesota. He was named official investigator for the National Defense Research Committee. In 1944 he was elected to the National Academy of Science.

Lorenz G. Straub was employed in the Office of Scientific Research and Development, Columbia University, 1942-44.

Robert E. Summers served as a member, Program Committee, Midwest Power Conference; and was named honorary member, National Association of Power Engineers.

Garvin L. Von Eschen was elected to Tau Omega, national honorary aeronautical engineering fraternity, 1943.

Henry H. Wade was named a member, Milling Methods Committee, American Institute of Mining and Metallurgical Engineers, 1943-44.

Joseph E. Wise served as co-ordinator of research on WPB projects, New York University.

Elmer Young was awarded First Prize in Water Colors, Minneapolis Institute of Art.

Department of Agriculture—Torfine L. Aamodt was elected secretary-treasurer, Central Plant Board, 1942-44; and chairman, Western 26 States Conference of State Leaders in Insect Control, 1942-44.

Edward W. Aiton was named a member, Rural Youth Subcommittee, Land Grant College Association, 1944.

William G. Andberg was elected to membership in Gamma Alpha, graduate scientific society, January, 1943.

Parker O. Anderson served as senior production specialist, Foreign Economic Service, and went to Ecuador, South America, as a member of the Cinchona Mission to locate quinine trees in the Amazon Valley and in the mountains of the Andes, 1943-44. He was appointed to the State Advisory Defense Council, 1943.

Albert C. Army served as a member, Committee on Varietal Standardization and Registration, American Society of Agronomy.

Clyde H. Bailey served as national co-ordinator, National Research Project on Vitamin A content of butter, and as regional co-ordinator, National Research Project on Conserving the Nutritive Value of Foods, both for the Land Grant College Association. He was adviser, Research and Development Branch, Quartermaster Corps, U. S. Army; and was a member of the Consulting Committee of Food Processors, Research Administration, U. S. Department of Agriculture. He was also a member, State Defense Council.

Alice Biester served as chairman, Minnesota State Nutrition Committee, 1942-43.

Eva L. Blair was a member, Minnesota State Nutrition Committee.

Carl Borgeson served as collaborator with the War Food Administration, USDA. William Boss was awarded the John Deere Medal, 1943.

Willard L. Boyd served as a member, Committee on Procurement and Assignment Service for Veterinarians, 1942-44. He was chairman, Special Committee on Brucellosis, American Veterinary Medical Association, 1943-44 and was a member of the Association's Committee on Education, 1943-44. He served as a member, Committee on Hygiene, United States Livestock Sanitary Association, 1943-44.

Clara M. Brown was elected chairman of the committee which wrote Bulletin No. 21, *Adjustment of the College Curriculum to Wartime Conditions and Needs*, for the U. S. Office of Education. She was also chairman, Committee on Higher Education, and a member, Postwar Planning Committee, both of the American Home Economics Association. She was also a member of the Research and Publications Committee, American Vocational Association.

Edward G. Cheyney was elected a fellow, Society of American Foresters, January, 1944.

Clyde M. Christensen served as research associate in charge of WPB contract 163, Office of Production Research and Development, 1944.

Jonas J. Christensen was elected president, American Phytopathological Society for 1943; and vice president, Minnesota Chapter of Sigma Xi, 1944.

John O. Christianson was appointed consultant, Bureau of Training, Industrial and Vocational Division, War Manpower Commission. He was awarded the honorary degree, doctor of science by the University of North Dakota, January 30, 1943; and received the State Farmer degree from the Minnesota Association of Future Farmers of America, May, 1943. He served as a member, Advisory Committee, Demonstration Veterans Employment Division for Minnesota. He was appointed a member, Educational Rehabilitation Committee, Agriculture Committee, State Postwar Planning Committee. He was re-elected chairman, Short Course Committee, Land Grant College Association. He serves as chairman, Folk Arts Foundation of America, Inc.; and also as chairman, Social Relations Committee of the Congregational Conference of Minnesota. He is a member of the President's Committee for the Consideration of Youth Problems; of the Minnesota State Defense Council; and of the National Committee for Co-operation in Character Education. He served as consultant, State Advisory Committee for Out-of-School Rural and Non-Rural Youth; and is an associate member, Registrant's Advisory Board, Selective Service, Second Judicial District of Minnesota.

Willes B. Combs worked with government agencies in the promotion of higher quality dairy products and in the development of new or modified dairy products for civilian and armed forces. He was elected secretary, Minnesota Dairy Industry Committee. He served as a member, Butter Committee, American Dairy Science Association, 1942-44.

Samuel T. Coulter served as a member, Butter Committee, American Dairy Science Association, 1942-44.

Ralph F. Crim served as a member, National Council of American-Soviet Friendship, Inc. He was elected secretary, Minnesota Crop Improvement Association; and was chairman, Small Grain Committee, International Crop Improvement Association.

William H. Dankers was a university representative on the Wartime Food Management Committee, War Food Administration.

Eva G. Donelson served as chairman, State Nutrition Committee.

Austin A. Dowell served as a member, Cornbelt Livestock Marketing Research Committee, 1942-44.

Raymond S. Dunham was elected secretary, Red River Valley Crops and Soils Association, 1942-44. He was also superintendent, Crops Division, Red River Valley Winter Shows.

Selmer A. Engene served as a member, Minnesota State Committee on Production Adjustments, 1942-44. He also served as review editor, *Journal of Farm Economics*, 1944.

Arnold B. Erickson served as editor of *Flicker*, 1942-44.

Charles A. Evans was the recipient of the Frasch Foundation Fellowship.

Theodore H. Fenske served as chairman, International Committee on Agriculture, Kiwanis International, 1943-44.

Reuel Fenstermacher served as a member, Committee on Transmissible Diseases of Swine, United States Livestock Sanitary Association, 1942-44. He was chairman, Committee on Wild Life Diseases, 1942-44.

James B. Fitch served as a member, Breeds Relation Committee, American Dairy Science Association. He was also a member, Type and Classification Committee, Holstein-Friesian Association of America; and of the Type and Classification Committee, American Jersey Cattle Club.

William F. Geddes was elected editor, *Cereal Chemistry*, Journal of the American Association of Cereal Chemists, July, 1943.

Lester O. Gilmore served as a member, Dairy Cattle Breeding Committee, American Dairy Science Association.

Harriet Goldstein served as chairman, Related Art Committee, American Home Economics Association; and is a member, Folk Arts Institute Committee, State of Minnesota.

Vetta Goldstein served as a member, Committee To Study Educational Films, American Home Economics Association.

Alexander A. Granovsky served as a member, Committee on the Co-ordination of Entomology with the War Effort; Committee on Potato Production in Central States; and Committee on Canning Peas Production in Eastern States.

Helen Hart served as associate editor, 1943, and as editor-in-chief, 1944, of *Phytopathology*.

Rodney B. Harvey was elected to membership on the Council, American Academy of Science for 1942-46; and also to membership on the Memorial Committee, American Society of Plant Physiologists, 1943.

Herbert K. Hayes served as a member of two committees of the American Society of Agronomy: the Committee on Co-operation with Foreign Scientists, and the Committee on Varietal Standardization and Registration; and was consulting crops editor of the society. He was a member, National Council of American-Soviet Friendship, Inc.; and a sponsoring member, Technical Book Committee, Russian War Relief, Inc.

Albert C. Heine served as a member, State Committee, Minnesota Department of the American Legion.

Inez M. Hobart served as a member, State Nutrition Executive Committee.

Forrest R. Immer was consulting editor in Statistics, *Journal of the American Society of Agronomy*. He served as a member, Committee on Bibliography of Field Experiments, American Society of Agronomy.

Oscar B. Jesness was a member of the following committees: Committee on Postwar Agricultural Policy, Association of Land Grant Colleges and Universities, 1944; Northwest Research Committee, 1943-44; Postwar Planning Committee, Commerce and Industry Association of New York, 1943-44; Midwest Committee on Postwar Programs (Land-Grant Colleges and U.S.D.A., 1943-44); Advisory Committee of National Grange and National Council of Farmer Co-operatives, 1944. He was elected to the Board of Directors, Institute of Governmental Research, 1942-44; and served on a Postwar Adjustment Committee, Midland Co-operative Wholesale Association, 1943-44.

Howard C. H. Kernkamp was elected secretary-treasurer, Minnesota State Veterinary Medical Society, 1942-44. He served as chairman, Committee on Nomenclature of Diseases of Animals, American Veterinary Medical Association, 1942-44; as chairman, Committee on Transmissible Diseases of Swine, United States Livestock Sanitary Association, 1943-44; and as chairman, Subcommittee on Baby Pig Losses, National Research Council, 1942-44. He was veterinary representative, Committee on Health, Minnesota Civilian Defense Council, 1942-44.

Orville M. Kiser served as secretary, Red River Valley Livestock Association, 1942-44.

Arthur J. Kittleson was elected a member, Board of Directors, Minnesota Public Health Association, 1943-46.

E. Fred Koller served as president, Minnesota Statistical Association, 1943-44. He was collaborator, Food Distribution Administration, 1943-44; and was review editor, *Journal of Farm Economics*, 1944.

Anne M. Krost was elected president, Minnesota Home Economics Association.

Louise S. Leavitt was elected president, Mercury Chapter, Iota Sigma Pi. She served as a member, Committee To Study War Problems in Food, National Research Council.

Jane M. Leichsenring served as national president, Omicron Nu.

Thomas M. McCall was elected president, Board of Managers, Red River Valley Winter Shows and Northwest School Farmers' Week. He is president, Red River Valley Development Association; and is a member, Interstate Potato Improvement Committee. He is chairman, Committee on Rotary Information; and also a member, Executive Committee, Ninth District Horticultural Society, 1942-44.

Paul R. McMiller was a member, Regional Soil Survey Committee, North Central States.

Wylle B. McNeal was elected chairman, Program and Policy Committee, Home Economics Section, Land Grant College Association. She was a member, Regional Advisory Committee representing USDA Bureau of Home Economics and Human Nutrition; and a member, State Advisory Committee, Farm Security Administration.

Clarence E. Mickel was elected secretary-treasurer, 1942-43, and president, 1943-44, Entomological Society of America.

Paul E. Miller served as chairman of the following committees: North Central States' Extension Directors, Land Grant College Association; Minnesota State Soil Conservation Committee; State Farm Help Advisory Committee; Farm Security Administration State Advisory Committee; and Subcommittee on Agricultural Employment, Governor's Postwar Planning Committee. He was appointed director, Minnesota Farm Manpower Program. He served as a member of the following: Advisory Committee on Wartime Extension Work, U.S.D.A.; Minnesota Soil Conservation Advisory Committee; War Food Administration Committee on Production Urgency and Manpower Priorities; Minnesota War Finance Committee; Minnesota Safety Council; Land Grant College Committee on Farm Structures; and Agricultural Advisory Committee to the District Office of Price Administration.

Matthew B. Moore served as chairman, Subcommittee for Co-ordination of Research in Cereal and Vegetable Seed Treatment, American Phytopathological Society, 1943.

Julia O. Newton was a member of the State Food Committee, Minnesota Defense Council.

Lowry Nelson was elected president, Rural Sociological Society, 1944. He served as a member, Agricultural Committee, National Planning Association, 1943-44; and also was a member of the special committee named by the Governor to recommend possible state-wide programs for Minnesota children and youth, 1944.

Ralph G. Nichols served as president, Minnesota Association of Teachers of Speech, 1942-44.

William E. Petersen was director, American Dairy Science Association. He was elected a member, Animal Health Committee, National Research Council; and a member of a subcommittee, Animal Nutrition Committee. He was awarded the Borden prize of \$1,000 and a Gold Medal at the annual meeting of the American Dairy Science Association, June, 1942. He was a member, National Research Council Committee on Dietary Allowances for Dairy Cattle; and served as a member, General Board for Dairy Research. He was a representative of the American Dairy Science Association on the Inter-Association Council; and served as production abstract editor, *Journal of Dairy Science*.

Ethel L. Phelps served as secretary, Consumer Interest Section, Minnesota OCD. She was a member, Advisory Board, *Journal of Home Economics*; and also of the Steering Committee, Research Department, American Home Economics Association. She was elected chairman, Research Committee, Textiles and Clothing Division, American Home Economics Association.

Benjamin S. Pomeroy represented the Minnesota State Livestock Sanitary Board at the National Turkey Federation Meeting held in Chicago, July, 1944.

George A. Pond served as a member of the following committees: North Central Regional Committee on Regional Adjustments, 1943-44; North Central Regional Committee on Land Tenure Research, 1942-44; North Central Regional Committee on Economic Relationships in Postwar Housing, 1944; and the Minnesota State Committee on Production Adjustments, of which he was chairman.

Erwin N. Reiersgord was district director, Region 30, Minnesota Safety Council, 1942-44.

William A. Riley was elected editor for Medical Entomology, *Journal of Parasitology*, 1942-44.

Clayton O. Rost served as chairman, Section II, Soil Chemistry, Soil Science Society of America. He was also a member, Technical Committee, Minnesota Agriculture Conservation Program.

Arthur G. Ruggles was a member, Editorial Board, *Journal of Economic Entomology*, 1942-43. He was secretary-treasurer, Minnesota Beekeepers Association, 1943-44.

Skuli Rutford served as a member, Northern Lake States Regional Planning Committee.

Henry Schmitz was re-elected president, Society of American Foresters, 1944-45. He was named as a member, Committee on Postwar Agricultural Policy, Association of Land-Grant Colleges and Universities. He was elected a member of the Society of Forestry in Suomi, Finland.

Arthur J. Schwantes was elected chairman, Committee on Agricultural Teacher Training, American Society of Agricultural Engineers, 1943-44.

Harold R. Searles served as a member, State Feed Advisory Committee.

Eric G. Sharvelle was a member, Upper Mississippi Valley War Emergency Committee.

Harold H. Shepard served as senior industrial specialist, Chemicals and Fertilizers Branch, War Food Administration, Washington, D.C., 1943-44.

Gustav Swanson served as treasurer, Wilson Ornithological Club, 1942-43.

Otto W. Swenson was named a member of the Honor "A" Society of the West Central School of Agriculture, Morris, 1944.

Elvin C. Stakman has membership in the following American Phytopathological Society Committees: Regulatory work and foreign plant diseases (chairman); Reorganization of International Co-operation (chairman); and War Committee (executive committee member). He is also on two National Research Council Committees: Crop Protection Committee (chairman, 1942); and the War Biology Committee, 1942.

Maurice C. Tanquary was named as a member, Federation Honey Plant Committee, National Association of State Beekeepers Associations, 1944.

Ian W. Tervet served as a member, Upper Mississippi Valley War Emergency Committee; and was plant pathologist, Emergency Plant Disease Survey, United States Department of Agriculture.

M. A. Thorfinsson is executive secretary, State Soil Conservation Committee.

Eudora K. Waddell was elected to Iota Sigma Pi and Omicron Nu.

Warren C. Waite served as a member of the following organizations: Food Distribution Administration, USDA (staff member, 1943); Board of Directors, National Bureau of Economic Research, 1944; Regional Committee on Co-ordinating Research in Poultry and Egg Marketing, 1944.

John H. Wampole was elected secretary-treasurer, Ninth District Horticultural Society, 1942-43.

Harold K. Wilson served as chairman, Committee on Student Sections, American Society of Agronomy.

Francis J. Weirether was elected vice president, 1943, and president, 1944, of Gamma Alpha, national graduate fraternity.

Law School—Wilbur H. Cherry was compliance commissioner, War Production Board, 1943-44. He was also a member, Advisory Committee on Rules of Civil Procedure, appointed by the Supreme Court of the United States, 1942-44.

Everett Fraser is president-elect and member of the Executive Committee, Association of American Law Schools, 1944. He served as adviser on the Law of Property to the American Law Institute, 1942-44. In 1943-44, he was a public member, Panel of Disputes Section, National War Labor Board, Region VI.

Edward G. Jennings served as regional price attorney, Chicago Regional Office, Office of Price Administration. He was also state price attorney, Minnesota State Office, Office of Price Administration.

Henry L. McClintock was presiding officer, Hearing Commission, Office of Price Administration, 1943-44.

Maynard E. Pirsig served as secretary, Minnesota Judicial Council. He was legal adviser to servicemen; was hearing officer, Office of Price Administration; and was elected chairman, Committee on Youth Correction Act, Minnesota State Bar Association. He was director from Minnesota, American Judicature Society; member, Committee on Jurisprudence and Law Reform, Hennepin County Bar Association; and a member, Committee on Court Reorganization, appointed by the Minnesota Judicial Council. He served as associate justice, Supreme Court of Minnesota, October to December, 1943.

William L. Prosser served as Minnesota state counsel, Office of Price Administration, 1942-43.

Horace E. Read verified part of the Minnesota Statutes for the Attorney General, 1943. Since 1943-44, he has been on leave of absence and is on active service with the Canadian Navy as Commander, RCNVR, department of Judge Advocate General (N), and director of Revision of Canadian Naval Regulations. He drafted the Canadian Naval

Service Act, 1944, which was enacted by the Canadian Parliament, July 24, 1944. In 1941, he was appointed as honorary Kings Counsel by the attorney general of Nova Scotia, an honor similar to the American award of an honorary degree.

Stefan A. Riesenfeld served with the Board of Economic Warfare in Washington, D.C., 1943.

Henry Rottschaefer served as a public member, Panel of Disputes Section, National War Labor Board, Region VI. He was chairman, Minnesota Panel of Enforcement, National War Labor Board, Region VI; and was a member, Panel of Leaders to Conduct Symposia on Legal Problems, Minnesota State Bar Association; and of the Special Committee on Post War Federal Tax Policies.

Medical School—John M. Adams was elected president, Northwestern Pediatric Society, 1943-44.

Ray M. Amberg was elected a regent, American College of Hospital Administrators. He was a member, House of Delegates, American Hospital Association; and chairman, Council on Governmental Relations, Minnesota State Hospital Association.

Wallace D. Armstrong is president-elect, International Association for Dental Research, 1944-45. He was editor, *Bulletin of the Minnesota Medical Foundation*; and a member, editorial board, *Journal of Dental Research*, 1943-44. He served as consultant to the Office of Scientific Research and Development, 1943; and as an expert witness for the United States Department of Agriculture on fluorine metabolism. He was elected vice president, International Association for Dental Research, 1943-44.

John J. Bittner was the recipient of a grant from the Jane Coffin Childs' Memorial Fund for Medical Research. He was elected vice chairman, American Association for the Advancement of Science, Gibson Island Cancer Conference.

Edward A. Boyden was reappointed a member of the executive committee, American Association of Anatomists, 1942-44. He served as managing editor, *The Anatomical Record*, 1942-44.

Ruth E. Boynton was re-elected president, American Student Health Association, 1942. She was appointed a member of the Subcommittee on Women Physicians, Procurement Service, War Manpower Commission. She served as a member of the Committee on Physical Fitness, U. S. Office of Education; American Medical Association Committee on Student Health; Advisory Council, American Student Health Association; Tuberculosis Committee, State Medical Association; and Advisory Committee, Minnesota State Nutrition Committee. She was re-appointed a member and elected president, State Board of Health.

Florence Brennan was elected chairman, Minnesota Nurses' Association Committee on Civil Service, 1944. She is a member, National League of Nursing Education Committee on Measurement and Educational Guidance.

Myrtle Brown was elected chairman, Minnesota League of Nursing Education Committee on Education of Nurses in the Care of Children.

George O. Burr served on the Food and Nutrition Board, National Research Council; and as the representative of the Society of Biological Chemists in the Division of Biology and Agriculture, National Research Council. He was editor, *Archives of Biochemistry*, associate editor, *Journal of Physical Chemistry*; and associate editor, *Journal of Nutrition*. He was the recipient of the following special grants: from the Rockefeller Foundation for Studies in Spectroscopy of Lipids; from the Rockefeller Foundation for Physiology of Lipids; from the National Live Stock and Meat Board for Chemistry of Fats; from the National Dairy Council for Chemistry of Butter Fat; from the Hormel Research Foundation for Chemistry of Fats; and from the Nutrition Foundation for Studies on Butter. He is a member of the Council, American Chemical Society; of the Executive Committee, Division of Biological Chemistry, American Chemical Society; of the Nominating Committee, Society of Biological Chemists; of the Charles Reid Barnes Life Membership Committee, American Society of Plant Physiologists; of the Eli Lilly Award Committee; and of the Mead Johnson Award Committee.

Berry Campbell was the recipient of a grant from the National Foundation for Infantile Paralysis, 1942-43.

James B. Carey was elected a member of the Minnesota Academy of Medicine.

Sumner S. Cohen was appointed a member, Committee on Tuberculosis, Minnesota State Medical Association; and of the Advisory Committee, Minnesota State Board of Health. He was elected to membership in the American College of Physicians. He is president, Minnesota Trudeau Medical Society.

Samuel A. Corson was elected to membership in the American Physiological Society, 1942. He is executive secretary, D. C. Branch of the American Association of Scientific

Workers. He was appointed a member, Yale University Aero-Medical Research Unit (OSRD contract in Aviation Medicine, 1944); and served as collaborator for the *American Review of Soviet Medicine*.

John A. Dahl was elected a fellow, American College of Surgeons in 1943.

Katharine J. Densford served as president, Minnesota Nurses' Association, 1940-44. She was elected president, American Nurses' Association, June, 1944; and serves as a member, Commission on Hospital Care. She is chairman, Minnesota Nursing Council for War Service.

Harold S. Diehl was named as a member, Directing Board, Procurement and Assignment Service, War Manpower Commission; and is chairman, Committee on the Allocation of Medical Personnel. He was invited to present the Gehrman Lectures for 1943-44 at the University of Illinois Medical School.

Thelma Dodds is serving with the U. S. Public Health Service, Washington, D.C., as consultant to schools of nursing under the administration of the Bolton Act, 1944-45.

Hal Downey was selected to supervise a \$3,000 fellowship in clinical hematology by Parke, Davis and Company.

Charles R. Drake served as vice president and member, Board of Directors, Minnesota State School Board Association; member, Minnesota Historical Society; and counselor, Minnesota Chapter, American Society of Clinical Pathologists.

Gerald T. Evans was elected to membership in the American Physiological Society and to the Central Society for Clinical Research. He is the recipient of a research grant from the Office of Scientific Research and Development on Relation of Adrenal Cortex to High Altitude Flying.

Ejvind P. K. Fenger was named chairman, Sanatorium Consultation Committee, Minnesota Trudeau Medical Society. He was elected to membership in the Minnesota Society of Internal Medicine, 1944.

Margaret Filson served as a member, Committee on Measurement and Educational Guidance, National League of Nursing Education.

Edmund B. Flink was elected to Sigma Xi, 1944.

Esther Garrison was elected chairman, State Committee on Mental Testing, Minnesota League of Nursing Education.

Everett K. Geer served as a member of the Council, American Trudeau Society.

H. Phoebe Gordon served as consultant on the Committee advising the U. S. Office of Education in the preparation of the booklet *Professional Nurses are Needed*.

Wendell H. Hall was accredited clinical investigator, Committee on Chemotherapeutic and Other Agents, National Research Council, for studies on penicillin, 1943.

Arild E. Hansen was elected vice president, Pediatric Research Society, 1942-43; and was president, Northwestern Pediatric Society, 1942-43. He was elected a member, American Society for Clinical Investigation; American Society for Experimental Pathology; and American Institute of Nutrition. He was the recipient of a research grant from the National Live Stock and Meat Board.

Ruth Harrington served as secretary, Committee on Educational Problems in Wartime, 1942.

Starke R. Hathaway served as expert consultant, Technical Section, Adjutant General's Office, War Department. He was appointed a member, Board of Directors, Minnesota Society for Planned Parenthood; and served on the executive committee, Minnesota Society of Applied Psychologists, 1943-44.

Margaret Heyse was a member, Committee on Publicity and Public Information, and Committee on the Evaluation of Nursing Practice; both of the Minnesota State League of Nursing Education.

Robert G. Hinckley was awarded the Commonwealth Fund Fellowship, 1942-43. He served as chairman, Mental Hygiene Committee, American Student Health Association, 1944-45.

Frederick W. Hoffbauer was the recipient of a research grant from the Hormel Foundation and was elected to membership in the Minnesota Society of Internal Medicine.

Harry G. Irvine served as special consultant to the State Department of Health and was named acting control officer for venereal disease for Minnesota by the U. S. Public Health Service and the State Department of Health. He is a member, Anti-Syphilis Committee, American Social Hygiene Association. He was elected president, Professional Interfraternity Conference, 1944; and served as member at large, National Council, Boy Scouts of America. He is national past president and a member of the Council, Alpha Kappa Kappa, medical fraternity.

Reuben A. Johnson served as secretary-treasurer, Minnesota Society of Internal Medicine.

Joseph T. King is the recipient of a special research grant from the Winthrop Chemical Company to support studies on the activity of certain chemotherapeutic substances.

Arthur Kirschbaum is the recipient of research grants from the Jane Coffin Childs' Memorial Fund for Medical Research. He served as a member of the Board of Abstractors for *Cancer Research*.

Miland E. Knapp was elected president, American Congress of Physical Therapy.

Leonard M. Larson served as a member, Consultation Committee, Minnesota Trudeau Medical Society.

Francis W. Lynch served as a member, Medical Review Panel, Minnesota Industrial Commission and was elected vice president, Chicago Dermatological Society, 1943.

Ernest S. Mariette served as a member, committees on Educational Literature, on Medical Information, and on Rehabilitation, American Trudeau Society. He was named a member, Professional Advisory Committee on Physical Restoration, Office of Vocational Rehabilitation, 1944. He was chairman, Legislative Committee, Minnesota Trudeau Medical Society; and was elected president, Mississippi Valley Trudeau Society. He served as a member, Governing Council, Mississippi Valley Conference on Tuberculosis, 1942-43; and a member, Council on Professional Practice, Minnesota Hospital Association.

Peter M. Mattill is a member, Executive Committee, Minnesota Trudeau Medical Society. He served as a member, Public Health Committee, American Medical Society, 1943.

John L. McKelvey was elected to membership in the American Gynecological Society.

J. Charnley McKinley was elected secretary-treasurer, Minnesota State Board of Examiners in the Basic Sciences. He served as chairman, Committee on Nervous and Mental Diseases, Minnesota State Medical Association; and was a member, Board of Directors, American Board of Psychiatry and Neurology.

Irvine McQuarrie served, under the direction of the National Research Council, as a member, Committee on Medical Education, Children's Bureau, U. S. Department of Labor. He was a member, National Committee on Dental Research, American College of Dentists; and served as a member, Council on Foods and Nutrition, American Medical Association. He was elected associate editor, *The Journal of Pediatrics*; associate editor, *Journal-Lancet*; guest editor, *Journal-Lancet*, May, 1943 and July, 1944 issues. He is the recipient of special grants for research in convulsive disorders, and for the establishment of a scientific travel fund. He is president, Interurban Clinical Club; and honorary member, Mexican Pediatric Society.

John R. Meade was elected to membership in the Minnesota Society of Internal Medicine.

Henry E. Michelson was appointed a member, Committee on Dermatology, American Society for Research in Psychosomatic Problems. He was the recipient of grants from the Minneapolis-Honeywell Regulator Company for research in occupational dermatitis, and from the Northern Pump Company for research in atopic eczema. He was elected president, Society of Investigative Dermatology.

J. Arthur Meyers was appointed to the Subcommittee on Tuberculosis, National Research Council; and is a member of the committee of the National Tuberculosis Association to consider problems in the care and rehabilitation of veterans of World War II. He was appointed to the Medical Panel for consideration of cases under the Occupational Disease Law, State of Minnesota. He was elected president, American College of Chest Physicians. He served as a member, Editorial Board, *Diseases of the Chest*; and was awarded a certificate of honorable mention by the Editorial Board, *Modern Hospital*, for an article published in September, 1942.

William A. O'Brien was awarded an honorary fellowship in the American College of Hospital Administrators, 1943.

Harry Oerting was elected vice president, Minnesota Society of Internal Medicine.

Andrew T. Rasmussen was awarded a grant from the Committee on Research in Endocrinology, National Research Council, for a study of the pituitary glands of children. He delivered the special lecture before the Montreal Neurological Institute, McGill University, Montreal Canada, and the annual James A. Gibson Lecture before the James A. Gibson Anatomical Society, University of Buffalo, Buffalo, New York.

Leo G. Rigler served as consultant, State Selective Service System and the Fort Snelling Station Hospital and Induction Center. He was also consultant in roentgenology, State Board of Health. He was a member of the Publication Committee of *Radiology*. He received the Bronze Medal for Scientific Exhibit from the American Medical Association, 1944; and the Southern Minnesota Medical Association Medal for Scientific Exhibit, 1944.

Karl Sollner, jointly with Dr. Visscher, was engaged in research under an OSRD contract on Preparation of Fresh Water from Saline Water.

Wesley W. Spink served as consultant secretary, War Board for Investigation and Control of Influenza and Other Epidemic Diseases; and as a member, Commission on Hemolytic Streptococcus Infections, U. S. Army, 1942. He was an accredited clinical investigator, Committee on Chemotherapeutic and Other Agents, National Research Council; and he was recipient of grants from the Committee on Scientific Research, American Medical Association, for studies pertaining to the staphylococcus; and from the National Drug Company for studies on the antibacterial action of allantoin and the sulfonamides; from Sharp and Dohme, Inc., for studies pertaining to infectious diseases and chemotherapy. He was elected secretary, American Society for Clinical Investigation, 1942-45; and was elected president, Minnesota Pathological Society, 1944-45. He is a member, Executive Committee, Minnesota Society for Internal Medicine.

K. William Stenstrom served as a member, Standardization Committee, Radiological Society of North America; and was elected president, Minnesota Radiological Society. He is a member, Board of Directors, Minnesota Cancer Society.

Albert V. Stoesser was elected president, Northwestern Pediatric Society, 1944-45. He is the recipient of research grants from the John and Mary R. Markle Foundation and the Borden Company.

Samuel E. Sweitzer was elected vice president, American Dermatological Association.

Jean W. Taylor served as chairman, Minnesota Nurses' Association Committee on Civil Service, 1944. She was a member of the Committee on Measurement and Educational Guidance, National League of Nursing Education; of the Board of Directors, Minnesota Nurses' Association; and of the State Nursing Council for War Service.

Maurice B. Visscher served as a member, Governor's Scientific Advisory Committee for Minnesota War Industries, 1941-44; and as a member, Subcommittee on Clinical Investigation, National Research Council. He is councilor, American Physiological Society. During 1944-45, he serves as director, Medical Nutrition Study in France, for the Unitarian Service Committee. He is director, Unit for Physiological Research on Poliomyelitis and Physical Medicine, National Foundation for Infantile Paralysis, Inc., 1944-46. He was elected vice president, Minnesota section, American Association of University Professors, 1944-45; and secretary-treasurer, Minnesota Medical Foundation, 1944-45.

Louise Waagen was appointed a representative of the College Field Program as conducted under the U. S. Public Health Service and the National Nursing Council for War Service. She was associated with the National Publicity Program for the U. S. Cadet Nurse Corps.

Owen H. Wangenstein was the recipient of the John Scott Medal for the development of suction syphonage treatment in acute intestinal obstruction.

Cecil J. Watson was elected president, Central Society of Clinical Research; and vice president, American Society of Clinical Investigation. He served as a member, Committee on Medicine, National Research Council; as a member, American Board of Internal Medicine; as chairman, Liver Injury Conference, sponsored by Josiah Macy, Jr., Foundation, New York, N. Y.; as a member of the committee invited by the American Life Insurance Association to consider the support of medical research; and as adviser of a War Project, University of Chicago. He was elected secretary, Section on the Practice of Medicine, American Medical Association; and president, Minnesota Society of Internal Medicine. He served as trustee, Minnesota Medical Foundation, 1943.

Louis H. Winer was elected to membership in the American Dermatological Association.

Harland G. Wood was the recipient of the Eli Lilly Research Award in Bacteriology, 1942. He was elected to the Society of Biological Chemists, 1944.

Ragnvald S. Ylvisaker served as a member, Medical Advisory Board, Selective Service, 1942.

School of Dentistry—Wallace D. Armstrong was elected vice president, International Association for Dental Research, 1943-44; and is president-elect of this association for 1944-45. He was editor, *Bulletin of the Minnesota Medical Foundation*. He served as consultant to the Office of Scientific Research and Development; and was an expert witness for the U. S. Department of Agriculture. He was the recipient of research grants from the following organizations: American College of Dentists, American Dental Association, and Josiah Macy, Jr., Foundation.

Max E. Ernst served as secretary, American Association of Orthodontists.

Carl O. Flagstad was vice chairman, Legislative Committee, American Dental Association. He was also secretary, American Association of Dental Schools; and chairman, War Service Committee, Minnesota State Dental Association.

Raymond R. Henry served as a member, National Board of Dental Examiners.

Raymond E. Johnson was elected secretary, American Academy of Periodontology.

William F. Lasby was dental interviewer for pre-dental students for the Seventh Service Command; and was also chairman of the Dean's Committee of Dental Schools, Seventh Service Command. He was a member of the Dean's Screening Committee and chairman of the Deans of four Schools of Dentistry, Ninth Naval District. He served as a member of the following committees: War Service Committee, Minnesota State Dental Association; History Committee, American Dental Association; and Graduate Study Committee, American Association of Dental Schools. In addition to the above, he is a regent, American College of Dentists.

Charles E. Rudolph served as chairman, Council on Dental Health, Minnesota State Dental Association. He was a trustee, American Dental Foundation; and was also a member, Socio-Economics Committee, American College of Dentists.

Lewis W. Thom was elected president, Minnesota State Dental Association.

Carl W. Waldron served as editor, *Journal of Oral Surgery*, American Dental Association.

College of Pharmacy—Gustav Bachman served as a member, Minnesota State Board of Health.

Earl B. Fischer served as a member, Committee of Pharmacognosy and Pharmaceutical Botany, Division of Biology and Agriculture, National Research Council, 1942-43. He acted as chairman, Committee on Drug Plant Cultivation, Minnesota Resources Commission; and was a participating member, Subcommittee on Botany, Committee on National Formulary, American Pharmaceutical Association, 1942-44. He was an auxiliary member, Subcommittee on Botany and Pharmacognosy, U. S. Pharmacopoeial Revision Committee, 1942-43-44; and served as chairman, Kilmer Prize Award Committee, American Pharmaceutical Association, 1942. In addition to the above, he was chairman, Drug Plant Culture Committee, Minnesota State Pharmaceutical Association, 1942.

Ole Gisvold won the Ebert Prize Medal, 1942. He was chairman, Ebert Prize Committee, 1942-43; and was a member, Committee on Pharmaceutical Research, American Association of Colleges of Pharmacy, 1943-44. He was also a member, Executive Council, Rho Chi Society and vice president, Section of Chemistry, Teacher's Conference, American Association of Colleges of Pharmacy.

Charles V. Netz was elected secretary, Minnesota State Pharmaceutical Association, 1942-44; and served also as executive secretary, 1944. He was editor, *Proceedings of the Annual Meeting of the Minnesota State Pharmaceutical Association*, for 1943 and for 1944. During the winter quarter, 1944, he served as acting secretary, Pharmacy Advisory Committee to State Selective Service. He served as chairman, Committee on Continuation Study for Pharmacists, American Pharmaceutical Association, 1942-44; and was chairman, Committee on Predictive and Achievement Tests, American Association of Colleges of Pharmacy.

Charles H. Rogers was elected president, 1943; and member, Executive Committee, 1944-47, Minnesota State Pharmaceutical Association. He is president, State Pharmacy Advisory Committee to the War Manpower Commission and State Selective Service; and served as a member, American Pharmaceutical Association Committee on the Status of Pharmacists in the Government Service. He was chairman, Executive Committee, and member, Committee on Predictive and Achievement Tests, American Association of Colleges of Pharmacy; and was chairman, Committee on Drug Plant Cultivation, Minnesota Resources Commission.

Charles E. Smythe served as chairman, Northwestern Branch, American Pharmaceutical Association, 1943-44; and was also chairman, Drug Plant Culture Committee, Minnesota State Pharmaceutical Association, 1942-44.

Taito O. Soine served as a member, Committee on Research, Minnesota State Pharmaceutical Association, 1943-44. He was elected to Sigma Xi, 1942.

Charles O. Wilson was chairman, Scientific Section, American Pharmaceutical Association. He was first vice chairman, Practical Pharmacy Section, American Pharmaceutical Association; and was a member, Committee on Problems and Plans, American Association of Colleges of Pharmacy. He was chief consulting chemist, Minnesota State Board of Pharmacy. He served as member, Committee on Activities for Alumni, American Association of Colleges of Pharmacy; was chairman, Committee for the Study of the Reorganization of the Scientific Section, American Pharmaceutical Association; and was a member, Committee on Pharmaceutical Syllabus dealing with Qualitative Analysis.

College of Education—G. Lester Anderson served as test consultant, Committee on American History in Schools and Colleges, of the American Historical Association, the

Mississippi Valley Historical Association, and the National Council for the Social Studies, 1943. He was co-editor, *Fifteenth Yearbook: Adapting Instruction in the Social Studies to Individual Differences*, National Council for the Social Studies.

Gertrude M. Baker was president, Central District, Association for Health, Physical Education, and Recreation, 1942-43. She was treasurer, National Association of Physical Education for College Women, and also chairman, Committee on Professional Leadership, of the same association.

Emma M. Birkmaier was secretary, Minnesota Chapter, American Association of Spanish Teachers. She served as chairman, Spanish Movie Committee, American Association of Spanish Teachers. She was elected president, Minnesota Chapter, American Association of Teachers of German. She was editor, *German News*, a publication under the auspices of the American Association of Teachers of German, Minnesota Chapter. She was a member of the national nominating committee, American Association of Teachers of German and was elected second vice president of the association, 1943-44.

Charles W. Boardman was a member, National Committee on Teacher Examinations, American Council on Education; and a member, Secondary School Commission, North Central Association of Colleges and Secondary Schools. He served as educational consultant, Civil Aeronautics Administration, 1941-42.

Nelson L. Bossing was a member, State Curriculum Policy Planning Committee, and served as director, Minnesota Schools Curriculum Project. He was editor of the Curriculum Page, *MEA Journal of Education*.

Theodore Brameld was regional vice president, Progressive Education Association (now American Education Fellowship) 1942-44 and was re-elected for a three-year term, 1944-47. He was secretary-treasurer, Philosophy of Education Society; chairman, Midwest Committee on Education and Postwar Reconstruction, and of the Adult Education Committee, American Federation of Teachers. He has been contributing editor to *Frontiers of Democracy*, 1943-44. He is a member, Sixth Yearbook Committee, John Dewey Society; has served as executive secretary, Study of Administrative Practices and Policies in Intercultural Relations, American Council on Race Relations; and is a member, Problems and Plans Committee, American Education Fellowship; and of the Committee of Educational Consultants, Bureau for Intercultural Education.

William H. Cartwright, Jr., has been acting secretary-treasurer, Minnesota Council for the Social Studies, and served as co-chairman of the 1944 Spring Conference of the Council.

Walter W. Cook was educational consultant, U. S. Army Engineers, Santa Fe, N. M., 1943-44. He was president, Minnesota Society for the Study of Education, 1944-45; was named a member, Executive Committee, Minnesota Society for Applied Psychology; and was a member, Curriculum Committee, Minnesota State Department of Education, 1944-45.

Ruth E. Eckert was consultant in higher education, New York City Survey, conducted by the Joint Legislative Committee on the New York State Education System, 1943. Her recently published book, *Outcomes of Higher Education*, was selected as one of the thirty-seven outstanding publications of the year in the field of education.

George F. Ekstrom, in 1944, worked two months in the Minnesota State Department of Education as state appraiser, Federal Study of Food Production, War Training Program, U. S. Office of Education. He served as business manager, *Agricultural Education Magazine*; as chairman of the special committee to prepare course of study outlines for the Rural Food Production War Training Program in co-operation with the State Department of Education; and co-operated with the Vocational Education Division, State Department of Education, in conducting professional training conferences for the special teachers in the Rural Food Production War Training Program.

Albert M. Field was a member of the following committees: State Advisory Committee for Vocational Education; Planning Committee, Minnesota Education Association; and State Program Planning Committee for Rural Food War Production Training Program.

Bertha Handlan was a member, Book Lists Committee, National Council of Teachers of English.

Robert I. Helm was judge, Regional Exhibit of High School Art, for *Scholastic Magazine*.

Palmer O. Johnson was consultant to Educational Policies Commission, Washington, D.C. He served as director, Army Specialized Training Program of Examinations; and was consultant for the United States Armed Forces Institute Examination Program. He served as statistical editor, *Journal of Experimental Education* and as associate editor,

Science Education. He was co-ordinator, Symposium on Postwar Science Education for the National Association of Science Teachers.

Louis F. Keller served as secretary, Ice Hockey Rules Committee, National Collegiate Athletic Association, 1942-44; editor, *Ice Hockey Guide*, for the same association, 1942-43.

Marie Lien was elected to membership in Delta Kappa Gamma, honorary education fraternity; and served as chairman, Art Division, State Research Program of the fraternity. She was a member of the Minnesota Folk Arts Foundation Planning Committee.

Josephine Lutz organized an exhibition of pictures "The Art of St. Croix" for the Stillwater, Minnesota Centennial, 1943. She painted and circulated a one-man show of paintings of Minnesota in Oklahoma and Kansas, 1944. A cultural and architectural study of old homes in Stillwater, consisting of 25 paintings, was exhibited by her in the Art Museum, Sacramento, California and in the St. Paul Gallery, State Historical Society. She served on the National Jury for the Scholastic High School Art Exhibition.

Dorothy Meredith served as editor, *The Bulletin*, Minnesota Council for the Social Studies, 1942-44. She was awarded a Rockefeller Fellowship for research for the Committee on American History in Schools and Colleges of the American Historical Association, Mississippi Valley Historical Association, and the National Council for the Social Studies.

Gordon M. A. Mork was co-chairman, Committee of the Science Education Section, Minnesota Academy of Science, to work on a new secondary school science program for Minnesota.

Mervin G. Neale served as consultant on Pre-flight Education, Civil Aeronautics Administration. He was a member, 1944 Yearbook Commission, American Association of School Administrators; Editorial Advisory Board, *The School Executive*; and of the Cleveland Conference; and was college examiner, North Central Association of Colleges and Secondary Schools.

Hazel B. Nohavec was elected president, North Central Division, Music Educators National Conference, 1943-45; and was executive secretary and treasurer, Minnesota Public School Music League. She was a member of the Teacher Education Committee, Music Teachers National Association; of the Executive Board, Music Educators National Conference; and of the Editorial Board, *Educational Music Magazine*. She is a music columnist on the *Northwest Life Magazine*. She is a member of the Policy Commission, Minnesota Education Association; of the National Committee of Music in War Institutes; of the Research Council, Music Educators National Conference; and of the National Committee on Music in Industry. She was elected to Delta Kappa Gamma, honorary education fraternity.

Carl L. Nordly served as a member, National Council on Physical Fitness; and as a consultant on physical fitness, Federal Security Agency, 1942. He was state director of physical fitness and recreation, 1942-43; member, Governor's Advisory Group on Youth Problems; president, Central District, American Association for Health, Physical Education, and Recreation; and vice president, Recreation, of the same association.

Clarence R. Osell served as vice president, Minnesota Camping Association.

Wesley E. Peik was chairman, Minnesota Regional Conference on Teacher Education, 1942-44; consultant on out-of-school work for high school credit, U.S. Office of Education, 1943; consultant, Educational Policies Commission, 1943-44. He was a member, Committee on Teacher Education and Certification, National Education Association, 1942-44; consultant, School Conference for Teachers' College Executives, 1944; consultant, Greeley State College Curriculum Revision, 1942. He conducted a survey of the Boston schools, 1944; was a member, Midwest Committee on Postwar Education; and was consultant on teacher training for several liberal arts colleges. He was co-chairman of the Educational Policies Commission, Minnesota Education Association, 1942-44; chairman, Education Committee, Civilian Defense Corps, 1942; and served on the Minnesota Advisory Committee on Education, 1942-44.

Olive M. Prime was elected president, Special Class Teachers Section, Minnesota Education Association, 1942-44.

Ruth Raymond was elected an honor member of Kappa Delta Phi and also a member of the American Society for Aesthetics, 1943. She served on the Jury for the Poster Contest—National Council of Christians and Jews and for the Regional High School Art Contest. She was a member of the Planning Committee for the organization of a Folk Art Foundation, 1943-44.

Dora V. Smith was elected chairman, Elementary Division, National Council of Teachers of English, 1942-45; and vice president, National Conference on Teaching

English, 1944-45. She is a member of the Booklist Committees, National Education Association, American Library Association, and National Council of Teachers of English; and a member of the Yearbook Committee on Elementary School English, National Society for the Study of Education. She served as consultant to the Armed Forces Institute and the Committee on General Education Program for the Armed Services. She served as consultant on the evaluation of staff of Hampton Institute; as consultant of reading study at Rockford, Illinois; and consultant on curriculum for Stephens College, Columbia, Missouri; and for the Public Schools of Akron, Ohio.

Jean G. Smith was elected vice president, Minnesota Library Association.

Homer J. Smith served as staff member of the Survey of Public Schools, Battle Creek, Michigan. He was a consultant for the Minnesota State Advisory Committee on War Production Training, and also for the Minnesota State Advisory Committee on Private Trade Schools. He was consultant for the Utah State Department of Education on Industrial Education and Teacher Training; and continues as consultant to the Tuttle Committee, American Council on Education.

Catherine Snell was a member, Visual and Teaching Aids Committee, Minnesota Association for Health, Physical Education, and Recreation, 1940-42.

Helen M. Starr was secretary-treasurer, Minnesota Association of Health, Physical Education, and Recreation; served as chairman, Health Problems Committee for the association; was state chairman of Aquatics, Riding, Elementary Swimming, Synchronized Swimming, 1943-44; was chairman, Health Section, Central District of Health, Physical Education, and Recreation, 1939, 1943; and was national water safety instructor, American Red Cross, 1940-44.

Hazel Stoick was president, Epsilon Chapter, Pi Lambda Theta; and president, Alumni Chapter of Gamma Chapter, Delta Phi Delta, 1943-44.

Tracy F. Tyler was elected editor, *Journal of the Association for Education by Radio*, 1944-45. He served as faculty sponsor, Phi Delta Kappa, national honorary education fraternity, since 1939, and of Psi Chi, national honorary society in psychology, 1944-45. He was a member, Board of Directors, Minnesota Society for the Study of Education, 1943-46; consultant, Radio Committee, Minnesota Education Association, since 1938; served as first vice president, Minnesota Radio Council, 1943-45; and member, Board of Directors, Horace Mann League, 1944-47.

Marvin J. Van Wagenen was regional representative, Education Section, AAAP; and technical adviser on examinations, Army and Navy Training Program.

Edgar B. Wesley was a member of the Minnesota Resources Commission, 1937-44; and of the State Bond Committee. He has served as advisory editor, *Education*, since 1943. He received the honorary degree, doctor of literature, from Vision College, Barbourville, Kentucky, May 11, 1943.

C. Gilbert Wrenn served as second vice president, National Vocational Guidance Association.

School of Business Administration—Eugen Altschul was principal economist, Commodity Division, WPB, 1942; principal economist, Central European Division, Board of Economic Warfare, 1942-43; and served on the Economic Research Staff of the U. S. Tariff Commission, since February, 1943—all in Washington, D.C. He was also a member, Research Committee, Russian Economic Institute, New York, New York.

Roy G. Blakey served as tax and research consultant, Council of State Governments (Chicago), Federation of Tax Administrators (Chicago), and Governmental Research Institute (St. Louis). He was elected vice president, 1942-43 and president, 1943-44 of the National Tax Association; appointed a member, Minnesota Resources Commission, 1943; director of research for Minnesota Income Study financed by the Rockefeller Foundation; and was a member, Informal Liaison Tax Committee, with Roy Blough of the U. S. Treasury Department and I. M. Labovitz of the U. S. Bureau of the Budget.

Francis M. Boddy did special research in connection with the war effort in the Lead, Zinc, and Tin Division, OPA, Washington, D.C., 1942-43.

Arthur M. Borak has served as senior price analyst, OPA, St. Paul, since 1942.

A. Hamilton Chute has served in turn as acting chief, Retail Planning Section, Wholesalers and Retailers Branch; assistant chief, Retail Planning Division, Civilian Food Requirements Branch; and as special assistant to the chief, Regulatory Accounting Division, Compliance Branch, Office of Distribution, all of the War Food Administration, since 1943.

Richard L. Kozelka has served as a member, Executive Committee, Office of Civilian Defense for Minnesota, and as chairman, Committee on Price Watching and Committee on Program for the Spring 1943 Institute. He was a member of a Special Civic Com-

mittee on Allocation of Production; member, Subcommittee on Postwar Planning for State, County, and Municipal Buildings of the Governor's Co-ordinating Committee on Postwar Planning; projects chairman, Northwest Research Committee; research chairman, Committee for Economic Development for the Ninth District; and special consultant, on CED Postwar Community Study of Albert Lea, Minnesota.

Aurelius Morgner was appointed by the U. S. Department of Labor to serve as a public member on a committee called to determine a national minimum wage rate for the meat, dairy, and poultry industries for a meeting held in New York, July, 1943. He served as public panel member in connection with labor disputes on National War Labor Board cases for Region VI.

Edmund A. Nightingale served as principal industrial specialist, Transportation Committee, WPB, Washington, D.C., 1942; principal economist, Division of Stockpiling and Transportation, War Production Board, Washington, D.C. and field service with headquarters in Minneapolis, 1942-43; consulting transportation economist, Office of Iron Range Resources and Rehabilitation, since June 13, 1944; consulting economist, Air Cargo-Passenger Research, Air Traffic Committees of the Minnesota Council and the Greater Twin Cities Chapter of the National Aeronautics Association, 1943; consulting transportation economist, Minnesota Resources Commission, since July, 1942.

Emerson P. Schmidt has held the following posts since 1943: economist, Committee on Economic Policy, and for the Committee on Social Security; and director, Economic Research Department; all of the Chamber of Commerce of the United States of America. He is a member, Advisory Committee on Economics to the Committee on International Policy, Carnegie Endowment for International Peace; member, Special Research Committee of the Postwar Planning Committee, District of Columbia Board of Trade; consultant to Committee on Postwar Economic Policy and Planning of the House of Representatives; consultant to Research Committee, Committee for Economic Development; editor, *American Economic Security*; and member, Editorial Council, *Journal of Land and Public Utility Economics*.

Russell A. Stevenson was a member, Board of Directors, Smaller War Plants Corporation for Region XII. He served as a public panel member on a number of War Labor Board cases for Region VI; was a member, Governor Stassen's Economic Wartime Advisory Committee; member, Northwest Research Committee concerned with postwar planning and sponsoring community surveys for the region; member, Planning Committee for the Committee on Economic Development for the Ninth Federal Reserve District, including membership on the Planning Committee for the Albert Lea Community Study. He was chairman, Advisory Committee on the Minnesota-Manitoba Study of Effects of Various Possible Peace Settlements on the Economies of the Central Northwest United States and the Prairie Provinces of Canada, a study financed by the Rockefeller Foundation. He served also as director, Employment Stabilization Research Institute involved with Minnesota Income Study, and likewise financed by the Rockefeller Foundation; and as co-ordinator, University of Minnesota Research Project on the Impact of the War on a Minnesota Community, involving the comprehensive survey of Red Wing, Minnesota. He was chairman, Committee on the Study of Business Education, American Association of Collegiate Schools of Business; and special consultant, National Association of State Universities concerning federal legislation on business and economic research. He was awarded the honorary degree, doctor of laws, from the University of Michigan, June 21, 1941.

George J. Stigler served as a member, Applied Mathematics Panel, Office of Scientific Research and Development, involving research on statistical and mathematical studies assigned by the Armed Forces, New York City. He also engaged in special research for the National Bureau of Economic Research involving studies of employment in service industries since 1900, and forces governing employment trends, New York, New York.

Roland S. Vaile was chief, Consumers' Goods Division, Office of Civilian Supply, WPB, Washington, D.C., 1942. He served the University of Minnesota Chapter, American Association of University Professors, as vice president, 1943-44 and president, 1944-45.

Dale Yoder held the following posts: chief, Planning Division, War Manpower Commission, Washington, D.C., vice chairman, Regional War Labor Board, Chicago; special consultant, Morale Services Division, Army Service Forces, War Department, Washington, D.C.; member, Labor Market Research Committee, Social Science Research Council; member, Special Committee on Training in Industrial Relations, American Management Association; and associate editor, *American Economic Review* and *Journal of the Society for the Advancement of Management*.

Graduate School—Theodore C. Blegen served as director, Historical Service Board, Washington, D.C., 1943-44. He was elected president, Mississippi Valley Historical Asso-

ciation, 1943-44. He served as joint chairman, Committee on American History in Schools and Colleges of the American Historical Association, the Mississippi Valley Historical Association, and National Council for the Social Studies.

Mayo Foundation for Medical Education and Research—Alfred W. Adson served on the Executive Committee and Council on Medical Service and Public Relations, American Medical Association; the Minnesota State Board of Medical Examiners; and the Medical Counsel Committee for United States Veterans Administration.

C. Anderson Aldrich was a representative of the American Board of Pediatrics on the Advisory Board of Medical Specialties.

Edgar V. Allen was consultant in medicine, Seventh Service Command, U. S. Army. He was also chairman, Section on Experimental Medicine and Therapeutics, American Medical Association.

Edward J. Baldes is a responsible investigator on a project for the OSRD. He served as a member of the Subcommittee on Acceleration of the Committee on Aviation Medicine, National Research Council, and as a consultant at Wright Field, Dayton, Ohio.

Donald C. Balfour was honorary consultant for the Bureau of Medicine and Surgery, U. S. Navy; honorary consultant for the Army Medical Library; and served as a member of the Committee on Surgery, National Research Council. He was awarded the LL.D. degree by Carleton College; was named an honorary fellow of the Royal Society of Medicine; and is president-elect of the Interstate Post-Graduate Medical Association of North America. He served also as a representative of the Association of American Medical Colleges and was a member of the Advisory Board for Medical Specialties.

Jacob A. Bargen served on the Editorial Board of *Gastroenterology*. He was secretary, American Gastro-enterological Association and acted as chairman, Section on Gastroenterology and Proctology, American Medical Association.

Arlie Barnes was a member, Subcommittee on Cardiovascular Diseases, Committee on Medicine, National Research Council. He was also president, Central Society for Clinical Research.

William L. Benedict served on the editorial board of *Archives of Ophthalmology*. He was executive secretary-treasurer, American Academy of Ophthalmology and Otolaryngology, and a member, Subcommittee on Ophthalmology, Committee on Surgery, National Research Council.

Jesse L. Bollman served as the Joseph Graham Mayo Memorial Lecturer, the State University of Iowa.

Walter M. Boothby was a responsible investigator on a project for the OSRD, and was a member, Subcommittee on Oxygen and Anoxia, Committee on Aviation Medicine, National Research Council.

Walter F. Braasch served as a member, Subcommittee on Urology, Committee on Surgery, National Research Council; and also as a member, Board of Trustees, American Medical Association.

Albert C. Broders was named honorary member, Brown-Sequard Chapter, Alpha Omega Alpha, Medical College of Virginia.

Louis A. Buie is a member, Advisory Committee, National Council on Physical Fitness.

Charles F. Code is a member, Subcommittee on Decompression Sickness, Committee on Aviation Medicine, National Research Council. He is also a responsible investigator on a project for OSRD.

Winchell McK. Craig was the Mayo Memorial Lecturer, Dartmouth Medical School.

Austin C. Davis served as treasurer, Southern Minnesota Medical Association.

Arthur U. Desjardins served as a member, Council on Physical Therapy, American Medical Association.

Claude F. Dixon was the Arthur Dean Bevan Lecturer, Chicago Surgical Society. George B. Eusterman was editor of *Gastroenterology*.

William H. Feldman served as secretary-treasurer, Conference of Research Workers in Animal Diseases, North America. He received the Gold Medal from the American Medical Association for an exhibit on Chemotherapy of Tuberculosis (with H. C. Hinshaw and F. C. Mann). He was made an honorary member, American Trudeau Society, 1943.

Fred A. Figi was secretary-treasurer, American Association of Oral and Plastic Surgeons.

Robert E. Fricke was elected first vice president, American Therapeutic Society.

Ralph K. Ghormley served on the American Board of Orthopedic Surgery. He was also on the editorial board of *Surgery*.

Herbert Z. Giffin was elected president, Minnesota State Medical Association.

Henry F. Helmholtz was a member, Subcommittee on Maternity Care and Child Health, Health Committee, Office of Foreign Relation Rehabilitation Operations and of the Children's Bureau. He was also chairman, Committee on Pan-American Scholarships, American Academy of Pediatrics; and was awarded the honorary degree, master of science, by the University of Wisconsin, 1943.

H. Frederick Helmholtz, Jr., worked as a responsible investigator on a project for OSRD.

Wallace E. Herrell served as Alpha Omega Alpha Lecturer, Wayne University Medical School.

Richard M. Hewitt was a member, Committee on Information, National Research Council; and of the Subcommittee on Information of Procurement and Assignment Service, War Manpower Commission. He worked as consultant, Preventive Medicine Division, Office of the Surgeon General, U. S. Army. He was the recipient of the Alumni Achievement Award from George Washington University.

Horton C. Hinshaw served as chairman, Committee on Therapy, American Trudeau Society. He was awarded the Gold Medal by the American Medical Association for an exhibit on Chemotherapy of Tuberculosis. He worked as director of the Minnesota Public Health Association.

Bayard T. Horton was elected president, Minnesota Society of Internal Medicine.

Arthur B. Hunt was elected secretary-treasurer, Central Travel Club.

Roger L. J. Kennedy served as chairman, Advisory Committee to the State Board of Health; and on the Emergency Maternal and Infant Care Program, Children's Bureau, Department of Labor. He was also Minnesota state chairman, American Academy of Pediatrics.

Byrl R. Kirklín served as consultant in radiology, Office of the Surgeon General, U. S. Army. He was a member, Subcommittee on Radiology, Committee on Surgery, National Research Council. He was elected secretary-treasurer of the Advisory Board for Medical Specialties.

Frank H. Krusen was elected secretary, Subcommittee on Physical Therapy, Committee on Surgery, National Research Council. He was director of the Baruch Committee on Physical Medicine; and served on the Council on Physical Therapy, American Medical Association.

James W. Kernohan served as a member of the editorial boards of the *American Journal of Clinical Pathology* and of the *Journal of Neuropathology and Experimental Neurology*.

William R. Lovelace was recipient of the Distinguished Flying Cross for heroism beyond call of duty.

John S. Lundy worked as civilian consultant in anesthesia, Office of the Surgeon General, U. S. Army; was a member of the Subcommittee on Anesthesia, Committee on Surgery, National Research Council; and secretary, Section on Anesthesiology, American Medical Association. He served also as a representative of the American Board of Anesthesiology on Advisory Board for Medical Specialties.

Frank C. Mann was elected chairman, Section on Pathology and Physiology, American Medical Association. He was the William Henry Welch Lecturer, Mt. Sinai Hospital, New York. He served on the editorial board of the following: *Proceedings of the Society for Experimental Biology and Medicine*, *Annual Review of Physiology*, *Journal of Gastroenterology*, and *Surgery*.

James C. Masson delivered the Balfour Lecture at Toronto, Ontario on Lister Day.

Henry W. Meyerding was elected chairman, Committee for Study of Bone Tumors, American Academy of Orthopedic Surgeons, 1942-44.

John R. Miner was elected vice president, American Statistical Association, for the field of facts and methods related to biometry, vital statistics, psychology, and education.

Frederick P. Moersch was elected to the Council, American Psychiatric Association, 1944.

Herman J. Moersch served on the editorial board of *Gastroenterology* and also of the *American Journal of Digestive Diseases and Nutrition*. He was elected president of the Minnesota Trudeau Medical Society, 1943.

Gordon B. New was Mayo Lecturer, University of Michigan, Ann Arbor, June 21, 1944. He was elected president, American Academy of Ophthalmology and Otolaryngology, 1944-45.

Paul A. O'Leary was on the consulting staff of the Dermatoses Investigations, U. S. Public Health Service. He was also a member of the American Board of Dermatology and Syphilology.

Arnold E. Osterberg worked as a member of a subcommittee of the National Research Council.

John deJ. Pemberton was elected president, American Association for the Study of Goiter.

Arthur H. Sanford was a representative, American Board of Pathology, on the Advisory Board of Medical Specialties. He was elected president, American Board of Pathology. He was honorary consultant, Army Medical Library; and was elected an alumnus member, Northwestern University Chapter of Alpha Omega Alpha, 1943.

Carl F. Schlotthauer was vice president, American Veterinary Medical Association; and served also as a member of the Research Council of that association.

Gershom J. Thompson served as chairman, Section on Urology, American Medical Association.

Maurice N. Walsh was recipient of the Air Medal for bravery in action.

Russell M. Wilder served the National Research Council as a member of the Executive Board of the Committee on Medicine, and of the Food and Nutrition Board. He was also a member of the Council on Foods and Nutrition, American Medical Association.

Institute of Child Welfare—John E. Anderson held the following posts in the American Psychological Association: president, 1942-43; editor, *Psychological Bulletin*, 1942-48; member, Election Committee, 1943-44; Constitutional Committee, since 1943; and of the Committee on War Services to Children, 1942-44. He was delegate to the Inter-society Constitutional Convention of Psychologists from the American Psychological Association, 1943; and member, Continuation Committee, 1943; and of the Joint Constitutional Committee, since 1943. He served the National Research Council as member, Executive Committee, Division of Anthropology and Psychology, since 1943; and member, Committee on Child Development, since 1925; and of the Emergency Committee in Psychology, 1942-43. He was chairman, Society for Research in Child Development, 1942 and 1943; member, Advisory Committee on Mental Hygiene, U. S. Children's Bureau, 1942-44; chairman, Committee on Exceptional Child, and member, Board of Managers, National Congress of Parents and Teachers, 1938-43. He served as a member, Commission on Morale, 1942-44, of the American Association of School Administrators; and was chairman, Section on Child Welfare, Minnesota Defense Council, since 1941.

Marion L. Faegre served as senior child welfare analyst, Children's Bureau, U. S. Department of Labor, 1942-44; and was a member, Committee on Readings for Parents, United China Council, 1942-44; and of the Board, National Council of Parent Education, since 1943.

Florence L. Goodenough was elected chairman, Society for Research in Child Development, 1946 and 1947; president, National Council of Women Psychologists, 1943; and was a delegate to the Inter-society Constitutional Convention of Psychologists from the National Council of Women Psychologists, 1943.

General College—Arthur H. Brayfield served as consultant to the Educational Branch, U. S. Army, in preparing materials for pre-demobilization training and counseling in the vocational area.

Signe Holmstrom was elected vice president, Psi Chi, national honorary society in psychology, 1944-45.

Horace T. Morse is chairman, Committee on Publications, National Council for the Social Studies, 1941-45. He is also a member, Committee on Postwar Education Planning, North Central Association of Secondary Schools and Colleges, 1943-44.

Alfred L. Vaughan was a staff member for the Development of Teaching Materials, Armed Forces Institute, 1942; and served as consultant for the ESMWT on the preparation of refresher courses in mathematics and physics for high school teachers, 1942.

General Extension Division—Watson Dickerman was a member of the Board, American Association for Adult Education, and Minnesota Council for Adult Education, 1942-44. He was state co-ordinator, Department of Adult Education, National Education Association, 1942-43.

Delwin B. Dusenbury served as radio consultant, Women's Army Corps and U. S. Army recruiting drives, 1942-43; and as radio director, Information Division, Office of Price Administration, Northwest District, 1944. He was elected a life member, Alpha Epsilon Rho, honorary radio education fraternity, 1943.

Betty T. Girling was a member, National Children's Radio Writing Council; and director, Children's Programs, Minnesota Children's Council, 1943-44. She was elected to Alpha Epsilon Rho, honorary radio education fraternity, 1943; and one of her programs received the second award in the Seventh National Exhibition of Educational Recordings, 1944.

Jerome Jackman served as director of identification, Office of Civilian Defense.

James S. Lombard served as state co-ordinator, Department of Adult Education, National Education Association, 1943-44. He was elected president, International School Assembly Managers' Association; and secretary, International Lyceum Association.

Helen P. Mudgett was named an honorary member, Eugene Field Society, National Association of Authors and Journalists, St. Louis, Missouri, 1944.

Julius M. Nolte was a member, Advisory Committee, Department of Veterans Affairs, State of Minnesota, 1943-44; Legal Advisory Committee for Selective Service, since 1940; Governor's Advisory Committee on Youth Problems, 1944; and Governor's Committee on Folk Arts, 1943-44. He served as regional director, University Extension Register, National University Extension Association, since 1944; and was a member, Legal Institute Committee, Minnesota State Bar Association, since 1942.

E. William Ziebarth was a member, Radio Division, 1943-44, and of the Speakers Bureau, 1942-44, United States Treasury Victory Committee; and radio consultant, U. S. Navy Recruiting Drives, 1942-43. He served as member, Board of Directors, 1942-43, and program chairman, 1944, Minnesota Radio Council; chairman, Radio Section, National Association of Teachers of Speech, 1942; and contributing editor, *Journal of the Association for Education by Radio*, 1942-43. He was elected to membership in Phi Delta Kappa, national honorary education fraternity, 1943; Psi Chi, national honorary society in psychology, 1943; and Alpha Epsilon Rho, honorary radio education fraternity, 1944.

BUILDINGS AND GROUNDS

LAND

During 1942-44, additions were made to the Farm campus by the purchase of the following properties in Ramsey County:

Undivided seven-eighths of west 20 rods of SE $\frac{1}{4}$ of SE $\frac{1}{4}$, Sec. 17, Twp. 29, R. 23—8.75 acres.
Undivided one-eighth of west 20 rods of SE $\frac{1}{4}$ of SE $\frac{1}{4}$, Sec. 17, Twp. 29, R. 23—1.25 acres.
Part of E $\frac{1}{2}$ of E $\frac{1}{2}$ of NE $\frac{1}{4}$ of NE $\frac{1}{4}$, Sec. 20, Twp. 29, R. 23; and part of SE $\frac{1}{4}$ of SE $\frac{1}{4}$, Sec. 17, Twp. 29, R. 23—16.72 acres.

Additions were made to the Forest Experiment Station at Cloquet by the purchase of the following properties in Carlton County:

NE $\frac{1}{4}$ of NE $\frac{1}{4}$, Sec. 29, Twp. 49, R. 17—40 acres.
NW $\frac{1}{4}$ of NE $\frac{1}{4}$, Sec. 29, Twp. 49, R. 17—40 acres.
SE $\frac{1}{4}$ of SE $\frac{1}{4}$, Sec. 31, Twp. 49, R. 17; and N $\frac{1}{2}$ of NE $\frac{1}{4}$, Sec. 6, Twp. 48, R. 17—120 acres.

The following properties were given to the University by the Minnesota Academy of Science, Inc., for a Wild Life Refuge and Cedar Creek Forest:

E $\frac{1}{2}$ of SE $\frac{1}{4}$ and NW $\frac{1}{4}$ of SE $\frac{1}{4}$, Sec. 21; and N $\frac{1}{2}$ of SW $\frac{1}{4}$, Sec. 22, all in Twp. 34, R. 23 W, Isanti County—200 acres.
SE $\frac{1}{4}$ of NW $\frac{1}{4}$, Sec. 27, Twp. 34, R. 23 W, Anoka County—40 acres.
SE $\frac{1}{4}$ of SW $\frac{1}{4}$, Sec. 22, Twp. 34, R. 23 W, Isanti County—40 acres.

The following properties were given to the University by Cora A. and Albert D. Cornica for an addition to the Wild Life Refuge:

SW $\frac{1}{4}$ of SW $\frac{1}{4}$, Sec. 22, Twp. 34, R. 23 W, Isanti County—40 acres.
NW $\frac{1}{4}$ of NW $\frac{1}{4}$, Sec. 27, Twp. 34, R. 23, Anoka County—40 acres.

The following property in Isanti County was given to the University by Glenn A. and Lena L. Carpenter as an addition to the Wild Life Refuge:

SW $\frac{1}{4}$ of NE $\frac{1}{4}$ and part of the SE $\frac{1}{4}$ of NE $\frac{1}{4}$, west of highway, Sec. 22, Twp. 34, R. 23 W—50 acres.

LAND IMPROVEMENTS

Main Campus—The old greenhouses near 12th and University Avenues Southeast were torn down and the area graded.

High water in the Mississippi River caused the small retaining wall holding up the bank near the heating plant to fall and the bank to wash out. Steel sheet piling was installed to prevent this action in the future.

The property given to the University some years ago by the late William Henry Eustis, bounded by 40th Street and 42nd Street South and 46th Avenue East to the River Road was used by members of the staff for "Victory" gardens.

Farm Campus—The area east of Green Hall and between the Home Economics and Agronomy buildings has been landscaped.

BUILDINGS AND TUNNELS

Two small buildings were constructed at the University Airport. One was a small hangar to house six small planes. The other was a two-classroom and control building. Neither of these buildings is fireproof, and they are heated with stoves.

No other buildings were constructed because the necessary priorities could not be obtained.

IMPROVEMENTS AND ALTERATIONS

During the biennium it was impossible, on account of the shortage of labor and materials, to perform the usual building maintenance. The roofs have all been kept in repair, but the buildings have suffered for lack of paint, both inside and out. There is a great accumulation of maintenance which must be undertaken just as soon as the necessary labor and materials are available.

Main Campus—Both Pioneer and Powell halls were repainted inside and out.

A considerable number of alterations were made at the University Hospitals, such as remodeling the Pathology Laboratories, rearrangement of space for the Department of Medicine, and some changes for the X-ray Department.

The rooms in the Armory, occupied by the Department of Military Science and Tactics, were modernized.

The Pharmacognosy Greenhouse was completely overhauled. This work included the underpinning of the super-structure, the removal of the old walls, and their replacement by new walls of reinforced concrete. All of the glass had to be reset.

Certain rooms in the Chemistry Building were remodeled for special research in rubber.

The space under the South Tower of the Stadium devoted to the Laboratory of Physiological Hygiene was doubled.

The parapet wall on Jones Hall was completely rebuilt and a new roof installed. A new roof was installed also on the rear portion of the Oak Street Laboratories.

Farm Campus—New roofs were installed on the Heating and Power Plant, on the Machinery Storage Building, and on the Dairy Barn.

The walls of the Beef Cattle Barn, which had been sagging badly, were drawn together with heavy steel rods. This operation also straightened the roof. The building is now in good condition.

Offices were constructed in the Administration Building for the dean of the College of Agriculture, Forestry, and Home Economics.

A new turbine-driven feedwater pump was installed in the Heating Plant.

On November 19, 1943, a portion of the Veterinary Building was destroyed by fire. Temporary quarters were provided for one of the laboratories in the Serum Building. Plans for the repairs of the building are under way and the work will be done as soon as the necessary priorities are obtainable.

General—During the past two years the Physical Plant Department, notwithstanding the shortage of labor and materials, had an extra load. This was caused by the large number of servicemen on the Main and Farm campuses. Both Sanford and Shevlin halls had double-decked beds installed and were occupied by the Army. The same was true for a time in the Center for Continuation Study. The handball and squash courts, wrestling gymnasium, and the orthopedic gymnasium under the stadium were revamped to house Army Air Force trainees. Pioneer Hall had double-decked beds and housed army and navy students. The old Union Building on the Main campus was turned into a battleship and housed electrician's mates for the Navy, the ship's company occupying the entire portion formerly used by the Campus Club.

Besides these buildings, the University rented the Motley School on East River Road and Ontario Street. Double-decked beds were installed for army units. One of the dormitories from Augsburg Seminary was similarly equipped and used. Seven fraternity houses near the Armory were rented by the University and housed the Naval ROTC units. Five other fraternity houses were rented by the University for a period of time for Army units.

At the Farm campus, Thatcher Hall was fitted with double-decked beds for Army use. Dexter Hall and the Dining Hall dormitory were similarly equipped to house enlisted men of the Navy. The Old Home building was used as the recreation and study center for these naval units. Pendergast Hall housed trainees for the Civil Aeronautics Authority, and when this unit was closed down, it was occupied by Air Force trainees.

All this meant a great deal of extra work because it became necessary to provide additional firemen, janitors, maids, trucking service, and the like. Nevertheless, because of the excellent co-operation of the various departments involved, the program operated very smoothly.

Classes were held on both campuses from seven-thirty in the morning until ten-thirty at night. Some of the classrooms were in continual use. Most of the crew of the Buildings and Grounds department proved themselves both efficient and loyal, and through their fine co-operation, contributed greatly to the success of the program.—WILLIAM F. HOLMAN, *superising engineer*.

GIFTS, 1942-43

SUMMARY OF CASH GIFTS

(As of June 30, 1943)

Description	Number	Amount	Total
Loan funds			
New	5	\$11,505.70	
Additions to previous gifts.....	6	6,950.08	
		6,950.08	\$ 18,455.78
Scholarships			
New	7	4,061.97	
Additions to previous gifts.....	12	10,536.06	
		10,536.06	14,598.03
Fellowships			
New	4	6,950.00	
Additions to previous gifts.....	11	21,695.41	
		21,695.41	28,645.41
Prizes			
New	0		
Additions to previous gifts.....	13	664.00	
		664.00	664.00
Research			
New	28	112,155.25	
Additions to previous gifts.....	30	115,773.88	
		115,773.88	227,929.13
Miscellaneous			
New	10	15,712.94	
Additions to previous gifts.....	11	86,211.94	
		86,211.94	101,924.88
Totals	137		\$392,217.23

CASH GIFTS, 1942-43

LOAN FUNDS—NEW

\$ 4,000.00	From the W. K. Kellogg Foundation for aid to students in Nursing
4,000.00	From the W. K. Kellogg Foundation for aid to students in Medical Technology
1,805.91	From the Minnesota Student Foundation for a loan and scholarship fund
1,500.00	From A. E. Adams for a loan fund to be available to students in the College of Agriculture, Forestry, and Home Economics
199.79	From the Householders Association for small emergency loans for short periods for specific purposes not ordinarily covered by regular student loan funds
\$11,505.70	

LOAN FUNDS—ADDITIONS TO PREVIOUS GIFTS

	Year Established
\$ 5,000.00 W. K. Kellogg Foundation Student Aid Fund—Medicine	1943
1,013.00 Law Alumni Loan Fund	1923
642.08 Staff and Employees Loan Fund (from sale of scrap material).....	1933
250.00 Class of 1902 Loan Fund	1928
30.00 General Student Loan Fund	1922
\$25.00 Gymal Doled Club	
5.00 Schoolmasters Club, through Center for Continuation Study	
15.00 Dr. Nellie Welch Nelson Loan Fund	1929
\$10.00 Women's Auxiliary, Railway Mail Association	
5.00 Round Table Club	
\$ 6,950.08	

THE PRESIDENT'S REPORT

SCHOLARSHIPS—NEW

\$ 1,150.00	From Georgianna Slade Peet to establish a memorial scholarship trust fund in memory of the late Colonel George T. Slade
1,061.97	For a memorial trust fund in honor of Dean Emeritus E. E. Nicholson to be called the Dean E. E. Nicholson Scholarship Fund for Returning Military Service Students, established by the Class of 1942
\$734.82	From students and student organizations, through Alpha Phi Omega, Boy Scout Fraternity
244.15	Class of 1942
75.00	Through the Twin City Panhellenic Association
	18.75 Alpha Gamma Delta Alumnae Association
	18.75 Phi Omega Pi Alumnae Association
	18.75 Kappa Delta Alumnae Association
	18.75 Delta Zeta Alumnae Association
	5.00 E. G. Williamson
	3.00 Kenneth Ayer Latta
700.00	From the Sears-Roebuck Agricultural Foundation to provide scholarships for Mary Lee Jameson and John Chelgren
500.00	From Charles E. Merrill to establish a scholarship to assist one or more deserving students
500.00	From the American Legion Auxiliary to establish scholarship for student nurses; \$300 for Miriam Berdella Olson and \$200 for Verna Jane Raisamen
100.00	From La Grange Chapter of Alpha Zeta Fraternity to establish two scholarships of \$50 each for war veterans enrolled in the College of Agriculture, Forestry, and Home Economics
50.00	From an anonymous donor to establish a postwar scholarship for a man or woman student in the College of Agriculture, Forestry, and Home Economics
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\$ 4,061.97	

SCHOLARSHIPS—ADDITIONS TO PREVIOUS GIFTS

		Year Established
\$ 4,358.56	Curtis Lloyd Jensen Scholarship Fund.....	1941
2,500.00	Sears-Roebuck Agricultural Foundation Scholarship for 1942-43.....	1937
2,263.50	Rockefeller Foundation—British Medical Students.....	1941
625.00	Pullman Company Scholarships.....	1925
350.00	Pharmaceutical Institute Postgraduate Scholarships.....	1941
	\$150.00 Northwestern Drug Company	
	125.00 McKesson and Robbins, Inc.	
	75.00 Northern Drug Company	
100.00	Twin City Panhellenic Association Scholarship.....	1937
100.00	Marion L. Vannier Scholarship.....	1929
100.00	N. W. Daily Press Association Scholarship.....	1935
50.00	Minneapolis Women's Advertising Club Scholarship.....	1935
39.00	Alpha Tau Delta Scholarship.....	1935
25.00	Home Economics Association Scholarship.....	1924
25.00	Law Faculty Scholarship Fund.....	1925
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\$ 10,536.06		

FELLOWSHIPS—NEW

\$ 3,000.00	From Parke, Davis, and Company to establish a fellowship in clinical hematology under the direction of Dr. Hal Downey
2,300.00	From the W. M. Welch Manufacturing Company to establish a postdoctorate fellowship in chemistry
900.00	Annually for three years from the Gulf Oil Corporation to establish a fellowship in hydrocarbon bond strength or hydrocarbon physics under the direction of Dean John T. Tate
750.00	(to \$1,000) from the American Association of University Women, Minnesota State Division, to establish a graduate fellowship open to women (to be made in alternate years)
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\$ 6,950.00	

FELLOWSHIPS—ADDITIONS TO PREVIOUS GIFTS

		Year Established
\$ 11,445.41	Minneapolis General Hospital Fellowships.....	1931
1,700.00	Miller Hospital Fellowships.....	1921
1,500.00	American Potash Institute, Incorporated, Fellowship.....	1940
1,500.00	Allied Chemical and Dye Corporation Fellowship.....	1941
1,400.00	Washburn Home Fellowship.....	1939
1,000.00	Harriet Walker Hospital Association Fellowship.....	1939
750.00	American Creosoting Company Fellowship.....	1931
750.00	du Pont Fellowship for 1943-44.....	1929
750.00	Abbott Laboratories Fellowship in Organic Chemistry.....	1942
750.00	Grace Ellis Ford Fellowship of the Minneapolis Women's Club.....	1931
150.00	Minnesota State Pharmaceutical Association Fellowship.....	1931
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\$ 21,695.41		

PRIZES—NEW

None

PRIZES—ADDITIONS TO PREVIOUS GIFTS

		Year Established
\$ 175.00	Pillsbury Debate Prize	1888
100.00	Peavey Prizes	1901
75.00	American Society of Mechanical Engineers Prize	1931
54.00	American Society of Civil Engineers Prize	1935
50.00	Louise M. Powell Prize	1928
50.00	Phi Upsilon Omicron Prize	1932
50.00	Lambda Alpha Psi Prize	1922
50.00	Gargoyle Club Prize	1931
25.00	Pi Beta of Chi Omega Prize	1927
15.00	Tau Beta Pi Prize	1930
8.00	Chi Epsilon Prize	1931
7.00	Pi Tau Sigma Prize in Mechanical Engineering.....	1913
5.00	Eta Kappa Nu Prize in Electrical Engineering.....	1931
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\$ 664.00		

RESEARCH—NEW

\$ 50,000.00	From the Rockefeller Foundation to provide for studies in Northwestern History (Graduate School)
7,500.00	From the National Dairy Council to establish a research on fats in human nutrition under the direction of Dr. Ancel Keys (Medicine)
6,000.00	From the Minnesota Dairy Industry Committee to establish a research on the Vitamin A content of butter (Agriculture)
5,500.00	Annually for five years from the Citizens Aid Society to establish a professorship to carry on cancer research (Medicine)
5,000.00	From Sharp and Dohme to establish a research on infectious diseases under the direction of Dr. Wesley W. Spink (Medicine)
5,000.00	From the Jane Coffin Childs Memorial Fund for Medical Research, to establish a research on the nature and mode of action of the milk influence in mammary cancer under the direction of Professor John J. Bittner and Dr. Robert G. Green (Medicine)
4,400.00	From the Buffalo Electro-Chemical Company, Incorporated, for research on the chemotherapy and bacteriology of infected wounds and burns (Medicine)
3,500.00	From the John and Mary R. Markle Foundation (Medicine)
	\$2,500.00 For research on nutrition under the direction of Professor Leo T. Samuels
	1,000.00 For research on evaporation clothing under the direction of Dr. Maurice B. Visscher
3,000.00	From Sharp and Dohme to establish researches under the direction of Professors Richard T. Arnold and William G. Clark
	\$1,500.00 Research on sulfonamides (Zoology)
	1,500.00 Research on chemistry (Technology)
3,000.00	From the Lederle Laboratories to establish a research covering an investigation of barbituric acid derivatives in the field of pharmaceutical chemistry and related fields (Pharmacy)
2,555.25	From the National Foundation for Infantile Paralysis to establish a research on the nutritional status of patients with acute poliomyelitis (Medicine)
2,400.00	From the American Veterinary Medical Association for research on chemotherapy of calf pneumonia under the direction of L. Meyer Jones (Pharmacology)
2,100.00	From the Ciba Pharmaceutical Products, Inc. for research on the metabolic effects of methyltestosterone under the direction of Professor Leo T. Samuels (Medicine)
2,000.00	From Abbott Laboratories for research on wound-healing and chemotherapy under the direction of Professor William G. Clark and Dr. Ernest A. Strakosch (Medicine)
1,500.00	From W. F. Straub and Company for research on amino acids for parenteral administration under the direction of Cyrus P. Barnum, Jr. (Medicine)
1,200.00	From the American Cyanamid Company for research on the oxidation reduction behavior of the sulfanilamides (Medicine)
1,200.00	From the Josiah Macy, Jr. Foundation for a study of the mechanism of the action of sex hormones on the tissues under the direction of Professor Leo T. Samuels (Medicine)
1,000.00	From the Winthrop Chemical Company, Inc., for research on pyocyanine and other related chemotherapeutic agents under the direction of Dr. Joseph T. King (Medicine)
1,000.00	For research on properties of dry sweet cream buttermilk (Agriculture)
	\$500.00 Land O'Lakes Creameries, Inc.
	500.00 Kraft Cheese Company
1,000.00	From Merck and Company, Inc., for research on sulfonamides in the treatment of infectious calf diseases (Agriculture)
800.00	From the American Dry Milk Institute for research on heat treatment of milk in relation to bread baking (Agriculture)
500.00	From the Perfection Manufacturing Corporation for research on mechanical milking of dairy cows (Agriculture)
500.00	From William C. McArthur for research in ophthalmology, to be known as the Frank E. Burch Research Fund in Ophthalmology (Medicine)
400.00	From the Anaconda Sales Company for research on the effect of treble superphosphate on the yield and composition of legumes (Agriculture)
300.00	From the American Medical Association for research on carbohydrate metabolism of the kidney under the direction of Dr. Roger M. Reinecke (Medicine)
275.00	From Frederick Stearns and Company for research in the Division of Otolaryngology (Medicine)
275.00	From Dr. Lawrence R. Boies for research in the Division of Otolaryngology (Medicine)
250.00	From the Minnesota Society of Internal Medicine, through the Minnesota Medical Foundation, for research on transfusion reaction under the direction of Dr. Edmund B. Fink (Medicine)

\$112,155.25

THE PRESIDENT'S REPORT

RESEARCH—ADDITIONS TO PREVIOUS GIFTS

		Year Established
\$ 54,049.00	National Foundation for Infantile Paralysis (Medicine)	
	\$37,729.00 Training Course for Kenny Technique	1942
	10,700.00 Research on Infantile Paralysis	1941
	5,620.00 Research	1940
14,374.88	Military Fatigue Project (Medicine)	1940-41
	\$5,000.00 Nutrition Foundation	
	2,500.00 Swift and Company	
	2,500.00 Corn Industries Research Foundation	
	2,500.00 National Confectioners' Association	
	1,874.88 United States Cane Sugar Refiner's Association	
7,500.00	Minnesota and Ontario Paper Company Research (Technology)	1940
7,000.00	National Research Council—Research on Fat Metabolism (Medicine)	1941
5,000.00	Insulation Board Institute Research (Technology)	1941
4,353.00	Minnesota Medical Foundation—Research on Thermal Properties of Fabrics (Medicine)	1941
3,472.00	National Dairy Council Research on Fats (Agriculture)	1941
2,000.00	Northwest Association of Ice Cream Manufacturers Research (Agriculture)	1939
2,000.00	Babson Brothers Company Research (Agriculture)	1942
2,000.00	Experimental Surgery Research Fund (Medicine)	1938
2,000.00	Rock Analysis Laboratory (Geology)	1934
1,600.00	Central Fibre Corporation Research (Agriculture)	1937
1,400.00	Superior Metal Products Company Research (Technology)	1940
1,100.00	The Jane Coffin Childs Memorial Fund for Medical Research—Leukemia in Mice (Medicine)	1941
1,000.00	Upjohn Company Research (Medicine)	1941
1,000.00	Milk Distributors Research (Agriculture)	1936
1,000.00	The John and Mary R. Markle Foundation Research (Medicine)	1940
1,000.00	Central Fibre Corporation Research (Agriculture)	1937
1,000.00	Firestone Fund (Agriculture)	1934
600.00	Koppers Company Research (Agriculture)	1941
500.00	Minnesota State Pharmaceutical Association Research (Pharmacy)	1931
500.00	Research on Convulsive Disorders in Children (Medicine)	1941
500.00	Fox Breeders Distemper Research (Medicine)	1926
300.00	National Research Council—Research on Visual Fatigue (Medicine)	1941
200.00	Middle West Soil Improvement Committee (Agriculture)	1940
100.00	Sigma Xi Research Fund (Graduate)	1936
100.00	National Dairy Council Research on Butter (Medicine)	1942
50.00	Medical Social Work Fund (Sociology)	1929
50.00	Charles P. DeLaittre Research Fund (Medicine)	1941
25.00	Cancer Research Fund (Medicine)	1928
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\$115,773.88		

MISCELLANEOUS—NEW

\$ 6,000.00	From the General Education Board, through Purdue University, for a study of farm work simplification methods
5,000.00	From the Rockefeller Foundation for development of American regional materials by Miss Helen Clapesattle
1,500.00	From Mrs. C. C. Bovey for the construction of a goose group in the Museum of Natural History
1,000.00	From the Minnesota Jewish Council for a 4-H Club public speaking contest
1,000.00	From the East Indies Institute of America, Incorporated, for the publication by the University of Minnesota Press of <i>The People of Alor</i> by Cora Du Bois
575.00	To apply toward expense of publishing potato blight and garden folders by the Agricultural Extension Division
	\$200.00 Northrup-King Seed Company
	125.00 Castle Chemical Company
	75.00 Southern Agricultural Chemical Corporation
	50.00 McConnon and Company
	50.00 Roy Howe Potato Company
	50.00 Flaas Farm Supply Company
	25.00 John Bean Manufacturing Company
300.00	From the Rockefeller Foundation to enable Burton Paulu, manager, Station WLB, to study educational broadcasting in New York, N. Y., during the summer of 1942
200.00	From Dr. Frank E. Burch for the Department of Ophthalmology and Otolaryngology
122.00	For improvement of the Center for Continuation Study Building
	\$59.00 Institute in Dermatology and Syphilology
	40.00 Nursery School Teachers Institute
	23.00 Institute in Venereal Disease
15.94	From the Class of 1942, West Central School of Agriculture, for the purchase of a service flag for the school

\$ 15,712.94

MISCELLANEOUS—ADDITIONS TO PREVIOUS GIFTS

	Year Established
\$ 58,924.69 From United States Public Health Service	
\$25,882.94 Nursing Instruction, Basic B	1942
11,532.72 Field Training of Public Health Nurses	1936
6,359.34 Nursing Education	1942
6,140.00 Nursing Anesthetist Program	1942
3,681.45 Ward Administration	1942
3,528.24 Nursing Instruction, Basic A	1942
1,800.00 Refresher Course for Nurses	1942
17,000.00 Psychiatric Clinic for Children	1938
\$10,000.00 Home for Children and Aged Women	
7,000.00 The Commonwealth Fund	
2,866.00 Robert Meyer Clinical Associate Professorship Fund	1940
\$2,112.00 Child Welfare Division, United States Department of Labor	
250.00 Emergency Committee in Aid of Displaced Foreign Medical Students	
125.00 Dr. E. G. Holmstrom	
100.00 Dr. Robert E. Meyer	
80.00 Dr. Owen F. Robbins	
72.00 Dr. John L. McKelvey	
38.00 Dr. Claude J. Ehrenberg	
25.00 Anonymous	
24.00 Mary Waldrof	
10.00 Grand Forks Clinic	
10.00 Dr. A. B. Baker	
10.00 Dr. Meyer and Dr. Zachman	
10.00 Dr. John Moore	
1,800.00 Minneapolis General Hospital Pediatrics Directorship for 1942-43	1935
1,520.00 Hormel Foundation	1938
1,500.00 General Education Board General College Fund	1935
1,000.00 Booth Memorial Hospital Fund	1940
1,000.00 Guy Stanton Ford Lectureship Fund	1942
544.25 Endowment Fund for the School of Nursing	1941
57.00 Tau Beta Pi Bookshelf	1941

\$ 86,211.94

MISCELLANEOUS GIFTS

Wilcox-Gay recording machine and supply of records to the Central School of Agriculture, from the Class of 1942
 Marble urn from Mrs. Rollin G. Andrews, Minneapolis
 Cuneiform tablets from Mesopotamia, from Mrs. J. J. Flather, Minneapolis
 Two engravings, Portrait of Sir Nicolas Tindal, Lord Chief Justice of the Common Pleas, and The Old Temple Bar of London, from Arthur C. Pulling, for the Law School
 Two AMC washing machines from Priscilla S. James for the University Hospitals
 Portrait of Dr. J. Anna Norris, from alumnae, friends, and staff of the Department of Physical Education for Women, to be hung in the Norris Gymnasium for Women
 State colors to the ROTC units from the Elks Club, Minneapolis
 Transformer from the Maloney Electric Company, St. Louis, Missouri, to the Department of Electrical Engineering
 Electrical equipment from the Western Electric Company to the Department of Electrical Engineering
 Two mural paintings from the Senior Class of 1932, Northwest School and Station, Crookston, to be installed in the School Auditorium
 Norwegian flag to the University Gallery from Miss Mabel Teigen
 Sound motion picture film on "Health and the Cycle of Water" from the Cast Iron Pipe Research Association of Chicago, to the Department of Preventive Medicine and Public Health
 Oak desk from the Board of the Cosmopolitan Club to the University
 Portfolio of Spanish-Colonial design, from Vernon Hunter, to the University Gallery
 Fred S. Carver hydraulic press of 25,000-pound capacity, to the Department of Mechanical Engineering, from McLaughlin Gormley King Company
 French precision level to the Department of Civil Engineering from John G. Claybourn
 Two Pratt and Whitney engines and propeller blades from the Fairfield Air Depot, Army Air Corps, to the Department of Aeronautical Engineering
 Portrait of Dean Edward M. Freeman from students of the College of Agriculture, Forestry, and Home Economics

BOOK GIFTS

Twenty-three books on geology from Mrs. G. A. St. Clair, Minneapolis
 Five books on geology from Mrs. F. W. Merritt to the Department of Geology and Mineralogy
 Program notes for Minneapolis Symphony Orchestra Concerts, 1903-23, and *Ulster County Gazette*, Vol. 2, No. 88, January 4, 1800, from Mrs. William S. Brooks, Minneapolis
 One hundred twelve volumes of textbooks and general literature from Miss Amy Pellatt, Chicago
Jahrbücher der Deutsch-Amerikanischen Turnerei, Vols. 1-3, 1890-94, from H. Steichmann, Recorder and Assistant to Comptroller, Indiana University Normal College of the American Gymnastic Union, Indianapolis, Indiana
 Typewritten manuscript: Kovanik, Anna Mary, *A Short Sketch of the Life and Works of Anton Dvorak*, from Regent E. E. Novak, New Prague

Collection of 140 volumes from Mrs. Titus R. Mareck, Minneapolis, to the University Library
 Library of the late Dr. Arthur D. Hirschfelder from Mrs. Hirschfelder
 Unpublished manuscript of Dr. Arthur D. Hirschfelder on digitalis and Dr. Withering from Mrs. Hirschfelder to the Library
 Collection of *Theatre* magazines to the University Gallery, from Mrs. G. A. Reinrich
 Remaining portion of his ophthalmology library from Dr. Frank E. Burch
 Collection of periodicals and pamphlets from the Swedish Consulate, Minneapolis
 Collection of 354 volumes on religion, poetry, fiction, history, and general literature from the Reverend J. E. Bushnell, Minneapolis
 Collection of 361 items in the field of German philology from Mrs. Samuel Kroesch, Minneapolis
 Three books from the Czechoslovak Council of America, Chicago
 Number of Melbourne, Sydney, London, and other foreign newspapers, to the School of Journalism from Captain Frank H. Kelley, former Commandant of the University Naval ROTC
 Collection of reprints and the chemical library of the late Professor Ross A. Gortner, from his estate, to the Division of Agricultural Biochemistry
 Three collections of books to the University Library
 Fifty-six thousand two hundred three books from 6,312 donors
 Papers and drawings of the late Dean J. B. Johnston from Mrs. Johnston to the University Library

ASSIGNMENTS OF PATENT APPLICATIONS

Professor Lee I. Smith et al. Serial No. 456,791, filed August 31, 1939, Process of Preparing Carbinols
 Professor Leroy S. Palmer, Serial No. 458,135, Water Soluble Chroman and Process of Preparing Same
 Professor Lee I. Smith, Serial No. 471,611, Organic Products and Processes
 Edwin H. Ofstie, Serial No. 346,016, Sprinkler Heads
 Morris Newman, Serial No. 473,077, Distribution System and Regulator Therefor
 Professor Walter M. Lauer, Serial No. 479,132, Antioxidants
 Professor Ole Gisvold, Serial No. 478,321, Processes for Producing Plant Extracts

PATENTS RECEIVED

No. 2,300,734, application of Professor Lee I. Smith, Serial No. 284,523, Process of Making Chroman Compounds
 No. 2,301,314, application No. 6,910 filed February 16, 1935, Professor Ralph E. Montonna and Lew W. Cornell, Processes of Making Alpha Cellulose

GIFTS, 1943-44

SUMMARY OF CASH GIFTS (As of June 30, 1944)

	Description	Number	Amount	Total
Loan funds				
	New	4	\$ 7,873.67	
	Additions to previous gifts.....	6	6,572.58	
				\$ 14,446.25
Scholarships				
	New	12	10,879.43	
	Additions to previous gifts.....	15	4,906.56	
				15,785.99
Fellowships				
	New	4	7,550.00	
	Additions to previous gifts.....	13	42,350.00	
				49,900.00
Prizes				
	New	2	1,500.00	
	Additions to previous gifts.....	26	2,310.00	
				3,810.00
Research				
	New	32	290,647.00	
	Additions to previous gifts.....	37	80,937.79	
				371,584.79
Miscellaneous				
	New	9	36,175.05	
	Additions to previous gifts.....	13	576,313.78	
				612,488.83
Totals		173		\$1,068,015.86

CASH GIFTS, 1943-44

LOAN FUNDS—NEW

\$ 4,550.00	From Charles E. Merrill to establish a fund for the rehabilitation of maimed or wounded boys on their return from service
1,500.00	From an anonymous donor for a student loan-scholarship fund
1,000.00	From an anonymous donor to establish a loan fund for needy students, preferably from the town of Faribault, or Rice County
823.67	All-University Council Foreign Students Aid Fund, a fund for the aid of foreign students
	\$549.67 Campus Chest
	249.00 All-University Council
	25.00 Esther Bjornsson

\$ 7,873.67

LOAN FUNDS—ADDITIONS TO PREVIOUS GIFTS

		Year Established
\$ 5,000.00	W. K. Kellogg Foundation Student Aid Fund—Dentistry.....	1942
842.53	Law Alumni Loan Fund.....	1923
500.00	A. E. Adams Student Loan Fund.....	1942
214.05	Staff and Employees Loan Fund (from sale of scrap material).....	1933
11.00	General Student Loan Fund	
	\$10.00 Chicago-Lake Community Service Club, through Key Center of War Information	
	1.00 Anonymous	
5.00	Class of 1902 Loan Fund.....	1928
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\$ 6,572.58		

SCHOLARSHIPS—NEW

\$ 3,204.41	Bequest of the late Edgar L. Morrill to defray the schooling expenses of worthy and needy orphans	
2,074.58	Bequest under the will of Harold C. Wieman for a scholarship for graduates of the Henderson High School, Henderson, Minnesota	
1,300.00	From the WNAX Broadcasting Company for two scholarships in the College of Agriculture, Forestry, and Home Economics	
1,000.00	From the <i>St. Paul Dispatch</i> , a scholarship for a study of creative evolution of plants, under the direction of Professor Ernst C. Abbe	
800.00	From the Structural Clay Products Institute for four scholarships of \$200 each to be granted to senior students in agricultural engineering	
750.00	For a scholarship fund to train carpenters to erect farm structures	
	\$500.00 Weyerhaeuser Sales Company	
	250.00 Webb Publishing Company	
500.00	From Consolidated Vultee Aircraft Corporation for two scholarships for engineering students who have completed their junior year	
400.00	From the American Foundation for Pharmaceutical Education for two scholarships for needy students in the College of Pharmacy	
339.50	From the Alumni Association of the College of Agriculture, Forestry, and Home Economics to establish the Dean E. M. Freeman Scholarship Fund in honor of Dean Emeritus E. M. Freeman.	
300.00	Annually from the National Hillel Commission for a scholarship in honor of King Gustav of Sweden, to be awarded to the junior student who makes the finest contribution to the development of better inter-faith relations on the campus	
135.94	From the University Bookstores to establish a scholarship with Bookstore dividends unclaimed after six years	
75.00	From the Comstock Hall Government Association for a scholarship in honor of Mrs. Leora E. Cassidy	
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\$ 10,879.43		

SCHOLARSHIPS—ADDITIONS TO PREVIOUS GIFTS

		Year Established
\$ 1,250.00	Sears-Roebuck Agricultural Foundation Scholarships.....	1937
750.00	George T. Slade Scholarship Fund.....	1942
700.00	Sears-Roebuck Scholarships for Clyde A. Enroth and Gloria Marie Fessler.....	1942
631.56	Dean E. E. Nicholson Scholarship Fund for Returning Military Service Students	
	\$236.99 Military Ball	
	126.53 Campus Chest	
	100.00 1942 Homecoming Organization	
	93.75 Through the Twin City Panhellenic Association	
	\$18.75 Alpha Phi Alumnae Association	
	18.75 Kappa Alpha Theta Alumnae Association	
	18.75 Delta Delta Delta Sorority	
	18.75 Twin City Panhellenic Association	
	18.75 Delta Gamma Alumni Association	
	74.29 Sale of scrap material	
500.00	Law Faculty Scholarship Fund.....	1925
325.00	Pharmaceutical Institute Postgraduate Scholarships.....	1941
	\$175.00 McKesson and Robbins, Inc.	
	150.00 Northwestern Drug Company	
150.00	Minnesota State Pharmaceutical Association Scholarship.....	1917
100.00	C. L. Lewis, Jr., Scholarship in Forestry.....	1937
100.00	N. W. Daily Press Association Scholarship.....	1935
100.00	Alpha Tau Delta Scholarship.....	1935
100.00	Marion L. Vannier Scholarship.....	1929
50.00	Phi Upsilon Omicron Alumni Association Scholarship.....	1926
50.00	Theta Sigma Phi Scholarship.....	1939
50.00	Home Economics Association Scholarship.....	1924
50.00	Minneapolis Women's Advertising Club Scholarship.....	1935
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\$ 4,906.56		

THE PRESIDENT'S REPORT

FELLOWSHIPS—NEW

5,400.00	From the Commonwealth Fund to establish fellowships for postgraduate medical education under the direction of Dr. William A. O'Brien
750.00	and tuition from the Consolidated Vultee Aircraft Corporation to establish a graduate fellowship in engineering, metallurgy, chemistry, physics, or mathematics
700.00	From McConnon and Company to establish a research on potato insects and potato blight
700.00	From the Soy Flour Association to establish a research on insect hazards in relation to soy products
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\$ 7,550.00	

FELLOWSHIPS—ADDITIONS TO PREVIOUS GIFTS

		Year Established
\$ 28,650.00	Minneapolis General Hospital Fellowships	1931
	\$13,818.00 for 1943-44	
	14,832.00 for 1944-45	
3,000.00	W. M. Welch Manufacturing Company Postdoctorate Fellowship in Chemistry.....	1942
1,500.00	American Potash Institute, Incorporated, Fellowship.....	1940
1,500.00	Allied Chemical and Dye Corporation Fellowship.....	1941
1,400.00	Washburn Home Fellowships	1939
1,000.00	St. Paul Dispatch-Pioneer Press Fellowship.....	1943
1,200.00	Miller Hospital Fellowship	1921
1,000.00	Harriet Walker Hospital Association Fellowship	1939
750.00	du Pont Fellowship for 1944-45	1929
750.00	Grace Ellis Ford Fellowship of the Minneapolis Women's Club.....	1931
750.00	Abbott Laboratories Fellowship in Organic Chemistry.....	1942
500.00	Minnesota State Pharmaceutical Association Graduate Fellowship.....	1931
350.00	Soy Flour Association Fellowship Fund.....	1943
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\$ 42,350.00		

PRIZES—NEW

\$ 1,000.00	Part of a fund of \$2,000 to be raised by businessmen of the Twin Cities and Winnipeg for a prize for a common American-Canadian history, \$1,000 to be deposited with the University of Minnesota
500.00	From the Northern States Power Company for awards to students in the Schools of Agriculture who do superior work in home projects relating to rural electrification
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\$ 1,500.00	

PRIZES—ADDITIONS TO PREVIOUS GIFTS

		Year Established
\$ 1,000.00	Minnesota Jewish Council 4-H Club Fund	1942
500.00	4-H Club Awards	1931
	\$200.00 Procter and Gamble Company	
	150.00 Pioneer Hi-Bred Corn Company	
	150.00 Twin City Seed Company	
175.00	Pillsbury Debate Prize	1888
150.00	Minnesota State Pharmaceutical Association Prize	1917
100.00	Peavey Prize	1901
75.00	American Society of Mechanical Engineers Prize.....	1931
50.00	Gargoyle Prize in Architecture	1931
50.00	Phi Upsilon Omicron Prize	1932
50.00	Women's Self-Government Association	1932
50.00	Louise M. Powell Prize	1928
25.00	Pi Beta of Chi Omega	1927
25.00	Chemical Faculty Prize (Books).....	1929
15.00	Phi Lambda Upsilon Prize	
10.00	Alpha Chi Sigma Prize in Chemistry.....	1926
10.00	Alpha Kappa Gamma Prize in Dental Hygiene.....	1933
10.00	Louise C. Ball Prize (formerly a plaque).....	1936
8.00	Chi Epsilon Prize	1931
7.00	Pi Tau Sigma Prize	1931
	Alpha Kappa Psi Junior Scholarship Medallion	
	Delta Sigma Pi Scholarship Key	
	Theta Sigma Pi Leadership Award	
	Lehn and Fink Gold Medal	
	Milling Club Gold Key	1932
	University Business Women's Club Scholarship Key.....	1939
	Phi Delta Scholarship Award (bracelet)	
	Zeta Phi Eta Verse Reading Book Prize.....	1941
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\$ 2,310.00		

RESEARCH—NEW

\$175,000.00	From the National Foundation for Infantile Paralysis to establish a special research unit for studies of physiological problems concerned with the mechanism of infantile paralysis (Medicine)
36,312.00	From the National Foundation for Infantile Paralysis for instruction in the technique of the treatment of early poliomyelitis (Medicine)
20,000.00	From Swift and Company for research on virus diseases of food-producing animals (Agriculture)
10,000.00	From the Simmons Company for research on gyratory motion, under the direction of Dr. M. B. Visscher (Medicine)
7,000.00	From the Minneapolis Star Journal and Tribune Company covering research in the field of journalism (Journalism)
5,000.00	From Wallace and Tiernan Company for research in cereal chemistry (Agriculture)
5,000.00	From Fairbanks, Morse and Company for research on various types of small gasoline engines with reference to farm use (Agriculture)
3,500.00	From Josiah Macy, Jr., Foundation for research on the influence of nutrition upon fracture healing and disuse atrophy of bone, under the direction of Dr. Wallace D. Armstrong (Medicine)
3,500.00	From the Industrial Tool and Die Works, for high voltage research (Technology)
2,500.00	From D. B. Rosenblatt and sons, Herman L., Woodruff N., and Justin L., to establish the Flora Rosenblatt Fund for Cancer Research for medical research and surgery in cancer under the direction of Dr. Owen H. Wangensteen (Medicine)
2,400.00	From the National Dairy Council for research on the relation between rations of dairy calves and the microflora of the gastro-intestinal tract (Agriculture)
2,100.00	From the Westwood Corporation for research on sulfonamides, under the direction of Professor William G. Clark (Medicine)
2,000.00	From Josiah Macy, Jr., Foundation for research on the influence of "shock" on the central nervous system, under the direction of Dr. Ernst Gellhorn (Medicine)
2,000.00	From an anonymous donor for research on the nutritive value of cereals under the direction of Professor George O. Burr (Medicine)
2,000.00	From Northern Ordnance, Incorporated for research on atopic eczema, under the direction of Dr. Henry E. Michelson (Medicine)
1,800.00	From Minneapolis-Honeywell Regulator Company for research on occupational dermatosis, under the direction of Dr. Henry E. Michelson (Medicine)
1,500.00	From the John and Mary R. Markle Foundation for research on intra-ocular virus infections, under the direction of Dr. Charles A. Evans (Medicine)
1,500.00	From Industrial Tool and Die Works, through Minnesota Institute of Research, for research on the electrical characteristics of powdered iron products (Technology)
1,300.00	From Morris Newman for research on lightning and transients (Technology)
1,000.00	From the Soy Flour Association for research on soy products (Agriculture)
1,000.00	From the Tennessee Corporation for an investigation of the function of copper, zinc, and manganese in the nutrition of crop plants (Agriculture)
800.00	Annually for three years from the Lederle Laboratories, Incorporated, for research in the field of organic pharmaceutical chemistry, under the direction of Professor Charles O. Wilson (Pharmacy)
600.00	From the Minnesota and Ontario Paper Company for research on the use of insulation board in poultry house construction (Agriculture)
500.00	From the Minnesota Dairy Industry Committee for research on Vitamin A (Agriculture)
500.00	From the Tennessee Corporation for research on the efficacy of copper fungicides (Agriculture)
500.00	From the Universal Milking Machine Company for research on the effect of the prolonged action of milking machines upon congestion in and trauma to the udder (Agriculture)
275.00	To establish the Doctor and Mrs. Harry B. Zimmerman Fund for Surgical Research (Medicine)
	\$175.00 Dr. Owen H. Wangensteen
	100.00 Roger S. Kennedy
250.00	From the Abbott Laboratories for research on antibiosis among micro-organisms, under the direction of Professor Clyde M. Christensen (Agriculture)
210.00	From General Mills, Incorporated, for research to determine the extent to which certain feed mixtures affect livability and growth of young turkeys (Agriculture)
200.00	From the National Drug Company for research on allantoin and its effect upon the sulfonamide inhibitors, under the direction of Dr. Wesley W. Spink (Medicine)
200.00	From Dr. E. A. Strakosch for the purchase of mice to be used in research under the direction of Professor William G. Clark (Medicine)
200.00	From the Economics Laboratory, Incorporated, for research on the effect of wetting agents and detergents on wound healing (Medicine)

\$290,647.00

RESEARCH—ADDITIONS TO PREVIOUS GIFTS

		Year Established
\$ 8,000.00	National Research Council—Research on Fat Metabolism (Medicine).....	1941
7,500.00	Minnesota and Ontario Paper Company Research (Technology).....	1940
5,500.00	Military Fatigue Project (Medicine)	1940
	\$5,000.00 Nutrition Foundation	
	500.00 National Confectioners Association	
5,500.00	Sharp and Dohme Research on Sulfonamides (Zoology).....	1942
5,100.00	General Education Board—Farm Work Simplification Fund (Agriculture).....	1943
5,000.00	Jane Coffin Childs Memorial Fund for Medical Research (Medicine).....	1943
4,400.00	Buffalo Electro-Chemical Company, Incorporated, Research (Zoology).....	1942
3,600.00	National Live Stock and Meat Board Research (Medicine).....	1930
3,500.00	Rockefeller Foundation Research on Colloid Systems (Agriculture).....	1941
3,000.00	Munsingwear, Incorporated, through the Minnesota Medical Foundation—Research on Thermal Properties of Fabrics (Medicine).....	1941
2,700.00	Jane Coffin Childs Memorial Fund for Medical Research—Leukemia in Mice (Medicine).....	1941
2,500.00	Frank E. Burch Research Fund in Ophthalmology (Medicine).....	1943
2,400.00	American Veterinary Medical Association Research on Chemotherapy of Calf Pneumonia (Agriculture)	1942
2,264.00	National Dairy Council Research on Fats (Agriculture).....	1941
2,112.50	Experimental Surgery Research Fund (Medicine).....	1938
2,000.00	Fox Breeders Distemper Research (Medicine).....	1926
2,000.00	Land O'Lakes-Kraft Cheese Research (Agriculture).....	1942
1,600.00	Central Fibre Corporation Research To Improve the Quality of Flax Straw (Agriculture)	1937
1,500.00	Convulsive Disorders in Children Research (Medicine).....	1941
1,500.00	Sharp and Dohme Research in Chemistry (Technology).....	1942
1,200.00	American Society of Heating and Ventilating Engineers Research (Technology).....	1936
1,000.00	Joslyn Research Fund (Technology).....	1937
1,000.00	Milk Distributors' Research (Agriculture)	1936
1,000.00	Central Fibre Corporation Research (Agriculture).....	1937
1,000.00	Antioxidant Cooperative Research (Pharmacy).....	1943
885.44	American Dry Milk Institute, Incorporated, Research Fund (Agriculture).....	1942
750.00	Rohm and Haas Company, Incorporated, Research on Potato Insects (Agriculture)	1941
567.49	Rockefeller Foundation Studies in Northwestern History (from the T. B. Walker Foundation, Incorporated, to apply toward the expense of a biography of T. B. Walker) (Graduate School).....	1943
500.00	Sulphur Research (Agriculture).....	1942
500.00	Minnesota Dairy Industry Committee Vitamin A Research (Agriculture).....	1942
273.00	Medical Social Work Fund (Sociology).....	1929
	\$100.00 Maxine Slingsby	
	60.00 Mrs. Mildred M. Bergheim	
	50.00 Gertrude Tennant	
	40.00 Gertrude E. Hoyt	
	10.00 Mary Gold	
	5.00 Phyllis Hathaway	
	5.00 Evalena Ford	
	3.00 Frances D. Boone	
150.00	Augustus L. Searle Fund for Surgical Research (Medicine).....	1944
125.00	Cancer Research Fund (Medicine)	1943
100.00	Experimental Medical Research Fund (Medicine)	1942
100.00	Sigma Xi Research Fund (Graduate School).....	1936
57.90	National Foundation for Infantile Paralysis—Training Course in Kenny Techniques (Medicine).....	1942
52.46	W. F. Straub and Company Research on Amino Acids (Medicine).....	1943
\$ 80,937.79		

MISCELLANEOUS—NEW

\$ 16,000.00	From the Rockefeller Foundation for postwar training of physicians in the fields of pediatrics and public health (Medicine)
10,027.69	To establish the William Hodson Memorial Fund in memory of the late William Hodson, use to be determined later
	\$2,539.00 From 182 donors
	1,000.00 Mrs. Lillian N. Zelle and Edgar F. Zelle
	1,000.00 Anonymous
	1,000.00 Mr. and Mrs. Harold W. Sweatt
	1,000.00 Marshall Field
	888.66 Members of the Department of Welfare of New York City
	500.00 The Messrs. Rockefeller
	500.00 Anna Lord Strauss
	100.03 Anne Bernstein
	100.00 Henry Pearlman
	100.00 Reginald Heber Smith
	100.00 Jane M. Hoey
	100.00 Mrs. Gertrude P. Hodson
	100.00 Mrs. Bayard James
	100.00 George W. Naumberg
	100.00 Charles F. Noyes
	100.00 Mr. and Mrs. Nathan Strauss

	100.00	Marguerite M. Wells
	100.00	Leo Arnstein
	100.00	Earle H. Balch
	100.00	Frank J. Bruno
	100.00	Alan J. McBean
	100.00	Mrs. Anna Hodson
	100.00	J. M. Kaplan
5,000.00		From the Joslyn Manufacturing and Supply Company to apply toward the building of a high-voltage laboratory (Technology)
3,000.00		From the Citizens Aid Society for purchase of a contact therapy X-ray machine for the Cancer Institute (Medicine)
1,000.00		From the American Council of Learned Societies to apply toward the cost of publishing <i>The People of Alor</i>
500.00		From the Kellogg Foundation to assist in the publication of a list of books for hospital librarians
500.00		From the Minneapolis Star Journal and Tribune Company to aid in the upbuilding of the reference library of the School of Journalism
100.00		From Professor Frank F. Grout to establish a fund in honor of Professor William Harvey Emmons, to be used in the Department of Geology and Mineralogy
47.36		From the Class of 1943, School of Agriculture, for the purchase of an automatic electric time and score board for the Farm Gymnasium
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\$	36,175.05	

MISCELLANEOUS—ADDITIONS TO PREVIOUS GIFTS

		Year Established
\$549,022.10	United States Public Health Service.....	1936
	\$396,567.53 Nurse Cadets (Bolton Act)	
	86,167.90 Training of Public Health Nurses	
	48,286.67 Postgraduate Nursing Education (Bolton Act)	
	18,000.00 Training Center	
13,500.00	Psychiatric Clinic for Children.....	1938
	\$10,000.00 Home for Children and Aged Women	
	3,500.00 The Commonwealth Fund	
3,600.00	Minneapolis General Hospital Pediatrics Directorship.....	1935
	\$1,800.00 for 1943-44	
	1,800.00 for 1944-45	
2,500.00	Minnesota Medical Foundation Endowment Fund.....	1940
2,200.00	Minnesota Museum of Natural History—Special Collections Fund.....	1942
	\$1,000.00 Anonymous, for construction of a Moose Group	
	800.00 Mrs. Lillian N. Berthel, for construction of a Gray Fox group	
	400.00 Major George M. Sutton, for construction of a Swallowtail Kite Group	
2,000.00	Guy Stanton Ford Lectureship Fund.....	1942
	\$1,000.00 F. E. Compton and Company	
	1,000.00 Anonymous	
1,078.00	Robert Meyer Clinical Associate Professorship Fund.....	1940
	\$500.00 Emergency Committee in Aid of Displaced Foreign Medical Students	
	300.00 Harold Rypins Memorial Fund	
	75.00 Dr. O. F. Robbins	
	75.00 Dr. C. E. Ehrenberg	
	50.00 Beverley C. Compton	
	78.00 From eleven donors	
1,000.00	Booth Memorial Hospital Fund.....	1940
928.68	Endowment Fund for the School of Nursing, bequest of the late Louise M. Powell.....	1936
175.00	To apply toward the expense of publishing a potato blight folder.....	1943
	\$75.00 General Chemical Company	
	50.00 Superior Copper Products Company	
	50.00 Phelps Dodge Corporation	
150.00	Frederick J. Wulling Trust Fund.....	1930
100.00	Harold Rypins Memorial Fund.....	1940
60.00	Captain William B. Folwell Memorial War Collection.....	1912
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\$	576,313.78	

MISCELLANEOUS GIFTS

	Collection of photographs, books, etc., from Mrs. Vernon Ames Wright for the University Gallery
	Eye operating light from Dr. Robert R. Tracht for the Out-Patient Eye Clinic
	Framed picture of the University of Minnesota Campus in 1875 from Regent Fred B. Snyder
	Collection of thirteen paintings and engravings, and frames, to the University Gallery from Dean Emeritus Frederick J. Wulling
	Chevrolet truck from the Army Specialized Training Unit, through Colonel Harry L. King, to the Military Department
	Portrait of William Henry Eustis from Gardner T. Eustis, for the Eustis Hospital
	Seven paintings and miscellaneous frames from Dean Emeritus Frederick J. Wulling for the University Gallery

Silver embroidered runner from Mrs. H. C. S. MacMillan to the Division of Home Economics
 Four voltmeters from the General Electric Company for the Department of Electrical Engineering
 Two airplane engines from the General Motors Corporation for the Engineering Experiment Station
 School engine from the Fairchild Engine and Airplane Corporation for the Engineering Experiment Station
 Aircraft engine from Pratt and Whitney Aircraft Company for the Institute of Technology

BOOK GIFTS

Several old and valuable books, including Squibb's *Ephemeris* Volumes I and II, and *Self-Conviction*, 1670, by Christopher Merret, from Dean Emeritus Frederick J. Wulling for the collection of rare volumes in the College of Pharmacy

Collection of 293 periodicals, pamphlets, books, and official Swedish documents, in Swedish, relating to Sweden, its social and family life, from the Carnegie Corporation of New York, for the University Library

Two volumes, *Medieval American Art*, from Mrs. Paul Morand, for the University Library

Annual reports of the Chicago Board of Trade for 1928, 1929, 1931, 1932, 1933, 1934, 1935, 1938, 1940, 1941, and 1942, for the University Library

Collection of eight volumes on social and technical aspects of tuberculosis, from the Ramsey County Public Health Association, to the Department of Agriculture branch of the University Library

Three leather bound volumes of the work of Audubon and Bachman and three volumes of Andersch Brothers *Hunting and Trapping Guide*, from the estate of Louis Andersch

The first page of the *Minneapolis Tribune* December 31, 1908, and the August 20, 1773 issue of the *Maryland Journal and Baltimore Advertiser* from Mrs. David C. Broderick to the School of Journalism

177 volumes in Norwegian on the history and literature of Norway from Mrs. Olga Hilsen

Collection of historical books from Frances A. Knox

663 volumes published by Yale University Press given to the Library through the interest of a group of friends of the late Dean Frederick S. Jones

For the Law Library:

8 volumes of legal texts from Messrs. Faegre and Benson, Minneapolis

20 volumes of texts and statutes from Michael J. Dillon, County Attorney, Minneapolis

86 volumes of Public Utilities Reports annotated, together with 16 annual digests of this set, from Macalester College, St. Paul

60 volumes of the Proceedings of the City Council of the City of Minneapolis

135 volumes of legal texts, periodicals, statutes, and reports from the First National Bank of Minneapolis

380 volumes of law books from Mrs. Helen R. Dwan

101 volumes of law books and reports of state officers from Miss Eleanor Osborn, Nisswa, Minnesota

7 volumes of text and case books, and two drafts of the American Law Institute Restatement of Trusts, from Ralph H. Dwan

Four-volume set of the second edition of Kinney on Irrigation and Water Rights from George A. French, Minneapolis

28 volumes of statutes, commission reports, texts, and law directories from the First National Bank of Minneapolis

Appeal papers of the Minnesota Supreme Court from Associate Justice Harry H. Peterson, State Capitol, St. Paul

65 law books from Northwestern Mutual Life Insurance Company, Milwaukee, Wisconsin

35 back issues of the *Minnesota Law Review* from the Honorable Paul S. Carroll, Minneapolis

One volume of *The American Bar*, 1943, from James C. Field Company, Minneapolis

Approximately 1,000 volumes, books, periodicals, and pamphlets, from members of the Law faculty

350 law books from the Court House wastepaper drive selected at invitation of Judge Paul S. Carroll and Judge W. W. Bardwell

2,280 gifts from 12 donors for the University Library

ASSIGNMENT OF PATENT APPLICATIONS

No. 490,149, Method for Producing Plant Extracts by Professor Ole Gisvold

Canadian No. 497,844, Canadian application, Chromanes and Method of Producing Same by Professor Lee I. Smith and Herbert E. Ungnade

No. 502,974, Pharmacological Products and Processes for Producing Same by Professor Charles O. Wilson and Dr. James H. Boothe

No. 519,587, Despecciation of Albumin by Dr. Robert R. Williams

No. 524,442, Process of Making Heterocyclic Compounds by Professor Lee I. Smith and John A. King

No. 526,127, Process of Making Long Chain Intermediates by Professor Lee I. Smith and George F. Rouault

No. 526,126, Method of Making Aliphatic Intermediates by Professor Lee I. Smith and George F. Rouault

No. 529,426, Process of Preparing Fibers and Yarns by Professor Ralph E. Montonna et al.

ASSIGNMENT OF ROYALTIES

Dr. Walter M. Boothby and Dr. W. R. Lovelace, assignment of royalties to the Mayo Foundation for Medical Education and Research, Graduate School

PATENTS RECEIVED

No. 2,324,170, Serial No. 346,016, Edwin H. Ofstie, application for Sprinkler Heads

No. 2,334,103, Professor C. Frederick Koelsch application, Process of Producing Substitute Alpha-Naphthoquinones

No. 2,346,232, Professor Edgar L. Piret and Edward C. Ritchell, Meat Process

OFFICE OF ADMISSIONS AND RECORDS

The tables show enrollment in the various colleges, in the Summer Session, in the Extension Division, in contract courses including Engineering, Science, and Management War Training courses, and programs of the Army, Army Air Forces, and Navy, and in subcollegiate units.

The net grand total of collegiate enrollments including the Graduate School and the Summer Session, excluding duplicate registrations, Table I, was 17,230 in 1942-43—a decrease of 11.1 per cent from the previous year, and 12,633 in 1943-44—a decrease of 26.7 per cent for the second year of the biennium. This decrease reflects smaller net total enrollments for both the Summer Session and the academic year in all curricula except Nursing, Public Health Nursing, Medical Technology, and Physical Therapy. Collegiate enrollment for 1943-44 including Summer Session was 42.1 per cent below the peak of 21,812 in 1939-40.

Collegiate enrollment exclusive of Summer Session was 13,870 in 1942-43—a decrease of 11.5 per cent from the previous year, and 9,871 in 1943-44—a decrease of 28.8 per cent for the second year of the biennium. The sex ratio was 34.2 per cent men and 65.8 per cent women in 1943-44 and 61.4 per cent men and 38.6 per cent women in 1941-42. During the biennium the enrollment of men declined 64.9 per cent whereas the enrollment of women increased 7.1 per cent. Collegiate enrollment for 1943-44 exclusive of Summer Session was 43.4 per cent below the peak of 17,526 in 1939-40.

The Summer Session enrollment in 1942 was 7,272, an increase of 18.8 per cent over the previous year and 5,711 in 1943, a decrease of 21.5 per cent for the second year of the biennium. The increase in duplicates between the Summer Session and the academic year shows that all of the increase in 1942 was due to accelerated curricula and that the size of the normal Summer Session group (teachers and others attending for the summer only) actually declined.

The enrollment in the subcollegiate schools of agriculture, University High School, Nursery School and Kindergarten, Table III, was 1,418 in 1943-44, a decrease of 7.3 per cent from the previous biennium. Agriculture short course attendance was 8,445 in 1943-44, a decrease of 25.4 per cent from 1941-42.

Enrollment in evening extension classes, extension short courses, and correspondence study courses, Table IVA, declined from 11,129 in 1941-42 to 10,232 in 1942-43 and increased to 11,503 in 1943-44, a net gain of 3.3 per cent during the biennium. An increase of 69.5 per cent in correspondence study enrollment from 3,469 in 1941-42 to 5,881 in 1943-44, more than offset declines of 25.7 per cent in evening extension and 37.8 per cent in extension short course enrollments during the two-year period.

The number of students enrolled in the Center for Continuation Study, Table IVB, was 2,035 in 1943-44, a decrease of 48.9 per cent from 3,980 in 1942-43. Much of this decline may be attributed to the fact that the facilities of the Center were used exclusively in 1943-44 for Armed Forces training programs.

Table IVC summarizes enrollment in contract courses. Engineering, Science, and Management War Training enrollment increased 68.7 per cent from 2,005 in 1941-42 to 3,382 in 1942-43, remaining approximately the same (3,332) in 1943-43. Enrollments in the Army, Army Air Forces, Navy, and Curtiss-Wright programs established during the biennium are listed separately for each course. Total enrollment in contract courses was 13,326 in 1943-44 compared with 7,322 in 1942-43 and 2,005 in 1941-42, an increase of 11,321 students during the two-year period.

The large increase in contract course and extension (correspondence study), enrollments noted appear again in Table V and more than offset losses in other divisions of the University. Table V shows that the University provided instruction to 45,934 individuals during 1943-4, an increase of 346 over the peak total enrollment of 45,588 in 1940-41.

The University conferred 2,390 degrees in 1943-44 compared with 2,993 in 1942-43, a decrease of 20 per cent. These figures include the Bachelor degrees, professional degrees, and advanced degrees, as well as the two-year associate degrees conferred by the General College and the College of Science, Literature, and the Arts and the two- and three-year diplomas conferred on graduates in Dental Hygiene and Nursing, respectively. A summary of degrees conferred appears in Table VIIA.

Certificates issued by the University, Table VIIB increased from 1,220 in 1941-42 to 2,253 in 1942-43, and 2,731 in 1943-44—the main increase being in ESMWT certificates

issued. A new certificate was authorized beginning in 1942-43 for proficiency in the Kenny Technique of which 156 were issued in 1942-43 and 129 in 1943-44. During 1942-43, 1,546 certificates of good standing were issued to students who left the University for service with the Armed Forces. During 1943-44, 443 of these certificates were issued.

Table VIII, IX, and X show the sources of enrollment of new students from high schools, the sources of students admitted with advanced standing, and the geographical distribution of all university students for each year of the biennium.

TABLE I. COLLEGIATE STUDENTS BY SCHOOLS AND COLLEGES, 1942-44

College or School	Year 1942-43			Year 1943-44			Gain	Loss
	Men	Women	Total	Men	Women	Total		
General College								
Second year	100	85	185	16	61	77		108
First year	240	155	395	101	244	345		50
Adult specials	1	1	2		4	4	2	
Totals	341	241	582	117	309	426		156
University College								
Seniors	20	9	29	6	26	32	3	
Juniors	11	25	36	4	19	23		13
Sophomores	1	4	5		3	3		2
Freshmen		1	1					1
Adult specials	1	1	2		1	1		1
Totals	33	40	73	10	49	59		14
Science, Literature, and the Arts								
Seniors	150	226	376	58	236	294		82
Juniors	232	310	542	130	366	496		46
Sophomores	734	695	1,429	265	814	1,079		350
Freshmen	948	844	1,792	404	1,028	1,432		360
Adult specials	69	107	176	45	108	153		23
Totals	2,133	2,182	4,315	902	2,552	3,454		861
Institute of Technology								
Seniors	408	1	409	371	1	372		37
Juniors	479	2	481	171	5	176		305
Sophomores	568	5	573	170	16	186		387
Freshmen	1,071	16	1,087	233	19	252		835
Adult specials	6	0	6	12	13	25	19	
Totals	2,532	24	2,556	957	54	1,011		1,545
Agriculture, Forestry, and Home Economics								
Seniors	88	209	297	24	154	178		119
Juniors	61	108	169	10	125	135		34
Sophomores	132	229	361	29	150	179		182
Freshmen	152	144	296	40	140	180		116
Adult specials	8	14	22	7	9	16		6
Totals	441	704	1,145	110	578	688		457
Law								
Seniors	17	1	18	8	3	11		7
Juniors	29	4	33	7	0	7		26
Sophomores	29	1	30	10	3	13		17
Freshmen	62	4	66	28	10	38		28
Adult specials	1	0	1	3	0	3	2	
Totals	138	10	148	56	16	72		76
Medicine								
Interns	201	14	215	125	20	145		70
Seniors	202	20	222	21	9	30		192
Juniors	130	8	138	7	5	12		126
Sophomores	124	6	130	9	6	15		115
Freshmen	122	7	129	29	6	35		94
Adult specials								
Totals	779	55	834	191	46	237		597
Medical Technology								
Seniors		55	55		65	65	10	
Juniors		66	66		74	74	8	
Adult specials								
Totals		121	121		139	139	18	
Public Health								
Adult specials	5	5	10	1	1	2		8
Totals		1	1					1
Totals	5	6	11	1	1	2		9

ADMISSIONS AND RECORDS

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TABLE I.—Continued

College or School	Year 1942-43			Year 1943-44			Gain	Loss
	Men	Women	Total	Men	Women	Total		
Physical Therapy	0	8	8	1	17	18	10	
Nursing								
Third year		82	82		92	92	10	
Second year		152	152		246	246	94	
First year		382	382		549	549	167	
Affiliates		429	429		474	474	45	
Adult specials		5	5		41	41	36	
Totals		1,050	1,050		1,402	1,402	352	
Public Health Nursing								
Seniors		99	99		101	101	2	
Juniors		36	36		30	30		6
Sophomores		30	30		45	45	15	
Adult specials		38	38		42	42	4	
Totals		203	203		218	218	15	
Dentistry								
Seniors	113	2	115	15	1	16		99
Juniors	85	0	85	6	1	7		78
Sophomores	3	1	4	7	1	8		4
Freshmen	100	1	101	12	0	12		89
Adult specials					1	1		1
Totals	301	4	305	40	4	44		261
Dental Hygienists								
Second year		37	37		20	20		17
First year		25	25		33	33		8
Adult specials								
Totals		62	62		53	53		9
Pharmacy								
Seniors	79	12	91	38	14	52		39
Juniors	18	7	25	9	4	13		12
Sophomores	31	7	38	0	3	3		35
Freshmen	22	4	26	10	10	20		6
Adult specials				2	0	2		2
Totals	150	30	180	59	31	90		90
Education								
Postgraduates	1		1					1
Seniors	112	353	465	19	265	284		181
Juniors	77	223	300	18	244	262		38
Sophomores	49	111	160	10	121	131		29
Freshmen	97	111	208	20	133	153		55
Adult specials	68	152	220	34	126	160		60
Totals	404	950	1,354	101	889	990		364
Business Administration								
Seniors	131	19	150	46	46	92		58
Juniors	270	91	361	40	59	99		262
Adult specials	12	48	60	10	25	35		25
Totals	413	158	571	96	130	226		345
Graduates (including Mayo Foundation)	1,008	441	1,449	876	478	1,354		95
Totals academic year	8,678	6,289	14,967	3,517	6,966	10,483		4,484
Less duplicates	544	553	1,097	142	470	612		485
Net totals academic year	8,134	5,736	13,870	3,375	6,496	9,871		3,999
Summer Session								
First term	3,458	2,847	6,305	2,315	2,747	5,062		1,243
Second term	2,855	1,559	4,414	1,923	1,640	3,563		851
Totals	6,313	4,406	10,719	4,238	4,387	8,625		2,094
Less duplicates	2,523	1,236	3,759	1,769	1,454	3,223		536
Net totals Summer Session	3,790	3,170	6,960	2,469	2,933	5,402		1,558
Mayo Foundation (graduates)	303	9	312	292	17	309		3
Net totals Summer Session (including Mayo Foundation)	4,093	3,179	7,272	2,761	2,950	5,711		1,561
Grand totals, collegiate	12,227	8,915	21,142	6,136	9,446	15,582		5,560
Less duplicates	2,792	1,120	3,912	1,557	1,392	2,949		963
Net grand totals, collegiate	9,435	7,795	17,230	4,579	8,054	12,633		4,597

TABLE IIA. COLLEGIATE ENROLLMENT BY QUARTERS, 1942-43

College or School	First Term, Summer Session, 1942			Second Term, Summer Session, 1942			Fall			Winter			Spring			Total Individual Registration*		
	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total
	General College	31	13	44	24	9	33	305	193	498	262	210	472	127	159	286	365	253	618
University College	12	3	15	10	4	14	23	19	42	22	32	54	26	33	59	39	44	83
Science, Literature, and the Arts.....	672	546	1,218	520	249	769	1,809	1,950	3,759	1,470	1,732	3,202	972	1,469	2,441	2,580	2,638	5,218
Institute of Technology	901	4	905	806	3	809	2,420	18	2,438	1,998	13	2,011	1,421	12	1,433	2,731	25	2,756
Agriculture, Forestry, and Home Economics	76	139	215	43	37	80	422	653	1,075	300	611	911	169	534	703	479	770	1,249
Law	55	5	60	44	5	49	126	9	135	109	10	119	73	9	82	157	10	167
Medicine and Interns	564	39	603	565	39	604	556	38	594	534	37	571	667	44	711	910	71	981
Medical Technologists	0	18	18	.....	6	6	.....	100	100	.....	98	98	.....	78	78	.....	125	125
Nursing and Affiliates	0	624	624	.....	603	603	.....	757	757	.....	730	730	.....	780	780	.....	1,447	1,447
Physical Therapists	0	6	6	.....	8	8	.....	8	8	.....	8	8	.....	7	7	.....	10	10
Public Health	7	1	8	7	6	13	3	3	6	3	2	5	1	3	4	12	10	22
Public Health Nursing	0	137	137	.....	93	93	.....	127	127	.....	101	101	.....	137	137	.....	301	301
Dentistry	205	2	207	202	2	204	297	2	299	291	3	294	244	3	247	320	4	324
Dental Hygienists .....	.....	38	38	.....	38	38	.....	63	63	.....	58	58	.....	24	24	.....	67	67
Pharmacy	145	22	167	148	22	170	146	26	172	127	24	151	69	17	86	186	30	216
Education	201	752	953	79	220	299	344	754	1,098	281	724	1,005	184	739	923	568	1,690	2,258
Business Administration	140	32	172	129	22	151	398	88	486	289	108	397	263	125	388	480	177	657
Graduates (including Mayo)	783	510	1,293	592	210	802	818	314	1,132	796	277	1,073	748	274	1,022	1,509	916	2,425
Totals	3,792	2,891	6,683	3,169	1,576	4,745	7,667	5,122	12,789	6,482	4,778	11,260	4,964	4,447	9,411	10,336	8,588	18,924
Less duplicates	31	35	66	11	8	19	197	144	341	290	255	545	260	302	562	901	793	1,694
Net totals	3,761	2,856	6,617	3,158	1,568	4,726	7,470	4,978	12,448	6,192	4,523	10,715	4,704	4,145	8,849	9,435	7,795	17,230

* This represents a net count of individuals with all duplicates deducted.

TABLE IIB. COLLEGIATE ENROLLMENT BY QUARTERS, 1943-44

College or School	First Term, Summer Session, 1943			Second Term, Summer Session, 1943			Fall			Winter			Spring			Total Individual Registration*			
	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	
General College	24	10	34	14	7	21	90	222	312	79	229	308	67	240	307	135	318	453	
University College	8	22	30	8	22	30	5	39	44	5	40	45	7	40	47	16	59	75	
Science, Literature, and the Arts.....	564	702	1,266	436	397	833	756	2,172	2,928	603	2,094	2,697	512	1,927	2,439	1,246	2,986	4,232	
Institute of Technology	948	40	988	880	36	916	886	39	925	704	44	748	468	43	511	1,210	67	1,277	
Agriculture, Forestry, and Home Economics	31	165	196	16	61	77	86	522	608	80	509	589	64	488	552	133	715	848	
Law	36	5	41	36	5	41	42	12	54	49	8	57	41	12	53	70	18	88	
Medicine and Interns	158	37	195	158	37	195	165	37	202	158	34	192	88	31	119	196	48	244	
Medical Technologists		16	16		6	6		122	122		119	119		108	108		151	151	
Nursing and Affiliates		478	478		502	502		912	912		1,102	1,102		1,040	1,040		1,548	1,548	
Physical Therapists	1	7	8	1	6	7	1	7	8		7	7	1	17	18	1	18	19	
Public Health		8	8		2	2		1	1		1	1					1	10	11
Public Health Nursing		141	141		78	78		145	145		131	131		141	141		322	322	
Dentistry	30	3	33	29	3	32	35	3	38	22	2	24	30	2	32	45	4	49	
Dental Hygienists		34	34		34	34		53	53		41	41		24	24		61	61	
Pharmacy	54	16	70	54	16	70	53	28	81	33	15	48	26	14	40	67	37	104	
Education	116	650	766	38	214	252	66	571	637	74	578	652	79	601	680	208	1,451	1,659	
Business Administration	64	68	132	45	50	95	51	114	165	52	90	142	53	92	145	147	186	333	
Graduates (including Mayo)	573	362	935	500	181	681	684	338	1,022	691	332	1,023	652	332	984	1,380	810	2,190	
Totals	2,607	2,764	5,371	2,215	1,657	3,872	2,920	5,337	8,257	2,551	5,375	7,926	2,088	5,152	7,240	4,855	8,809	13,664	
Less duplicates	33	89	122	1	7	8	25	115	140	87	242	329	53	270	323	276	755	1,031	
Net totals	2,574	2,675	5,249	2,214	1,650	3,864	2,895	5,222	8,117	2,464	5,133	7,597	2,035	4,882	6,917	4,579	8,054	12,633	

* This represents a net count of individuals with all duplicates deducted.

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TABLE III. SUBCOLLEGIATE STUDENTS, 1942-44

School or Course	Year 1942-43			Year 1943-44			Gain	Loss
	Men	Women	Total	Men	Women	Total		
Central School of Agriculture (three-year course)								
Seniors	30	24	54	8	18	26	.....	28
Juniors	52	28	80	22	31	53	.....	27
Freshmen	30	15	45	98	28	126	81	.....
Unclassed	10	7	17	2	7	9	.....	8
Totals	122	74	196	130	84	214	18	.....
Intermediate	2	2	4	0	4	4	.....	.....
Total school registration	124	76	200	130	88	218	18	.....
Northwest School of Agriculture (three-year course)								
Seniors	51	29	80	80	42	122	42	.....
Juniors	87	40	127	77	27	104	.....	23
Freshmen	83	30	113	92	32	124	11	.....
Unclassed	5	2	7	.....	1	1	.....	6
Totals	226	101	327	249	102	351	24	.....
Intermediate	36	19	55	34	15	49	.....	6
Total school registration	262	120	382	283	117	400	18	.....
West Central School of Agriculture (three-year course)								
Seniors	50	20	70	53	20	73	3	.....
Juniors	58	22	80	92	31	123	43	.....
Freshmen	80	27	107	113	40	153	46	.....
Unclassed	4	26	30	4	9	13	.....	17
Totals	192	95	287	262	100	362	75	.....
Intermediate	10	14	24	18	10	28	4	.....
Total school registration	202	109	311	280	110	390	79	.....
North Central School of Agriculture (three-year course)								
Seniors	5	.....	5	5	.....	5	.....	.....
Juniors	5	.....	5	6	.....	6	1	.....
Freshmen	26	.....	26	38	.....	38	12	.....
Unclassed	3	1	4	1	.....	1	.....	3
Totals	39	1	40	50	.....	50	10	.....
Intermediate	5	.....	5	8	.....	8	3	.....
Total school registration	44	1	45	58	.....	58	13	.....
University High School	117	140	257	110	143	253	.....	4
Nursery School and Kindergarten	49	54	103	52	47	99	.....	4
Net totals, schools	798	500	1,298	913	505	1,418	120	.....

TABLE III.—Continued

School or Course	Year 1942-43			Year 1943-44			Gain	Loss
	Men	Women	Total	Men	Women	Total		
Short Courses								
Central School of Agriculture								
Advanced Creamery Operators	64	1	65	60		60		5
Agricultural Men	148		148	99		99		49
Animal Nutrition	106	3	109	91	2	93		16
Beekeepers	49	26	75	55	18	73		2
Better Seed	48		48					48
Boy Scouts of America				79		79	79	
Cheese Improvement	25		25					25
Cheesemakers	32		32	35		35		3
Chinese National Reconstruction				42	10	52	52	
Cleaning Dairy Equipment	17		17					17
Crop Improvement Day				146	1	147	147	
Dry Milk Manufacture	57		57					57
Editors	92	11	103	76	6	82		21
Farm and Home Week	792	521	1,313					1,313
Farm Bureau Women		105	105		89	89		16
Farm Help Training	700		700					700
Farm Machinery Repair				16		16	16	
Farm Worker Training Course in Dairy Husbandry				408	36	444	444	
Fertility and Infertility	44		44					44
Food Inspectors		36	36					36
Food Preservation Training Course for Farm Section Administrative Workers				3	32	35	35	
Frozen Foods Short Course	70	113	183					183
Garden Leaders	14	43	57	14	17	31		26
High School Congress	653		653	660		660		7
High School Tractor Operation				314	32	346	346	
High School Training Group in Animal Husbandry				202	9	211	211	
Home Economics Conferences of Teachers of Adult Classes					204	204	204	
Horticulture	220	489	709	162	196	358		351
Ice Cream Manufacturers	136	4	140					140
Income Tax				301	27	328	328	
Insect Pests	48	1	49					49
Job Training Institute in Agriculture	14		14					14
Logging and Sawmilling				28		28	28	
Minnesota Beekeepers' Association				83	20	103	103	
Minnesota State Gardens Conference	100		100					100
Poultry	132	18	150	141	18	159	9	
Red Polled Breeders Association	30		30					30
Rose Growers' Day				21	38	59	59	
Seed Inspectors	9		9					9
Swine Feeders' Day	295	4	299	360		360	61	
University of Scouting	55		55	79		79	24	
Victory Garden Conference				64	50	114	114	
Women's Farm Worker Training Course					6	6	6	
Totals	3,950	1,375	5,325	3,539	811	4,350		975
Northwest School of Agriculture								
4-H Club	182	384	566	395	580	975	409	
Women's Camp		130	130		142	142	12	
Totals	182	514	696	395	722	1,117	421	
West Central School of Agriculture								
4-H Club	537	419	956	479	664	1,143	187	
Women's Week		100	100		154	154	54	
Totals	537	519	1,056	479	818	1,297	241	
North Central School of Agriculture								
4-H Club	91	41	132	119	196	315	183	
Totals	91	41	132	119	196	315	183	
Totals, short courses	4,760	2,449	7,209	4,532	2,547	7,079		130
Less duplicates	18	16	34	5	1	6		28
Net totals, short courses	4,742	2,433	7,175	4,527	2,546	7,073		102
Grand totals, schools and short courses								
	5,540	2,933	8,473	5,440	3,051	8,491	18	
Less duplicates	24	10	34	28	18	46	12	
Net grand totals, schools and short courses	5,516	2,923	8,439	5,412	3,033	8,445	6	

TABLE IVA. EXTENSION STUDENTS, 1942-44

Department or Course	Year 1942-43			Year 1943-44			Gain	Loss
	Men	Women	Total	Men	Women	Total		
General Extension	2,786	3,272	6,058	1,838	3,571	5,409	.....	649
Extension Short Courses								
Dental				37		37	37	
Practical Speech-Making				20		20	20	
Nursing Extension		131	131		297	297	166	
Maxillofacial Surgery	36		36					36
Military Astronomy and Fundamentals of Navigation	10		10					10
Prenavigation Mathematics	45		45					45
Public Speaking	20		20					20
Seminary in Teaching Techniques for ROTC	9		9					9
Use of Acrylics	53		53					53
Pretraining in Mathematics and Astronomy	92		92					92
Embalming	14	2	16	12	1	13		3
Totals, short courses	279	133	412	69	298	367		45
Less duplicates	12		12					12
Net totals, short courses	267	133	400	69	298	367		33
Correspondence Study	1,891	2,081	3,972	3,887	1,994	5,881	1,909	
Grand totals, extension	4,944	5,486	10,430	5,794	5,863	11,657	1,227	
Less duplicates	98	100	198	65	89	154		44
Net grand totals, extension	4,846	5,386	10,232	5,729	5,774	11,503	1,271	

TABLE IVB. CENTER FOR CONTINUATION STUDY, 1942-44

Course	Year 1942-43			Year 1943-44			Gain	Loss
	Men	Women	Total	Men	Women	Total		
Administrators and Superintendents	42	14	56					56
Adult Education and Demobilization				15	11	26	26	
Alumnae Institute	10	270	280		150	150		130
Anesthesiology		93	93					93
Assessors' School	55	2	57	74	6	80	23	
Blood and Blood Substitutes	16	73	89					89
Cancer Education		69	69		91	91	22	
Clinical Dietetics					56	56	56	
Communicable Diseases (for Public Health Nurses)		63	63					63
Conference on Corporation Income Tax Returns	31		31					31
Conference on Government Finance	12	5	17					17
Conference on Retail Merchants for Northwest	32	3	35					35
Curriculum Institute	48	41	89					89
Denture Service	43		43					43
Dietetics	3	94	97					97
Diseases of Heart	12		12					12
Diseases of Infancy and Childhood	62	3	65					65
Diseases of Rectum and Colon	13		13					13
Electrocardiography	18	1	19					19
Finance Officers' School	32	4	36	24	4	28		8
General Practice	5	3	8					8
Health Education for School Administra- tors				41	33	74	74	
Health Education of the Child				13	95	108	108	
Health Education Workshop				21	38	59	59	
High School English and American Lit- erature					57	57	57	
Higher Education	21	13	34					34
Homes for Aged	11	24	35					35
Hospital Administration	19	44	63	14	13	27		36
Hospital Nursing		78	78					78
Income Taxation	71	5	76					76

ADMISSIONS AND RECORDS

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TABLE IVB.—Continued

Course	Year 1942-43			Year 1943-44			Gain	Loss
	Men	Women	Total	Men	Women	Total		
Industrial Relations Institute	30	10	40	73	5	78	38	.....
In-Service Training School for WPA Nursery School Teachers	.....	63	63	.....	.....	.....	.....	63
Institute in Weaving	1	31	32	.....	31	31	.....	1
Internal Medicine	78	2	80	.....	.....	.....	.....	80
Junior Red Cross Institute	.....	.....	.....	8	76	84	84	.....
Kenny Hot Foments	.....	250	250	.....	.....	.....	.....	250
Kenny Technique for Infantile Paralysis for Nurses and Technicians	.....	.....	.....	.....	23	23	23	.....
Kenny Technique for Infantile Paralysis for Physicians	221	14	235	85	5	90	.....	145
Kenny Course for Physical Therapy Technicians	3	111	114	6	58	64	.....	50
Kindergarten Education	.....	132	132	.....	.....	.....	.....	132
Legal Course in Income Tax	.....	.....	.....	93	5	98	98	.....
Life Insurance Underwriting	40	6	46	.....	.....	.....	.....	46
Management of Infantile Paralysis	.....	.....	.....	55	4	59	59	.....
Management of Poliomyelitis	.....	.....	.....	.....	55	55	55	.....
Medical Social Service	.....	18	18	.....	.....	.....	.....	18
Medical Technology	.....	.....	.....	.....	56	56	56	.....
Mental Hygiene	.....	62	62	.....	.....	.....	.....	62
Minnesota Bankers' Conference	206	.....	206	.....	.....	.....	.....	206
Minnesota Civilian Defense Course for Auxiliary Police	82	.....	82	.....	.....	.....	.....	82
Minnesota Civilian Defense Course for Citizen Defense Corps Commanders	76	.....	76	.....	.....	.....	.....	76
Minnesota Civilian Defense Course for Council Chairmen	86	2	88	.....	.....	.....	.....	88
Minnesota Civilian Defense Course for Senior Gas Officer	86	.....	86	.....	.....	.....	.....	86
Minnesota Institute of Cereal Chemistry	99	5	104	.....	.....	.....	.....	104
Mining Symposium	.....	.....	.....	122	.....	122	122	.....
Music Education	.....	.....	.....	1	3	4	4	.....
Obstetrics	62	3	65	.....	.....	.....	.....	65
Obstetrics and New Born Nursing	.....	44	44	.....	.....	.....	.....	44
Obstetrics and Pediatrics	32	2	34	.....	.....	.....	.....	34
Otolaryngology	.....	.....	.....	52	.....	52	52	.....
Pharmaceutical School	33	14	47	.....	.....	.....	.....	47
Plumbing Inspectors	4	.....	4	.....	.....	.....	.....	4
Plumbing School	.....	.....	.....	3	.....	3	3	.....
Plumbing and Sewer School	1	.....	1	7	.....	7	6	.....
Postgraduate Dental Course in Resin Plastics and Restoration Dentistry	70	.....	70	.....	.....	.....	.....	70
Probation and Parole Officers	30	13	43	.....	.....	.....	.....	43
Public Health Administration	.....	.....	.....	27	120	147	147	.....
Race Relations Institute	.....	.....	.....	12	62	74	74	.....
Radiology	32	.....	32	.....	.....	.....	.....	32
Refraction	23	.....	23	.....	.....	.....	.....	23
Restaurant Management	10	28	38	15	23	38	.....	.....
Rheumatic Fever	.....	53	53	.....	.....	.....	.....	53
Sewer School	26	.....	26	38	.....	38	12	.....
Social Service Institute	27	21	48	.....	.....	.....	.....	48
Surgery	76	1	77	128	.....	128	51	.....
Symposium in Handling Bulk Materials	112	.....	112	.....	.....	.....	.....	112
The Citizens' War at Home	15	54	69	.....	.....	.....	.....	69
Trade and Community Secretaries	28	.....	28	.....	.....	.....	.....	28
Training Course for Employment Counselors	.....	.....	.....	29	13	42	42	.....
Tuberculosis (for Public Health Nurses)	1	52	53	.....	.....	.....	.....	53
Vocational Guidance under War Conditions	34	33	67	.....	.....	.....	.....	67
Water School	.....	.....	.....	28	.....	28	28	.....
Water and Plumbing	4	.....	4	10	.....	10	6	.....
Water and Sewer	6	.....	6	3	.....	3	.....	3
Water, Plumbing, and Sewer School	19	.....	19	12	.....	12	.....	7
Waterworks School	25	.....	25	.....	.....	.....	.....	25
Totals	2,234	1,926	4,160	1,009	1,093	2,102	.....	2,058
Less duplicates	91	89	180	7	60	67	.....	113
Net totals	2,143	1,837	3,980	1,002	1,033	2,035	.....	1,945

TABLE V. CONTRACT COURSES, 1942-44

Course	Year 1942-43			Year 1943-44			Gain	Loss
	Men	Women	Total	Men	Women	Total		
Engineering, Science, and Management								
War Training	2,990	845	3,835	2,565	767	3,332		503
Less duplicates	376	77	453					453
Net totals	2,614	768	3,382	2,565	767	3,332		50
Army Specialized Training Program								
Advanced Engineers				644		644	644	
Basic Phase, Engineers	324		324	347		347	23	
Foreign Area and Language Study								
Germany and Northern Europe				308		308	308	
Japan and Southwest Pacific				120		120	120	
Nine A				183		183	183	
Nine L				128		128	128	
Personnel Psychology				132		132	132	
Pre-Professional				147		147	147	
ROTC				67		67	67	
Army Air Force Training Program								
Pre-Flight	682		682	1,389		1,389	707	
Pre-Meteorology B	122		122	172		172	50	
Pre-Meteorology C	265		265	289		289	24	
Navy Training Program								
Electricians' Mates*	1,715		1,715	2,795		2,795	1,080	
Machinists' Mates	731		731	1,116		1,116	385	
Navy Aeronautical Engineering School				83		83	83	
Navy College Training Program V-12				1,152		1,152	1,152	
Medical School (Army and Navy)				519		519	519	
School of Dentistry (Army and Navy)				360		360	360	
Curtiss-Wright Cadettes		101	101		102	102	1	
Totals	3,839	101	3,940	9,951	102	10,053	6,113	
Less duplicates				59		59	59	
Net totals	3,839	101	3,940	9,892	102	9,994	6,054	
Grand totals	6,453	869	7,322	12,457	869	13,326	6,004	
Less duplicates								
Net grand totals	6,453	869	7,322	12,457	869	13,326	6,004	

* 100 enrolled in 1941-42.

TABLE VA. DETAIL OF ARMY AND NAVY MEDICAL AND DENTAL STUDENTS, 1943-44

	Men	Women	Total		Men	Women	Total
Medicine				Dentistry			
Interns	84		84	Seniors	121		121
Seniors	111		111	Juniors	92		92
Juniors	107		107	Sophomores	70		70
Sophomores	112		112	Freshmen	77		77
Freshmen	105		105	Totals	360		360
Totals	519		519				

TABLE VI. SUMMARY, 1942-44

Division	Year 1942-43			Year 1943-44			Gain	Loss
	Men	Women	Total	Men	Women	Total		
Collegiate students	9,435	7,795	17,230	4,579	8,054	12,633		4,597
Subcollegiate students	5,516	2,923	8,439	5,412	3,033	8,445	6	
Totals	14,951	10,718	25,669	9,991	11,087	21,078		4,591
Less duplicates	8	8	16	6	6	12		4
Net totals	14,943	10,710	25,653	9,985	11,081	21,066		4,587
Extension students	4,846	5,386	10,232	5,729	5,774	11,503	1,271	
Center for Continuation Study	2,143	1,837	3,980	1,002	1,033	2,035		1,945
ESMWT and contract courses	6,453	869	7,322	12,457	869	13,326	6,004	
Grand totals	28,385	18,802	47,187	29,173	18,757	47,930	743	
Less duplicates	1,597	1,156	2,753	922	1,074	1,996		757
Net grand totals	26,788	17,646	44,434	28,251	17,683	45,934	1,500	

TABLE VII. COMPARATIVE REGISTRATION FIGURES, 1942-44

Instructional Unit	Year 1942-43			Year 1943-44			Gain		Loss	
	M	W	T	M	W	T	M	W	M	W
General College	341	241	582	117	309	426	.....	68	224	.....
University College	33	40	73	10	49	59	.....	9	23	.....
Science, Literature, and the Arts.....	2,133	2,182	4,315	902	2,552	3,454	.....	370	1,231	.....
Institute of Technology	2,532	24	2,556	957	54	1,011	.....	30	1,575	.....
Agriculture, Forestry, and Home Economics (including schools of agriculture and agricultural short courses)	5,815	3,443	9,258	5,388	3,439	8,827	.....	.....	427	4
Law	138	10	148	56	16	72	.....	6	82	.....
Medicine (including Medical Technology, Nursing, Physical Therapy, Public Health Nursing, and Public Health)	784	1,443	2,227	193	1,823	2,016	.....	380	591	.....
Dentistry (including Dental Hygienists)	301	66	367	40	57	97	.....	.....	261	9
Pharmacy	150	30	180	59	31	90	.....	1	91	.....
Education (including University High School, Nursery School, and Kindergarten)	570	1,144	1,714	263	1,079	1,342	.....	.....	307	65
Business Administration	413	158	571	96	130	226	.....	.....	317	28
Graduate School	1,008	441	1,449	876	478	1,354	.....	37	132	.....
Summer Session (net)	4,093	3,179	7,272	2,761	2,950	5,711	.....	.....	1,332	229
Totals	18,311	12,401	30,712	11,718	12,967	24,685	.....	566	6,593	.....
Less duplicates	3,368	1,691	5,059	1,733	1,886	3,619	.....	.....	195	1,635
Net totals	14,943	10,710	25,653	9,985	11,081	21,066	.....	371	4,958	.....
Extension:										
General Extension	2,786	3,272	6,058	1,838	3,571	5,409	.....	299	948	.....
Short courses and nursing extension	267	133	400	69	298	367	.....	165	198	.....
Correspondence study	1,891	2,081	3,972	3,887	1,994	5,881	1,996	.....	.....	87
Totals	4,944	5,486	10,430	5,794	5,863	11,657	850	377	.....	.....
Less duplicates	98	100	198	65	89	154	.....	.....	33	11
Net totals	4,846	5,386	10,232	5,729	5,774	11,503	883	388	.....	.....
Center for Continuation Study.....	2,143	1,837	3,980	1,002	1,033	2,035	.....	.....	1,141	804
Contract courses	6,453	869	7,322	12,457	869	13,326	6,004	.....	.....	.....
Summary:										
Totals, resident students	14,943	10,710	25,653	9,985	11,081	21,066	.....	371	4,958	.....
Totals, extension students.....	4,846	5,386	10,232	5,729	5,774	11,503	883	388	.....	.....
Totals, Center for Continuation Study	2,143	1,837	3,980	1,002	1,033	2,035	.....	.....	1,141	804
Totals, contract courses	6,453	869	7,322	12,457	869	13,326	6,004	.....	.....	.....
Grand totals	28,385	18,802	47,187	29,173	18,757	47,930	788	.....	.....	45
Less duplicates	1,597	1,156	2,753	922	1,074	1,996	.....	.....	675	82
Net grand totals	26,788	17,646	44,434	28,251	17,683	45,934	1,463	37	.....	.....

TABLE VIII. DEGREES CONFERRED, 1942-44

College and Degree	Year 1942-43			Year 1943-44		
	Men	Women	Total	Men	Women	Total
Science, Literature, and the Arts						
B.A. <i>summa cum laude</i>	1	2	3	1	1	2
B.A. <i>magna cum laude</i>	10	20	30	7	18	25
B.A. <i>cum laude</i>	27	20	47	16	36	52
B.S. <i>magna cum laude</i> .....	.....	.....	.....	.....	1	1
B.S. <i>cum laude</i> .....	.....	3	3	.....	2	2
B.A.	140	124	264	77	137	214
B.S.	4	40	44	4	15	19
Associate in liberal arts	3	1	4	3	6	9

TABLE VIII.—Continued

College and Degree	Year 1942-43			Year 1943-44		
	Men	Women	Total	Men	Women	Total
Institute of Technology						
Bachelor of aeronautical engineering with high distinction	4	.....	4	3	.....	3
Bachelor of aeronautical engineering with distinction	6	.....	6	10	.....	10
Bachelor of aeronautical engineering	87	.....	87	90	1	91
Bachelor of agricultural engineering with distinction	1	.....	1	.....	.....	.....
Bachelor of agricultural engineering	8	.....	8	1	.....	1
Bachelor of architecture with distinction	3	.....	3	2	.....	2
Bachelor of architecture	12	.....	12	5	.....	5
Bachelor of interior architecture	.....	1	1	.....	1	1
Bachelor of civil engineering with high distinction	.....	.....	.....	2	.....	2
Bachelor of civil engineering with distinction	3	.....	3	3	.....	3
Bachelor of civil engineering	38	.....	38	28	.....	28
Bachelor of electrical engineering with high distinction	4	.....	4	11	.....	11
Bachelor of electrical engineering with distinction	5	.....	5	9	.....	9
Bachelor of electrical engineering	51	.....	51	50	.....	50
Bachelor of mechanical engineering with high distinction	7	.....	7	2	.....	2
Bachelor of mechanical engineering with distinction	13	.....	13	8	.....	8
Bachelor of mechanical engineering	78	.....	78	67	.....	67
Bachelor of chemistry with high distinction	4	.....	4	.....	.....	.....
Bachelor of chemistry with distinction	2	.....	2	3	.....	3
Bachelor of chemistry	9	.....	9	13	.....	13
Bachelor of chemical engineering with high distinction	3	.....	3	4	.....	4
Bachelor of chemical engineering with distinction	12	.....	12	18	.....	18
Bachelor of chemical engineering	57	.....	57	68	.....	68
Bachelor of physics with high distinction	2	.....	2	.....	.....	.....
Bachelor of physics with distinction	.....	.....	.....	1	.....	1
Bachelor of physics	1	.....	1	2	.....	2
Bachelor of geological engineering with distinction	1	.....	1	.....	.....	.....
Bachelor of geological engineering	3	.....	3	.....	.....	.....
Bachelor of metallurgical engineering with distinction	2	.....	2	1	.....	1
Bachelor of metallurgical engineering	13	.....	13	19	.....	19
Bachelor of mining engineering with high distinction	.....	.....	.....	1	.....	1
Bachelor of mining engineering with distinction	.....	.....	.....	1	.....	1
Bachelor of mining engineering	8	.....	8	4	.....	4
Bachelor of petroleum engineering	3	.....	3	2	.....	2
B.S. in engineering	1	.....	1	.....	.....	.....
Agriculture, Forestry, and Home Economics						
B.S. with distinction (agriculture)	2	.....	2	.....	.....	.....
B.S. (agriculture)	20	.....	20	11	.....	11
B.S. with high distinction (science specialization)	2	.....	2	.....	.....	.....
B.S. with distinction (science specialization)	4	.....	4	3	.....	3
B.S. (science specialization)	12	.....	12	7	.....	7
B.S. (wild life management)	1	.....	1	.....	.....	.....
B.S. with distinction (forestry)	3	.....	3	1	.....	1
B.S. (forestry)	10	.....	10	3	.....	3
B.S. with high distinction (home economics)	1	4	5	3	3	3
B.S. with distinction (home economics)	.....	5	5	.....	9	9
B.S. (home economics)	.....	68	68	.....	44	44
Agriculture and Education						
B.S. with distinction (agricultural education)	4	.....	4	.....	.....	.....
B.S. (agricultural education)	14	.....	14	5	.....	5
B.S. with high distinction (home economics education)	.....	1	1	.....	2	2
B.S. with distinction (home economics education)	.....	14	14	.....	13	13
B.S. (home economics education)	.....	55	55	.....	45	45
B.S. with distinction (home economics education and home economics)	.....	.....	.....	.....	1	1
Agriculture and Business Administration						
Bachelor of agricultural business administration	1	.....	1	1	.....	1

TABLE VIIA.—Continued

College and Degree	Year 1942-43			Year 1943-44		
	Men	Women	Total	Men	Women	Total
Law						
LL.B.	28	2	30	10	3	13
B.S. in Law	32	1	33	7	—	7
Medicine						
M.P.H.	2	3	5	—	—	—
M.D.	106	5	111	110	12	122
M.B.	106	11	117	101	6	107
B.S. (medicine)	101	4	105	85	2	87
B.S. with distinction (medical technology)	—	14	14	—	11	11
B.S. (medical technology)	—	48	48	—	43	43
B.S. (x-ray technology)	—	1	1	—	5	5
B.S. with distinction (public health nursing)	—	18	18	—	13	13
B.S. (public health nursing)	—	59	59	—	67	67
B.S. (physical therapy)	1	—	1	—	—	—
Graduates in nursing	—	96	96	—	146	146
Dentistry						
D.D.S.	67	1	68	56	1	57
Graduate dental hygienists	—	37	37	—	19	19
Pharmacy						
B.S. in pharmacy	48	5	53	20	5	25
Education						
M.Ed.	9	9	18	—	4	4
B.S. with high distinction	4	4	8	1	10	11
B.S. with distinction	8	49	57	1	51	52
B.S.	76	227	303	25	199	224
School of Business Administration						
B.B.A. with distinction	9	1	10	1	1	2
B.B.A.	146	34	180	77	28	105
B.S. in economics with distinction	1	1	2	—	—	—
B.S. in economics	2	2	4	2	3	5
University College						
B.A. <i>summa cum laude</i>	1	—	1	—	1	1
B.A. <i>magna cum laude</i>	2	1	3	1	8	9
B.A. <i>cum laude</i>	10	6	16	8	13	21
B.A.	7	—	7	1	—	1
B.S. <i>cum laude</i>	—	—	—	15	2	17
B.S.	—	—	—	—	—	—
General College						
A.A.	25	39	64	5	27	32
Graduate School						
M.A.	101	84	185	60	55	115
M.A. in public administration	7	2	9	5	1	6
M.B.A.	4	—	4	3	1	4
M.S.	49	27	76	21	19	40
M.S. in psychometrics	—	3	3	—	2	2
M.S. in aeronautical engineering	2	—	2	—	—	—
M.S. in agricultural engineering	3	—	3	—	—	—
M.S. in chemical engineering	3	—	3	—	—	—
M.S. in civil engineering	5	—	5	—	—	—
M.S. in mechanical engineering	1	—	1	2	—	2
M.S. in mining engineering	1	—	1	—	—	—
Architectural engineer	1	—	1	—	—	—
M.S. in anesthesiology	1	—	1	—	—	—
M.S. in dental surgery	1	—	1	—	—	—
M.S. in dermatology and syphilology	1	—	1	3	—	3
M.S. in medicine	14	—	14	7	—	7
M.S. in neurology and psychiatry	1	—	1	—	—	—
M.S. in neurosurgery	1	—	1	3	—	3
M.S. in ophthalmology	2	—	2	3	—	3
M.S. in orthopedic surgery	5	—	5	2	—	2
M.S. in otolaryngology	2	—	2	—	—	—
M.S. in otolaryngology and rhinology	—	—	—	2	—	2
M.S. in pathology	4	—	4	2	—	2
M.S. in pediatrics	4	—	4	—	—	—
M.S. in proctology	—	—	—	1	—	1
M.S. in radiology	1	—	1	1	—	1
M.S. in surgery	13	—	13	8	—	8
M.S. in urology	1	—	1	—	—	—
Ph.D.	107	11	118	62	11	73
Ph.D. in dermatology and syphilology	1	—	1	—	—	—
Ph.D. in medicine	1	—	1	—	—	—
Ph.D. in neurology and psychiatry	—	—	—	1	—	1
Ph.D. in pathology	1	—	1	—	—	—
Ph.D. in pediatrics	1	—	1	—	—	—
Ph.D. in physiology	—	—	—	3	—	3
Ph.D. in surgery	—	—	—	3	—	3
Totals	1,830	1,163	2,993	1,286	1,104	2,390

TABLE VIII. CERTIFICATES CONFERRED, 1942-44

School, Division, or Course	Year 1942-43			Year 1943-44		
	Men	Women	Total	Men	Women	Total
Central School of Agriculture	17	15	32	6	24	30
Embalming	19	2	21	22	1	23
Engineering, Science, and Management War Training	1,347	356	1,703	1,703	507	2,210
Extension	15	2	17	7	4	11
Kenny Technicians .....	.....	156	156	5	124	129
Library .....	.....	2	2	.....	.....	.....
North Central School of Agriculture.....	8	.....	8	13	.....	13
Northwest School of Agriculture	76	38	114	74	51	125
Physical Therapy .....	.....	.....	.....	1	6	7
Public Health Nursing .....	.....	90	90	.....	73	73
Social Work	2	13	15	.....	.....	.....
University High School	23	27	50	21	47	68
West Central School of Agriculture	28	17	45	27	15	42
Totals	1,535	718	2,253	1,879	852	2,731
Certificates of Good Standing	1,546	.....	1,546	443	.....	443

TABLE VIII.A. SUMMARY OF SOURCE OF ENROLLMENT
FROM HIGH SCHOOLS, 1942-43

Entrants From	General College	S., L., and A.	Institute of Technology	Agriculture	Nursing	Dental Hygienists	Pharmacy	Education	Total
Minneapolis public schools	145	593	325	74	21	3	4	68	1,233
St. Paul public schools	48	207	97	21	12	3	2	24	414
Other Minnesota high schools	75	368	274	108	79	6	14	39	963
Minnesota private schools	14	104	36	23	2	1	1	18	199
Totals from Minnesota	282	1,272	732	226	114	13	21	149	2,809
Other states	26	147	86	20	26	1	1	12	319
Foreign countries .....	.....	1	2	.....	.....	.....	.....	.....	3
Grand totals	308	1,420	820	246	140	14	22	161	3,131
Entered by examination	1	65	11	.....	.....	2	.....	.....	79

TABLE VIII.B. SUMMARY OF SOURCE OF ENROLLMENT
FROM HIGH SCHOOLS, 1943-44

Entrants From	General College	S., L., and A.	Institute of Technology	Agriculture	Nursing	Dental Hygienists	Pharmacy	Education	Total
Minneapolis public schools	97	444	42	76	48	4	.....	38	749
St. Paul public schools	48	160	15	32	15	.....	.....	12	283
Other Minnesota high schools	59	290	14	91	128	10	.....	23	615
Minnesota private schools	24	73	9	10	10	.....	.....	2	128
Totals from Minnesota	228	967	80	209	201	17	.....	75	1,777
Other states	21	97	11	17	51	.....	.....	7	204
Foreign countries .....	.....	2	.....	1	.....	.....	.....	.....	3
Grand totals	249	1,066	91	227	252	17	.....	82	1,984
Entered by examination	3	111	6	1	70	.....	.....	3	194

TABLE IXA. SUMMARY OF STUDENTS ADMITTED WITH ADVANCED STANDING, 1942-43

Entrants From	General College	S., L., and A.	Institute of Tech.	Agriculture	Law	Medicine	Med. Technology	Nursing	Dentistry	Dental Hygienists	Public Health	Pharmacy	Pub. Health Nursing	Education	Business Adm.	Total
Institutions in Minnesota	1	203	84	78	10	.....	2	16	21	3	.....	2	13	60	27	520
Institutions in other states .....	.....	175	50	22	1	1	3	16	13	.....	3	1	30	47	11	373
Institutions in foreign countries .....	.....	6	5	1	.....	.....	1	.....	.....	.....	.....	.....	.....	2	.....	15
Totals	1	384	139	101	11	1	6	32	34	3	3	3	43	109	38	908

TABLE IXB. SUMMARY OF STUDENTS ADMITTED WITH ADVANCED STANDING, 1943-44

Entrants From	General College	S., L., and A.	Institute of Tech.	Agriculture	Law	Medicine	Med. Technology	Phys. Therapy	Nursing	Public Health Nursing	Dentistry	Dental Hygienists	Pharmacy	Education	Business Adm.	Total
Institutions in Minnesota	9	222	23	49	2	.....	.....	1	36	19	9	2	.....	53	13	438
Institutions in other states	3	170	19	31	.....	.....	2	4	27	34	15	.....	.....	37	4	346
Institutions in foreign countries .....	.....	4	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7
Totals	12	396	44	81	2	.....	2	5	63	53	24	2	.....	90	17	791

TABLE XA. SUMMARY OF GEOGRAPHICAL DISTRIBUTION OF UNIVERSITY STUDENTS OF COLLEGIATE GRADE
(OTHER THAN SUMMER SESSION), 1942-43

Entrants From	General College	University College	S., L., & A.	Institute of Technology	Agriculture	Law	Medicine	Medical Technology	Public Health	Physical Therapy	Nursing	Public Health Nursing	Dentistry	Dental Hygienists	Pharmacy	Education	Business Administration	Graduate	Duplicates	Total
Counties in Minnesota																				
Hennepin	306	39	2,093	1,061	322	60	244	43	4	3	424	44	66	17	50	554	243	399	374	5,972
Ramsey	148	16	755	453	176	25	134	13		2	76	15	43	10	21	220	87	167	63	2,361
Other Minnesota counties	95	17	1,042	780	578	53	357	41	2	2	378	67	113	24	95	455	181	229	551	4,509
Totals	549	72	3,890	2,294	1,076	138	735	97	6	7	878	126	222	51	166	1,229	511	795	988	12,842
Other states	33	1	415	245	66	9	91	24	5	1	169	75	78	11	13	116	58	561	105	1,971
Foreign countries			10	17	3	1	8				3	1	5	1	1	9	2	93	4	154
Grand totals	582	73	4,315	2,556	1,145	148	834	121	11	8	1,050	202	305	63	180	1,354	571	1,449	1,097	14,967

TABLE XB. SUMMARY OF GEOGRAPHICAL DISTRIBUTION OF UNIVERSITY STUDENTS OF COLLEGIATE GRADE
(OTHER THAN SUMMER SESSION), 1943-44

Entrants From	General College	University College	S., L., & A.	Institute of Technology	Agriculture	Law	Medicine	Medical Technology	Public Health	Physical Therapy	Nursing	Public Health Nursing	Dentistry	Dental Hygienists	Pharmacy	Education	Business Administration	Graduate	Duplicates	Total
Counties in Minnesota																				
Hennepin	221	24	1,610	404	222	35	66	39		3	528	36	8	15	28	408	97	350	206	4,094
Ramsey	97	10	618	195	104	7	45	12		6	93	14	6	9	15	153	41	144	91	1,569
Other Minnesota counties	76	17	834	294	305	23	89	54		4	518	65	16	24	44	309	70	248	232	2,990
Totals	394	51	3,062	893	631	65	200	105		13	1,139	115	30	48	87	870	208	742	529	8,653
Other states	31	7	378	107	55	7	33	33	2	5	260	98	11	5	2	115	17	521	76	1,687
Foreign countries	1	1	14	11	2		4	1			3	5	3		1	5	1	91	7	143
Grand totals	426	59	3,454	1,011	688	72	237	139	2	18	1,402	218	44	53	90	990	226	1,354	612	10,483

OFFICE OF THE VICE PRESIDENT—
BUSINESS ADMINISTRATION

The data which follow constitute a brief summary of the financial report for the year ended June 30, 1944. The complete annual financial report is published separately and is available on request.

SOURCES OF INCOME, JULY 1, 1943 TO JUNE 30, 1944

FROM THE STATE	
<i>The Legislative Maintenance Appropriation</i>	\$ 3,890,000.00
For the general support of instructional, research, and administrative departments, and maintenance of buildings and grounds, including the Department of Agriculture and the Agricultural Schools and Experiment Stations.	
<i>The 23/100 Mill Tax</i>	275,166.96
The standing direct property tax for the general support of the University.	
<i>The State's share of the cost of indigent patients at the University of Minnesota Hospitals</i>	245,000.00
<i>The Special Projects administered and carried on by the University for the general benefit of the people of the State</i>	424,822.97
These special projects include Agricultural Extension, County Agents, Beneficiation of Manganiferous Ores, Beneficiation of Low-Grade Ores, Soils Survey, Dairy Manufacturing, Medical Research, Live Stock Sanitary Board, Crop Breeding and Testing, Child Welfare, Psychopathic Hospital Maintenance, Mastitis Control, Potato and Vegetables Research, General Research, and Minnesota Institute of Research.	
FROM THE FEDERAL GOVERNMENT	
<i>Instruction, Research, and Extension</i>	775,010.02
This income is divided: for instruction, \$136,800.15; for agricultural research, \$147,309.02; for agricultural extension, \$490,900.85.	
<i>Armed Forces—Instruction and Research</i>	1,142,911.74
FROM THE PERMANENT UNIVERSITY FUND	
474,568.89	
The principal of the fund, amounting to \$16,617,815.62 on June 30, 1944, was derived from land set aside by the Federal Government and 10 per cent of the occupational tax on iron ore. The income is used for general university support.	
FROM THE SWAMP LAND FUND	
58,272.28	
The principal of the fund was derived from land set aside by the State of Minnesota. The University participates in the income.	
FROM FEES AND RECEIPTS	
3,125,754.56	
This income is divided: student tuition fees, \$1,128,535.91; counties' share of indigent hospital patients, \$251,599.80; other hospital receipts, \$485,672.58; dental infirmary receipts, \$97,435.22; other departmental receipts such as laboratory fees, sales of livestock and agricultural products, \$1,160,127.55; miscellaneous receipts for plant extension, \$2,383.50.	
FROM SELF-SUPPORTING SERVICE ENTERPRISES AND REVOLVING FUNDS	
5,388,982.67	
The University operates dormitories and dining halls, cafeterias, a printing department, a laundry, garages, bookstores, cold storage plant, Army and Navy housing and feeding, and other enterprises and revolving funds, for the purpose of rendering service to the student body and of reducing the cost of general university operations.	
FROM TRUST FUNDS	
2,341,882.24	
The trust funds include gifts and donations for scholarships, prizes, and income from endowments for teaching, research, and the care of the sick. Of this amount, \$9,463.00 was used for plant extension.	
FROM INTERCOLLEGIATE ATHLETICS	
258,335.05	
TOTAL RECEIPTS	
\$18,400,707.38	
<i>Free Unencumbered Balance, July 1, 1943</i>	
6,048.29	
GRAND TOTAL	
\$18,406,755.67	

EXPENDITURES, JULY 1, 1943 TO JUNE 30, 1944

FOR ADMINISTRATION OF THE UNIVERSITY.....	\$ 338,815.73
The expenses of the offices of the President, the Vice Presidents, the Comptroller, the Dean of Students, the Dean of Women, the Director of Admissions and Records, and other general administrative offices.	
FOR THE GENERAL UNIVERSITY.....	618,099.07
The expenses of the library, general bulletins and publications, lectures and convocations, the storehouses, truck service, the inter-campus trolley, the employment bureau, and other services of an all-university character.	
FOR INSTRUCTION AND RESEARCH.....	7,791,186.88
The expenses of college instruction and research, Agricultural Schools and Experiment Stations, the University of Minnesota Hospitals, Summer Session, Agricultural and General Extension (General Fund, \$5,086,012.55; Federal Funds, \$803,679.76 exclusive of \$10,971.86 Federal Funds included in General University total; Special State Appropriations, \$307,156.62; Armed Forces War Training Programs \$1,594,337.95).	
FOR PHYSICAL PLANT OPERATIONS.....	875,980.52
The expenses of maintaining and operating the buildings and other improvements on the land of the Main campus and the Farm campus (General Fund, \$875,700.70; Special State Appropriation, \$279.82).	
FOR PHYSICAL PLANT EXTENSION.....	35,460.82
This includes the following: Veterinary Building, \$1,923.90; Medical-Biological Library, \$3,500.00; Purchase of Land, \$16,423.33; Mechanical-Aeronautical Engineering Building, \$10,259.90; and Miscellaneous, \$3,353.69.	
FOR SELF-SUPPORTING SERVICE ENTERPRISES AND REVOLVING FUNDS.....	5,207,029.74
The operating and capital expenditure for dormitories and dining halls, cafeterias, printing department, army and navy housing and feeding, and other self-supporting enterprises and revolving funds.	
FOR TRUST FUND PURPOSES.....	2,011,698.80
Scholarships, fellowships, prizes, and trust fund expenditures for teaching and research, care of the sick and other trust purposes.	
FOR INTERCOLLEGIATE ATHLETICS.....	181,706.91
The operating expenses of intercollegiate athletics and that part of the physical education expense paid from receipts of intercollegiate athletics.	
TRANSFERS AND ADJUSTMENTS.....	1,335,744.86
Redemption of Union building certificates \$40,000.00; Flour and Corn Exchange buildings depreciation \$45,000.00; trust fund endowment increase \$25,109.80; athletic contingent reserve \$2,500.00; outstanding obligations and allotments increase \$459,037.23; war training reserve \$482,746.12; and other reserves \$281,351.71.	
TOTAL EXPENDITURES, TRANSFERS, AND ADJUSTMENTS.....	\$18,395,723.33
Free Unencumbered Balance, June 30, 1944.....	11,032.34
GRAND TOTAL.....	\$18,406,755.67

A FEW INTERESTING FACTS ABOUT THE UNIVERSITY

STUDENTS	1940-41	1941-42	1942-43	1943-44
Collegiate.....	21,688	19,378	17,230	12,633
Non-collegiate.....	15,730	16,930	17,295	23,806
Extension.....	10,900	11,345	10,232	11,503
STAFF—1943-44				
Academic staff*.....				1,562
Civil service staff*.....				1,378
COLLEGES	Departments		Departments	
Science, Literature, and the Arts.....	25	College of Education.....	10	
Institute of Technology.....	13	Graduate School.....	11	
Department of Agriculture.....	30	Business Administration.....	1	
Medical School.....	17	Library Instruction.....	1	
School of Dentistry.....	2	University College.....	1	
Law School.....	1	General College.....	1	
College of Pharmacy.....	1			

* Reduced to a full-time basis.

LAND—June 30, 1944	Acres	Value
Main campus—Minneapolis	137.97	\$4,047,367.62
Farm campus—St. Paul	674.89	643,553.64
Crookston	915.89	142,650.97
Grand Rapids	454.60	34,095.00
Excelsior	229.89	41,271.22
Morris	823.82	61,137.53
Waseca	597.30	70,752.50
Duluth	272.74	41,344.00
Cloquet	3,502.09	61,944.78
Totals	7,609.19	\$5,144,117.26

BUILDINGS—June 30, 1944	Major		Minor†	
	Number	Value	Number	Value
Main campus	61	\$20,141,088.46	40	\$ 232,849.36
Farm campus	29	3,154,944.00	137	292,248.14
Branch stations				
Crookston	9	527,682.68	45	164,724.98
Morris	10	643,245.24	22	145,608.22
Duluth	1	29,520.00	21	52,724.56
Grand Rapids	2	155,687.97	66	86,833.94
Itasca			24	30,264.18
Waseca			48	57,002.60
Excelsior			29	73,301.70
Cloquet			34	46,363.83
Totals	112	\$24,652,168.35	466	\$1,181,921.51

EQUIPMENT—June 30, 1944	Total	Livestock	Books and Museum Collections	Other
Main campus	\$ 7,970,591.39		\$4,437,494.22	\$3,533,097.17
Department of Agriculture	1,540,331.82	\$135,649.32†	354,736.23	1,049,946.27
Research	235,104.86			235,104.86
Service Enterprises	1,723,090.94			1,723,090.94
Totals	\$11,469,119.01	\$135,649.32	\$4,792,230.45	\$6,541,239.24

ENDOWMENT—June 30, 1944	Value
For general purposes	\$16,617,815.62
Unassigned funds operating temporarily as an endowment	162,547.87
For student aid—scholarships, prizes, and loans	743,129.64
Educational purposes	5,360,583.57
Other purposes	2,086,555.44
Endowment—subject to annuity	512,609.71
<i>Student Loan Funds</i> —Cash available	\$25,483,241.85
Notes receivable	210,402.40
	276,869.65
Total	\$25,970,513.90

W. T. MIDDLEBROOK, vice president.

† Valuation \$25,000 and under.

‡ As of June 30, 1943.

THE WORK OF THE UNIVERSITY

COLLEGE OF SCIENCE, LITERATURE, AND THE ARTS

Too frequently the response of the liberal arts college to the current emphasis on technical and specialized training is merely to iterate, in conventional, general, and often vague terms, the value of liberal studies, or to wait impatiently for the war to end so that the college can revert to "normalcy." In too many instances "normalcy" represents inadequate facilities for a basic general education, narrow and excessive specialization, routine teaching and learning, and formal, rather than vital, educational experience. The task of the liberal college, now and in the postwar period, is not to reproduce its past, but, in the words of President Seymour of Yale, to discover "new ways to make the wisdom of learning, and a knowledge of the arts as well as the sciences, functional and living in our time." That is the perennial problem of liberal education. For hundreds of years potentially liberal studies have oscillated between periods of formalism and periods of revival. It is time for another revival. The great opportunity of the liberal college now is to provide an education relevant to the felt necessities of this age.

New Courses in the Humanities—In many institutions, the humanities have suffered most from the wartime emphasis on applied science and technology, though the liberal values of science itself have had to be sacrificed in great degree. But at the University of Minnesota, a real renaissance in humanistic studies is under way. It began when Professor Alburey Castell offered a new course under the title "Humanities in the Modern World," in which appropriate documents from history, philosophy, literature, and the arts are selected and correlated to reveal the growth of democratic ideas from 1775 to the present time. Although the course is entirely elective, the registration reached 200 during the present year.

The student should not only be thoroughly familiar with the intellectual issues of the modern world; he should also see his time in historical perspective; he should study the modern mind in the making. Therefore, a second course, which is being planned by Professor J. W. Beach, will be offered next year under the title of "The European Heritage: from Homer to Molière." While the course will be devoted to selected classics, it will not be composed of a series of unconnected great books. Like "Humanities in the Modern World," this course will be organized around central concepts in the development of human culture as a means of giving continuity and integration to the study of the humanities in the classical, medieval, and Renaissance periods. To complete the series of courses covering both European backgrounds and American civilization, a third course is being planned in the development of American life and culture.

Global World War II has made us aware that a knowledge of western civilization is not enough in modern times. We shall need to know something of the culture of other great areas, too. As an outgrowth of the ASTP Language and Area program, a new course will be given for regular students next year on the environment, peoples, and cultures of the Far East. This course will be a part of the program for area study discussed later in this report.

Committee on General Education—Other recent ventures in general education include the orientation course in the natural sciences, the divisional course called "Introduction to the Social Sciences," and several departmental courses especially designed for the students who may not take further work in the subject. While these individual projects are all worth while, it is essential now to plan the program of general education as a whole in terms of well-defined purposes.

The College of Science, Literature, and the Arts has responsibility for enabling several groups of students to secure a well-balanced general education. Students who do not get beyond the sophomore year, preprofessional students, and students who are admitted to the Senior College for specialized training are those for whom the college has primary responsibility. If the Institute of Technology and the College of Agriculture, Forestry, and Home Economics follow the recommendations of the University Senate and include at least minimal opportunities for their students to secure a broad general education, the College of Science, Literature, and the Arts will undoubtedly be called upon, in part at least, to provide the facilities. The problem of general education is not one of curriculum-making alone, but also one of student counseling. For although general education should provide for all students the *common* basis for normal human living in a free society, the process of attaining the outcomes of general education may differ for individual students.

To assure systematic planning of the program of general education, the faculty authorized the appointment of a Committee on General Education. This committee is charged with the responsibility of formulating objectives, recommending appropriate courses, co-operating with the professional schools and specialized colleges in planning the program for preprofessional students and students in other division of the University, and making recommendations concerning the adaptation of the program to individual students. The committee will be composed of the vice-chairmen of the three divisional councils and the Personnel Council, the chairman of a newly created Department of General Studies, and three members of the faculty appointed at large.¹

Developments in the Senior College—Professor Harold S. Quigley was chairman of a committee appointed to consider the inauguration of curricula in foreign area study for civilian students now and in the postwar period. The committee has recommended that curricula be established for (1) Europe, (2) Latin America, and (3) Far East. The objectives of these curricula should be both cultural and professional. The curricula should be centered around an integrated study of the geography, the people, the language, the cultural characteristics, the governments, and the economic systems of the areas in question. Area study should be preceded by junior college work in world history and geography and by a command of the language of the area in which the student expects to specialize. In the case of students professionally interested in foreign service, area study should be combined with preparation for some field of specialized activity in, or in relation to, a foreign area.

The military foreign area programs put primary stress on speaking a foreign language. The faculties in the modern foreign languages are now studying the methods of language instruction used in the military classes and their adaptation to civilian teaching. The departments of German and Romance Languages will probably experiment next year with more emphasis on the spoken language and, in certain sections, with more hours per week in class divided into basic instruction and oral practice in small groups.

The Committee on Graduation with Honors, Dean J. M. Thomas, chairman, reviewed its experience during the period 1935-43, and made recommendations concerning the future personnel and policies of the committee that were approved by the faculty.

A Research Division was established in the School of Journalism with Professor Ralph O. Nafziger as director, and Professor Ralph D. Casey, director of the School of Journalism, as chairman of the advisory committee on the division. The purposes of the Research Division are to stimulate and conduct fundamental and applied research in the field of communication and communication agencies, to secure grants for research, and to encourage promising research workers to come to the University for advanced graduate training. The activities of the division got under way at once under a substantial grant from the Minneapolis Star Journal and Tribune Company, and additional funds made available by the University itself. The staff of the School of Journalism has earned a wide reputation through the research it has already completed and through the service it has rendered to the government and to other agencies concerned with communication problems. The School of Journalism, through the new Research Division, is in position to take national leadership in research not only on technical newspaper problems but also on such problems as those concerned with the foreign press and public opinion.

Military Training Programs—A large number of military training programs has been administered through the College of Science, Literature, and the Arts, making it necessary, not only to use a considerable portion of the regular staff but to make temporary additions to the faculty. These military training curricula not only made it possible to keep the faculty of the college intact, but in the case of Personnel Psychology and Language and Area programs, they brought to the campus advanced students of outstanding ability. The majority of students in personnel psychology had previously earned baccalaureate degrees, and many in the languages and area curricula were of graduate level and caliber.

Faculty Personnel—During 1943-44, 43 members of the staff were on leave, 27 in the armed forces and 16 in government service.

Enrollment decreases in certain departments created a surplus of staff, and abnormal enrollments in certain fields such as physics and mathematics together with heavy instructional loads in the military programs caused staff shortages in other places. To meet

¹The faculty recently authorized the appointment of vice-chairmen from the faculty for the three divisional councils and the Personnel Council. The faculty organization provides that the dean of the college shall be chairman and the associate dean, vice-chairman, of all four councils. However, the position of associate dean is now vacant. The Department of General Studies was created to provide a convenient administrative and budgetary unit for non-departmental courses, such as those in the humanities.

this situation in part, 16 members of the faculty taught outside their own departments. Eleven staff members from other divisions of the University also gave their services part time or full time to the college to help carry the emergency load.

Study of the Curriculum—The departments are engaged in a systematic study of the needs, opportunities, and problems of the postwar period. The matters under consideration include the following: (1) the characteristics and needs of the students to be served, including the particular needs of veterans; (2) the recruitment of a staff to perform effectively the activities of teaching, counseling, research, and public service; (3) the development of courses designed especially for the purposes of general education; (4) the organization of senior college curricula to provide adequate means of concentration without excessive specialization; and (5) problems of instruction, including adjustment to individual differences and the utilization of newer teaching aids and devices.

Special Services for Veterans—Under general policies adopted by the Personnel Council, a special committee of the council with Professor Donald G. Paterson as chairman is working out detailed procedures for the counseling of veterans, for the co-ordination of the counseling agencies within the college, and for the co-ordination of college and university personnel services as they affect veterans. From recent experience, it is apparent that counselors will have to spend more time with returning veterans than with civilian students, and that a higher degree of counseling ability will be called for. When veterans begin to return in substantial numbers, it will be necessary undoubtedly to appoint a small number of full-time counselors or a larger number of part-time faculty counselors to carry effectively the load of advising. In the meantime, several members of the faculty counseling group have been asked to serve as special veterans' advisers in addition to their regular teaching duties.

A special committee has been appointed also to consider possible terminal curricula for veterans and to supply to the Veterans' Administration information concerning vocational outlets from major fields of specialization in the college.

Student Intermediary Board—The Student Intermediary Board has been re-established under a new constitution approved by the faculty and students of the college. The first elections to the board were held during the spring quarter, 1944. The board is composed of nine student members (five elected and four appointed) and the dean of the college. The board will conduct studies and discussions of curricular matters, teaching practices, faculty-student relations, student counseling, and educational aims of the college, and bring their suggestions to the Advisory Committee or the faculty.—T. R. McCONNELL, dean.

INSTITUTE OF TECHNOLOGY

The lengthening war has had an increasing effect upon the activities of the staff and students and particularly upon enrollment of civilian students, which is now reduced to about one fourth of normal. Many staff members are engaged in war work either in the armed forces or in research; some are absent on leave for the duration; others who remain here devote part or, in some cases, full time to war research.

The Navy V-12 students and the Army medical and dental students require instruction in many fields of science and technology and keep the balance of the staff fully occupied. Most of the younger assistants and instructors under 26 years of age have entered the service or are taking part in war research either here or elsewhere.

Retirements—On July 1, 1944, Dean Leland retired as dean of administration, Institute of Technology, and Professor Comstock as administrative assistant, School of Mines and Metallurgy. Professor Bass retired on June 30, 1943 from the headship, Department of Civil Engineering.

Placement—Owing to the small number of graduates and the great demand for technical services, placement no longer presents any difficulties. Professor E. W. Johnson, newly appointed administrative assistant, has taken over the direction of placement from E. S. Loye who accepted a Navy commission.

Deferment—On July 1, 1944, the deferment of all civilian students of technology was terminated. Some of the staff members between the ages 26 and 38 are still subject to deferment.

ESMWT Courses—The so-called ESMWT courses sponsored by the United States Office of Education have been continued under the direction of Professor B. J. Robertson. During the biennium, 7,475 students have received training in 226 different courses.

Naval Mates—Courses which were begun in the summer of 1942 for machinists' mates and electricians' mates after four months attained their full quota of 500 in each. Late in 1943 the course for machinists' mates was terminated and the quota was trans-

ferred to electricians' mates, making a total of 1,000. This course is now in the process of liquidation and in October, 1944, will be terminated.

Engineering Experiment Station—Research work in the Experiment Station has continued with reduced staff. Much difficulty has been experienced in maintaining the staff of younger research assistants because of war demands. Funds have been provided by the Graduate School for researches and bulletins on "Conservation of Fuel"; "Low Temperature Refrigeration"; and "Study of Atmospheric Dust and Methods of Measurement." The American Society of Heating and Ventilating Engineers has contributed funds for two studies: "Air Filter Performance" and "Comfort Conditions." The Insulation Board Institute supports a research on "Application of Insulating Board to Moisture-Proof Conditions," and the Minnesota and Ontario Paper Company on "New Uses of Wood Products." Thirty research projects were investigated and twenty bulletins and reports have been issued. Included are the researches and reports made in the Department of Electrical Engineering.

Mines Experiment Station—The Mines Experiment Station staff now consists of 6 technical staff members and 15 laboratory machinists, mechanics, and the like. It has been very difficult to maintain the non-technical staff at full working strength during the past year because of the high pay scales offered by industrial plants. Without a doubt, the university retirement, insurance, and hospitalization programs have been of the greatest importance in holding the older employees. Work has been slowed down due to the loss of all the younger men and because it has been impossible to replace all of them. Notwithstanding this handicap, 19 carloads of ore samples have been received during the year and the mining companies submitting them have been given reports indicating the methods that can be used for beneficiation. In all, 404 samples have been investigated at the station and in this study, 15,649 assays have been made.

The *Mining Directory of Minnesota* was published in July as usual, and Information Circular No. 4, *Mesabi Taconite—a Study of Concentrating Characteristics* was published in March. Work is continuing on the iron powder investigation with good indication that a small commercial plant will be built on the Range as soon as possible after the war. Taconite investigations are going ahead steadily and satisfactory progress is being made in the concentration of this material. Most of the mining companies in the state are running short of high-grade ore and are deeply interested in taconite concentration. Most of the attention of the staff at the Station has been directed, during the past year, toward some phase of the taconite problem.

North Central Experiment Station of the United States Bureau of Mines—A district office of the United States Bureau of Mines from which its activities in Minnesota, Michigan, and Wisconsin are supervised was established at the University of Minnesota in July, 1942.

Many examinations were made and much exploratory work was done in connection with the development of our resources of essential and critical materials needed for the war effort.

The activities of the North Central Experiment Station of the United States Bureau of Mines were directed largely to investigations pertaining to beneficiation of low-grade rotary ores. Preliminary experiments were conducted on magnetizing in an internally-fired rotary kiln. The results indicate that this method is applicable to many low-grade ores and a ten-ton-a-day experimental unit is being set up for larger scale investigations.

A small pilot plant is being installed in which the reduction of iron oxides by heated mixtures of carbon monoxide and hydrogen will be studied.

Minnesota Tax Commission—The School of Mines and Metallurgy, as in the past, has made all of the ore estimates for the Department of Taxation. Heretofore this service was rendered in accordance with an agreement entered into between the Board of Regents and the Minnesota Tax Commission. The 1943 Legislature, however, made it mandatory upon the University by adding to the university appropriation bill the following statement: "Provided, further, that out of the appropriation herein provided, ore estimates shall be made by the School of Mines at the University of Minnesota, for the Department of Taxation, without costs to said department." During the biennium ended August 31, 1942, the school has examined and made reports on seventy-four properties. These reports involved an aggregate tonnage of 266,047,525 tons of Bessemer, non-Bessemer, and manganese iron ores, constituting a net increase in all properties reported of 77,350,768 tons. The school reported an additional 7,057,171 tons of lean ore material.—S. C. LIND, dean.

COMPARISON OF FALL QUARTER ENROLLMENTS FOR THE
INSTITUTE OF TECHNOLOGY

Course	1940-41	1941-42	1942-43	1943-44
Aeronautical Engineering	546	539	538	216
Agricultural Engineering	38	25	17	4
Architecture	107	94	74	25
Chemical Engineering (including business)	413	438	452	213
Chemistry	106	106	110	49
Civil Engineering	217	206	173	56
Electrical Engineering	313	281	291	140
Interior Architecture	8	2	1	0
Mechanical Engineering	404	402	377	128
Mines and Metallurgy	154	158	128	35
Physics (industrial)	30	23	21	12
Prebusiness	25	18	11	3
Miscellaneous	32*	35*	178	16
Totals	2,393*	2,327*	2,371	897

* These figures constitute changes from those which appear in the 1940-42 Report, p. 85, which were in error.

DEPARTMENT OF AGRICULTURE

Agricultural Experiment Station—The research work of the Agricultural Experiment Station has been carried forward during the biennium under unusual handicaps arising largely out of the impact of the war upon our national needs and occupations. The most serious handicap has been a shortage of well-trained and experienced research workers. In normal times, men and women taking advanced degrees in the graduate school provide a good supply of skilled part-time workers in various research fields. This supply has been reduced almost to the vanishing point. A secondary handicap has been the critical shortage of manual and clerical workers required in caring for crops and animals involved in the various lines of research and in recording and analyzing accumulated data. To meet this emergency teen-age boys and girls have been utilized. Adult women have also been employed where available for work in the experimental plots and fields.

Notwithstanding these handicaps, much progress has been made in advancing most of the important researches under way. While it has been necessary to suspend activities on some projects, new projects urgently related to advised shifts in agricultural production or to new methods of producing, processing, or marketing food products have kept the research work of the station at nearly full tide.

The demand upon the station for information and advice has increased rather than diminished during the biennium. The concerted and sustained effort of producers to increase the production of foods, fats, and fibers has resulted in the introduction of some new crops and the production of other crops in new areas. New enterprises raise new problems and stimulate inquiry and often new researches. Many of these new researches are co-operative and national in scope. Examples that may be cited are investigations of (1) the Russian dandelion (*kok-saghyz*) as a possible source of rubber—conducted in co-operation with the USDA and (2) the production of penicillin, so important in the treatment of human diseases—conducted in co-operation with and under the support of the WPB.

The crop breeding and plant disease control laboratories have continued to develop superior crop varieties, of special importance being Newthatch wheat, and Mars, a promising variety of barley. New fruits continue to come to notice from the fruit breeding farm at Zumbra Heights and are introduced in areas where repeated trials show them to be adapted.

Twenty years ago studies of the effect of close inbreeding of swine in the development of superior strains was initiated at the Southeast Branch Station. That investigation has been widely expanded and is now being conducted as a part of the National Swine Breeding Laboratory with headquarters at Ames, Iowa. As a result of a cross between individuals of the Danish Landrace and Tamworth breeds followed by close line breeding at the North Central Station, a strain has been developed in which are combined the superior qualities of the parent breeds. This strain is now being introduced into the state as the Minnesota No. 1 hog. Its notable characteristics are extreme length of body, plumpness of ham, high fertility insuring large litters, and large milking capacity on the part of the females. The same hybrid vigor noted in hybrid varieties of grain and corn appears to be transmitted in hybrid swine.

Another significant finding has grown out of long-continued studies of milk secretion and the management of dairy cows during milking time. These studies show that by proper stimulation of the cow in preparation for milking, a free "let down" of the milk may be secured, resulting in more rapid milking and well-maintained production.

One of the serious problems of the biennium has been control of insects and of plant diseases spread by insects. Intensive research efforts have yielded information which has enabled the station to assist farmers in keeping reasonably good control over these pests and in protecting their crops from serious loss.

The ability of the Agricultural Experiment Station to serve the people of the state is greatly enhanced by co-operation with the branch stations. These stations serve as additional laboratories for researches and as testing grounds for all crop varieties developed through the plant breeding laboratories. Four of these branch stations are also extensively engaged in the swine improvement project. The Northwest Station plays an important part in the poultry improvement program of research and the Southeast Station is used as a center for a comprehensive corn breeding and testing program.

The publications of the Agricultural Experiment Station continue to meet with popular favor. The fact that several million copies were required to meet the biennium demand speaks well for this branch of agricultural service.

Agricultural Extension—Agricultural Extension has continued to use its resources in assisting farm families to reach WFA production goals for Minnesota. The major programs have been directed towards increasing home food production and preservation; increasing feed supplies to support expanded livestock production; directing 4-H Club work to support war activities; and furnishing needed farm labor. Aided by favorable weather farmers produced a record output of farm products in both 1942 and 1943.

To further the Victory Garden program state and county garden conferences, sponsored by Extension and attended by all agencies interested in this campaign, were held in 1943 and again in 1944. To insure that the garden products once produced would be preserved and utilized in the most efficient manner, the home demonstration staff has continued to use its full resources on the food preservation program. Special food preservation programs were set up in the 51 non-home demonstration agent counties. An accurate survey covering the rural families of the state indicated that for 1943 an average of approximately three hundred quarts of fruits and vegetables were canned per family.

During 1942, and again in 1943, county agricultural agents and members of the specialist staff built their programs around the increases called for in hogs, dairy, and poultry products. Special attention was given also to potatoes, flax, soybeans, hemp, and peas and field beans. Through local leaders, neighborhood meetings, radio, the press, and special publications, farmers were reached in large numbers and, with few exceptions, met the goals set up for Minnesota. During 1944 a special effort was made to further increase milk production.

Late in 1943 it was evident that the expansion in livestock numbers was heading towards a serious feed situation, and by 1944 it was urgent that feed production be increased and some reduction in livestock numbers forthcoming to bring feed and livestock into balance. County agents, therefore, urged farmers to use new varieties of high-yielding feed grains, treat seed grain for seed-borne diseases, use limited available fertilizers on corn, and replace a part of the grain acreage with corn. An intensive campaign reached a substantial majority of the state's farmers through extension media. Culling campaigns for poultry and livestock were pushed aggressively in 1944.

4-H Club work continues to be a major activity of extension workers. The numerous projects have been revised to insure that the efforts of the young people would contribute more directly to the war effort. Altogether, 47,685 boys and girls were enrolled, and the number of individual projects they carried during 1943 exceeded 100,000—the largest project enrollment ever recorded in Minnesota 4-H Club work. Through their projects they contributed materially to farm labor requirements, and to food production. They also assisted through their local organizations in the collection of scrap metal and paper, and in the sales of war bonds and stamps, as well as other organized community war efforts.

The planning and carrying through of the farm labor program has been one of the major wartime responsibilities of the Extension Service. The Farm Labor Act made the Extension Service responsible for the recruitment, training, and placement of farm labor, and the Governor named the director of extension as director, Farm Labor Program in Minnesota. Recognizing that most of the needed help would have to come from within the local communities, county organizations were completed in all counties to receive farmers' requests for help and to recruit local people to meet these needs. Altogether,

104,228 placements were made during 1943 and a similarly large program is anticipated for 1944. As a result of the concerted effort on the part of farmers and townspeople, no crops of importance were lost because of lack of labor.

County agricultural agents were given the further responsibility as the representatives of County War Boards for investigating all deferments of farm workers under the Tydings Amendment. Selective Service Boards have used the information thus obtained in granting agricultural deferments. Farmers have appreciated this expert assistance.

During the biennium, agricultural agents have been maintained in all counties, and in 34 of them home demonstration agents are now serving. Full-time or part-time 4-H Club agents are employed in 64 counties, farm labor assistants in 75, and emergency food production assistants in 22. Emergency food production assistants and farm labor assistants are employed through special funds appropriated by Congress or allocated to Extension by the WFA. While there have been numerous changes in personnel and several vacancies on the state staff have not been filled, the quality of the technical staff has been maintained at a relatively high level. Various staff members have been called upon during the biennium to accept special war assignments in Washington and elsewhere. County extension personnel has also given much time to local war activities sponsored by Civilian Defense and other local groups.

Agricultural Extension maintains close co-operative relationships with all state and federal agencies working with farm people. Progress has been made also in developing constructive working relationships with private industry, especially feed manufacturers, the farm equipment industry, retail lumber dealers, and other groups serving the farm markets.

College of Agriculture, Forestry, and Home Economics—During the biennium the registration in the College of Agriculture, Forestry, and Home Economics continued to decline, dropping to 1,214 in 1942-43 and 780 in 1943-44, or 51.6 per cent below the previous biennium. This was due largely to the reduction in the number of men in the agricultural and forestry curricula and, to a smaller degree, of women in home economics. If inquiries from men in the armed forces is a reliable indication of postwar enrollments, it appears that a rapid step-up in registration will occur following the war.

As an outcome of government subsidization of war veterans through the Veterans Rehabilitation Bill and the Servicemen's Readjustment Act there may be a rapid influx of returned servicemen and women into the college. To facilitate the counseling and training of these students, which will present unique problems, and to provide a working relationship with the Veterans Administration and other agencies dealing with veterans, a procedure for channeling and counseling of veterans entering the college has been adopted and is in operation. A record system has been set up in the college office which includes (1) general information on war veterans, (2) lists of special veterans' advisers, (3) record of applications of admission by war veterans, (4) correspondence concerning veterans, and (5) individual folders for veterans in residence. Leigh H. Harden, assistant to the dean, has been largely responsible for the development and administration of this program.

A faculty committee has been at work the past year studying problems in agricultural education in relation to the needs of ex-servicemen. This committee will make recommendations concerning desirable and necessary adjustments in the present educational programs. Special consideration will be given to (1) curricula on the college level of less than four years in length, (2) the needs and facilities for refresher courses, (3) counseling facilities in the college, (4) college credit for service training and experience, and (5) college relationships to governmental and other agencies dealing with veterans.

A five-year curriculum in technical agriculture leading to the professional degree of agricultural technologist has been established. This will allow a student in any agricultural field to continue special training in various fields. It is offered to those who plan to engage in occupations in the broad field of agriculture and who need an additional year of study to extend their knowledge in their major field, to obtain additional training in other general and special fields in agricultural technology, and to obtain training in other fields such as social science, business, engineering, and applied sciences.

A special committee of the faculty has made a study of the administrative procedures in the college. The committee concluded that the administration of college affairs has proceeded along truly democratic lines within the rules established by the University and that there has been a fair distribution of responsibility between the general faculty, faculty committees, and the administrative officials. Certain changes to improve the operation of the system were recommended to and approved by the faculty.

Schools of Agriculture—The training program of the School of Agriculture at University Farm continued as before with major emphasis on farm and home management

and constructive, worth-while rural living. Individual counseling and guidance is an important part of the whole training program. This is even more true now than in previous years since, in October, 1943, the minimum age for entrance was lowered from 17 to 15 for the duration. Previous to the war the average age of the boys in attendance was a little less than 20 years and, for the girls, 19 years. The attendance was greatly decreased by the war because this age group was not available as students. Boys of 17 were kept on the farm so that they would more likely be allowed to remain there when they reached draft age. Girls of 17 and over went into well-paying defense work. Consequently, the advanced classes were practically wiped out. The effect of this increased enrollment of younger freshmen will not show in the graduating class until March, 1946. Before that time a return to a minimum age of 16 or 17 for entrance may prove advisable.

A new curriculum was offered in rural building, beginning with the fall term, 1943. This course is designed to provide a practical training for the young man with a farm background so that he may serve as a builder of farm buildings.

At the West Central School, the 1942-43 registration was 311. This increased, in 1943-44, to 390. A trend toward the registration of younger students is in evidence here also, partly in consequence of the effect of the Selective Service Act. Instructional programs have been adapted to current needs of agriculture.

At the North Central School the length of the school year was reduced somewhat, and the school week was extended by holding classes six full days instead of five. Thus the full schedule of instruction was maintained. One effect of the war was to reduce the average age of the student by about one year. The student body has displayed a seriousness of purpose, however, and accomplished good school work.

The Northwest School has maintained a large enrollment—382 boys and girls in 1942-43, and 400 in 1943-44. All facilities, both dormitory and classroom, are crowded to capacity. Also, the average age of students is lower, as in the other schools. A strong parents association has been functioning in recent years, and its last two annual meetings have attracted an average attendance of 500 parents. Summer project work continues to constitute an important phase of the instructional program.

Agricultural Short Courses—During the past two years several short courses were not held due to the exigencies of the war. These included Artificial Insemination, Better Seed, Mastitis, Seed Inspectors, Commercial Florists, Egg Grading and Marketing, Farm Structures, Frozen Foods, Cattle Feeders, Food Inspectors, and Farm and Home Week.

Among the successful new short courses was one on Farm Income Tax problems which enrolled 328 in 1943. Most of the registrants were bankers. The course was given in co-operation with the Minnesota Bankers' Association, the Bureau of Internal Revenue, and the State Income Tax Department. It will be offered again in October, 1944.

The traditional Farm and Home Week was held in 1943 with an attendance of 1,313, but was cancelled for 1944 due to lack of housing, food service, and classroom facilities at University Farm. Special programs were given by radio, printed announcements being sent to former Farm and Home Week registrants. Although the radio version served as an emergency measure, it was an ineffective substitute. Consequently the former program will be resumed as soon as possible.

Short courses for agricultural instructors, arranged at the request of the State Department of Education, were projected in welding and forging, as related to the repair of farm machinery, tractor repair and servicing, and framing farm buildings; also, a course for training creamery workers, at the request of the War Manpower Commission. Enrollment was not sufficient to justify offering any of them.

War-related short courses during the biennium were: Flock Selecting Agents, Advanced Creamery Operators, Swine Feeders, Animal Nutrition, Cheesemakers, Garden Leaders, Horticulture, Farm Help, Cheese Quality, Women Farm Workers, Logging and Sawmilling, Seed Inspectors, 4-H Club Leaders, High School Congress, Beekeepers, Agricultural Instructors, and Farm and Home Week.

In addition, the director, Agricultural Short Courses, serves also as liaison officer between the General Extension Division and the University Department of Agriculture in arranging for correspondence study courses and extension classes in agriculture, forestry, and home economics. Ten correspondence study courses, three of which are being revised to meet the requirements of the Armed Forces Institute, have been prepared and are being offered by the Department of Agriculture. Thirteen extension classes have been offered also.

During the biennium, 53 short courses and conferences were held, including 18 new ones. These 53 courses had a total attendance of 9,571. In addition, 25 extension classes and correspondence study courses were offered each year, 4 of the latter having been prepared during 1942-44.—CLYDE H. BAILEY, *dean and director*.

LAW SCHOOL

Registration—The registration which had fallen markedly in the last biennium continued to decrease. The total registration for the academic years was 140 in 1942-43, and 76 in 1943-44. The progressive effect of the Selective Service Act and the war on the Law School is shown by the successive fall quarter registrations during the last five years, beginning with 1939, of 338, 295, 227, 139, and 64, respectively. In the spring quarter of 1944 the registration was down to 53. This will probably prove to be the low point, as there are now no men in the school eligible for military service, and some discharged service men are returning to school. The registration for the law schools of the United States fell from 34,539 in the fall of 1939 to 6,422 in the fall of 1943. On the latter date 21 per cent of the registrants were women. In the day schools in the fall of 1943 the largest registration was 118, and the lowest, 2; with this school ranking sixth. Thirteen schools closed for the duration, but 146 continued in operation.

Law Library—In the biennium, 10,639 volumes were added to the law library, bringing the total after withdrawal of obsolete books to 137,778. Of the additions, 7,542 volumes were acquired by purchase, 363 by exchange, and 2,734 by gift. More than 2,000 volumes were bound or repaired, and a large number of pamphlets were bound and lettered. Notable among the acquisitions are a valuable collection of Russian material aggregating 1,500 volumes of laws, codes, judicial decisions of the governing senate, and texts; additional continental material including an almost complete set of the famous *Tractatus Universi Juris* published in Venice in the sixteenth century; Latin-American statutes, codes, periodicals, and texts, bringing our collection of such materials to about 1,000 volumes. Our Anglo-American collection of reports, periodicals, and statutes has been well maintained, and it continues to rank among the best in law school libraries.

Professor Edward S. Bade was appointed law librarian in 1943. To carry on the work of the former law librarian, Arthur C. Pulling, now director of the Harvard Law Library, is no light task, but Professor Bade is accomplishing it with great success. His knowledge of the law library and of law books, his capacity for planning and for detail, and his enthusiasm for developing a fine law library distinctly qualify him for this work. The law library needs additional stackroom space. It also needs a larger staff. Many books remain uncataloged, and opportunities to obtain donations of many official publications as they are published are lost because of insufficient personnel to attend to the matter.

War Adjustments—The changes made to meet the conditions caused by the war, stated in my last report, continue in effect. The curriculum was reduced to the minimum necessary for the degrees offered. Subjects were offered in alternate years where practicable. At the close of the biennium four members of the faculty were on full-time leave, one was on half-time leave, and one took on the duties of law librarian. Thus the teaching staff in terms of full time was reduced from eleven to six. The reduction of the teaching staff was proportionately greater than the reduction found possible in the curriculum, and the teachers had to carry more hours of teaching, and to some extent in courses outside of their own specialties. In addition all the full-time teachers have been rendering various services to governmental agencies such as the WPB, WLB, and OPA.

Bar Examinations—Two tables giving data on the state bar examinations follow. Table I is primarily designed to show what proportion of the candidates is ultimately successful. The years 1940 and 1941 were chosen for this study in order to allow time for repeated attempts. This study was restricted to candidates who first appeared in those years, and the records of unsuccessful candidates were examined down to August, 1944, after which they are not likely to appear for further examinations. The table shows that 95 per cent of the candidates from this school, 67 per cent from other schools, and 80 per cent of all candidates passed the examinations. The proportion not passed was lower than in preceding periods. It was, in the years 1936-37, 27 per cent, in 1938-39, 22 per cent, and in 1940-41, 20 per cent. Table II shows the record of all candidates in 1942, 1943, and 1944, regardless of when they first appeared. It shows that 88 per cent of the candidates from this school, and 67 per cent of other candidates, were successful in their first attempt. The graduates of this school also have an excellent record of success in the bar examinations of other states. No report of failure has been received in the last twelve years, although failures for the United States average about 45 per cent of all candidates.—EVERETT FRASER, dean.

TABLE I. RECORD OF CANDIDATES TAKING MINNESOTA BAR EXAMINATIONS FOR THE FIRST TIME IN 1940 AND 1941, IN ALL EXAMINATIONS TAKEN BY THEM TO AUGUST 31, 1944

Candidates' Appearances	Candidates from University of Minnesota			Candidates from Other Law Schools			Totals		
	All	Passed	Failed	All	Passed	Failed	All	Passed	Failed
First	122	99(81%)	23(19%)	132	57(43%)	75(57%)	254	156(61%)	98(39%)
Second	20	15(75%)	5(25%)	51	21(41%)	30(59%)	71	36(51%)	35(49%)
Third	2	2(100%)	0(0%)	14	9(64%)	5(36%)	16	11(69%)	5(31%)
Fourth				2	0(0%)	2(100%)	2	0(0%)	2(100%)
Fifth				1	0(0%)	1(100%)	1	0(0%)	1(100%)
Total passed		116(95%)			87(67%)			203(80%)	
Not passed to August 31, 1944		6(5%)			45(33%)			51(20%)	

TABLE II. RECORD OF ALL CANDIDATES TAKING MINNESOTA BAR EXAMINATIONS IN 1942, 1943, AND 1944

Candidates' Appearances	Candidates from University of Minnesota		Candidates from Other Law Schools		Totals	
	All	Passed	All	Passed	All	Passed
First	26	23(88%)	55	37(67%)	81	60(74%)
Second	4	4(100%)	20	7(35%)	24	11(46%)
Third	2	1(50%)	9	1(11%)	11	2(18%)
Fourth			3	0(0%)	3	0(0%)
Fifth			2	1(50%)	2	1(50%)
Sixth			2	1(50%)	2	1(50%)
Total passed		28		47		75

MEDICAL SCHOOL

The primary functions of the Medical School are: teaching, research, and the provision of medical care for the patients in the University Hospitals and the Out-Patient Department. Teaching responsibilities include the provision of professional training not only for physicians but also for nurses, medical, x-ray, and physical therapy technicians, and various types of public health personnel. In addition, the Medical School provides instruction in anatomy, bacteriology, physiology, physiological chemistry, pathology, pharmacology, and preventive medicine and public health to students of other colleges, schools, and departments. The students in these groups far exceed the number actually enrolled in the Medical School and constitute a major portion of its teaching responsibility.

Medical Education During the War—In time of war medical education becomes an exceedingly important war activity. Medical officers, nurses, and other specialized health personnel must be trained for the armed forces; medical schools are urged to investigate special health and medical problems of military importance; and medical scientists are demanded for special assignments with the Army and Navy. As a result, the activities of the Medical School have reached an all-time high during the past biennium, with both teaching and research devoted directly and almost exclusively to the war.

The Accelerated Curriculum—In support of the National Defense Program the medical faculty voted in 1941 to accelerate the education of medical students by discontinuing the usual summer vacation and by increasing entering classes by approximately 10 per cent. This increased the annual teaching load for medical students by more than 40 per cent. Limited laboratory and clinical facilities have made it difficult to maintain the quality of medical training during this period. On the other hand, this program has resulted to date in the graduation of an extra class of approximately 120 medical students, practically all of whom are already in Army or Navy service.

Army and Navy Programs for Medical Students—During the academic year of 1942-43 physically qualified medical students were eligible for commissions as second lieutenants in the Army Medical Administrative Corps or as ensigns (class HV-P), in the Navy. These commissioned students were on inactive status and attended the University as civilians. They were, however, removed from the jurisdiction of Selective Service. All but a few of the eligible medical students applied for and were granted these commissions. The others were deferred by Selective Service.

On July 1, 1943, with the establishment of the ASTP and the Navy College Programs, students who held appointments in these services were placed on active duty. The freshman and sophomore army students were required to live in barracks. All others were given allowances for subsistence and permitted to make their own living arrangements. These students are in uniform under military jurisdiction with tuition, books, instruments, and the like, provided by the respective services.

The commanding officers of both the Army and Navy units on the campus have been most co-operative and insistent that military activities should not interfere with medical education. One formation requiring about fifteen minutes each day and approximately two hours of drill on Saturday afternoon constitute the usual requirements. There is some opinion, doubtless justified in special instances, that these military programs have handicapped students in their medical work. For most students, however, the satisfaction of being in uniform and the relief from the necessity of earning all or part of their expenses have been distinctly helpful.

War Service by Medical Faculty—Since the beginning of the war a total of 107 leaves of absence (exclusive of nursing) for military service have been granted to members of the Medical School faculty. These individuals are serving in all parts of the world but special concentrations of Minnesota personnel occur in several areas. United States General Hospital Number 26 which was organized and staffed by the Medical School cared for more than ten thousand patients during the North African and Sicilian campaigns. This hospital was transferred to Italy in November, 1943. The University of Minnesota Medical School has also provided the professional staff for Station Hospital Number 31 which for nearly two years has been in New Caledonia. In Oak Ridge, Tennessee, a 750-bed general hospital is being staffed largely by University of Minnesota physicians. Highly commendatory reports concerning the quality of service rendered by all of these hospitals have come to the Medical School. In addition, faculty members of the Medical School are rendering special war services on many national boards and committees.

At the request of the National Research Council and the Office of Scientific Research and Development, special investigations of medical problems of military importance, confidential in nature, have been carried out during the past biennium by various departments and individuals of the Medical School. Special courses for medical officers have

been conducted at the request of the Surgeon General of the Army and special courses for nurses at the request of the United States Public Health Service.

Curriculum Changes—A major change in the medical curriculum was instituted at the beginning and put into complete operation during this biennium. For approximately twenty years the senior year of the medical course has been devoted to clerkship teaching, in which individual students, under supervision, serve as physicians to patients in the Out-Patient Department and Hospital. This is accepted as a more effective method of medical instruction than demonstrations or clinics. Clerkship teaching, however, requires special techniques and a large instructional staff. During the past biennium, this clerkship teaching has been extended to include the junior as well as the senior year. The attitude and increased interest on the part of students is evidence of its value. In order better to prepare medical students to meet the special health and medical problems of the war two special courses, war medicine and tropical medicine, have been added to the curriculum of the senior year.

War-Time Problems of the Medical School—The loss of faculty members combined with an increased teaching load, limited facilities, and unavailability of scientific equipment and service personnel are creating serious problems for the Medical School. Efforts are made to meet individual situations as well as possible when they arise. There is, however, little prospect for any relief or over-all improvement until the end of the war.

Postwar Problems—The demand for accelerated medical training on the part of students whose education has been interrupted by the war will probably make it desirable to continue the accelerated program for at least several years after the war. For such students, with superior qualifications, the reduced war-time entrance requirements should be continued. The number of students who can be accepted will be limited in the future as it has been in the past by available facilities. In fact, an expansion of facilities is necessary for the proper training of the number of students now enrolled.

An even greater problem is the necessity for the provision of refresher and graduate courses for the many physicians from this area who will be returning after the war from military service to civilian practice. Surveys indicate that a large proportion of these physicians feel the need for additional work in the basic sciences and clinical fields. Consideration is being given to the development of special programs for these physicians, several hundred of whom have gone directly from internships into military service. For such courses special facilities and teaching staff will be required.

Graduate Medical Education—The training of physicians in the specialties of medical practice, such as surgery, psychiatry, and pediatrics, has been seriously interrupted by the war. Normally, three to five years of graduate work are required for specialty training in this institution. Before the war between 100 and 150 graduate students were enrolled in the various departments of the Medical School. This number has been reduced by approximately 40 per cent. Since the graduate students in the clinical departments carry a considerable portion of the responsibility for the care of patients in the University Hospitals and Out-Patient Department, this drastic reduction in their number places an additional load upon the depleted teaching staff.

Special Projects—During the biennium several important special projects have been inaugurated and others continued. Prominent among these are: (1) Cancer Research. For a number of years increasingly important investigations in the field of cancer have been conducted in the Medical School. During the biennium this work has been co-ordinated and augmented by the establishment of a professorship of cancer biology, with funds provided for a five-year period by the Citizens Aid Society of Minneapolis. Cancer research funds have been made available by a special legislative appropriation and by grants from the Jane Coffin Childs Memorial Fund for Medical Research. Fellowships for the training of physicians in cancer diagnosis and treatment have been provided by the National Cancer Institute. The Citizens Aid Society of Minneapolis has continued its annual grant of \$10,000 for the support of the teaching, research, and service program of the Cancer Institute of the University Hospitals; (2) Poliomyelitis Research. A special grant of \$320,000 for a five-year period has been provided to the Medical School by the National Foundation for Infantile Paralysis for support of "Research in Physiology as Related to Poliomyelitis and Physical Medicine." Studies are in progress under this program; and (3) The Psychiatric Clinic for Children. This clinic, which has been supported in part by the Stevens Avenue Home of Minneapolis and the Commonwealth Fund of New York, has continued to carry an important teaching function in the University and to render valuable service to the community. During the biennium this clinic was incorporated into the university organization as an integral part of the departments of Pediatrics and Neuropsychiatry.

Summary—The Medical School of the University of Minnesota is recognized as one of the leading medical schools in this country. The faculty is exceptionally able and active, although in some departments insufficient for its teaching and service responsibilities. With the expansion of the Medical School the laboratory facilities of most departments have become inadequate. The new buildings which are proposed as the Mayo Memorial and the School of Public Health are urgently needed, as are funds to remodel the laboratories in the older medical school buildings. Additional facilities for clinical teaching must be provided if classes of present size are to be continued. Part of this need can be met by providing additional full-time faculty members who will devote themselves to the development of teaching at the Minneapolis General Hospital. The responsibility of the Medical School for the instruction of students in other colleges represents a large and increasing part of its teaching load. This must be recognized and additional staff provided to carry it. During the past biennium the Medical School has carried the largest teaching load in its history. This has been done with a reduced staff, and in addition to special war researches and other war services rendered by the faculty.—HAROLD S. DIEHL, M.D., dean of the Medical Sciences.

SCHOOL OF NURSING

Wartime Activities—The chief wartime activity of the school has been concerned with meeting the great need in these war years for nurses in military, industrial, and civilian life. In response to this need the faculty of the school has bent every effort to the task of admitting increased numbers of qualified students (basic and graduate) and of maintaining a high type of teaching and supervision. Classes have been admitted quarterly rather than twice a year as in former times. The increase in numbers of admissions has grown from 120 in 1939 to an estimated 500 in 1944. The enrollment has increased steadily from 285 in 1939 to 982 in 1944. College graduates may enter the school any quarter but have a special class in June; five-year students enter fall, winter, and spring, but have a special class in the spring; qualified high school graduates enter fall and winter.

Other wartime activities have been numerous. Some members of the faculty have taught classes in home nursing and first aid. Many have assisted in the teaching and supervision of auxiliary personnel, among them the Red Cross Volunteer Nurses' Aides. Some have served as members of local, state, or national nursing committees, organizations, or war councils. All faculty members have participated in some measure in war work both within and outside the school.

Federal Aid—Federal aid, as reported in the 1940-42 biennium reports, continued to June 30, 1943. Since July 1, 1943 (in accordance with the provisions of the Bolton Act, Public Law No. 74, 78th Congress) the United States Public Health Service has provided financial assistance for three programs—student, postgraduate, and refresher. These are: (1) The United States Cadet Nurse Corps (student program), which was set up under provisions of the Bolton Act. Its membership is open to all basic students regularly enrolled in good standing in (a) the nursing portion of the five-year curriculum (thirty months), (b) the three-year curriculum (thirty-six months), and (c) the two and one-half year curriculum (thirty months) for college graduates. To join the Corps a student must meet the entrance requirements of the School of Nursing and agree, health permitting, to remain active in nursing for the duration of the war. The entire cost of the student's education while she is in the School of Nursing is paid through the United States Public Health Service. In addition the cadet receives stipends ranging from \$15 to \$30 for personal expenses. The University has an enrollment of 602 in the Corps, the largest enrollment of any school in the country; (2) Postgraduate, under which the graduate nurse who needs additional academic and professional preparation receives federal aid for maintenance and for university tuition and fees; and (3) Refresher, a program designed to prepare the graduate inactive nurse for immediate service and under which federal funds provide for instructional costs.

Programs—The assistance which federal aid has brought to the University is reflected in the services and programs it has made possible: U. S. Cadet Nurse Corps instruction, a full-time guidance director, a co-ordinator experienced in obstetric nursing, an advanced course in psychiatric nursing instruction, summer programs to prepare faculty members for schools of nursing, assistance in preparing bulletins, leaflets, brochures, folders and pamphlets, and the conduct of an experiment in rural hospital experience. Federal aid under the Lanham Act has made possible additional housing and instructional facilities in both the Charles T. Miller and the Minneapolis General Hospital residences. Similar funds have been requested for an addition to Powell Hall.

Faculty—Too high tribute cannot be paid the faculty which has maintained high standards for the teaching and supervision of students' learning and of patient care. These standards have obtained in spite of doubled admission dates, trebled admissions and enrollment, accelerated and new programs, frequent change of faculty personnel and almost entire loss of graduate nurses. Several faculty members have had leave for war work elsewhere. Most of the faculty have continued study of some sort even in the face of our war program and a few have been able to carry graduate work.

Curriculum—The phenomenal increase in enrollment in the School of Nursing during recent years has been accompanied by continuous adjustment of the curriculum. Some of the curriculum changes have been directly associated with the increase in size of the student group; other developments have been in response to changing objectives in nursing education and emergent social needs. Some of the more important changes are: (1) Condensation of the organized instruction and basic clinical experience into a thirty-month period, and acceleration of programs; (2) setting of extra admission dates in basic professional program; (3) expansion of clinical facilities; (4) redistribution of former emphases and incorporation of new emphases; (5) miscellaneous changes in clinical courses and experiences; (6) planning for senior cadet period; and (7) revision of variants in the nursing education major.

Faculty Committee Functions—The chief functions of the faculty are carried by committees. Of these committees, some twenty-nine have been active in the biennium. Perhaps their most significant work has been reported under Federal Aid and the Curriculum.

Students—Students in this war, as in the last, have contributed in splendid fashion to the task of providing nursing for a nation at war—they have proved that what they wish is a task worth doing. The numbers, both in admissions and in enrollment, have almost skyrocketed in the war years as is shown by the following figures for the basic curriculum as of June 1, 1944.

	1939	1940	1941	1942	1943	1944
Admissions	120	166	188	269	390	500 (estimated)
Enrollment	285	287	300	410	592	778

The enrollment in the school has increased steadily, reaching 982 on June 1, 1944—the largest of any school in the country. Of this number 778 are university undergraduates, 139 are affiliating undergraduates, and 75 are graduate nurse students.

Studies—During the war many changes have been inaugurated in our curricula and several new programs have been established. Special reconsideration at this time is needed, however, of all curricula. Modification (based on scientific study) is needed to include a broader concept of professional preparation. A cost study of the nursing service rendered by students and of their nursing education is needed urgently in this interim period to serve as a basis for decision regarding the kind and amount of instruction needed in the School of Nursing now and in the postwar period. It will help also in the preparation of a postwar budget adequate to attract and retain adequate faculty personnel.

Graduate Study—Increasingly, graduate nurses, both with and without Bachelor's degrees, have been turning to the University of Minnesota for graduate work. We can expect a continued increase in the postwar period. The needs of graduate nurses returning from military service will be vast. The School must be ready to meet their needs with the kinds of programs the health and welfare of our society demand.

Louise M. Powell—On October 6, 1943, occurred the death of Louise M. Powell, director of the school from 1910 to 1924. The Louise M. Powell Hall, the first of the university buildings to be named for a living person, constitutes a recognition of her contribution to the university education of the nurse. It stands as a beautiful and lasting tribute to her.

Anniversaries—During the biennium the school celebrated its thirty-fifth anniversary. There was no special function. Instead, students and staff devoted all their energies to the war effort. More recently, the faculty began preparations for the fortieth anniversary by appointing a three-member committee.—KATHARINE J. DENSFORD, *director*.

PUBLIC HEALTH TRAINING CENTER

Anniversary—The 1942-43 academic year marked the completion of the eighth year of the Public Health Training Center at the University of Minnesota. This Center was made possible through a grant from the United States Public Health Service to the Minnesota Department of Health under the Social Security Act, and a joint appropriation by the University.

Because of the war, no physicians took graduate work in public health during this biennium, and only an occasional public health engineer. In contrast, the continued high enrollment in public health nursing has been gratifying. The University of Minnesota is the only school giving a course in public health nursing in which the enrollment has increased during this biennial period. More public health nursing students receive their Bachelor's degrees in public health nursing at the University of Minnesota than from any other American university. Individuals enrolled during the biennium totaled 694. They came from 28 states, and from Canada, Ireland, and Puerto Rico.

Staff—In July, 1942, Dr. Gaylord W. Anderson, head of the department, was called to military service in the Office of the Surgeon General in the War Department, Washington, D.C. In his absence many of the courses which he taught have been given by Dr. Haven Emerson and other visiting professors. In September, 1943, George Pierce, in charge of the public health engineering teaching, entered the Army and is also stationed in the office of the Surgeon General in Washington, D.C. The teaching in this field has been done by H. A. Whittaker, clinical professor and director of the Division of Sanitation, of the State Health Department and by Richard G. Bond, of the State Health Department of the State University of Iowa.

Events—Significant events during the biennium have been:

1. Decision of the Board of Regents to authorize the expansion of the Department of Preventive Medicine and Public Health into a School of Public Health.
2. A gift of \$500,000 to the Board of Regents from the Mayo Properties Association for the expansion of the School of Public Health.
3. The addition of a full-time associate professor to develop courses in health education in the department as well as in the College of Education.
4. Provision for tuition and maintenance stipends for public health nurses under the federal nurse training, or so-called Bolton Act.
5. The establishment of an advisory committee for the course in public health nursing, composed of representatives from the state departments of health in Minnesota, North Dakota, South Dakota, Nebraska, Iowa, Wisconsin, and Missouri and representatives from other health agencies to which the students are sent for field training.
6. Courses in industrial health problems and health education, were given for the first time during this period. In addition, advanced training in supervision for public health nurses has been expanded. During the Summer Session of 1943, a two-week workshop in supervision was held which was attended by 53 students.
7. Field training facilities have been expanded through the co-operation of the St. Louis County (Missouri) Health Department and the Rochester (Minnesota) City Health Department.

Appreciation—Special mention should be made of the assistance furnished by the staff of the Minnesota Department of Health, Minnesota Department of Social Welfare, Minneapolis Community Health Service, St. Paul Family Nursing Service, Des Moines Public Health Nursing Service, Omaha Visiting Nurses Association, city health departments of Duluth, Minneapolis, St. Paul, and Rochester, state health departments of Iowa and Wisconsin, as well as many county nursing services in these states.—RUTH E. BOYNTON, M.D., acting head.

UNIVERSITY OF MINNESOTA HOSPITALS

In-Patient Department—The number of patients admitted for the year 1942-43 was 9,020 and for 1943-44, 8,960; total number of days of hospital treatment aggregated 131,393 and 139,432, respectively; average number of days per patient stay in the hospital was 14.6 and 15.6; deaths were 373 and 366; percentage of post-mortems obtained was 69.7 and 81.7; daily average number of patients was 359.9 and 382; and surgical operations performed during each year aggregated 5,488 and 6,155.

Out-Patient Department—The Out-Patient Department has been seriously affected during the war period by the lack of transportation, most patients being brought in by automobile. The number of visits to the Out-Patient Department aggregated 73,380 in 1942-43 and 68,902 in 1943-44.

General Remarks—The In-Patient Department had a slightly higher number of hospital days care and the Out-Patient Department had a slightly lower attendance record than in previous years due to the general war situation.

The X-Ray Therapy Department gave a total of 11,417 treatments in 1942-43 and 10,029 in 1943-44. Through the generosity of the Citizens' Aid Society this department now has new and adequate equipment which adds immeasurably to the capacity of the department and has greatly reduced the waiting time for service.

The Psychopathic Hospital admitted 280 patients in 1942-43 and 251 in 1943-44. These patients used a total of 9,868 patient days the first year and 9,561 patient days the second year of the biennium.

IN-PATIENT DEPARTMENT SUMMARY

	1942-43	1943-44
Total patients admitted		
Private	1,171	1,300
Per diem	1,211	1,188
Free		
Eustis Hospital	209	120
Teaching and research	310	165
Charity	145	11
Staff	342	281
County	3,715	3,700
Health Service	1,506	1,810
Psychopathic		
Private	211	166
Per diem	27	33
University group hospitalization		
Private	42	52
Per diem	98	106
Per diem	33	28
Totals	9,020	8,960
Total patients treated (discharged)		
Private	1,114	1,270
Per diem	1,161	1,138
Free		
Eustis Hospital	258	155
Teaching and research	314	168
Charity	149	17
Staff	318	281
County	3,752	3,705
Health Service	1,469	1,834
Psychopathic		
Private	235	202
Per diem	25	35
University group hospitalization		
Private	33	39
Per diem	101	109
Per diem	33	30
Totals	8,962	8,983
Total days hospital care		
Private	12,702	15,899
Per diem	15,121	18,410
Free		
Eustis Hospital	7,078	6,202
Teaching and research	4,620	3,156
Charity	1,888	199
Staff	1,934	1,561
County	69,661	73,656
Health Service	7,328	9,296
Psychopathic		
Private	7,494	7,125
Per diem	1,440	1,283
University group hospitalization		
Private	934	1,153
Per diem	905	1,173
Per diem	288	319
Totals	131,393	139,432
Average days per patient		
Private	10.8	12.2
Per diem	12.4	15.5
Free		
Eustis Hospital	33.9	51.7
Teaching and research	14.9	19.1
Charity	13.0	18.1
Staff	5.7	5.5
County	18.1	19.9
Health Service	4.8	5.1
Psychopathic		
Private	35.5	42.9
Per diem	53.3	38.8
University group hospitalization		
Private	22.2	22.2
Per diem	9.2	11.1
Per diem	8.7	11.4
Average length of stay per patient	14.6	15.6
Daily average number of patients		
Private	34.8	43.6
Per diem	40.4	50.4
Free		
Eustis Hospital	19.4	16.9
Teaching and research	12.7	8.6
Charity	5.2	.5
Staff	5.3	4.3
County	190.9	201.8
Health Service	20.1	25.5
Psychopathic		
Private	20.5	19.5
Per diem	3.9	3.5
University group hospitalization		
Private	2.6	3.1
Per diem	2.5	3.2
Per diem .....	.8	.9
Daily average census for entire hospital	359.9	382.0

Under the University Group Hospitalization plan we admitted 134 patients in 1942-43 and 139 in 1943-44. These patients spent a total of 1,193 patient days in 1942-43 and 1,492 patient days in 1943-44.

Appreciation—The Administration of the Hospitals wishes to thank the many generous friends who helped to maintain the services; the Citizens' Aid Society for their continued support and their additions to the X-Ray Therapy Department; the University Faculty Women's Club who have continued their generous efforts in behalf of the patients; the Crippled Child Relief for its assistance to the patients; the school children of the state and the Children's Club group who have been thoughtful and generous in their gifts to the patients; the Traffic Club who again during the past biennium gave splendid Christmas gifts, entertainment, and cheer to all of the patients. Thanks is due especially to the Minneapolis chapter of the American Red Cross for its aid to the Hospitals during this period of emergency and great shortage of help. Without the help of the Nurses' Aides, Nutritionists' Aides, and Gray Ladies the Hospitals would have faced a serious crisis in taking care of the patients during this war period.

Finally, to all the loyal members of the professional and service staffs, the superintendent wishes to extend the appreciation of the Hospitals for their loyal devotion to duty and considerate care of the patients.—RAY M. AMBERG, *superintendent*.

SOCIAL SERVICE DEPARTMENT OF THE UNIVERSITY OF MINNESOTA HOSPITALS

Social Case Work—Social work for neuropsychiatric patients is included in the first year but not the second because social work for these patients is being reorganized in relation to the department of neuropsychiatry which was created last year, and which we expect will evolve a somewhat different method of interpreting social services than that which is applicable elsewhere in the hospital. The following report gives figures relative to case work services rendered by nine social workers in the first year and seven in the second.

	1942-43	1943-44
Total number of intensive cases.....	1,489	1,126
Average monthly case load for the department.....	432	321
Average monthly case load for each social worker.....	48	46

Unrecorded Services—Many patients need only one or two social services, and so do not require intensive social study and care. Consequently, many more social services were rendered than those which are expressed in terms of intensive case work. These services are summarized as follows:

	1942-43	1943-44
Reports to other social agencies.....	2,861	1,571
Patient helped to reach another social agency.....	624	250
Referred by University Hospitals regarding clinic fees.....	54	63
Advice or interpretation to patient or family		
By conference.....	6,469	4,095
By letter.....	1,900	1,207
By visit.....	5	
Discharge arrangements for hospital patients.....	2,819	2,500
Board and room arrangements.....	445	391
Nursing home placements.....	1,171	900
Transportation arrangements.....	257	153
Totals.....	16,605	11,130

Development of the Medical Social Program—There have been many new doctors, nurses, and social workers within this period. Learning to work together has involved interpretation in the social area of the patients' care, and the place of the social worker in relation to the doctor and the patient in order to sustain the work at the level of previous years. New activities involved greater service to patients admitted to the hospital from maternity homes; the grouping of gastrointestinal surgery patients in one nursing home for preoperative diets; and increased attention to the medical social care of aged patients irrespective of the diagnosis.

Participation with Other Community Agencies—New personnel in community agencies has required explanations of established work relationships, while current developments have necessitated new policies. The Division of Social Welfare has helped us to extend service to patients admitted to the hospital from maternity homes, but more joint planning is needed in this area. The Bureau of Child Welfare has received our appeal for more adequately supervised nursing homes for sick children, and it is hoped that better facilities will be possible for such patients, although there is a general dearth of boarding

homes for children. Medical social care of aged patients is often necessary regardless of the diagnosis, and we have consulted the Bureau for Public Assistance concerning some of the problems of Old Age Assistance recipients. The vocational rehabilitation of handicapped people has afforded many opportunities for co-operation with the state agency especially handling that work, and it is expected that this activity will increase through the expanded program of the Division of Vocational Rehabilitation. We have also worked closely with the agencies for the care of the blind and the visually handicapped. We have continued with little change our co-operative relationships with such social agencies and institutions as the Farm Security Administration, county nurses, schools, and tuberculosis sanatoria. A new activity has been participation with Selective Service in determining the physical and emotional health of drafted men, if these men or their parents or siblings have medical records on file at the University Hospitals. Three hundred seventy-nine inquiries were received and reported on, though many of these reports were brief and negative.

Educational Services—We have worked out an added block of experience in participation with the School of Social Work, so that our graduates will be able to work with problems in social administration as well as in social case work. Services to the School of Nursing have increased as the nursing supervisors have asked for more interpretation regarding the social problems found in certain patient groups. Lectures have been given to obstetrical and pediatric nurses. Two lectures are given to each new class of nurses on social aspects of the patients' care; and one lecture a year to hospital librarians, physiotherapists, and public health nurses. Committee activity in professional organizations has continued.

Research—The department has neither the funds nor the personnel to make independent studies, but we have contributed to two national studies conducted by the American Association of Medical Social Workers. They investigated the effects of the war on the availability of medical social work personnel and on medical social work practice.—FRANCES M. MONEY, *director*.

SCHOOL OF DENTISTRY

Accelerated Course—Dentistry students are required to attend four quarters a year, to help meet the shortage of dentists and to provide dentists for the armed forces. Thus, the four-year curriculum is completed in three calendar years. Freshman classes were admitted every nine months—September, 1942, June, 1943, and March, 1944. The next class enters in January, 1945. Requirements for admission and graduation are being maintained at the prewar level and conform to those stipulated by the Council on Dental Education of the American Dental Association. The Army and the Navy requirements for a commission in the Dental Corps include graduation from an approved school of dentistry, license to practice in some state, and membership in the American Dental Association. The schools of dentistry have agreed that they will decelerate the course as soon as the military programs are discontinued.

Registration—Attendance has increased during the biennium and for 1943-44 was 335. About 60 per cent of the students are in the ASTP and 30 per cent in the Navy V-12. The remaining 10 per cent are attending as civilians either through continued deferment or because they are physically disqualified for service.

Military Leaves to Faculty—Four full-time and four part-time faculty members have been granted leaves for service in the Dental Corps of the armed forces. The teaching services of these men have been difficult to replace and the faculty deserves high commendation for the additional time and effort they have given in order to carry on the accelerated program.

Graduate Education and Research—Graduate students are fewer, but an increase is expected following the war. The research project in orthodontia has continued and is now established upon a permanent basis. In the biological-chemical research laboratory, several projects have been continued: a study dealing with fracture healing and disuse atrophy of bone—financed by the Josiah Macy, Jr. Foundation; continuation of the grant of the American College of Dentists; and a major study in connection with the clinical application of fluorides and quinones in dentistry as a preventative of dental caries. In four Minnesota communities the United States Public Health Service has assisted in making studies of the prevalence of dental caries and the effect of topical applications of fluorine as a means of reducing their incidence. Reports on three studies have already been published and a fourth will appear within a short time.

Postgraduate courses—The popular refresher or short courses for practitioners have been continued. The nine courses offered enrolled 390 dentists. In the postwar period a

greatly increased demand for such courses is expected and they will be planned to meet the needs of dentists who have been discharged from the service and who wish to resume or to establish themselves in private practice.

In conjunction with the Minnesota State Dental Association, a questionnaire has been sent to all Minnesota dentists now in service in an attempt to determine what courses, if any, they would be interested in attending before they resume practice. A large proportion want two or more courses dealing primarily with clinical dentistry in order to renew their knowledge and skill in the methods used in private offices.

Dental Hygienists—The two-year course for dental hygienists has also been accelerated. Army, Navy, and civilian requests for graduate dental hygienists far exceed the supply. It is an attractive field for young women who are interested in dental hygiene work in government service, hospitals, public schools, and private dental offices.—*WILLIAM F. LASBY, dean.*

COLLEGE OF PHARMACY

Enrollment—Undergraduate students registered in the College of Pharmacy during the biennium were as follows:

Year	Summer	Fall	Winter	Spring
1942-43	167	179	152	89
1943-44	70	80	49	40

Because Selective Service did not provide for the pharmaceutical education of even a limited number of students for the Army, Navy, and civilian practice, the enrollment during the biennium has decreased to approximately 10 per cent of normal. Most of these students are women and 4-F's, together with a few students over twenty-six years of age who have been deferred. During each year of the 1942-44 biennium, ten students enrolled in the Graduate School were taking their major work in either pharmaceutical chemistry or pharmacognosy. This number was approximately one third of that during the 1940-42 biennium.

Graduations—During 1942-43, 52, and during 1943-44, 23 students were graduated with the degree of bachelor of science in pharmacy. One master of science degree was conferred each year, and three doctor of philosophy degrees were conferred the first year, and one the second.

Curriculum—The only change in the curriculum was the introduction of a required two-credit course in Pharmaceutical Specialties, open to seniors.

Acceleration—The College of Pharmacy accelerated its program for all classes beginning in the summer of 1942. Acceleration is to be abandoned beginning with the 1944-45 fall quarter because none of the hoped for objectives has been allowed to be attained.

Faculty—During the biennium there was one resignation and one appointment on the regular faculty. Graduate teaching and research assistants were reduced from eight to four.

Scholarships and Fellowships—Scholarships and fellowships established during the biennium included two \$200 undergraduate scholarships from the American Foundation for Pharmaceutical Education; three graduate fellowships of \$600 each established by the Lederle Laboratories, Inc., of Pearl River, New York; one postdoctorate fellowship for two years jointly established by the William J. Stange Company of Chicago and the University of Minnesota.

Building and Equipment—The complete remodeling of the plant laboratory situated next to Wulling Hall is about complete at a cost of \$10,000. Equipment necessary for research on antioxidants, thiobarbituric acid derivatives, and other important researches, has been provided.

Research—The results of two pieces of research by members of the faculty were outstanding. One was the isolation and characterization of an antioxidant obtained from the so-called creosote bush, and the other was the synthesis of several new thiobarbituric acid compounds. The University has applied for patents on all of these products.

War Activities—Members of the instructional staff volunteered their services to instruct in those departments in which there was a shortage of teachers: physics, chemistry, and pharmacology. One member devoted 20 per cent of his time to antimalarial research. Another served as chairman of the State Pharmacy Advisory Committee to State Selective Service and the War Manpower Commission.

Library—One hundred sixteen new books were added to the library during the 1942-44 biennium. In addition 62 bound periodicals were added to the 8,961 bound and unbound

volumes. Several new and badly needed periodicals have been added. New fluorescent lighting and two large fans have been installed.

State Board Examinations and Placements—The Minnesota State Board of Pharmacy conducted six examinations in the College of Pharmacy during the biennium, and 121 persons made application for licensure examination. Of the 90 graduates of the College of Pharmacy of the University of Minnesota taking the examinations, 88 (97.77 per cent) passed and were licensed to practice pharmacy in Minnesota. Of the remaining 39 who were eligible for licensure examination, 20 (51.28 per cent) passed the examinations. During the 1942-44 biennium, a large majority of our graduates enlisted in the Army, Navy, or Marine Corps, or were inducted into service where they are practicing their profession. Others secured positions in retail pharmacies, hospitals, analytical and control laboratories.—CHARLES H. ROGERS, *dean*.

COLLEGE OF EDUCATION

This biennium was one in which World War II has influenced the enrollment, the staff, the program of studies, the content of courses, and many college activities in general. During this period the college staff, through conferences, publications, workshops, institutes, special committee work, and public addresses, has endeavored to contribute to planning for emergencies in war and postwar education.

The postwar period will probably produce an expansion of enrollments in secondary and higher institutions, a special program of education for returned veterans, an increased stimulus to the junior college and technical institute movement, and a continued growth of kindergartens everywhere and of nursery schools in metropolitan and medium-sized cities. There will be a greater demand for vocational education as a part of the total program of education. General education will continue to be emphasized, but there will come social and educational pressures to make it more functional and realistic. Higher standards for teaching will be demanded once the supply meets or exceeds the demand.

The Staff—It is a source of gratification that outside of the University High School, where appointments to instructorships are limited to advanced, part-time graduate students, there have been few losses to other institutions and positions during the last three bienniums. The college, however, has given several of its staff members to other major university functions or positions. These include T. R. McConnell to the deanship of the College of Science, Literature, and the Arts, William S. Carlson to the directorship of the Office of Admissions and Records, and Horace T. Morse to the assistant directorship of the General College. We are pleased that Wilford S. Miller has served as acting dean of the Graduate School and to share one of our staff, Tracy F. Tyler, with the president's office. In the position of associate director of the Committee on Educational Research, Ruth Eckert is serving the entire University. Eight permanent, full-time staff members are now on leave in the armed services or in related war activities.

Enrollment—The total number of undergraduate students in the College of Education, of graduate school students majoring in education, and of extension students taking work in education has declined during the biennium, 49, 49, and 11 per cent, respectively, from 1939-40 enrollments. Such a decline has been national in trend but has affected schools of education less than the teachers colleges.

Number of Graduates—Teachers constitute the largest vocational group, in terms of numbers of graduates, that the University turns out. In terms of the percentage of vocational graduates who return to service within the state of Minnesota itself, teaching is also probably one of the largest. Minnesota has lost 12,000 teachers since Pearl Harbor. Their ranks have not been filled with persons of standard preparation. At present, 2,000 teaching positions are vacant.

Educational Conferences and Institutes—The College of Education has sponsored many special meetings in accordance with its policy of supplying talent and leadership within the state and of stimulating educational thinking on the problems of education. In addition, our staff members have participated in state and national conferences sponsored by others. The difficulties of transportation have reduced their number to some extent. The conferences and institutes, however, that have been held have been so related to war emergency and postwar educational activities and problems that they are justified. They have been well attended.

New Developments and Projects—Additional five-year master of education curricula have been adopted in agricultural education and in home economics education. In cooperation with the Department of Preventive Medicine and Public Health, new courses and curricula have been added in health education at the graduate and undergraduate levels.

As the result of our study of courses, 28 have been eliminated, 61 combined, and 16 omitted temporarily.

Workshops—A workshop in education is a group of persons from a field of education who, with the help of a director and a group of specialists as resource persons, study co-operatively the problems that must be solved for further progress. Theory and practice are studied in the light of research and the best thought. During the biennium, the College of Education, in co-operation with the North Central Association, has provided two workshops in higher education with special reference to teacher education; it has sponsored one each in secondary, elementary, and rural education, and one in the social studies. It has co-operated with the Institute of Child Welfare in a workshop in nursery school, kindergarten, and primary education.

G. L. Anderson and the staff of the University High School have published for teachers of Minnesota a monograph entitled, "Adapting the High School to Wartime and Postwar Needs."

The Owatonna Art Education Project has been completed by the addition of six new monographs to the four previously issued. All were published by the University of Minnesota Press.

Future Needs and Activities—1. First of all is needed a College of Education building adjoining a new University High School and an elementary laboratory school. The co-ordination of staff, laboratories, clinics, and demonstration classes is a chronic need which affects the contribution, efficiency, and prestige of our college in the state and in the nation. The University must dignify Minnesota by a modern plant with adequate facilities to supply leadership, specialists, research, and teachers.

2. In co-operation with the Institute of Child Welfare and the Department of Psychology we must provide at once a specialist for the psychological clinic and related courses. Since this department is related more to childhood and youth and their education, it should be located in the College of Education. More and more educators need this specialized service so that education may be adjusted to individual needs. Research in this area needs development.

3. We must as soon as possible establish a Department of Commercial Education and Distributive Occupations with a major person capable of leadership and research in charge. Federal aids are available now for part of this program and before long for most of this program. Graduate work must be developed for one of the largest of the special subjects in the high schools.

4. Rural education needs more attention. The standards of preparation for rural teachers and for elected county superintendents in Minnesota are so low now that the university standards of preparation for other types of teachers at the baccalaureate and graduate levels do not reach down to them. Nor should we. But we must use our influence to see to it that all other teachers in this area know rural education and rural life problems, that the high school agricultural education teachers and home economics teachers, the science teachers, and the extension teachers whom we train know rural education and can include its development as part of their pattern of activities for the development of rural life. We should train more specialists in rural education and provide rural teachers with the applied courses which they need. Of the three great social groups—business and industry, labor, and agriculture—the farmer is neglecting his own education most. We must not let this continue.

5. We need to expand our emphasis and services in visual education.

6. We must plan soon after the war to train more secondary teachers in the five-year curricula in order that the pattern of their professional preparation may include the equivalent of two full years of general education, two full years of subject-matter preparation in the broad teaching field which they must service, the necessary professional preparation in the theory and practice of education, and sufficient electives to develop their special talents, deficiencies, and interests.

—W. E. PEIK, dean

SCHOOL OF BUSINESS ADMINISTRATION

Curriculum—Several adjustments in the curriculum were made in response to demands for special training programs incident to the war effort. The programs in production management and personnel management, first introduced in the summer of 1942, were continued until the fall of 1944. The graduates in this program who had completed the M.B.A. degree requirements were in demand from industrial plants engaged on war orders. Another group of courses was arranged for training women in the fields of industrial production, industrial relations and personnel, accounting, office management, and secretarial work. All who entered these courses were immediately placed in plants engaged on war orders.

During the past year the faculty has devoted considerable attention to the problems of returning veterans. Already there have been some veterans returning to the campus and it is expected that during the next year the numbers will increase. The returning servicemen will require special training programs. In order to meet this demand the faculty has approved a special three-year program for military veterans, leading to a "Certificate in Business Administration." The requirements for the certificate have been so arranged as to provide for individual needs. A student will obtain a broad, general training in business and in addition may select certain specific fields for intensive training; such as accounting, production, personnel administration, and statistics. Each student's program will be arranged in accordance with his aptitudes, interests, and the opportunities that appear to be available in the field of his selection.

In response to demand, a new course in the problems of the Far East was established this year. This course is integrated with a group of courses in other departments providing a specialized training in Far Eastern political, social, and economic problems.

A number of adjustments were made for students leaving the campus to enter the armed services. Students in the NROTC who left to take work in the naval program in other institutions were granted full credit when the courses offered were similar to those at Minnesota. Thus, most of the students, near to graduation when they left, were able to meet degree requirements. Similarly, some adjustments were made also for Advanced ROTC students.

Registration—Civilian students in the school declined from a total of 383 in the 1942 fall quarter to a total of 143 in the 1944 winter quarter. The 1944 spring quarter showed an enrollment of 147 civilians. It appears that the registration has now reached a low point and a gradual increase may now be expected. The registration of women students has shown a slight increase during this period.

Research—Several major research projects have been under way during the biennium. The Rockefeller Foundation provided funds for two extensive studies, one on unemployment in the city of St. Paul under the direction of Professor Dale Yoder and one on income in Minnesota under the guidance of Professor Roy G. Blakey. These studies were started in 1942. The income study is completed and the results have been published. The results of the St. Paul Unemployment Study are being completed and should be published before the end of 1944. The Rockefeller Foundation also provided funds for the study of the postwar economy for the mid-continent area in which the University of Minnesota co-operated with the University of Manitoba. Two reports have already been published. These were prepared by Professor Arthur R. Uppgren, director, and Professor William J. Waines, University of Manitoba, associate director.

The School of Business Administration has also co-operated with the Northwest Research Committee and the Committee for Economic Development on several community studies. The report on the first of these covering the study at Albert Lea was published jointly by the Committee for Economic Development and the United States Chamber of Commerce. At present there are a number of community surveys under way, the materials for which are being summarized by Professor Richard L. Kozelka as a basis for estimating the postwar employment for the state of Minnesota. The school has also co-operated with several of the other departments on community surveys in Minnesota.

Conferences—The fifth conference of Minnesota bankers was held in February, 1943, in co-operation with the Minnesota Bankers' Association. Because of war conditions the conference was not held in 1944. Two conferences were held in co-operation with the Minnesota Society of Certified Public Accountants, one in May, 1943 and the second in April, 1944. The annual conference of trade association secretaries was held in 1943. Due to war conditions the conference was not held in 1944.

Two special conferences were held pertaining to the subject of industrial relations, in February, 1943, and in April, 1944.

Staff Changes—Three members of the staff have left during the past two years to go into military service. Several members are on leave conducting special work of significance in the war effort.

As I am leaving the University of Minnesota at the end of the present academic year, I wish at this time to express my appreciation to the administration in the development of the program of the School of Business Administration during the eighteen years that I have served as dean, and to express my good wishes to the University and to the School of Business Administration in the years that lie ahead.—RUSSELL A. STEVENSON, dean.

GRADUATE SCHOOL

Graduate Students and the War—Large numbers of students who in normal times would be enrolled in the Graduate School are now enrolled in another school—the Army and Navy—and in specialized war services in government and industry. They are making important contributions to the war. Some are gaining experience in what may be called war seminars of scientific training. Some, perhaps many, graduate students will not return to their university studies after the war. Others, entering or returning to graduate work over the bridge of experience in the war, may find their basic interests changed. All will face serious problems of adjustment and readjustment. During the biennium the framework of the Graduate School has been maintained and the graduate faculty has given thought to planning for the problems of the postwar period.

Enrollment—It is highly probable that graduate enrollment after the war will not only reach but far surpass the peak prewar year, 1939-40, enrollment of 3,981 graduate students. From this peak there was a drop of 15.9 per cent in 1940-41; of 18.4 per cent in 1941-42; of 41.2 per cent in 1942-43; and 53.3 per cent in 1943-44. Thus there have been successive declines since 1939-40, but it is indicative both of the importance of advanced studies in the University of Minnesota and of the basic strength of the Graduate School that in 1943-44 there were no fewer than 1,856 graduate students enrolled.

Degrees—Many graduate students, facing the likelihood of war service, made unusual efforts to complete their candidacies for higher degrees. The total number of degrees granted in the previous biennium was 1,144—221 Ph.D. and 923 Master's degrees. There was a decrease in 1942-44 by about one third—to 744—200 Ph.D. and 544 Master's degrees. The peak year of Master's degrees granted was 1940-41, with 515; and of Ph.D. degrees, 1942-43, with 121.

In the 57 years from the granting of its first Ph.D. in 1888 through the June commencement of 1944, the University has awarded a total of 1,744 Ph.D. degrees. Of these it is interesting to note that 54.3 per cent were granted during the past ten years, 30.7 per cent during the past five years. During the past ten years 3,412 Master's degrees were conferred, in contrast with 2,020 during the previous ten-year period. During the five year ending June, 1944, 1,915 Master's degrees were awarded.

In 1942-43, of 333 Master's degrees conferred, 173 were earned under Plan A (with thesis) and 160 under Plan B (without thesis). During 1943-44, for the first time since Plan B was instituted, the number of graduate students attaining the Master's degree under that plan was considerably higher than the number under Plan A—122 to 89. As in previous years, Plan B has been more commonly followed in certain areas, whereas in others it has been elected by few students. In the group area of education, child welfare, psychology, and philosophy, where the ratio of Plan B to Plan A programs was about 5 to 1 in 1940-42, it dropped to approximately 3.5 to 1 during 1942-44.

One new professional degree, that of agricultural technologist, has been added during the biennium to the eight previously authorized for administration by the undergraduate colleges in which the work is done.

Two new majors for the Ph.D. degree have been approved, one in the field of statistics, the other in cancer biology. A third, in the field of public health, has been recommended and is now under consideration. The graduate faculty is studying other proposals looking toward new areas of advanced education, some of them cutting across traditional departmental boundaries.

The Graduate School has modified its policy with respect to the Master's degree in several ways. Under certain conditions the use of a limited amount of credits earned in Extension work has been authorized. The transfer of a limited amount of credit earned elsewhere, including credit earned through the United States Armed Forces Institute, has likewise been authorized. Finally, graduate credit has been authorized under specific conditions for work done in the military programs.

TABLE I. DEGREES APPLIED FOR BY GRADUATE STUDENTS AND DEGREES GRANTED

Degrees	1942-43		1943-44	
	Sought	Granted	Sought	Granted
Master of arts	883	191	685	128
Master of science	676	137	621	78
Master of business administration	23	4	5	5
Master of laws	1	0	2	0
Professional engineering degree	1	1	1	0
Doctor of philosophy	480	121	362	79
None	273	0	180	0
Totals	2,337	454	1,856	290

Graduate Record Examination—In co-operation with the Carnegie Foundation for the Advancement of Teaching, the Graduate Record Examination, which was experimentally required of incoming graduate students for a two-year period, has now been made available through the University Testing Bureau, at a small fee, to anyone interested in taking it. A careful study of the Graduate Record Examination and the Miller Analogies Test, as given to incoming graduate students in 1940 and 1941, has been made by Professor W. S. Miller. In the light of his study he has recommended that all entrants to the Graduate School should be given a test of general ability; and that the graduate faculties of the social sciences, languages, literature, physics, chemistry, geology, and

biology should consider the possibility of using the Graduate Record Examination as a part of the preliminary examinations of graduate students majoring in those fields. These recommendations are under consideration by the Executive Committee of the Graduate School.

Fellowships and Scholarships—One of the great needs of the Graduate School is for additional scholarships and fellowships that can be used to assist students of outstanding ability to carry on advanced studies in the University of Minnesota. This need will undoubtedly be more marked in the future than it has been in the past, and it is hoped that friends of the University will bear it in mind.

A notable encouragement in this field was given by the Minnesota State Division of the American Association of University Women, which in 1943 established a new fellowship for outstanding graduate women to be offered in alternate years at a stipend of not less than \$750.

The number of Latin-American tuition scholarships was increased from two to six during the first year of the biennium and from six to twelve during the second. These scholarships have helped to bring to the University a group of excellent young scholars from Latin America.

Ford Lectureship Fund—This fund, established in honor of Guy Stanton Ford, president emeritus of the University, has been brought to a total of \$8,332. It is hoped that it will ultimately be increased to at least \$15,000. The interest will be used to bring to the campus for lectures and conferences distinguished scholars who, like the scholar whose name the lectureship bears, represent varied fields of knowledge and achievement.

Research—During the biennium much university research has been concentrated upon war problems, and significant contributions have been made to the national effort. Many outstanding research scholars have been drawn away from the campus and those who have remained have faced the problem of carrying on their special studies with inadequate research assistance and in the midst of increased teaching programs. Notwithstanding difficulties, however, there has been notable advance along the entire research front.

Important investigations in the fields of agricultural, mineral, and human resources have been undertaken with aid from the General Research Fund, a legislative appropriation that was increased from \$25,000 during the first year of the biennium to \$50,000 during 1943-44. No statistical summary can measure the importance of this fund, but it may be noted that 13 varied research projects were supported during the first year, and 25 during the second.

The range of medical research, for which a special legislative appropriation of \$25,000 was available for each year of the biennium plus a special grant of \$15,000 for cancer research in 1943-44, has been "as broad as the scope of interest and activity" of the university medical scientists. In a typical year, aid is given to nearly 50 specific medical research projects, many of them on fundamental problems. The cancer fund has been focused upon a few significant areas of investigation in that important field.

Under a legislative grant of \$10,000 per year for the two years ending June 30, 1945, the University has established and is administering the Minnesota Institute of Research with Professor Ralph E. Montonna as director and an advisory committee made up of seven members of the graduate faculty. This institute has sponsored a series of research projects directed primarily toward serving the industries and developing the resources of Minnesota. These have included such problems as linen manufacture from seed flax straw, the dehydration of fruits and vegetables, and evaluation of lignite and its char as fuel for automotive gas producers.

Another new venture in the field of research has been the founding of the Hormel Research Institute with annual support grants from the Hormel Foundation to make possible carefully planned research centered upon problems in plant and animal production and utilization. With Professor H. O. Halvorson serving as director and with an advisory committee of five members, a notable beginning has been made by this institute, for which extensive laboratory facilities are being developed at Austin.

The Graduate School has also administered a fund of approximately \$15,000 each year of the biennium in support of varied researches by faculty scholars in all parts of the University outside the Medical School.

Through a grant of \$50,000 from the Rockefeller Foundation administered by a special Graduate School committee, more than twenty regional writing fellowships in varying amounts have been awarded to support the preparation of books interpreting the life and culture of the people of the Northwest.

The research activities and interests of the University are many and complex. Along with other kinds of postwar planning, the University has recently undertaken an extensive study of the problems of research organization and administration through an all-university committee under the chairmanship of the acting dean, Professor Miller.

TABLE II. FACULTY RANK OF GRADUATE STUDENTS

Rank	1942-43	1943-44
Professor	1	1
Associate professor	2	1
Assistant professor	6	4
Lecturer	2	0
Instructor	126	125
Assistant	292	222
Medical fellow	57	36
Mayo Foundation fellow	392	383
Fellow	15	3
Research fellow	5	7
Research assistant	22	12
Totals	920	794

TABLE III. AMOUNT OF WORK FOR WHICH GRADUATE STUDENTS HAVE REGISTERED

Registrants	1942-43		1943-44	
	Men	Women	Men	Women
Academic year				
Registered full time	269	156	206	173
Registered part time	391	274	326	269
Registered full time, Mayo Foundation.....	380	12	359	24
Total (men and women combined).....	1,482		1,357	
Summer Sessions of 1942 and 1943				
Registered full time	275	271	196	202
Registered part time	268	304	154	204
Total (men and women combined).....	1,118		756	
Totals academic year and Summer Session.....	1,583	1,017	1,241	872
Less duplicates	160	263	162	257
Net totals	1,423	914	1,079	777
Net totals (men and women combined)	2,337		1,856	

TABLE IV. FOREIGN STUDENTS REGISTERED IN THE GRADUATE SCHOOL

Country	1942-43	1943-44	Country	1942-43	1943-44
Argentina	3	2	Iceland	1	3
Austria	3	0	India	2	1
Bolivia	1	1	Italy	1	0
Brazil	5	6	Lithuania	1	0
Canada	37	26	Mexico	0	6
Central America	1	2	New Zealand	1	0
Chile	4	3	Panama	0	2
China	23	26	Peru	2	3
Colombia	3	4	Poland	2	0
Cuba	1	1	Puerto Rico	2	1
Czechoslovakia	3	3	Rumania	1	0
Ecuador	1	4	Scotland	1	0
Germany	11	3	Turkey	2	1
Guatemala	1	1	Uruguay	1	1
Haiti	1	1	West Indies	0	1
Holland	1	0	Totals	117	103
Honduras	1	0			

Administration—During the year 1943-44 the dean was on leave of absence, serving as director of the Historical Service Board in Washington, D.C. During his absence W. S. Miller, professor of educational psychology, was acting dean, a position that he filled with outstanding competence.—THEODORE C. BLEGEN, dean.

MAYO FOUNDATION FOR MEDICAL EDUCATION AND RESEARCH

Facilities—The additional facilities for medical education and research reported in the 1940-42 biennial report have proved most useful in their general purposes. This has been particularly true in the Aero Medical Unit housed in the new Medical Sciences building, and in the various laboratories at St. Mary's Hospital. The opportunity of carrying on clinical investigations by the staff and fellows in the division of nutrition, in the temperature-controlled rooms, and in the electroencephalographic laboratory division provided new facilities for research in such fields. The new wing of St. Mary's Hospital, chiefly for medical patients, has made available excellent opportunity for teaching and clinical investigation. The total number of beds in all hospitals available in the Foundation is now over 1,500.

Faculty—The faculty membership has been interrupted by the war and some recent appointees are on temporary arrangements. There are 42 faculty members now in military service and several other members are on various committees in Washington and, therefore, are subject to call for consultation by these agencies.

In January, 1944, Dr. C. Anderson Aldrich, formerly professor of pediatrics, Northwestern University, came to the Mayo Clinic and Mayo Foundation to inaugurate a child health project which involves a long-range study of the problems in mental and physical health in children of Rochester and southeastern Minnesota. The project is being carried on under the auspices of the Mayo Foundation with a grant-in-aid from the Mayo Properties Association.

Fellows—The number of fellows in the Foundation has been established by Procurement and Assignment Service and is approximately 231 as compared to about 360 in 1940. From 1942 to 1944, 75 graduate degrees (71 master of science degrees and 4 doctor of philosophy degrees) were conferred on Mayo Foundation fellows. During this period, fellows were the sole authors of 20 papers and were joint authors with faculty members on 221 more. In addition, 443 papers by faculty members were published.

As of October, 1944, a total of 360 fellows had joined the armed forces of this country or the Allies. Of this group, 252 joined the Army, 80 joined the Navy, and 6 joined the Public Health Service. Two are engaged in aviation research and 17 are in the various other branches of the Allied forces. Approximately 300 of this number have expressed a desire to return to the Foundation when the war is over, and this will constitute a problem in making provision for them to complete their training. However, the Medical Graduate Committee is confident this can be done and should be done in order that these fellows can complete their requirements for advanced degrees.

The steadily increasing number of applications of physicians not only from Latin-American countries but also from Great Britain, India, China, and other countries for fellowships after the war will require careful consideration on the part of the Graduate School as to how such requests for training may best be met. There is also the primary problem of the great number of applications which are coming from those in our armed forces for graduate training after the war, and the Foundation feels that every effort should be made to expand facilities for graduate training to include as many of these as possible.

Military Activities—Facilities of the Clinic and the Foundation have continued to be utilized as efficiently as possible in carrying on teaching and research projects related to the war and sponsored by the government. For many years, the Foundation has made available its facilities in certain fields for varying periods to officers of the federal services. Formal courses have been carried on in special fields for officers of the Army, Navy, Public Health Service, and Air Force since January, 1942, these fields being anesthesia, aviation medicine, general surgery and surgical specialties, internal medicine and medical specialties, maxillofacial and plastic surgery, neurologic surgery, physical medicine, and roentgenology. Over a hundred officers are usually assigned to these courses each quarter, and experience has shown in the majority of fields that a twelve-week course is the most satisfactory period for attaining the desired objectives. To October, 1944, over a thousand officers had participated in these courses. After the war courses in similar form probably will be continued for returning officers, providing they have adequate previous experience and are desirous of such postgraduate training.

Research—General research programs have continued essentially along the same lines as the projects directly related to the war. However, a gradual effort is being made to maintain and utilize the facilities for clinical investigation and research to the greatest extent possible with the depleted personnel of faculty and fellows.—DONALD C. BALFOUR, M.D., *director*.

GENERAL COLLEGE

Curriculum—No fundamental changes in the operating policy of the college have been made during the biennium. The staff has continued to regard the program in terms of the expressed purpose for the college as an experimental unit, and has continuously examined the curriculum with a view to keeping it flexible, suited to the student body, and alert to current developments in general education. The change in graduation requirements, discussed in the 1940-42 report, has been, in the opinion of the staff, an improvement; since student programs have become more flexible, there has been greater opportunity for elective courses, and program planning and registration have become easier.

During the last two years the staff has been discussing the desirability of setting up a limited number of curricula which might be considered as vocational in that they would give background training for certain broad occupational fields. The purpose of the proposal is to provide the kind of training which it has long been felt would be of advantage to the particular type of students whom the college enrolls.

In planning these sequences, courses were included only if they were already available in the General College or in other colleges and open to General College students on the usual combination program basis. This type of semivocational education would combine vocational preparation with general education for the subprofessional or technician level of occupation into which many General College students go.

The central staff of the college, working as a curriculum committee, has included among the proposed vocational groupings those which had been drawn up previously by the Senate Committee on Education and a subcommittee of the General College Advisory Committee. Seven vocational sequences were thus listed and described in the college bulletin for 1943-45. The vocational interest of the individual student provides the unifying factor around which the courses are grouped. The seven areas described in the General College Bulletin with suggested vocational outlets are: (1) Child Care, (2) Pre-nursing and Related Medical Arts, (3) Pre-embalming, (4) Health Services, (5) Commercial Art, (6) General Clerical, (7) Sales and Business Contact.

In proposing these vocational sequences, the General College is not attempting to duplicate the work of the four-year or professional schools at the University, nor that of the commercial trade schools. Since it seems from all available evidence that this type of education will be greatly in demand after the war, especially by returning war workers and ex-service personnel, the staff of the college, in accordance with policies determined by the Advisory Committee, hopes to be able to explore further the possibilities of vocational training in co-operation with other units of the University, and to appraise this type of program in the effort to provide educational leadership for the state.

Contributions to the War Training Program—Staff members of the General College have made significant contributions to the various war-training programs. They have carried heavy teaching schedules, and some have participated in a supervisory as well as a teaching capacity. The associate director of the college also acted as academic coordinator of the Air Force College Training Program, the AST Basic Phase, and the AST Pre-Medical and Pre-Dental Programs. In addition, two staff members were granted military leave of absence.

Enrollment—Enrollment in the General College declined steadily throughout the biennium until it reached its lowest point—approximately one third of normal—in the winter quarter of 1944. The 1944 spring quarter, and the first term of the Summer Session showed a marked enrollment increase over the previous year. Several disabled veterans have been assigned to the college, and it may be expected that more will be assigned as they return to the University in increasing numbers.—H. T. MORSE, *associate director*.

UNIVERSITY COLLEGE COMMITTEE

At its organization, the University College Committee was a group of twenty faculty members representative of the various subject-matter fields taught in the University. As changes have taken place in the faculty and in the problems presented to the committee, the chairman has felt free to call upon others of the faculty to serve as members, at least for certain students. At present, therefore, the advice and counsel of any university faculty member from any college is available to a student whose plans for his college work bring him under the jurisdiction of this committee. This expansion has been of value to a number of students. It also has served to acquaint a larger section of the faculty with the role of University College and thereby, through them, direct students to this branch of

the University when their needs could be served best by it. Nevertheless, as in the past, the student is enrolled in one of the regular colleges whenever that procedure is permitted under existing regulations and the student's needs are satisfied.

The University College has been of decided value to a number of students during the war years. Because of calls to the armed services or because of the desire to change their college work in order to enter particular phases of war work, students have turned to this college. A considerable part of the enrollment has been made up of this group. Among them are a number of women. As an example of the type of program of students in University College one may cite that of the women taking training under the Curtiss-Wright program. They could combine that technical training with their past academic work and complete a program worthy of a degree. As another illustration, some girls wished to build up a program in business administration, secretarial training, and aeronautical engineering—in addition to work in the College of Science, Literature, and the Arts. This would permit them to enter and do effective work in the office of an air line. These two examples will serve to illustrate the variety of programs of students in the college.

In spite of these calls upon the college, the registration remains at about fifty-five students. Each program is carefully evaluated and only those are approved which, in the opinion of the committee, are clearly deserving of a degree from the University of Minnesota and which fall within the jurisdiction of the committee. The average program contains considerably more than the minimum number of credits required of the regular college in which the student takes most of his work. A majority enter during the junior or senior years. During the past two years seventy-seven students have received degrees.—J. W. BUCHTA, *acting chairman*.

GENERAL EXTENSION DIVISION

Extension Classes—The decreased enrollments in extension classes noted in the previous report continued into the 1942-44 biennium. However, the enrollments for the year ending June 30, 1944, were somewhat higher than the enrollments in the previous year. The gain was almost entirely in collegiate subjects, whereas the largest loss, apparently still continuing, was in engineering subjects. This is probably a reflection of wartime conditions and indicates merely the unavailability of young men to take technical subjects. As far as the regular offering of extension classes is concerned, the trend toward mathematics and physics noted in the 1940-42 report has given place to a rather decided trend toward collegiate subjects. During the biennium the department continued to supervise the ESMWT courses which provide training at government expense for persons engaged in or preparing for activities producing armaments and other necessary war materials. Since this is a special activity, statistics concerning it are not included in the accompanying tables. Statistics for extension classes and short courses appear in Table I.

TABLE I. EXTENSION CLASSES AND SHORT COURSES

	1942-43	1943-44
Summary of extension classes:		
Number of student registrations:		
Collegiate	5,674	6,715
Business	1,544	1,591
Engineering	1,715	1,241
Totals	8,933	9,547
Net gain over previous year		614
Net loss over previous year	803	
Number of classes given	464	422
Number of individuals in classes	6,058	6,871
Net gain over previous year		813
Net loss over previous year	1,228	
Summary of short courses:		
Number of short courses	15	3
Number of kinds of short courses	4	3
Number of registrations in short courses	629	92

Correspondence Study—During the biennium there has been a marked increase in correspondence study activities. The number of registrations in force at the close of the preceding biennium is less than half of the number in force on June 30, 1944. Much of the increase represents courses undertaken by service personnel through the United States

Armed Forces Institute. This condition is reflected in the large increase of students registering from other states of the union and from outside of the United States. The number of enrollees from Minnesota itself is somewhat smaller than during the preceding biennium. This is a natural consequence of the removal of a large part of our correspondence study "market" out of this area under military auspices. A cause for regret is that the University has not been able yet to secure from the State Department of Education a satisfactory arrangement for taking care of a rather large and very insistent demand for correspondence study courses in the secondary school field. A service of this kind would be very valuable when teachers are hard to obtain and high school curricula are restricted.

A course in beekeeping was undertaken during the biennium in co-operation with the University Department of Agriculture. This course was a combination of correspondence study and actual campus attendance in the concluding sessions. The course was conspicuously successful and should lead to other similar ventures.

During the biennium the University undertook the supervision of a correspondence study course in the fundamentals of American citizenship, propagated by the federal government. This course is designed to furnish for aliens in rural areas an educational experience which will take the place of the naturalization courses offered in many cities.

Table II presents the more important biennial figures of the constantly increasing service of the department.

TABLE II. CORRESPONDENCE STUDY ENROLLMENTS IN REGULAR COURSES

	1942-43	1943-44
Registrations in force, beginning of year.....	2,047	2,352
New registrations during year.....	2,538	4,470
Total registrations in force during year.....	4,640	6,867
Registrations in force, close of year.....	2,352	4,295
Number of new individuals enrolled.....	2,173	3,943
Total number of individuals enrolled.....	3,961	5,904
Number of lesson reports received.....	28,226	31,123
Geographical distribution of new individual enrollees		
Minnesota.....	1,374	1,130
Other states.....	656	1,530
Outside of the United States.....	143	1,283
Number of states represented.....	44	46

Community Service—Effective July 1, 1944, the new Department of Concerts and Lectures will perform for the University the service formerly undertaken by the Lecture and Lyceum Bureau. This latter bureau, however, will continue under the supervision of the General Extension Division. During the biennium there was a continuation of the large and significant increase which has marked the activities of this bureau during the past several years. The service filled over 3,800 engagements during the biennium, and now reaches nearly 450 of the larger schools in the state, including the state teachers colleges and most of the junior colleges. The University has continued to serve the needs of schools, associations, and other organizations for films of various sorts. Plans are under way to expand this service as soon as conditions will permit. The current emphasis on the use of audio-visual instructional aids makes further development not only desirable, but imperative. The University also conducts a loan-play library to serve Minnesota schools and communities.

Municipal Reference Bureau—This bureau, as in former years, continues to serve as a division of the University for the reference work of students in political science and governmental subjects. It is also headquarters of the League of Minnesota Municipalities and extends its facilities to government officials throughout the state. The statistical record of its major activities appears in Table III. As will be noted in the table, the bureau participated in the holding of regional and other meetings of the League of Minnesota Municipalities, in the holding of civil service examinations for various local government subdivisions of the state, in providing charter consultation service for municipalities, and in helping with the presentation of short courses for local government officials. In addition the Reference Bureau has helped to provide editorial and publication service in connection with the magazine of the League of Minnesota Municipalities and other League publications. Interest in the League and its activities increased during the biennium.

TABLE III. MUNICIPAL REFERENCE BUREAU ACTIVITIES

	1942-43	1943-44
Number of inquiries	759	926
Monthly magazine		
Total number of copies published.....	64,700	63,823
Average monthly number published.....	5,391	5,318
Annual convention attendance	661	684
Attendance at regional meetings	368	615
Number of regional meetings held	13	13
Number of cities receiving charter consultation service	3	2
Number of civil service examinations held	1	4
Attendance at short courses	225	356
Number of short courses held	3	4

Radio Station WLB—The record of WLB during the biennium has been one of increased usefulness both from the standpoint of general education and from the point of view of assisting the war effort. The programs, as previously, have included broadcasts of university convocations and lectures, the Minnesota School of the Air for use in schools, agricultural programs for the farmer and the farmer's wife and family developed by staff members from the Agricultural campus, news programs, and many musical programs both by direct broadcasting and transcription. These programs, as in the past, have involved co-operation of many groups both on and off campus, including other radio stations and radio networks, other colleges and schools in Minnesota and many cultural and professional groups and associations—such as the Minneapolis Symphony Orchestra, State Medical Association, the armed services, United States Treasury Department, British Broadcasting Corporation, and numerous others. During the biennium the WLB management has had to cope with the constantly more troublesome problem of staff replacement, but in spite of this handicap and the shortage of available operating and broadcasting talent, the service of the station has improved. The management of WLB is exceedingly anxious to make greater use of the staff resources of the University and looks forward to a time when staff members can be compensated for broadcasting by a reduction in teaching load or in some other manner. The constantly expanding service of the station will soon require the addition of more personnel, particularly for the preparation of programs and in the engineering department.

During the biennium the University secured the facilities of a direct teletype service from one of the national news dispensing organizations and received permission from the British Broadcasting Corporation to rebroadcast direct programs from the eastern side of the Atlantic. These additions have assisted materially in making the news coverage of WLB outstanding in the Twin City area. This has been possible not only because of the improved facilities, but also because of the devoted co-operation of the university staff.

Center for Continuation Study—During the biennium, the Center offered 139 institutes or courses with a total registration of 6,071. (See Table IV.) Of this number 4,438, or 74 per cent, came from Minnesota cities and villages. The 402 courses held by the Center since its opening, November 13, 1936, are classified by type in Tables V and VI, both for the total period and by bienniums. Classification was based, as in former years, upon the bearing or result of the course as a whole. The showing of the Center as to enrollment during the biennium has been materially affected by the fact that from June 26, 1943, until February 20, 1944, the building was used to house ASTP students and other wartime programs. During this period the Center presented several courses, making use of downtown hotels and other university buildings. The fiscal year 1942-43 was by far

TABLE IV. CONTINUATION COURSES AND INSTITUTES, 1936-44

	1936-38*	1938-40	1940-42	1942-44	Totals	Per Cent. or Average
Number of courses	58	90	115	139	402	.....
Number of registrations	2,867	3,832	5,694	6,071	18,464	100
Minnesota	2,518	2,570	4,207	4,438	13,733	74
Other U. S. states	319	1,198	1,456	1,543	4,516	25
Foreign countries	30	64	31	90	215	1
Male	1,706	2,472	3,571	3,115	10,864	59
Female	1,161	1,360	2,123	2,956	7,600	41
Number on faculty	1,045	1,581	2,352	1,850	6,828	17
Course-hours	2,042	2,666 $\frac{3}{4}$	3,473 $\frac{1}{4}$	9,074	17,256	43
Course-days	317	429	538	1,470	2,754	7

* Beginning with November 13, 1936.

TABLE V. CONTINUATION COURSES AND INSTITUTES BY TYPES, 1936-44

Course	Number of Courses	Registrations	Minnesota	Other States	Foreign Countries	Men	Women	Number on Faculty	Course-Hours	Course-Days
Hospital service and public health.....	57	3,620	2,785	824	11	305	3,315	1,300	1,285½	185
Kenny technique (nurses, technicians).....	38	537	29	476	32	10	527	261	7,062	1,140
Medical.....	93	3,025	1,253	1,667	105	2,948	77	1,926	3,221¾	490
Kenny technique (physicians).....	21	406	41	346	19	379	27	161	603½	119
Educational.....	57	3,107	2,749	357	1	1,001	2,106	1,136	1,808¾	299
Commercial.....	21	2,051	1,936	115	0	1,850	201	455	553	90
State-municipal functions.....	40	1,923	1,788	118	17	1,823	100	561	773	121
Civic and cultural.....	21	966	870	95	1	144	822	298	584¼	95
Technological.....	16	872	665	191	16	864	8	232	329¾	48
National defense.....	6	506	505	1	0	450	56	147	155	22
Social welfare.....	9	418	218	189	11	154	264	107	391½	67
Legal.....	7	372	361	11	0	359	13	45	172½	30
Pharmaceutical.....	7	364	326	36	2	280	84	140	160	21
Dental.....	9	297	207	90	0	297	0	59	155½	27
Totals.....	402	18,464	13,733	4,516	215	10,864	7,600	6,828	17,256	2,754

TABLE VI. BIENNIAL ATTENDANCE BY TYPES OF COURSES, 1936-44

	1936-38		1938-40		1940-42		1942-44		Totals		Average Attendance per Course
	No. of Courses	Attendance	No. of Courses	Attendance	No. of Courses	Attendance	No. of Courses	Attendance	No. of Courses	Attendance	
Hospital service and public health.....	2	131	13	875	26	1,471	16	1,143	57	3,620	63
Kenny technique (nurses, technicians).....							38	537	38	537	14
Medical.....	14	397	34	936	35	1,182	10	510	93	3,025	33
Kenny technique (physicians).....							21	406	21	406	19
Educational.....	14	927	15	576	16	678	12	926	57	3,107	54
Commercial.....	2	328	1	184	9	1,025	9	514	21	2,051	98
State-municipal functions.....	7	332	10	475	12	610	11	506	40	1,923	48
Civic and cultural.....	12	429	2	60	1	35	6	442	21	966	46
Technological.....	2	83	6	294	5	181	3	314	16	872	55
National defense.....					1	105	5	401	6	506	84
Social welfare.....	3	129	4	212	1	29	1	48	9	418	46
Legal.....			1	52	3	145	3	175	7	372	53
Pharmaceutical.....	2	111	2	105	2	102	1	46	7	364	52
Dental.....			2	63	4	131	3	103	9	297	33
Totals.....	58	2,867	90	3,832	115	5,694	139	6,071	402	18,464	46

the most successful in the history of the Center. Despite the war, however, the record since the building has been restored indicates that the success of the year ending in June, 1943, will soon be eclipsed. Age figures have been obtained from 14,364 of the Center's total registration of 18,464, and education figures have been obtained from 15,473. The results are shown in Table VII. During the preceding biennium the demand for space at the Center compelled abandonment of the policy of instructing only one group at a time. Multiple use of facilities still continues. Thus in 1943-44 the Center was in operation 407 course-days. In addition to the regular program of the Center the University used the building as a place of meeting for many groups who came to the campus on public business. The estimated attendance of persons in such groups during the biennium is 1,800. This informal attendance totals 7,500 since November 13, 1936. All in all, the Center has thus been host to over 26,000 persons from its opening to the end of the 1942-44 biennium.

TABLE VII. EDUCATION AND AGE DATA, 1936-44

	Number of Registrants	Per Cent
Education data secured for	15,473	100
Grammar school	445	3
High school	1,541	10
College (some)	3,803	24.5
College degree	4,036	26
Advanced degree	5,648	36.5
Age data secured for	14,364	100
Over 60	729	5
40 to 60	6,280	44
30 to 40	5,282	37
Under 30	2,073	14

Key Center of War Information—During the 1942-44 biennium the Key Center for War Information, a university activity organized during 1942 and formerly operating under the control of the President's Office, was added to the list of departments under the general supervision of the Extension Division. The purpose of the Key Center has been to extend the understanding of people in the area reached by the University and its activities about problems directly related to the war or arising from it, to encourage widespread and intelligent participation in various war activities, and to enrich the information both of the prospective soldier and of his people at home. Under the general direction of Mrs. Bess Dworsky Stein there have been several other faculty members serving in a volunteer capacity. Among these have been Mrs. Helen Parker Mudgett and Professor Frank M. Rarig. Mrs. Mudgett has been editor-in-chief of *Reading for Wartime*, a bi-monthly survey of periodical literature. Professor Rarig has been chairman of a radio series sponsored jointly by the Key Center and the Department of Speech, entitled "The World We Want." Many other members of the university faculty have participated in the radio panels, belonged to the Speakers Bureau, and read and analyzed current literature about the war and its problems. The Key Center maintains a War Reading Room in the library. This service has been especially valuable to members of classes conducted on our campus by the armed services. The Center has assisted also in placing university personnel in speaking assignments as a volunteer activity to help in the war effort. It has maintained exhibits of maps and charts in the War Reading Room and on various campus bulletin boards which have been assigned to the Key Center. It has transcribed the radio presentations of "The World We Want" series and has given these wide circulation among interested persons. The Center has assisted also in numerous other special projects. This is an emergency activity, but one of great importance in the times in which we live.—J. M. NOLTE, *director*.

SUMMER SESSION

Changes in social conditions are always reflected in the program of the Summer Session. When the country went to war the University adopted an accelerated program in the College of Science, Literature, and the Arts, the Institute of Technology, the Law School, the Medical School, the College of Pharmacy, the School of Dentistry, and the School of Business Administration. This accelerated program continued through the Summer Sessions of the biennium, 1942-44.

The effect of the accelerated program was to enroll a larger proportion of students

in the summer quarter than in previous years, and to employ a larger proportion of the teaching staff during the same period. The combined enrollment of Summer Session students and accelerated students in this biennium was larger than the enrollment of a normal prewar Summer Session. However, the effect of Selective Service regulations was felt severely in the 1944 Summer Session when the enrollment in the Institute of Technology dropped from 865 in 1943 to 321 in 1944. The decrease in the total enrollment in the 1944 Summer Session amounted to about 10 per cent of the 1943 enrollment. Statistics regarding enrollment are incorporated in the report of the Office of Admissions and Records.

Curriculum—The workshops in elementary education, higher education, childhood education and childhood development, secondary education, and public health nursery supervision were continued throughout the biennium. Special courses in the Conservation of Hearing and in the teaching of Agriculture were carried on both years. The Institute of Spanish Studies was provided with a special house and proved increasingly successful. Due to the emergencies of war and the difficulties of transportation the Itasca Park Biological Station was suspended for the biennium.

Graduate Work—The enrollment in the Graduate School, reduced by the war, was materially increased in the second year of the biennium—an indication that we have possibly reached the minimum enrollment for the war period.

Recreation—The usual recreation program of athletic events, social evenings, and educational excursions has been maintained throughout the biennium.

Union—The Coffman Memorial Union has co-operated by providing a part of the recreational program and space for the showing of newsreels and for social evenings.

Effects of War—The general effect of the war has been to materially decrease enrollment in the College of Education and the Graduate School, but the accelerated program in other colleges has enabled the Summer Session to maintain its organization and to offer on a substantially normal basis a program of instruction throughout the biennium.—THOMAS A. H. TEETER, *director*.

DIVISION OF LIBRARY INSTRUCTION

Enrollment in the Division of Library Instruction decreased in the biennium to the lowest in its history. Compared with the total of 249 registrants for the biennium, 1940-42, only 129 students were registered in 1942-44. In spite of this, the demands of libraries in the Northwest, and indeed the entire nation, for trained librarians has been far greater than the available supply. Some of the nearly nine hundred students who have completed a year in the division have been pressed back into service, in spite of having given up library work for homemaking. Even so, there are many important vacancies which cannot be filled.

Frank K. Walter retired as director on June 30, 1943. During the year 1943-44, Donald E. Strout was added to the faculty to assume responsibility for the teaching of courses in reference and book selection.

Miss Lura C. Hutchinson, after having served the division continuously since its beginning in 1928, had to take a leave of absence because of a serious fall in the spring of 1944. The influence of the Division of Library Instruction through its graduates located in thirty-one states and four foreign countries is due largely to Miss Hutchinson's devotion and industry.—ERRETT W. McDIARMID, *director*.

INSTITUTE OF CHILD WELFARE

Research—In the biennium, 20 new research projects were undertaken. Of the 375 projects started since the beginning of the Institute of Child Welfare in 1925, 31 are now in progress, 239 have been completed, 92 dropped, 12 combined with other projects, and one divided into several projects. Of those completed, 169 have had full publication, 6 partial publication, 4 are in press, 48 are either in thesis form or in preparation for publication, and 12 have been completed without publication. Of the 31 current projects, 5 involve co-operation with other university departments.

Nursery School and Kindergarten—The Nursery School was in session during 1942-43 with an enrollment of 47, and in 1943-44, with an enrollment of 46. The Kindergarten enrollment was 22 in 1942-43, and 20 in 1943-44. Both schools were in session during the first term of the Summer Session each year.

Instruction and Enrollments—For 1942-43 the total enrollment in Institute classes on the campus, both undergraduate and graduate, was 1,592 and for 1943-44, 1,796. In the biennium, 75 students who completed the curriculum in nursery school, kindergarten, and

primary education, received the B.S. degree in the College of Education. Five students received the Ph.D. degree and 12 received the M.A. degree with majors in Child Welfare.

Parent Education—The parent education activities of the Institute are summarized in the following table:

	1942-43		1943-44	
	No. Groups	Enrollment	No. Groups	Enrollment
Extension courses				
Credit	9	107	7	79
Correspondence study courses				
Credit	4	93	4	43
Non-credit	2	91	2	46
Study groups	12	329	7	151
Lecture series	3	479	5	1,505

Radio—The weekly Institute radio program was continued over WLB, the university radio station.

Publications—During the biennium, fifteen scientific and professional articles were published and two, now in press, were prepared. Four monographs are in process of publication. Nineteen popular or semiprofessional articles were published.

Other Activities—During the biennium, members of the staff gave 200 lectures or addresses to various groups, societies, and organizations, both lay and professional. Traveling libraries for study groups were supplied as in previous years. Because so many war activities affect children, the demands upon the staff for consultation and advice to private and public agencies, and for participation in national, state, and local wartime programs have been very heavy.—JOHN E. ANDERSON, *director*.

COMMITTEE ON EDUCATIONAL RESEARCH

Committee Members—The following were members of the committee during the biennium unless otherwise noted:

Clyde H. Bailey, dean and director, Department of Agriculture; Frederic H. Bass, professor of municipal and sanitary engineering and chairman, Department of Civil Engineering, 1942-43; F. Stuart Chapin, professor and head, Department of Sociology; Walter C. Coffey, president of the University; T. C. Blegen, dean, Graduate School, and professor of history; Ruth E. Eckert, associate professor of education, *secretary*; Everett Fraser, dean, Law School; Edward M. Freeman, dean, College of Agriculture, Forestry, and Home Economics, and professor of plant pathology and botany, 1942-43; Palmer O. Johnson, professor of education; William F. Lasby, dean, School of Dentistry, and professor of dentistry; Samuel C. Lind, dean, Institute of Technology; Irvine McQuarrie, head, Department of Pediatrics, and professor of pediatrics; Donald G. Paterson, professor of psychology; Wesley E. Peik, dean, College of Education, and professor of education; Russell A. Stevenson, dean, School of Business Administration; John T. Tate, dean, College of Science, Literature, and the Arts and research professor of physics; Malcolm M. Willey, vice president, Academic Administration; T. R. McConnell, dean, College of Science, Literature, and the Arts, *chairman*.

Curriculum and Faculty Load Studies—During the biennium a number of studies were made of the comprehensive data gathered in 1941-42 relating to the courses and curricula offered in the departments and principal divisions of the University and to the responsibilities carried by faculty members. These studies were reported in *Studies in Higher Education*, published by the University of Minnesota Press in 1944. A simplified faculty load blank based on results of the faculty load studies, was devised and used in 1942-43. The analysis of the data secured from the revised schedule confirmed the earlier findings concerning the nature and extent of faculty services. During the past year a permanent record form was devised to make possible a cumulative report of each faculty member's varied university services.

Senate Committee on Education Studies—Several of the investigations undertaken during the biennium were made at the request of the Senate Committee on Education, which was engaged in a study of postwar educational problems in the University. Among these investigations was a detailed study of enrollment trends during the past quarter-century, resulting in estimates of the size of the University postwar student body. Another study summarized the relative academic aptitudes of freshmen admitted to the several principal divisions and colleges of the University. In order to find out how selective the University has actually been in admitting students, studies were made of the general scholastic promise of students recently graduated from Minnesota high schools and of those who entered other types of colleges in this state. A study of academic mortality and survival in certain undergraduate colleges was made to find out what proportion of

students finally secured degrees and how the graduates compared in academic aptitude with students who left college before graduation. Trends in faculty personnel during recent years were investigated, with special attention to the quality of leaves, losses, and replacements. Finally, the committee financed an appraisal of the scholarly publications of faculty members in the University.

Other Studies—Studies, begun earlier, completed during this biennium included an investigation of factors contributing to success in the School of Journalism, a similar prediction study carried on in the School of Business Administration, an analysis of enrollment trends in all university courses during the past ten years, an investigation of students' attitudes toward overlapping among courses, and a survey of the work experience of dental hygienists. Some assistance was provided also in the development of general education courses in the College of Science, Literature, and the Arts, with contributions made during this biennium to the courses entitled "Humanities in the Modern World" and "Orientation in the Natural Sciences." Some financial aid was supplied also for an exploratory study of educational acceleration in the College of Pharmacy.—T. R. McCONNELL, *chairman*; RUTH E. ECKERT, *secretary*.

WORKS PROJECTS ADMINISTRATION

The termination of the Works Projects Administration marks the close of an epoch on the campus of the University of Minnesota. From the beginnings, in December, 1933, down to March, 1944, there has been, in one form or other, a federally sponsored work program at the University. It is scarcely to be questioned that these years have represented a golden era of research accomplishment for the University and its staff members. Never before had research and service assistance been available in such an amount, whether measured in dollars or in men. A new momentum in University research and scholarship was achieved. Work that could not have been done for years in the normal course of events was accomplished within a period of months. Some idea of the magnitude of this research project may be gained from the accompanying table which shows that a total of \$2,475,652.82 was expended during the period beginning with the year, 1935-36, and ending February 1, 1943. This table shows in detail the distribution to the different colleges or administrative divisions, both in dollars and in percentages.

A detailed report giving statistics and a complete bibliography of publications resulting from the WPA project has been published under the title, *University General Research Program (WPA), 1935-1943*, to which interested readers are referred for further details.

The need, nationally, for the WPA has now diminished to the point where WPA continuation is no longer justified. To be sure, there are still individual workers who will never be absorbed by the labor market created as a result of the war. Their needs will have to be met in other ways, presumably through local relief. But the major problem of mass unemployment that characterized the 1930's has all but disappeared. And with it the basic need for WPA has likewise gone.

But what of the future?

Eventually, the great war industry that is now moving at near top speed will slow down. Think of the great plants that have been constructed as if by fairy-wand for the turning out of the implements of war: acres of powder factories, blocks of munition plants. Think, too, of the converted industrial plants now engaged on war contracts in place of the civilian goods they formerly turned out. Their conversion back to peacetime production will involve serious disarrangements. And, finally, think of the seven to ten million men in the Army, and the two or more million men in the Navy. Once the actual fighting is done, the pressure for their demobilization will rise to heights of intensity.

In brief, the end of the war will bring a manpower readjustment that because of its very magnitude, may very well be disruptive of the economic pattern.

To meet this situation, various expedients will have to be adopted. It is not too unsafe to predict that colleges and universities will be flooded with students as never before. This nation has always utilized the higher educational system as one means of solving its youth problems, and it will in all likelihood do so again. The schools will be one step in the demobilization process, leading gradually from war service back to civilian life.

But for many, the schools offer no solution; in fact, they offer it for a minority. Other governmental devices will have to be developed to assist in the transition. One of these devices will almost certainly be an enlarged program of public works. The local communities will no more be able to handle the problems of mass unemployment following the present war than they were following the collapse in 1929. The only question is at what stage a program of federal public works will be introduced: before the collapse and

UNIVERSITY WPA RESEARCH EXPENDITURES, 1935-43

Administrative Unit	1935-36	1936-37	1937-38	1938-39	1939-40	1940-41	1941-42	1942-43*	Total by Departments	Per Cent of Total
Administration	\$ 2,839.84	\$ 6,422.46	\$ 11,222.27	\$ 33,999.12	\$ 32,271.63	\$ 43,196.94	\$ 33,591.44	\$ 2,899.46	\$ 166,443.16	6.7
General University	34,474.80	74,855.94	77,498.46	25,534.32	10,449.98	8,846.29	4,766.09	1,248.50	237,674.38	9.5
College of Science, Literature, and the Arts	9,081.28	40,484.82	67,019.15	112,439.38	80,546.75	89,958.91	31,266.78	6,208.21	437,005.28	17.7
Institute of Technology	3,013.05	12,886.63	24,068.06	54,013.64	47,428.23	43,301.71	26,383.82	9,837.54	220,932.68	8.9
Department of Agriculture	40,676.65	91,668.45	113,339.86	138,906.67	98,951.55	101,548.32	124,395.88	37,664.81	747,152.19	30.2
Medical School	1,372.40	9,180.28	29,921.58	54,933.29	36,552.16	64,704.26	76,930.67	30,787.75	304,382.39	12.3
University Hospitals			782.50	2,850.79					3,633.29	0.1
School of Dentistry	606.30	2,586.40	3,258.55	2,889.95	4,681.10	4,638.09	39.35		18,699.74	0.8
College of Education		42,480.55	48,327.18	52,862.28	27,784.73	19,573.29	14,488.80		205,516.83	8.3
School of Business Administration.....	787.52	3,975.06	6,780.35	6,486.99	7,398.18	695.26	7,847.90	19,514.13	53,485.39	2.2
General College	7,100.10	3,412.74	8,932.29	4,093.48	6,431.13	5,776.15			35,745.89	1.4
Institute of Child Welfare	460.27	1,235.15	2,707.89	5,522.82	4,339.01	244.18	678.32		15,187.64	0.6
Physical Education						4,760.61	9,437.05	4,359.43	18,557.09	0.8
Student Service Enterprises							11,236.87		11,236.87	0.5
Totals	\$100,412.21	\$289,188.48	\$393,858.14	\$494,532.73	\$356,834.45	\$387,244.01	\$341,062.97	\$112,519.83	\$2,475,652.82	100.0

* Covers the seven months, July 1, 1942 to February 1, 1943.

thus serving to neutralize it; or after the collapse, repeating our experience of 1930. But who will doubt, even now, that there will arise an unemployment problem in the decade ahead of us, which can be met only by some form of federal intervention?

Relief and social gain are not incompatible concepts, as one can readily observe by reference to the history of WPA on the campus of the University of Minnesota, as a specific example. Here was an intelligent use of federal funds appropriated for relief purposes, and the expenditure of those funds has been accompanied by gains to the state of Minnesota, and to the larger world, that can scarcely be understated. Is it not desirable that we should, even now, begin to plan for the inevitable day when once again we shall be faced with the need for assisting men and women to meet their problems of daily living? Are there not, in the experience of the WPA, lessons to be learned that have application to the new problems that sooner or later will confront us?—MALCOLM M. WILLEY, *vice president, Academic Administration.*

PUBLIC ADMINISTRATION TRAINING PROJECT

The project continued under the general supervision of an all-university committee representing the several colleges, schools, and departments most immediately concerned with its work, and is directed by a training staff of members of the Department of Political Science.

The graduate training program in public administration, the principal activity of the project, was continued during the biennium in spite of adverse war conditions which sharply reduced the number of qualified applicants. The cancellation of deferments for young men of draft age, attractive employment and service opportunities for young women, and the reluctance of government agencies to grant educational leaves to their employees, made it difficult to secure a satisfactory enrollment. Even so, eleven graduate students were enrolled each year, and they maintained the high standard of scholarship and personal qualifications characteristic of earlier student groups. A marked increase in the proportion of women students not only reflected the shortage of men but was in keeping with the wartime demand for women in this field. All but one of the students enrolled in both years held fellowship or assistantship appointments.

The absence of faculty members in military and civilian government service substantially reduced the number of courses available in the formulation of study programs, but reasonably satisfactory substitutions were made. The policy of combining work in public administration and public law with courses pertinent to some particular field of governmental activity was followed as in prior years. Luncheon meetings necessarily were curtailed, but a considerable number of talks and lectures by public officials and visiting professors supplemented the more formal course work.

Internship training in appropriate governmental agencies was arranged for those pre-service students who had not had equivalent training before enrolling for residence work. Limited funds and the demand for accelerated training forced some curtailment in this phase of the program.

Ninety-five students have been enrolled in the program since its inauguration in 1936-37, of whom forty-five were in the armed forces of the nation at the close of the biennium. Most of the others are in government employment—national, state, or local—and are occupying increasingly responsible administrative positions.

The other activities of the project, namely, the reference library maintained in cooperation with the University Library and the Municipal Reference Bureau, and the information and vocational guidance service with reference to government employment opportunities, have been continued though with a diminishing student clientele.

The financial support of the Rockefeller Foundation, which made possible the beginning and subsequent operation of the project, terminates with the close of the 1944-45 fiscal year. The urgent need for fellowships to assist worthy students during their year of graduate study in residence and their additional period of internship training offers an unusual opportunity for some interested citizen of Minnesota and friend of the University to make an enduring contribution to the improvement of government administrative personnel—a matter of vital importance to the future of our democracy.—LLOYD M. SHORT, *secretary and director.*

STUDENTS' HEALTH SERVICE

In March, 1943 there arrived on campus the first group of army students to whom the Health Service gave complete medical care. During the remainder of the biennium the number of army men increased. These men brought new health problems. In some

units monthly replacements were made. They came from Army camps throughout the United States and brought with them contagious diseases. The incidence of illness, therefore, and the amount of hospitalization required for the army groups greatly exceeded that for civilian students.

In November and December, 1943, a widespread epidemic of influenza occurred in this area. The incidence was particularly high among the army groups, although it was widespread also among the other students and throughout the Twin Cities. Within a 48-hour period the facilities for hospitalization of students in the Health Service were exhausted. On November 22, 1943 an emergency hospital with 46 beds was set up in the Coffman Memorial Union. In the following four days 34 additional beds were added. The epidemic lasted approximately four weeks. All of the cases were relatively mild, with few complications and no deaths.

Small outbreaks of scarlet fever and mumps occurred in three of the army groups during the spring of 1944. For the companies in which scarlet fever occurred sulfadiazine was given prophylactically to all members of the companies. In spite of the epidemic of influenza and the high incidence of pneumonia and other serious diseases there has been but one death during this period, that of an army student who dived into a shallow lake and fractured his neck.

The care of the Army added many other additional duties. Sick call was held every morning at 7:30, required immunizations were given to large groups of the men, a required monthly inspection was made for certain of the groups, and the responsibility of making the many monthly and weekly reports was given to the Health Service with the assistance of certain non-commissioned officers. The fact that all of this additional load was carried with a medical staff about half the normal size was possible only because of the untiring and conscientious efforts of all of the staff.

The Navy has provided its own medical officers and sick bay. The Health Service has given hospital care to navy men referred by the navy physicians for serious illnesses and to the overflow from the navy sick bay for other navy students.

The regular program of the Health Service for civilian students has been continued with the exception of the special diet table. The complete health examinations required of all students on entering the University and annually for students in certain colleges have been continued. Table I presents comparative annual examination data.

TABLE I. NUMBER OF COMPLETE PHYSICAL EXAMINATIONS GIVEN*

Year	Entrance	Periodic	Total
1934-35	4,475	2,484	6,959
1935-36	5,378	2,737	8,115
1936-37	5,408	3,342	8,750
1937-38	5,036	2,854	7,890
1938-39	5,245	3,759	9,004
1939-40	5,369	4,171	9,540
1940-41	5,865	3,415	9,280
1941-42	5,865	2,973	8,838
1942-43	5,944	2,977	8,921
1943-44	4,859	1,782	6,641

* Collegiate grade.

Medical Care—During this biennium over 89,000 visits were made to the Health Service dispensary on the Main campus for medical care and advice. This is a decrease from the number of visits made during the past ten years. In 1943-44, however, the average visit per student was the highest at any time. These figures included the visits of the army men, which undoubtedly account for the increase in the visits per student. Although the army enrollment comprised less than 20 per cent of the total enrollment, over 30 per cent of the visits to the Health Service for medical care were made by army students.

Hospital Care—In 1942-43, 1,800 students, and in 1943-44, 2,261 students were hospitalized in the Health Service hospital on the Main campus for an average length of stay of approximately five days (Table III). These include civilian and army students. The number hospitalized for the year 1943-44 was the largest in the history of the Health Service. The high rate per 1,000 students registered was due to the fact that all army men were hospitalized in the Health Service, whereas many civilian students who were ill stayed at home. The comparative rate of hospitalization per 1,000 students registered for the civilians and the army group is given in Table IIIA. The rate of hospitalization was six to seven times as many for the Army as for civilians.

THE PRESIDENT'S REPORT

TABLE II. VISITS TO THE HEALTH SERVICE (MAIN CAMPUS)
FOR MEDICAL ATTENTION*

Year	Number of Visits†	Average Visits per Collegiate Student
1934-35	54,794	4.41
1935-36	57,400	4.25
1936-37	54,956	3.91
1937-38	55,969	4.06
1938-39	58,260	3.85
1939-40	53,212	3.48
1940-41	54,962	3.16
1941-42	51,322	3.27
1942-43	43,530	3.14
1943-44	45,896	4.65

* In this tabulation the calls made by students at the health services at the agricultural substations have not been included because in certain years the attendance at these health services is greatly affected by epidemics of contagious disease upon these campuses. The Summer Session figures also have been omitted.

† These totals do not include visits for physical examinations, dentistry, hospitalization, excuses for illness, contagious inspections, eye refractions, vaccinations, immunity tests, physiotherapy, laboratory, or X-ray services.

TABLE III. STUDENT HOSPITAL CARE (MAIN CAMPUS)

Year	No. of Patients	Rate per 1,000 Students Registered	No. of Hospital Days	Average Length of Hospital Stay per Patient in Days	Comments
1934-35	1,676	135.0	7,620	4.5	German measles
1935-36	1,214	89.7	6,464	4.5	No epidemic
1936-37	1,246	88.6	5,983	4.8	Mild influenza
1937-38	1,046	75.8	5,560	5.3	No epidemic
1938-39	1,405	92.9	7,353	5.2	Moderate epidemic
1939-40	1,225	80.0	6,134	5.0	No epidemic
1940-41	1,302	74.9	5,928	4.6	Moderate epidemic
1941-42	1,248	79.7	5,232	4.2	No epidemic
1942-43	1,800	118.4	8,687	4.8	No epidemic (Army during 3 months of period)
1943-44	2,261	190.2	11,228	5.0	Influenza epidemic

Special Diet Table—The special diet table for students with diabetes, gastric ulcer, allergy, obesity, and so forth, was discontinued at the end of the first term of the Summer Session in 1943 because of lack of personnel and lack of space. Tables IV and V give the data for the kind and number of cases treated during the first year of the biennium. It is hoped that this service can be continued again after the war, as it fills a very real need for many students.

TABLE IIIA. CIVILIAN-ARMY COMPARISON

Year	No. Patients	Rate per 1,000 Students Registered	No. Hospital Days	Average Stay
1942-43				
Civilian	1,174	84.64	5,665	4.8
Army	626	472.81	3,022	4.8
Totals	1,800	118.47	8,687	4.8
1943-44				
Civilian	943	95.53	5,333	5.7
Army	1,318	654.42	5,895	4.5
Totals	2,261	190.24	11,228	5.0

TABLE IV. KIND AND NUMBER OF DIET CASES TREATED, 1942-43*

Type of Diet	Number on Diet	Per Cent
Reduction	34	44
Allergy	11	14
Ulcer	10	13
Supernourishing	9	12
Diabetic	7	9
General	4	5
Ulcerative colitis	2	3

* Discontinued.

TABLE V. AVERAGE NUMBER OF DIET PATIENTS SERVED DAILY, 1942-43*

Month	1942-43
September	10.3
October	12.2
November	22.3
December	24.2
January	21.0
February	22.6
March	17.8
April	19.0
May	20.5
June	15.0

* Discontinued.

Mental Hygiene—During this biennium a total of 481 new students has been seen in the mental hygiene department, despite the fact that during one year of the biennium one psychiatrist was on sabbatical leave. During 1943-44, contrary to what might be expected with the decreased civilian enrollment, there has been a definite increase in the need for psychiatric consultation. This has been due in part to an increasing number of referrals from all parts of the University, and in part to a comparatively greater load among the army students than among the civilians. The total number of interview hours for the biennium was 7,867. The civilian students seen have shown more severe abnormalities than formerly. During the past few months of the biennium an increasing number of discharged veterans has been seen in the mental hygiene division.

Tuberculosis Control—During the biennium only 44 cases of tuberculosis were found in the University. These cases were all diagnosed as a result of the routine case-finding tuberculosis program.

Special Services—Although all of the special services, such as the allergy clinic, have been continued, most of the research activities, including the cold prevention study, have been discontinued because of lack of staff.

Farm Campus—Tables VI and VII present data for the Farm campus Health Service. In 1943-44 the number of students hospitalized at the Farm campus was one of the greatest in its history. The number of students given medical attention and immunization in the dispensary was low, largely because of the decreased enrollment in the School of Agriculture.

TABLE VI. FARM CAMPUS HEALTH SERVICE: OUT-PATIENT DEPARTMENT

Year	Medical Attention	Total Immunizations: (Smallpox Vaccination, Diphtheria, Scarlet Fever Immuniza- tions, etc.)	Total Services Rendered*
1934-35	3,619	2,241	5,860
1935-36	2,518	3,812	6,330
1936-37	4,702	1,771	6,473
1937-38	4,426	2,009	6,435
1938-39	4,743	1,840	6,583
1939-40	5,150	1,567	6,717
1940-41	4,210	1,501	5,711
1941-42	3,260	960	4,220
1942-43	2,047	696	2,743
1943-44	2,343	1,128	3,471

* These totals do not include visits for physical examinations, contagious disease inspections, eye refractions, or excuse for illness.

TABLE VII. STUDENT HOSPITAL CARE (FARM CAMPUS)

Year	No. of Patients	No. of Hospital Days	Average Length of Hospital Stay per Patient in Days	Comments
1934-35	490	2,397	4.9	German measles, scarlet fever
1935-36	305	1,920	6.3	Mumps
1936-37	272	1,108	4.1	No epidemic
1937-38	260	1,296	5.0	Mild influenza
1938-39	256	1,089	4.3	Mild influenza
1939-40	238	1,039	4.4	No epidemic
1940-41	308	1,397	4.5	Influenza, mumps
1941-42	51	215	4.2	No epidemic
1942-43	166	721	4.3	No epidemic
1943-44	458	1,895	4.1	Influenza epidemic

Faculty Examinations—Physical examinations of all new members of the academic staff and those promoted to positions implying tenure have been required since the spring of 1941. During the biennium there were 137 examinations—125 at the Health Service and 12 elsewhere. None was rejected because of physical defects.

Nonacademic Applicants—During the biennium a total of 682 applicants for non-academic positions on the regular payroll has been examined and 13, or slightly less than 2 per cent, rejected for health reasons.

Campus Sanitation—The Health Service has continued the inspection of kitchens, swimming pools, and rooming houses. Weekly inspections are made of all campus eating places, and weekly samples of water are taken from all swimming pools for bacteriological examination. All food handlers on the campus are given annual medical examinations.

With the anticipated increase in enrollment in the postwar period, it has become evident that the facilities of the Health Service will have to be expanded to take care of increased enrollment. A committee has been appointed to consider possible expansion and to make recommendations.—RUTH E. BOYNTON, M.D., *director*.

DEAN OF STUDENTS

Student Activities Bureau—This bureau was established in August, 1943 to administer university policies concerning student organizations and groups, to give program advice concerning student events and activities, to provide financial supervision of student organizations, and to counsel individual students needing experiences through group activities. The following table summarizes certain functions of the bureau for the biennium:

	1942-43	1943-44
Speaker approvals	72	40
Poster approvals	275	258
Post-office approvals	46	49
Social party approvals	938	306
Eligibility certifications	1,328	1,891
New organizations recognized	13	12
Organizations declared inactive	28	42

In addition to the significant decline in number of social parties indicated above, there was also a decrease in the number of student organizations from 263 to 221. As a substitute for social-recreational activities, a large number of students turned their attention to war-related projects. The Campus Chest raised \$3,206.90 and \$4,426.91 in the two years of the biennium, this money being given chiefly to Minneapolis and St. Paul War Chests, to prisoners' aid, and to the support of campus war projects. This philanthropic drive was supplemented by raising \$2,523.41 for the Red Cross, \$724.43 for the Christmas Seal campaign as well as by stamp drives and the raising of \$51,526.30 through the sale of war bonds. Special mention should be made of the Blood Bank sponsored originally by fraternities and more recently by sororities.

At the suggestion of the staff, student veterans of the present war now enrolled in the University have organized a Veterans' Club and are meeting frequently to inform each other about current social problems. This club may serve a useful function in helping other veterans to become adapted to student life upon their return to the campus.

The staff of the bureau held approximately 14,000 conferences with students and over 8,000 with faculty advisers each year with regard to the planning of program events. In addition, over 4,000 conferences were held each year concerning the financial affairs of student organizations.

In September of 1943, a new program of social adjustment counseling was begun. Students in need of socializing group experiences are given extensive counseling by the bureau's staff working in co-operation with other personnel workers and with student leaders of organizations. A total of 212 students was counseled extensively in this program.

Because of decreased student enrollment and a decline in number of student organizations, the deposits in the student organization funds decreased from \$145,399.06 in 1942-43 to \$126,203.98 in 1943-44. The cash balances on June 30 of the respective years were \$34,548.04 and \$28,856.52.

In 1943, as a measure of protection for surplus funds of inactive student organizations, a Student Organization Investment Trust Fund was established under the supervision of the Financial Investment Counsel of the University. At the close of this first year of operation a total of \$37,361.81 was held in trust in this fund. In addition \$6,543 in government bonds is held on deposit for student organizations.

Loans and Scholarships—In the first year of the biennium, 1,191 students were given financial assistance to the amount of \$189,053.71 as contrasted with 319 students granted a total of \$56,052.14 in loans and scholarships in the second year. To administer this aid required 20,040 and 6,451 contacts with students, parents, university departments, personnel agencies, and others during the respective years. This significant decrease in the amount of financial assistance granted to students was due to the decrease in federal student war loans from \$96,605.35 to \$14,367.98, the greater number of part-time job opportunities for students, general economic improvement in the students' home communities, decline in enrollment, and the transfer from the Bureau of Student Loans and Scholarships to the School of Nursing of the responsibility for administering certain federal nursing scholarships programs.

In addition to the 319 students granted financial assistance in the year 1943-44, 146 students were given counseling on other financial matters. This financial counseling is a new type of service and, increasingly, counselors in the colleges are referring students for this kind of assistance.

During the year 1943-44 special attention was given to increasing available financial resources for students from non-university sources. A total of \$3,833.24 was obtained from sixteen non-university organizations to supplement the \$56,052.14 indicated above.

Foreign Students—During the past two years the number of foreign students enrolled in the University has declined to eighty-six. A special allotment permitted the employment of an adviser devoting approximately one sixth of his time to advising foreign students concerning matters of housing, social contacts, speaking engagements, overcoming language handicaps, legal status, visas, and also serving as liaison with the various officials of the U. S. State Department who are becoming increasingly active in supervising foreign students enrolled in American universities. As the number of foreign students increases, the amount of staff time available for special counseling must be materially increased.

Student Housing—The residential status of each student enrolled in the University during the fall quarter of each year was as follows:

	1942-43		1943-44	
	Men	Women	Men	Women
*Parents' homes	3,900	2,535	1,511	2,543
Commuters	161	80	83	101
Dormitories	404	888	244	810
Fraternities or sororities	686	201	254	229
Co-operative houses		101		121
Apartments	49	30	16	46
Relatives' homes	127	94	29	101
Employers' homes	77	48	19	18
Friends' homes	30	34	15	51
Approved rooming houses	1,461	657	842	876
Unapproved rooming houses	92	62	34	39
	6,987	4,730	3,047	4,935

* In Minneapolis or St. Paul.

In co-operation with the Students' Health Service, the director continues to work with home owners to improve the hygienic and physical comfort phase of student housing outside of the university residences. She also seeks to improve relationships between the University and householders, and to raise residential standards so entering students may experience a more satisfying introduction to university life.

An official directory of inspected and classified residences for men and women on the two campuses is published and distributed to students by the bureau each year. In addition

to students, parents, faculty, military staff members, and special short-term groups come to the bureau for personal assistance. Special attention has also been given to the tendency of fraternities, unchaperoned and unsupervised, to rent rooms to non-students and to non-member students. It is evident that responsible adults are needed in all facilities available for student roomers.

Student Conduct—Despite the stresses and strains inherent in war conditions, no marked increase in serious cases of misconduct was noted during the biennium. In 1942-43 there were 159 students (119 men and 40 women) who were counseled concerning matters of conduct and their cases reviewed by the All-University Discipline Committee. During the next year there were 214 such cases (91 men and 123 women). The total number of situations coming to the University's attention, including those involving student organizations and non-students, was 177 and 245, respectively. In the year 1941-42 the total number of such cases was 127. The increase in total number is caused chiefly by a greater number of minor irritating relationships between students and householders. In counseling these special cases the assistant to the dean, who serves as secretary of the Discipline Committee, increased the number of his conferences from 1,897 in the year 1942-43 to 2,752 during 1943-44. During the biennium it has been necessary to exclude permanently only one student.

Speech Clinic—Beginning in September, 1943, new freshman students take an examination given by the Speech Clinic. They are then advised with regard to needed speech remediation including enrollment in speech courses. Also adopted in this biennium was a new policy requiring a small addition to the incidental fee for general support of the Speech Clinic in addition to a revised schedule of special fees. Special clinical facilities were provided for students in military training programs. The number of individuals given speech examinations increased from 720 in the first year to 2,874 in the second year. The number of individuals given clinical service during the first year increased from 119 to 264 the second year. Of the 2,200 freshmen examined at the time of matriculation, approximately four fifths were either released as having no serious need for speech correction or referred to speech classes for group instruction or to the Student Activities Bureau for socializing experience through group activities. The remainder was recommended for speech remediation in the Speech Clinic varying from one or two conferences to extended and extensive technical corrective work.

Student Counseling Bureau—This bureau, formerly the University Testing Bureau, provides technical psychological services directly to students and indirectly through faculty advisers and administrators. Its varied services are partially summarized as follows:

	1942-43	1943-44
Total student cases	6,006	4,095
Non-university cases	226	251
Number of counseling interviews	8,517	5,923
Case reports to other counselors	5,623	3,694
Case consultations	201	185
Group testing cases	8,708	12,269
Number of psychological tests administered	125,722	107,279
Number of tests scored	92,130	115,207

Among the special services provided are: a Reading Clinic, with an average of 209 student visits per month; an extensive and carefully selected occupational information library for counselors and student advisees; supervision of special reading services for blind students in co-operation with the State Department of Vocational Rehabilitation; and consultation work with departments and colleges of the University and also to a lesser extent with personnel managers of industrial concerns.

Counseling Veterans—Following approval by the Senate of a plan recommended by the Committee on Education, the president appointed a Committee on the Co-ordination of Advisory Services for Veterans with the dean of students as chairman and with an executive secretary. Each college and certain university departments are represented. Each college has appointed special advisers for veterans to work within the framework of its present advisory system. A special training conference is planned for all those within the University who are concerned with counseling veterans. Current personnel facilities are expected to take care of veterans' problems adequately, and the committee will serve a co-ordinating and liaison function to make certain that each veteran receives the personnel services which he needs. Procedures are being developed rapidly to facilitate the counseling of veterans and effective co-operation has been obtained from the local office of the U. S. Veterans' Administration. Thus far, approximately 175 veterans have been enrolled, many of whom were former students.

Religious Work—Upon request of the president, the present executive secretary,

University YMCA, is serving as the University's co-ordinator of student religious programs. As such, he is a special adviser to many of the student religious organizations and is also the liaison officer between the University's counselors and the religious organizations adjacent to the university campus.

Co-ordination—A major emphasis of the biennium was the co-ordination of college and university personnel departments and the increase in size and scope of these facilities to the end that each student may be referred to that agency which best provides the services he needs. Through conferences, interviews, demonstration clinics, and staff meetings, the possibilities of these inter-departmental relationships were further explored.

The most significant progress during the biennium was the formulation by the Senate Committee on Education of a policy providing for greater emphasis upon and co-ordination of: the faculty counselor program; co-operative relationships between counseling agencies; attention to special groups such as foreign students, transfer students, and superior students; continuous review of rules and regulations governing various aspects of admissions, scholarship, and graduation; and co-operation with high school counselors in providing information about the vocational and educational opportunities in the University of Minnesota.—EDMUND G. WILLIAMSON, *dean*.

BOARD OF ADMISSIONS

Periodically the board reviews *ad interim* action taken by the secretary in the cases of applicants who do not qualify for admission in the regular manner. During the biennium, 355 freshmen were admitted to the University on the basis of their standing in aptitude tests. Of the total, 244 were high school graduates with deficiencies in pattern of subjects and 111 had not graduated from high school. Of the total, 229 or 64.5 per cent earned an average grade of "C" or more during their first quarter of residence. This is, of course, a more satisfactory record than is achieved by most first quarter freshmen and indicates that, through careful selection, students who would ordinarily be denied admission now achieve desirable scholastic standing.

In co-operation with the Senate Committee on Relations with Other Institutions, the board consulted with selected high school principals, superintendents, and representatives of other Minnesota colleges concerning the admission of such non-graduates of high schools. As a result of this meeting, the University's policy has been adopted by colleges of the state and endorsed by high school officials. The application of this policy has been determined in co-operation with school officials and requires the collaboration of high school principals, parents, the University Counseling Bureau, the dean of the college, and the director of admissions. All student cases in which there is not unanimous concurrence come within the jurisdiction of the Board of Admissions.

Further broadening of university admission policy will result from the action of the faculty of the College of Agriculture, Forestry, and Home Economics which permits students in the highest one fourth of high school classes to enroll in that college regardless of the pattern of subjects taken in high school. Under this new policy no student who is qualified by reason of aptitude and previous achievement is denied admission to the University through technicalities or deficiencies in formal subject-matter requirements. In a very real sense, the University is prepared, at least partially, to deal with some of the anticipated irregularities involved in readmitting veteran-students.

Major attention was also given during the biennium to preparation for other problems of veteran-students. Special procedures for identification at the time of admission were developed in co-operation with the Senate Committee on Education. These procedures make it possible for instructors, advisers, and administrators to identify veterans readily so that they may be given maximum counseling assistance.

One additional major problem in the readmission of veterans awaits solution—namely, procedures for the granting of college credits for certain types of experiences and training. It is expected that the proper admissions officers will review each veteran's service record of training and experience to determine equivalency to courses offered in the University. Recently adopted policies permit the granting of college credits to students to the extent that they demonstrate that they have learned materials comparable to those required in the University. Special examinations developed by the United States Armed Forces Institute are now available in the Student Counseling Bureau for use by admissions officers and committees of the various colleges.—EDMUND G. WILLIAMSON, *chairman*.

DEPARTMENT OF PHYSICAL EDUCATION AND ATHLETICS

Although the civilian population of the University has been radically reduced during the biennium, nevertheless the use of the physical education facilities has been greater than in any previous period. Most of the servicemen on the campus were required to take one hour of physical training per day. This meant that approximately 5,000 men were using the facilities every day. The addition of the requirement of physical training for freshmen men in several colleges added to the load. The civilian staff administered the program and taught all of the classes for the army units. The navy personnel handled their own classes, but the administration of the facilities for these classes was the responsibility of the university staff. Continued loss of staff members made the task rather difficult but with the excellent co-operation of those that remained the programs were carried on without interruption or confusion.

Every effort was made to carry on a complete program of activities in all branches of the department. Although schedules in some activities were curtailed, intercollegiate competition was carried on in all sports. Enrollment in the teacher-education curriculum was at an all-time minimum but classes were taught in this field. The intramural program has been continued for civilians and servicemen. As a result of this continuity of activity, transition to peace-time conditions should be less difficult. Statistical tables showing the extent and kind of participation accompany this report.

In addition to regularly scheduled activities a list of events of special importance conducted by the department follows:

1942-43

1. Conduct of an Intersectional Ice Hockey Series with St. James of Winnipeg.
2. Assistance with the conduct of the Northwest Gymnastic Meet.
3. Conduct of the state high school championship meets in basketball, golf, swimming, tennis, track, and wrestling.
4. Conduct of the regional and Twin City high school basketball championships.
5. Assistance with the conduct of the State High School Coaches Basketball Clinic.
6. Assistance with the conduct of the Northwest Golf Clinic.
7. Conduct of the Metropolitan Area and Twin City high school track championships.

1943-44

1. Conduct of the regional and Twin City high school basketball championships.
2. Conduct of an Intersectional Ice Hockey Series with St. James of Winnipeg.
3. Conduct of the state high school championship meets in golf, swimming, track, tennis, gymnastics, and wrestling.
4. Conduct of the Metropolitan Area and Twin City high school track championships.
5. Conduct of the Twin City high school football championship.
6. Assistance with the conduct of the Northwest Gymnastic Championship.

Intercollegiate Athletics—In spite of manpower, travel, and scheduling difficulties the amount of participation in intercollegiate sports in the past two years compared favorably with that of the previous biennium. In Table I items of special importance are summarized and a comparison with the two preceding years is shown.

Despite the shortage of manpower the records of the various teams in intercollegiate competition are satisfactory. All sports were maintained and schedules were curtailed only when competition was not available. Although every effort was made to win all contests the main emphasis was upon giving active competition to as many men as possible. The percentage of contests won for the past two years was .550. Athletic receipts for the past biennium were considerably less than for the previous two years but were ample to finance the scheduled programs.

TABLE I. INTERCOLLEGIATE COMPETITION 1940-44

	1940-42	1942-44
Number of contests	229	191
Number of Conference contests	131	105
Number of Non-conference contests	98	86
Number of contests won	157	105
Number of contests lost	68	84
Number of contests tied	4	2
Number of varsity candidates	1,080	319
Conference championships	3	0

Physical Education—During the past biennium emphasis in physical education was placed upon physical fitness. Civilian classes profited from the example set by those conducted for the army and navy trainees and a definite trend toward better physical fitness

TABLE II. STATISTICS ON INTERCOLLEGIATE ATHLETICS, 1942-44

Activities and Head Coaches	Total No. Games		No. Confer- ence Games		No. Non- Conference Games		Total No. Receiving Ath. Instr. Including Freshmen		No. Varsity Candidates		No. Varsity Cand. Elig. for Intercul. Competition		Number Competing		No. "M" Awards		No. Plain Garments Awarded		No. Fresh- man* Candi- dates		No. Freshman Numerals* Awarded		No. Games Won		No. Games Lost		No. Games Tied	
	42- 43	43- 44	42- 43	43- 44	42- 43	43- 44	42- 43	43- 44	42- 43	43- 44	42- 43	43- 44	42- 43	43- 44	42- 43	43- 44	42- 43	43- 44	42- 43	43- 44	42- 43	43- 44	42- 43	43- 44	42- 43	43- 44	42- 43	43- 44
Baseball MacMillan	19	18	10	8	9	10	40	35	40	35	31	35	15	23	14	14	8	13			8		15	13	3	5	1	0
Basketball Nordly	19	21	12	12	7	9	95	24	30	24	25	24	18	21	10	14	6	2	65		24		10	8	9	13	0	0
Football Hauser	9	9	6	5	3	4	146	80	63	80	81	60	51	48	11	31	13	11	83		63		5	5	4	4	0	0
Golf Smith	7	6	3	2	4	4	23	31	23	31	19	29	7	9	6	6	0	1			1		5	4	2	2	0	0
Gymnastics Piper	4	2	1	0	3	2	25	13	5	13	3	13	1	5	1	3	0	2	20		7		0	2	4	0	0	0
Hockey Armstrong	14	11	6	0	8	11	48	21	25	21	18	21	16	21	10	12	8	9	23		13		8	6	5	5	1	0
Swimming Thorpe	5	4	4	2	1	2	36	24	17	24	18	23	12	13	11	12	1	2	19		16		5	4	0	0	0	0
Tennis Brain	5	6	3	5	2	1	61	39	61	39	29	35	7	8	6	5	4	3			5		2	1	3	5	0	0
Track Kelly	6	12	6	10	0	2	27	31	27	31	18	27	18	13	16	8	0	5			8		1	4	5	8	0	0
Wrestling Hanson	9	5	7	3	2	2	25	21	15	21	15	20	10	12	9	5	1	5	10		10	6	4	3	5	2	0	0
Totals	97	94	58	47	39	47	526	319	306	319	257	287	155	173	124	110	41	53	220		155	6	55	50	40	44	2	0

* Freshmen made eligible for varsity competition spring, 1943.

on the part of students and faculty was evident. It is hoped that this attitude will continue and that better programs for the promotion of health and physical education will be conducted in the future.

Adapted Physical Education Program—The adapted physical education program is designed to provide physical education and recreational activities for those unable to participate in the regular sports education program. This disability may be attributed to physical deviations, low sports skills, or psychological reasons, all of which would prohibit an individual from fitting into a group program. Included in this adapted program are students who are preparing for military service and are desirous of getting into body-building classes as a means to physical fitness.

During the biennium 189 new students have taken adapted physical education and 16 formerly enrolled students repeated. Of the 189 students, 153 were referred by the Health Service, 10 by psychiatrists, 15 by the physical education supervisor; 11 came voluntarily or on the recommendation of friends, counselors, etc. Ninety-three hours in addition to required scheduled classes were spent in counseling students on sports activities suited to individual needs.

Intramural Athletics—Although many of the facilities ordinarily used for intramural activity were occupied by service units during the past year, a relatively full program of sports was conducted. Civilian activities were at a minimum but full schedules were played by army and navy units. Quite naturally the number of participants and contests was considerably reduced but advantage was taken of every opportunity to afford physical recreation to civilian and service groups. Table III presents the statistical record.

TABLE III. INTRAMURAL PARTICIPATION

Activity	Number of Men Participating 1942-43	Number of Men Participating 1943-44
Archery	40	C
Badminton	180	81
Baseball	112	Dr
Basketball	1,130	832
Bowling	1,628	740
Boxing	165	C
Diamondball	978	604
Fencing	135	110
Golf		
Handball	140	Dr
Horseshoes	162	55
Hockey	210	Dr
Rifle shooting	Dr	Dr
Skiing	85	15
Squash	Dr	Dr
Swimming	147	C
Table tennis	254	Dr
Tennis	522	598
Touchball	836	308
Track	540	228
Volleyball	258	C
Wrestling	84	C
Total participants	7,606	3,571

C = Class only.
Dr = Dropped.

Laboratory of Physiological Hygiene—The Laboratory of Physiological Hygiene moved in the summer of 1942 from Millard Hall to the South Tower of the Stadium. The enlarged quarters, increased staff, and added equipment have made possible a more extensive program of experimental studies with the most advanced methods of physiology, biochemistry, psychology, and medicine. Successful research on problems of the relationship of diet to fatigue has been largely responsible for the increase in facilities and the added war-important research. Much of the work has been sponsored by the War Department, the Office of Scientific Research and Development, and the National Research Council.

Problems to which the laboratory has devoted major attention during the biennium include: (1) human requirements for vitamins of the B complex, particularly thiamine, riboflavin, and niacin; (2) the design and testing (laboratory and field) of Army rations for combat and emergency use; (3) standardization of methods for the assay of thiamine, riboflavin, and niacin; (4) assay and standardization of item components for all army

rations; (5) development of test methods and procedures for the assessment of physical and psychological "fitness"; (6) study of physical deterioration resulting from starvation, excessive heat, and bed rest; (7) the fuel of muscular exertion; (8) effect of diet on the functioning of the stomach; (9) the appraisal of nutritional status; (10) the course of learning and physical improvement in training programs; (11) physiological factors in convalescence and rehabilitation.

This laboratory has come to be at least equal to any similar organization in the United States. It is a real credit to the University and it is hoped that adequate financial support can be made available so that research of high quality in this important field can be continued. The work of Dr. Ancel Keys and his staff justly deserves the confidence and support of the University.—LOUIS F. KELLER, *acting director*.

DEPARTMENT OF PHYSICAL EDUCATION FOR WOMEN

Enrollment—The average total registration of women students for the biennium totaled 3,875. The decrease in total registration from 1942-43 to 1943-44 was 3 per cent.

Chief Accomplishments—Accompanying a report summarizing the facts on fitness of college women, a recommendation was made to heads of all colleges enrolling women that the respective faculties endorse a uniform policy of a minimum of one year of either elective or required work with credit in physical education. The department sponsored also an institute on "Total Fitness."

In the regular college program the time basis was increased one third; observable progress was made in the medians on the new test of strength and endurance used in 1942-43; skill and knowledge test scores were higher than ever before; and the majority of the students have endorsed most of the new emphases in the conditioning and evaluation aspects of the program. In the extracurricular program, there has been more student initiative and co-operation than ever before in the enforcement of health and safety requirements. In the professional program revisions of the curriculum have been made in the direction of more functional and individualized requirements; new procedures for guidance have been set up; and emergency courses for recreational leaders on both a non-credit and a credit basis have been put into operation. In the girls' program of the University High School new standards were set up in 1942-43 and in 1943-44 and a total appraisal of physical education skill, knowledge, and attitude was made.

Proposed Activities—The department proposes the following future activities:

1. Search for evidence in support of the recommendation that the faculties of the various colleges afford at least minimum recognition to the extent of granting credit for one year of physical education to all women students.
2. Planning of refresher courses, institutes, and workshops for the in-service training of the many inadequately trained teachers now teaching health and physical education throughout the state.
3. Formulation of a plan for some type of survey of the rapidly changing practices in the field of health, physical education, and recreation, especially in the secondary schools of the state in order that our professional courses may become still more functional.
4. Consideration of a better total plan of selection and guidance of professional students.

—GERTRUDE M. BAKER, *acting director*.

CIVIL SERVICE PERSONNEL

The Office of Civil Service Personnel was created by the Board of Regents in action taken on October 17, 1942, and began to function as a department on December 1, 1942. Labor relations assumed very critical proportions during this period. Three strikes were declared against the University by Public Building Service Employees, Local 113, A.F. of L. An estimated 1,000 service employees were off their jobs from October 3, 1942 to October 4, 1942 (noon). The reasons for the strike, as advanced by the Union, were their demands for pay increases, the settlement of certain individual and policy grievances, and machinery for the handling of grievances. Following intervention by Governor Stassen, the employees returned to work after one and one-half days' absence from their jobs. The following action taken by the Board of Regents on October 17, 1942, in effect provided for settlement of the strike:

Voted to approve the following statement of policy relating to employment at the University of Minnesota:

1. That a personnel officer be appointed to handle grievances of members of the nonacademic staff. This officer may have other responsibilities in connection with the University Civil Service, or other activities, but he should be selected for his particular understanding of the employment relationships of non-academic employees.
2. That in conformity with the expressed policy of the Board of Regents as set forth in their minutes of December 17, 1937, reading as follows: "The University of Minnesota has always main-

tained the right of any employee or group of employees or their authorized representatives to discuss with responsible administrative officials, including the Board itself, any matters pertaining to working conditions, wages, or employment at the University, and it will continue to maintain this right of the employees," under which action it is clear that every employee of the University possesses the inalienable right to be represented in his employee relations by himself or by a representative or representatives of his own choosing, and further that every employee possesses the right to take up individually his own grievances or problems regardless of any organizational affiliation. The Board of Regents now definitely states: (a) An employee shall be free to join any lawful organization but the right to work in the University cannot be dependent upon membership or non-membership in any organization. (b) Employees must realize that the functions of the University as a public constitutional corporation involving the public welfare are necessarily continuous and no deliberate and concerted disruption of them can be accepted as a proper method of settling employment problems.

Inasmuch as a substantial number of employees in the service group of the University (as defined in *Class Specifications for Positions in the Classified Service* but exclusive of the skilled trades sub-groups) have membership in the Public Building Service Employees, Local No. 113, and inasmuch as agents and committees of that organization have from time to time represented its members before administrative officers, committees, and the Board of Regents, it is suggested that Local No. 113 select by and from its university employee membership a Grievance Committee of three to take up with the university personnel office, or under exceptional circumstances the university comptroller or the Board of Regents, any grievances affecting any university employee in the service group.

3. That the Civil Service rules of the University be furnished promptly to every non-academic employee.

4. That every non-academic employee taking a placement examination, either written or oral, be furnished his rating promptly; and that upon request in the case of written examinations, such employee be permitted to see his examination papers.

5. That the "five and five" cost of living adjustment be granted to all employees under \$250 per month as of July 1, 1942, notwithstanding any automatic or merit adjustment that the employee may have received.

6. That involuntary layoffs not exceeding an aggregate of more than four weeks in any one fiscal year shall not be counted as absences from employment in the determination of vacation and sick leave and other privileges of non-academic employees.

7. That janitresses in downtown office buildings be granted vacation leave with pay. (Approved. See minutes of Board of Regents of September 11, 1942.)

8. That the salaries of floormen be fixed at the same relationship to the salaries of janitors as the salaries of floormen bear to the salaries of janitors in downtown office buildings.

9. That there shall be no reduction in the rate of pay of a non-academic employee who is transferred from the miscellaneous payroll to the regular payroll provided the duties of the position on the regular payroll involve like work or greater responsibility.

10. That the personal laundry privileges of employees in the University Laundry be definitely determined, with the understanding that if such privileges are withdrawn there be a compensating wage adjustment.

Subsequent action by the Board of Regents set up machinery for the handling of grievances. This provided for the submitting of grievances in writing to the director, Civil Service Personnel, by any employee or his authorized representative which might be a grievance committee. The director was authorized to settle all grievances except those which involved finance or general university policy. Appeals from the decisions of the director would be made to the Civil Service Committee and, if necessary, then to the Board of Regents itself. From June 28, 1944 to December 1, 1944, some 59 grievances were handled in the first step of this procedure, but the Union refused to use the appeal machinery inasmuch as they claimed it was the machinery of the Regents and not of their own making.

Following various attempts by the University to reconcile its differences with the Union, the Labor Committee of the Board of Regents met with the Union before the United States Conciliation Service in a series of three meetings beginning October 12, 1943. At these meetings the Union presented for the first time a signed collective bargaining agreement which provided for arbitration in the ultimate settlement of grievances.

The Board of Regents was advised by the Attorney General that it did not appear to have the authority to enter into such a contract. Notwithstanding this, the Union refused to withdraw its demands and ultimately declared a second strike against the University.

Approximately 1,000 service employees were off their jobs from January 14, 1944 to January 20, 1944. The following strike settlement was reached on January 18, 1944, at the Governor's office:

RESOLUTION PASSED BY THE BOARD OF REGENTS AS STRIKE SETTLEMENT, JANUARY 18, 1944

In view of the recommendation of the Governor, and in an effort to terminate the present strike, it is proposed:

1. That the Union withdraw its demand for a written collective bargaining agreement.
2. That for an experimental period of nine (9) months, unless such period is terminated or extended by mutual agreement, the civil service procedure of the University for the handling of grievances be amended to provide that appeals from the decision of the director of Civil Service Personnel shall be made directly to the Labor Committee of the Board in lieu of the Civil Service Committee, with the understanding that any interested party, including the employee or his authorized representative, which may be Public Building Service Employees Union, Local No. 113, A.F. of L., shall have the further right to appeal from the decision of the Labor Committee to the Board of Regents. The

Board, before hearing the appeal from the decision of the Labor Committee and at its next regular meeting, shall request the Governor of the State, in writing, with copy of such request to the Union, to appoint an impartial investigator, who shall meet with the parties concerned, review the facts involved and file a report and recommendation with the Board within forty-five (45) days after the appeal and furnish a copy to the Union, which report and recommendation shall become a part of the record at the time the Regents give final consideration to the matter. Any interested party may file a written argument upon the report and recommendation of the Investigator before the matter is considered by the Board.

3. The Regents will direct that notice of public hearings held by the University Civil Service Committee on proposed additions to or revisions of civil service rules be mailed to the Union ten (10) days prior to such hearing.

4. That for an experimental period of nine (9) months, unless such period is terminated or extended by mutual agreement, the Union shall have the right to present to the Labor Committee of the Board of Regents written proposals with regard to wages, hours, and working conditions or any other matters of general policy affecting civil service employees, and to discuss such proposals provided a request for a hearing is made at least ten (10) days before any scheduled meeting of the Labor Committee of the Board of Regents, with the understanding that the Union shall have the further right to appeal from the decision of the Labor Committee to the Board of Regents. The Board of Regents, before hearing the appeal from the decision of the Labor Committee and at its next regular meeting, shall request the Governor of the State, in writing, with copy to the Union, to appoint an impartial investigator, who shall meet with the parties concerned, review the matter involved and file a report and recommendation with the Board within forty-five (45) days after the appeal and furnish a copy to the Union, which report and recommendation shall become a part of the record at the time the Regents give final consideration to the matter. Any interested party may file a written argument upon the report and recommendation of the Investigator before the matter is considered by the Board.

The third strike involving some 40 service employees on the Farm campus occurred on June 19, 1944, lasting until June 22, 1944. In the first instance, the employees refused to return to work unless the University released a paycheck to an employee. This paycheck was held because the employee refused either to refund certain alleged improper payments made to him or to submit the matter as a grievance to be handled by machinery set up for the purpose. Upon agreement by the Union to use the grievance machinery, the check was released, but the employees would not return to work unless they were guaranteed payment for the time lost. The strike was terminated when they agreed to submit this also as an issue for consideration by the provided grievance machinery.

While of necessity much of the attention of the Personnel Department has been focused on labor relations, plans have been laid, and to a limited extent carried out, to expand the present personnel program. Its ultimate accomplishment can only be attained with the wholehearted co-operation and concerted effort of all departments of the University.—HEDWIN C. ANDERSON, *director*.

EMPLOYMENT BUREAU

The Employment Bureau is one of the departments of the University where the mounting crescendo of war was most closely reflected. It was no longer possible to think of theoretically best procedures; the times required immediate action. The problem became essentially: how to operate in ways calculated to serve immediate needs with the least friction, loss of time, and waste effort.

Recruiting for University Positions—The volume of applicants interviewed and tested during the first part of this period was only less fantastic than the vacancies listed, both on and off campus. The major problem was one of quality rather than quantity, since only a small percentage of applicants was found eligible for appointment. Later, applicants were so few that those with a modicum of qualifications were given a chance to prove themselves.

In the recruiting program, recourse was made to newspaper advertising, personal contacts with other employment agencies, schools, churches, clubs, and civilian defense agencies throughout the state and elsewhere.

Close contact was maintained always with the United States Employment Service and every effort was made to conform closely to requests and regulations of the War Manpower Commission in the matter of referrals and releases. The benefits of this co-operation were clearly shown in the results obtained. We were able to recruit many valued employees through this source and also to refer employees and students through it for transfer to positions where they could make better use of specific qualifications needed in the prosecution of the war.

Co-ordination of Employment Bureau activities with those of the high school counselors of the Twin Cities was another successful program which was developed at this time, particularly for clerical work and sub-professional types of work in scientific fields. It was thus possible to secure the services of workers of very high caliber who though young and inexperienced could quickly become oriented to university procedures.

Service wives constituted another source of workers. Many of them were here for such indefinite periods that it was impossible to use them in positions where they could make use of their highest skills. Some, however, who could be assigned for a year or more, furnished us with very highly qualified incumbents.

Other highly qualified workers in clerical and specialized fields were the relocated Nisei who were first made officially eligible for employment at the beginning of 1944.

Student Placement—The employment of students by the University continued to increase while off-campus placements were reduced to a minimum. The University needed all the student help it could secure in order to maintain essential services, and in most cases students found university employment better suited to their individual interests and convenience. A small group preferred work in war industries off campus, and several nearby essential industries arranged split shifts and continuing part-time jobs to accommodate them.

TABLE I. PLACEMENTS OF STUDENTS IN JOBS

Employer	1942-43	1943-44	Biennial Total
University	1,619	1,139	2,758
Off-campus	896	185	1,081
Totals	2,515	1,324	3,839

Co-ordination of effort with other full-time graduate placement agencies on campus was augmented by arranging special interviews with representatives of various federal agencies and critical war industries. Several students in this way secured advantageous positions which may continue after the war.

One interesting aspect of student employment in wartime was the change in emphasis. Clerical, scientific, and semi-skilled laboring jobs were those most in demand, while clerking, commission sales, and housework fell to what is expected to be an all-time low.

In this period, a student's earning capacity was limited only by his willingness to work and the number of hours he could spend. Fewer students worked fewer hours, but earned more per job than previously. The percentage of the available civilian student population at work was at all times higher than previously.

NYA employment statistics are not included in the tables since the program was being consistently reduced during 1942-43 preparatory to its termination on June 30, 1943, and this would not present a true picture.

Certifications—Employment Bureau certifications for regular payroll (Table III) and miscellaneous payroll (Table V) which entail investigation of qualifications, pensions, employment records, and examinations jumped to 17,108, compared with 10,402 in the previous biennium, not counting NYA or teaching, research and extension assistants (Table IV).

There was a tremendous increase in promotions and transfers. Probably at no time has the Civil Service Staff been so mobile; everyone with potential qualifications was given an opportunity to apply for promotion. One limiting factor in this general movement was the change in the pay schedule which gave increases to everyone and thus removed the immediate incentive to promotion. Resignations increased markedly during the first year of the biennium. The reasons for separation from university employment were about equally divided between actual war work of a non-military nature such as Red Cross, and work in war industries. Military leaves were granted to men and women only on the basis of actual assignment to some branch of the armed services.

Tests and Examinations—The testing program was maintained during the period with only one major change: all examinations were waived for service and other groups where a willingness and an ability to perform satisfactorily on the job were of paramount importance. By far the largest number of tests given was for the clerical, fiscal, and scientific groups where data were found which were of great help in predicting success in the work situation. Many refinements of the examination program were tentatively considered but will be impossible to attain until a larger staff is available for the work. Less emphasis was placed upon definite test results in specific skills than on an overall evaluation of the applicant's potential value in the particular situation. It was impossible to maintain a file of eligible candidates since in most cases all available and eligible candidates were immediately assigned. A revision of the testing program is an imperative need for the next biennium.

TABLE II. STUDENT EMPLOYMENT: PLACEMENTS AND EARNINGS

Type of Employment	Applicants Requested				Applicants Accepted				Amount Earned		
	Men		Women		Men		Women		1942-43	1943-44	Total
	1942-43	1943-44	1942-43	1943-44	1942-43	1943-44	1942-43	1943-44	1942-43	1943-44	Total
Athletic events	170	232			78	157		5	\$ 5,168.00	\$ 3,638.00	\$ 8,806.00
Attendant	120	130	42	28	108	92	30	26	12,181.85	9,054.95	21,236.80
Chauffeur	6	15			6	6			1,187.00	1,239.60	2,426.60
Clerk—soda fountain	7	7	9	3	3	2	3		766.60	217.80	984.40
Clerk—store	99	202	61	192	66	112	37	92	8,875.80	8,528.40	17,404.20
Draftsman	48	19	2	2	36	5		1	2,261.00	300.03	2,561.03
Domestic helper	309	118	271	209	237	50	187	120	54,232.05	12,826.80	67,058.85
Janitor	147	75			116	57			6,367.20	2,573.10	8,940.30
Laboratory helper	44	53	12	30	41	35	11	25	5,123.56	5,851.17	10,974.73
Library	52	31	5	42	46	29	3	37	4,036.40	6,650.50	10,686.90
Manual labor	160	135	5	9	129	49		5	11,277.02	3,657.40	14,934.42
Musician and entertainer	6	2	2	2	6			1	1,050.00		1,050.00
Nursemaid			22	27			12	14	944.20	628.00	1,572.20
Odd jobs	491	169	73	36	425	39	60	26	10,872.22	1,991.90	12,864.12
Office work	377	111	423	373	265	79	368	286	45,535.17	24,166.54	69,701.71
Oil station	22	6			7				1,298.00		1,298.00
Settlement house	9	11	6	11	9	4	5	10	2,094.00	3,187.00	5,281.00
Summer resort and camp work	2	2	2	29				1		245.00	245.00
Telephone operator	6	4	17	16	1		14	11	2,138.00	1,494.82	3,632.82
Translation	3		2	2	3		2		80.00		80.00
Tutoring and teaching	64	32	22	17	69	32	19	10	1,791.00	107.00	1,898.00
Usher	31	11	21		15	2	14		1,054.00	4.00	1,058.00
Sales on commission	2	1		1							
Miscellaneous	244	60	19	29	141	27	13	9	18,081.40	3,021.10	21,102.50
Full-time permanent work	6	5	11	6			1	1	1,500.00	1,380.00	2,880.00
Totals	2,425	1,431	1,027	1,064	1,807	777	780	679	\$197,914.47	\$90,763.11	\$288,677.58
Total placements of students by the Employment Bureau during the biennium									4,043		
Total student earnings									\$288,677.58		

THE PRESIDENT'S REPORT

TABLE III. CERTIFICATIONS—NONACADEMIC STAFF REGULAR PAY ROLL

Type of Certification	1942-43			1943-44		
	Men	Women	Total	Men	Women	Total
Appointments	181	350	531	130	404	534
Promotions	59	152	211	34	120	154
Transfers	1	20	21	4	15	19
Demotions	3	0	3	1	0	1
Retirements	6	2	8	6	1	7
Resignations	157	310	467	81	313	394
Leaves of absence						
Military	19	12	31	14	6	20
Non-military	21	128	149	20	99	119
Totals	447	974	1,421	290	958	1,248

Total for the biennium, 2,669; previous biennium, 1,889; increase, 780

TABLE IV. CERTIFICATIONS—TEACHING, RESEARCH, AND EXTENSION ASSISTANTS REGULAR PAY ROLL

Type of Certification	Total 1942-43	Total 1943-44
Appointments	305	223
Changes of status (promotion, demotion, transfer)	66	40
Resignations	113	93
Leaves of absence		
Military	3	3
Non-military	1	7
Totals	488	366

Total for the biennium 854

TABLE V. CERTIFICATIONS—NONACADEMIC STAFF MISCELLANEOUS PAY ROLL

	1942-43				1943-44			
	Student	High school student	Non-student	Total	Student	High school student	Non-student	Total
Appointments	3,175	163	2,225	5,563	2,459	615	2,656	5,730
Changes of status	590	10	856	1,456	429	74	1,187	1,690
Totals	3,765	173	3,081	7,019	2,888	689	3,843	7,420

Total for the biennium, 14,439; previous biennium, 8,513; increase, 5,926

TABLE VI. QUALIFYING TESTS ADMINISTERED—NONACADEMIC STAFF

Year	Persons Tested	Tests Administered
1942-43	3,044	6,331
1943-44	2,505	5,515
Totals	5,549	11,846

TABLE VII. PHYSICAL EXAMINATIONS—NONACADEMIC STAFF

Year	Men	Women	Total
1942-43	81	287	368
1943-44	70	248	318
Totals	151	535	686

University Stenographic Bureau—The services of the Stenographic Bureau were enlarged in scope during the biennium to include different types of help with full-time as well as part-time workers available. The critical situation with regard to clerical help led to the establishment of positions for full-time clerk-stenographers who should be available to give emergency service in any campus office. This additional service was used and favorably received by various departments. The principal difficulty was that departments tried to employ these all-university stenographers permanently, and this was allowed in two cases. The program showed, nevertheless, the advantages of an in-service training program.—DOROTHY M. PUNDERSON, *director*.

UNIVERSITY ART GALLERY

The pinch of war-time restrictions and the effects of a society geared to war, have forced curtailment of some important activities and expansion of others. Part of the exhibition space has been devoted to material which was useful to the Language and Area studies and to the staff who were handling army and navy training. Also, activities have been pointed toward what it is believed should be a museum's function for the campus in wartime.

Activities during the biennium have been of four types: exhibition; education; co-operation with the armed services, student, and public groups; and servicing classes with visual aid materials.

The war has curtailed in many respects the service to teachers and others throughout the state. The loan of exhibition and study materials was discontinued due to lack of staff, but the reference room and study files have been kept open for students and practice teachers, because the College of Science, Literature, and the Arts has helped provide a teaching assistant who serviced the room on a half-day basis.

Exhibitions—Fifty-two exhibitions were secured in 1943 and forty-six in 1944. There have been several exhibitions from the countries of Central and South America, thus helping to promote a better understanding of these people through their painting, sculpture, architecture, and arts and crafts. The exhibitions were supplemented with charts, photographs, and explanatory material giving geographical information, the social structure, the economic resources, and the racial groups, together with something of their historical development.

"Camouflage" was a display of photographs and models aimed to give the public insight into the methods of "pictorial deception." "Image of Freedom" attempted to interpret the American spirit, stressing what freedom really means, and raising the issue of whether or not it was worth defending and preserving. "War Posters Today" was a collection from World War II. "Art of the Armed Forces" was a painting record done by men in the service under war conditions, showing scenes and recreating experiences totally foreign to most of us. "Visual and Non-Visual Art Expression" was an exhibition showing painting and sculpture done by the blind or nearly blind. "Defense Housing" analyzed the "jerry-built" housing of World War I, and sought to awaken communities to build better, with a possibility of permanency, around industries. All of the other exhibits, including those requested for the campus military units were of an educational nature. They covered such topics as "Naval Aviation," "China at War," "Emotional Design in Painting," "Art Appreciation," and "An Introduction to Modern Sculpture."

Architecture and building exhibitions have been shown at regular intervals. These ranged from simple to multiple dwellings, city planning and slum clearance, factory and public building construction—some of the problems that will face America after the war. Industrial design and the handicrafts have not been overlooked.

American Art Represented—A "design" theme was carried through the year by means of ten exhibitions from the Metropolitan Museum of Art, originals from the Index of American Design. They showed something of American past culture and were primarily for the art classes but have been interesting and illuminating to the public at large.

Developing Appreciation—By means of lectures and gallery talks, copious labelling of exhibitions and mimeographed pamphlets, an attempt has been made to aid the student in understanding what has been shown. The loans to students of framed color reproductions, etchings, block and screen prints, and lithographs has been a popular service with practically all pictures being rented each quarter.

Acquisitions—Appreciation should be expressed for the generosity of Mrs. C. C. Bovey, Dean Emeritus Frederick J. Wulling, Professor L. H. Reyerson, Arthur C. Pulling, Mrs. Rollin Andrews, Solomon R. Guggenheim, Lakeside Press, *Chicago Tribune*, and one anonymous giver, who have made the following additions to our collection:

68 prints (photographs and reproductions), 31 oils, 1 marble urn, 64 textiles, and 1 oriental rug.

Endowment—An anonymous gift of \$2,500 was presented in 1939-40. This, through the addition of earnings from exhibition fees and accrued interest, now totals \$4,204.09.

An Appraisal—The report so far may sound as though the Gallery was a virile and flourishing part of the University, but this disguises the true facts. Our visitors have wandered through and there has been a lot of traffic, but mere inoculation is not enough. The student who merely comes to look is not only losing valuable time but has missed an opportunity of enrichment in living, during his college years, which may not come again. The Gallery is failing if the student is allowed to depart from the University without the realization of the part that art and the humanities play in civilization. The traditional museum methods of the past are unsatisfactory; they are outworn; new techniques must be developed.

The Future—Until the war is over little can be done for a better physical plant for the arts. New equipment is not available; nor can new technical presentations be devised by which the visitor could experiment and utilize the educational material according to his needs.

The armed services have demonstrated the value of audio and visual aids to speedy learning. The audio devices they have used make possible the preparation of art talks, critical commentaries, and explanations by transcription. These transcriptions should be continuously available so that the interested visitor could hear them whenever and as often as he wished. Television is another technique which can do for the arts what radio has done for music. While these educational techniques may be thought of as future plans, they can be put into practice sooner than is realized.

The danger to education, in the postwar years, may be in the demand solely for professional, mechanical, and technical training; the knowledge of man's cultural heritage may be forced aside. The University Art Gallery is only one of the cultural agencies but it must assume its share in ensuring that the postwar educational program devotes adequate attention to the arts. The arts know no boundaries of race, politics, religion, or geography. Therefore, those who believe in the validity of the disciplines which culture can give and which it is their function to preserve, must guard and act militantly in behalf of the arts in the years to come.—RUTH LAWRENCE, *director*.

UNIVERSITY LIBRARY

The biennium marked an important milestone in the history of the University of Minnesota Library. On September 1, 1943, Frank K. Walter retired as university librarian, after twenty-two years of distinguished service to the University and to the nation. Under Mr. Walter the library more than tripled in size, growing from 367,000 to over 1,300,000 volumes.

During the biennium, the total number of volumes in the University Library increased from 1,231,963 to 1,302,769, representing total additions of 70,806 volumes. Several important gifts contributed to this total: in 1942-43 a collection of more than 3,000 medical books and periodicals from Mrs. A. D. Hirschfelder and a collection of valuable books on optics from Dr. Edward P. Burch; in 1943-44 a collection of over 600 volumes of Yale University Press publications given in memory of Frederick Scheetz Jones by his friends. Other donors, too numerous to mention except in an extended report, have added greatly to the research resources of the library. In furtherance of this tradition, the "Friends of the University of Minnesota Library" was organized in the spring of 1944, with approximately one hundred persons in attendance at the first meeting. It is the purpose of the "Friends" to promote understanding of the library and its place in a university center to the end that its resources may be increased. Already there are indications that the organization of the "Friends" will result in valuable acquisitions to the library.

The decline in civilian enrollment has resulted in changes in the use of the library. The recorded use of books—those signed for or taken out of the library—has decreased. Recorded circulation as compared with that of the previous biennium is as follows:

1940-41	912,851	1942-43	538,470
1941-42	727,902	1943-44	449,208

In many subjects, especially science, the reference use of the library has increased. This is attributed partly to an increased motivation on the part of students and partly to the fact that the decline in enrollment gives the library staff time to give more help to users, and users, in turn, tend to seek more assistance.

Despite its later beginning, the University of Minnesota Library has surpassed many other college and university libraries, until now it stands sixth in size among the university libraries of the country. To retain this position and to continue to improve its service to the University and the state, the library needs badly: increased staff; increased funds for purchases of books and periodicals; and additional space for readers and books. With this support the library can become, as it should become, the educational and intellectual center of the university community.—ERRETT W. McDIARMID, *university librarian*.

MINNESOTA GEOLOGICAL SURVEY

War Service—All information available to the Minnesota Geological Survey has been placed at the service of the various war-related government agencies, and numerous conferences were held with their officers and engineers in the office and in the field. Among the problems studied were: (a) Concentration of lean manganiferous ores. Data were accumulated which show that Minnesota has low grade material sufficient to supply the needs of the country for several years; (b) Clays for paper and aluminum. Certain clays are used in paper mills to give gloss to paper. These come now from Georgia. It is believed that similar clays may be provided by Minnesota. Paper clay experts from Georgia visited the deposits with Professor Frank F. Grout and took samples. There is a great demand for aluminum and a short supply of aluminum ore in the United States. The Aluminum Company of America and the United States Geological Survey showed interest in Minnesota clays. Officers of these organizations, recalling that white clays elsewhere are associated with high aluminum clays, visited Minnesota deposits under the guidance of the Survey. Each took samples for analyses. Some of the Minnesota clays could be used for this purpose in case higher grade imported material becomes insufficient; (c) Advice for the drilling in search for iron ore was given certain companies; and (d) The Minnesota Geological Survey, in co-operation with the Mines Experiment Station and the Minnesota Institute of Research requested the Iron Ore Resources and Rehabilitation Commission to finance certain drilling in Cook County to explore for iron and other minerals.

Field Work—Professor George M. Schwartz made a magnetic survey northwest of Duluth. Professor George A. Thiel continued his studies of water resources of southern Minnesota and supervised field studies of water resources of the Mesabi Range region. The latter survey was to ascertain whether adequate supplies of ground water are available for any additional iron concentration plants that may be built on the Mesabi Range. Professor John W. Gruner continued his studies of iron ore and of the possibilities of concentration of low grade ores on the Mesabi Range. The iron ores of southeastern Minnesota were studied and mapped by Professors Clinton R. Stauffer and George A. Thiel. A report on their observations is now in press. Professor Stauffer made field and laboratory studies of dolomites with a view to their use in the manufacture of magnesium. Similar field and laboratory studies were made of high calcium limestones. Co-operation in the near future with the United States Geological Survey was planned in connection with the water supplies of the Red River Valley, further study of the iron ranges, and topographic mapping.

Publications—During the biennium the following publications were issued: (1) W. H. Emmons and F. F. Grout (editors), *Mineral Resources of Minnesota*, Minnesota Geological Survey, Bulletin 30. 1943. 150 pages, 25 maps and figures. (2) G. A. Thiel, *Geology and Water Resources of the South Half of Minnesota*, Minnesota Geological Survey, Bulletin 31. In press. 1944. (3) J. W. Gruner and C. R. Stauffer, "A Unique Occurrence of Bobierite." *American Mineralogist*, 28:339-40. 1943. (4) G. M. Schwartz, *Magnetic Work in St. Louis County in 1942*, published by Commissioner of Iron Range Resources and Rehabilitation. Report 1. 1943. 30 pages, 7 plates. (5) G. A. Thiel and C. R. Stauffer, "The Iron Ores of Southeastern Minnesota," *Economic Geology*, 39:327-39. 1944. (6) J. W. Gruner, "The Composition and Structure of Minnesotaite, a Common Iron Silicate in Iron Formations," *American Mineralogist*, 29:363-72. 1944.

Three bulletins are in preparation: one on the Duluth metropolitan area, one on analyses and uses of a variety of limestones, one on mapping of the Cuyuna Range.

Other Activities—The Minnesota Geological Survey has answered numerous inquiries which arrive daily concerning mineral resources of Minnesota. Requests cover a great variety of subjects and materials. In many cases samples are sent to the office and these in turn are supplied by the Survey to industrial organizations to be tested for specific purposes. Thus, the Survey is attempting to aid in bringing to the state such mineral industries as may be operated within its borders.—WILLIAM H. EMMONS, *director*.

MINNESOTA MUSEUM OF NATURAL HISTORY

Museum—In common with the other departments of the University, the museum was given over to the activities of the Army and Navy. The three lecture rooms with equipment were in almost daily use for lectures and demonstrations.

Attendance—The constant coming and going through the several entrances and exits of the museum by the army and navy students made it impractical to keep an accurate daily register of civilian attendance. From such records as we have, a conservative estimate would be approximately 75,000. This figure is much below the last report largely because of curtailed transportation facilities. The group attendance of the city school children suffered especially because the bus service was largely suspended. Outside schools seemed not to be so seriously affected and groups came from many places in the state, one as far away as Coleraine. The museum has been a favorite attraction to the servicemen on campus and uniforms are a common sight in the exhibition halls.

Lectures—Lectures at the museum and elsewhere totalled 245 with an attendance of 38,029. The Sunday afternoon lectures from November to March, inclusive, were continued during the biennium with an attendance of 18,533. Five of these lectures in the 1943-44 series were by speakers from the National Audubon Association. All lectures were illustrated by colored motion pictures. There were 21 out-of-town lectures with an estimated attendance of 5,530.

New Exhibits—During the biennium one major group and three smaller groups have been added. The first, a Blue Goose Group, was sponsored by Mr. and Mrs. C. C. Bovey in the name of their son, Martin K. Bovey. The others were: Bald Eagle Group by Mrs. George C. Christian, a Gray Fox Group by Mrs. Lillian M. Berthel in memory of her son, Russell M. Berthel, and a Raccoon Group from museum funds.

Donations—Donations have been received from 63 individuals and organizations as follows: mammals, 12; birds, 51; reptiles, 83; amphibians, 101. A collection of 50 birds' eggs was donated to the Children's Museum by William T. Hornaday Foundation, Geneva, Alabama.

Shell Collection—Conchology was not an original activity of the museum but in 1922 Mrs. A. W. Abbott of Minneapolis donated a large collection of marine and land shells, numbering many thousands of specimens. In January, 1942, Edward P. Burch began the study and arrangement of this collection and from that time to the present has continued its development until it now numbers over 16,000 specimens, representing 2,089 species. All this material has been carefully classified and arranged in trays with a typed indexed catalog. Mr. Burch has worked gratuitously as a volunteer and deserves the thanks and appreciation of all those interested in conchology. If the Board of Regents would appoint him honorary curator of conchology, I am sure he would appreciate it. He certainly deserves recognition for all the service that he has rendered and is still rendering so freely and willingly.

Photography—There have been added to the photographic library: 41 negatives, 20 lantern slides, 135 prints, and 1,000 feet of 16 mm. colored motion picture film. From December 1, 1943 to February 1, 1944, there was exhibited in the museum a notable collection of original photographs of birds, known as the Dr. Eliot F. Porter Collection. They are the property of the Museum of Modern Art, New York City.

Co-operation—Museum property has been loaned 68 times to individuals and organizations as follows: portable school groups, 66; 16 mm. motion picture reels, 78; lantern slides, 181; and specimens from study collections, 15.

Publications—Dr. Breckenridge has furnished articles monthly throughout the biennium for *The Conservation Volunteer*, and the bimonthly "Season" articles for the *Audubon Magazine* have been continued by the director. Also, Dr. Breckenridge has completed a book on *The Reptiles and Amphibians of Minnesota* which the University of Minnesota Press will announce in August.

Field Work—Transportation difficulties have drastically limited field work during the past two years.

Financial—The \$1,500 received from Mr. and Mrs. C. C. Bovey was expended in the construction of the Goose Group and the \$400 received from Mrs. George C. Christian for the Bald Eagle Group. Mrs. Lillian M. Berthel of St. Paul donated \$800 for a Gray Fox Group in memory of her late son, Russell M. Berthel, and Major George M. Sutton, \$400 for a Swallow-tailed Kite Group in memory of his mother. An anonymous donor contributed \$1,000 toward the construction of a Moose Group. The Fox Group is completed but the Kite and Moose Groups are in course of construction. Mr. James F. Bell's monthly contribution of \$75 was continued through the biennium and was used in the general support of the museum. A donation of \$50 received from an

unknown donor was also placed in this fund, designated as the Museum Donation Fund and carried in the First National Bank in the name of Thomas S. Roberts, trustee. There was a balance in this fund on June 30, 1944 of \$856.34.—THOMAS S. ROBERTS, *director*.

FIELD SECRETARY AND GENERAL ALUMNI ASSOCIATION

Alumni Officers—The officers of the General Alumni Association for 1942-43 were Ben W. Palmer, Arts '11, Law '13, president; Dr. George Earl, Arts '06, Medicine '09, vice president; Arnulf Ueland, Arts '17, treasurer; and E. B. Pierce, Arts '04, secretary; for 1943-44, Dr. George Earl, Arts '06, Medical '09, president; Ralph B. Beal, Arts '18, vice president; Arnulf Ueland, Arts '17, treasurer; and E. B. Pierce, Arts '04, secretary.

Minnesota Alumnus—On March 11, 1943, the board of directors of the General Alumni Association voted to change the frequency of publication of the official magazine of the Association from weekly to monthly and the name from the *Minnesota Alumni Weekly* to the *Minnesota Alumnus*. The change was received with favor by the nearly 11,000 subscribers. The magazine has featured the war program of the University and news of alumni in the armed forces. For its reporting of the war program of the University of Minnesota, the *Minnesota Alumnus* was presented in 1944 an Award of Excellence by the American Alumni Council. Copies of the magazine have been sent free to the reading rooms of all the camps and stations in the United States and special pictorial news letters have been prepared and mailed first class to alumni in service.

Alumni Advisory Committee—This group, appointed by the Alumni Board and composed of representative alumni located at points outside the Twin Cities, has usually met with the Alumni Board and the president of the Board of Regents of the University at homecoming time and at commencement time in June. The homecoming meeting was held in 1942, but the manpower shortage, gasoline shortage, and other difficulties made it inadvisable to attempt meetings in 1943-44.

Alumni Meetings—Gas rationing reduced materially the number of alumni meetings out in the state. The following gatherings were held during the years 1942-43 and 1943-44:

1942-43—September—Law alumni at Grand Forks, North Dakota; alumnae at Akron, Ohio; October—Alumni directors, Minneapolis; Omaha; homecoming meetings—alumni advisory committee, journalism alumni, general alumni dinner (Minnesota and Michigan); November—Philadelphia; M Club, Minneapolis; December—Chicago (annual football dinner), New York City; January—Philadelphia; February—Los Angeles (Minnesota alumni sponsored meeting of Big Ten Club); San Francisco (Minnesota alumni sponsored meeting of Big Ten Club), Philadelphia; March—Mankato, Red Wing, alumni directors, Minneapolis; April—Fergus Falls; May—Akron; Redwood Falls, Tyler. The alumni in Seattle, the Gopher Club of Los Angeles, and the Minnesota Alumnae Club, Minneapolis, held monthly meetings during the year.

1943-1944—August—Brainerd, Little Falls; September—Aitkin, Faribault, St. Peter; October—Buffalo, Hutchinson, New Prague, Waseca; November—homecoming—alumni open house, journalism alumni, medical alumni; Fox River Valley unit at Menasha, Wisconsin; Litchfield; December—Chicago; Panama Canal Zone; January—Class of 1918, Minneapolis; Los Angeles (Minnesota engineers of Southern California in aircraft industry), London (alumni of Minnesota and Notre Dame serving in the armed forces); February—Hartford, Connecticut; Los Angeles, Philadelphia, Rochester; March—alumni directors, Minneapolis; Chicago, Dallas (petroleum geologists); April—Red Wing; May—Akron, Chicago, Los Angeles (Big Ten Club), Moorhead, St. Cloud; June—Duluth, monthly meetings of alumni at Seattle, the Gopher Club of Los Angeles, and the Minnesota Alumnae Club, Minneapolis.

Homecoming—It has been the practice of the General Alumni Association to invite to its homecoming festivities alumni of the institution represented by its football opponent, especially those living in Minnesota. These representatives have taken an active part in our homecoming programs. In 1942, the fiftieth anniversary of football relations between Michigan and Minnesota, Michigan was the guest, and in 1943, Purdue.

Alumni Day—In 1943, Alumni Day fell on June 11. The general alumni dinner was held in the Coffman Union cafeteria and was followed by a program in the ballroom. The special reunion classes, those with numerals ending in 3 and 8, had class meetings during the day and attended the dinner in a body. In 1944, June 9 was Alumni Day. The dinner, held in the Coffman Union cafeteria, was well attended. Several of the reunion classes, those with numerals ending with 4 and 9, met during the day.

Alumni Archives—The Archives Committee, appointed in 1940, has received valuable material from alumni in all parts of the country.—E. B. PIERCE, *field secretary of the University and secretary, General Alumni Association*.

THE UNIVERSITY OF MINNESOTA PRESS

The story of the biennium might almost be told in one word: turnover. In addition to the director, only one person remained on the staff on July 1, 1944, who had been there at the beginning of the biennium. Except for shipping clerks the losses have not been to

the armed services; most of the resignations have been for the purpose of accepting better positions at higher salaries elsewhere.

At the same time that we have suffered great loss of trained personnel, our production and sales have continued at a very high level. Although sales volume has not again reached the peak of 1941-42 when *The Doctors Mayo* was on the best-seller list, the sales, nevertheless, have continued to be between two and three times the average for the 1930's. The increase in volume of production is still higher because of a considerable amount of publishing of research distributed either without charge or at a nominal price and consequently not reflected in sales figures.

Promise of greatly increased expansion of the publishing program of the Press is the promotion of regional writing by means of a grant of \$50,000 from the Humanities Division, Rockefeller Foundation. From the same source came a grant of \$5,000 to Helen Clapesattle, editor at the Press, to devote half time to the promotion of regional writing. The Press has an option on seventeen manuscripts to be produced during the next two years by writers to whom fellowships have been awarded. The Foundation has authorized that \$5,000 of the \$50,000 may be used by the Press to subsidize publication on condition that matching funds be supplied by the University.

The Press has received direct support for certain publications from the following foundations: the American Council of Learned Societies, the Coolidge Foundation, and the Kellogg Foundation. Indirect support has been received from research grants made to the University, but controlled by other departments.

The weaknesses in the organization of the Press as outlined in the 1940-42 Biennial Report have not been remedied, but have become increasingly acute: quarters so ill-adapted to our requirements that the efficiency of distribution is reduced and the costs increased; an organizational set-up that makes it difficult to maintain a staff of high caliber; and inadequate financial support.

The University of Minnesota Press is universally recognized as one of the leading scholarly presses of the country, a position slowly built up with great effort, but one quickly and easily lost by neglect. The University of Minnesota is the logical center for the publishing of a great area and should be alert to its opportunities and responsibilities in this department of public education.

Following is a list of publications for the biennium, July 1, 1942 to June 30, 1944:

Mental Growth of Children from Two to Fourteen Years. Florence L. Goodenough and Katharine M. Maurer. (Child Welfare Monograph Series, No. 20.) 130 pages. 6 x 9 inches. Frontispiece and 38 tables. Cloth. Edition, 500.

University of Minnesota Studies in Predicting Scholastic Achievement. (Part One: College of Science, Literature, and the Arts; College of Agriculture, Forestry, and Home Economics.) Edmund G. Williamson, Edward S. Bordin, Edward M. Freeman, and Palmer O. Johnson. 65 pages. 6 x 9 inches. 12 tables. Paper. Edition, 500.

University of Minnesota Studies in Predicting Scholastic Achievement. (Part Two: Medical School; School of Nursing; School of Business Administration; Law School; School of Dentistry.) Harl R. Douglass, Levi A. Lovegren, Leonard J. Luker, Roben J. Maaske, Constance M. McCullough, and Ruth A. Merrill. 74 pages. 6 x 9 inches. 27 tables. Paper. Edition, 500.

The Background of Thomson's Seasons. Alan D. McKillop. 191 pages. 6 x 9 inches. Cloth. Edition, 500.

Economic Effects of Steady Employment and Earnings: A Case Study of the Annual Wage System of Geo. A. Hormel & Co. Jack Chernick. 75 pages. 6 x 9 inches. 32 tables. Paper. Edition, 500.

American Silvics and Silviculture. Edward G. Cheyney. 472 pages. 6 x 9 inches. 34 halftones. Cloth. Edition, 2,000.

Improve Your Reading: A Manual of Remedial Reading Exercises. Frances Oralind Triggs. 127 pages. 6 x 9 inches. Paper. Edition, 5,000.

Common Edible Mushrooms. Clyde M. Christensen. 120 pages. 5½ x 8½ inches. Illustrated (67 halftones—18 species in color). Cloth. Edition, 5,000.

Remedial Reading: The Diagnosis and Correction of Reading Difficulties at the College Level. Frances Oralind Triggs. 219 pages. 6 x 9 inches. 25 tables. Cloth. Edition, 1,000.

On Your Own: How To Take Care of Yourself in Wild Country. A Manual for Field and Service Men. Samuel A. Graham and Earl C. O'Roke. 150 pages, 5½ x 7½ inches. 52 illustrations. Cloth. Edition, 5,000.

Administrative Districts and Field Offices of the Minnesota State Government. (Studies in Administration, No. 2.) Ivan Hinderaker. 157 pages. 8½ x 11 inches. 34 illustrations. Paper. Edition, 300.

The Midcontinent and the Peace, No. 1 (Joint Preliminary Report from the Universities of Manitoba and Minnesota). Arthur R. Uppgren and William J. Waines. 48 pages. 6 x 9 inches. 2 halftones. Paper. Edition, 5,000.

Child Care and Training. Marion L. Faegre and John E. Anderson. (6th revised edition.) 314 pages. 5½ x 8½ inches. 23 halftones. Cloth. Edition, 5,000.

Adapting the High School to Wartime and Postwar Needs. G. Lester Anderson. 53 pages. 6 x 9 inches. Paper. Edition, 1,000.

The Hunt-Minnesota Test for Organic Brain Damage. Howard F. Hunt. 8-page manual. 8½ x 11 inches. 24 cards. 25 recording sheets. Paper. Edition, 500 sets.

Report of the Dight Institute for the Year 1942-43. C. P. Oliver. 32 pages. 6 x 9 inches. 1 half-tone. Paper. Edition, 1,200.

Your Own Story. Marion L. Faegre. 52 pages. 5¼ x 7 inches. 23 zinc etchings. Paper. Edition, 15,000.

- Outcomes of General Education: An Appraisal of the General College Program.* (Studies of General Education.) Ruth E. Eckert. 210 pages. 6 x 9 inches. 29 zinc etchings. Cloth. Edition, 1,000.
- Building a Curriculum for General Education.* (Studies of General Education.) Ivool Spafford. 353 pages. 6 x 9 inches. Cloth. Edition, 1,000.
- These We Teach: A Study of General College Students.* (Studies of General Education.) Cornelia T. Williams. 188 pages. 6 x 9 inches. Cloth. Edition, 500.
- Northern Fishes, with Special Reference to the Fishes of the Upper Mississippi Valley.* Samuel Eddy and Thaddeus Surber. 252 pages. 6 x 9 inches. 59 halftones; 3 zincs; 4 color plates. Cloth. Edition, 3,000.
- Mineral Resources of Minnesota.* (Geological and Natural History Survey of Minnesota, No. 30.) William H. Emmons and Frank F. Grout. 149 pages. 6 x 9 inches. 25 zincs; 1 halftone. Paper. Edition, 1,800.
- Studies in Higher Education.* Report of the Committee on Educational Research. 126 pages. 6 x 9 inches. 11 tables. Paper. Edition, 1,100.
- Freedom's Ferment: Phases of American Social History to 1860.* Alice Felt Tyler. 608 pages. 6 x 9 inches. 49 illustrations. Cloth. Edition, 2,500.
- The Northern Garden Week by Week.* (3rd printing.) Daisy T. Abbott. 93 pages. 5½ x 8½ inches. 9 illustrations. Paper. Edition, 3,000.
- The Midcontinent and the Peace, No. 2 (The Interests of Western Canadian Agriculture in the Peace Settlements).* William J. Waines. 27 pages. 6 x 9 inches. Paper. Edition, 5,000.
- Let's All Grow Vegetables.* Grace Keen and Arthur Hutchins. 92 pages. 5½ x 8½ inches. 20 zincs. Paper. Edition, 4,750.
- Analyses of Minnesota Incomes 1938-39.* Roy G. Blakey. 367 pages. 6 x 9 inches. 60 zincs. Cloth. Edition, 500.
- A Manual for the Identification of the Birds of Minnesota and Neighboring States.* (Reprint.) Thomas S. Roberts. 284 pages. 6 x 9¼ inches. 123 zincs. Cloth. Edition, 1,000.
- Art for Daily Living.* (Owatonna Art Education Project, No. 4.) Edwin Ziegfeld and Mary Elinore Smith. 155 pages. 6 x 9 inches. 2 halftones. Paper. Edition, 1,000.
- Art Units for Grades 1 to 3.* (Owatonna Art Education Project, No. 5.) Edwin Ziegfeld and others. 64 pages. 6 x 9 inches. 6 halftones. Paper. Edition, 1,000.
- Art Units for Grades 4 to 6.* (Owatonna Art Education Project, No. 6.) Edwin Ziegfeld and others. 67 pages. 6 x 9 inches. Paper. Edition, 1,000.
- Art Units for the High School; The Home.* (Owatonna Art Education Project, No. 7.) Edwin Ziegfeld and others. 100 pages. 6 x 9 inches. Paper. Edition, 1,000.
- Art Units for the High School; The Urban Community.* (Owatonna Art Education Project, No. 8.) Edwin Ziegfeld and others. 80 pages. 6 x 9 inches. Paper. Edition, 1,000.
- Art Units for the High School; Graphic Art.* (Owatonna Art Education Project, No. 9.) Edwin Ziegfeld and others. 100 pages. 6 x 9 inches. Paper. Edition, 1,000.
- Red Wing Looks Ahead: The Economic Impact of the War on a Minnesota Community, with a Forecast of Postwar Conditions.* (The Community Basis for Postwar Planning, No. 1.) Roland S. Vaile. 29 pages. 6 x 9 inches. Paper. Edition, 3,000.
- Luis Velez de Guevara: El Conde don Pero Velez y don Sancho El Deseado.* Richard H. Olmsted. 189 pages. 5½ x 8½ inches. 2 illustrations. Cloth. Edition, 500.
- The People of Alor: A Social-Psychological Study of an East Indian Island.* Cora Du Bois. 654 pages. 6 x 9 inches. 34 pages of illustrations. 86 halftones; 17 zincs; 1 map. Cloth. Edition, 1,000.
- Minnesota Multiphasic Personality Inventory.* Starke Hathaway and J. Charnley McKinley. Individual form—(8 reprintings) 1,400 sets; Group form—(1st printing) 100 sets.

—MARGARET S. HARDING, *director.*

COFFMAN MEMORIAL UNION

1942-44

The Coffman Memorial Union has now completed its fourth year. The novelty of the building and its facilities, so noticeable in the first years, has worn off and given way to a genuine and ready acceptance. The vital part the Union has played in university war services has established it as a mature member of the university community. The problems of organization, operation, and program planning, which marked the first two years of the Union's history, became intensified with the full impact of wartime conditions.

Union Board—The Union Board of Governors, comprised of fifteen students and five non-students, has felt the weight of responsibility for the wartime affairs of this important department. Following the trends in general student body enrollment, the ratio of men students to women, which during normal times was nine to six, is now five to ten. Military service for the men and accelerated educational programs for women have resulted in an unprecedented turnover in student representation. For the first time in the history of the organization, a woman student, Joy Nissen, has been selected for president. During the past year, provision was made for including official Union Board representation from each of the major army and navy training units stationed on campus. Eleven servicemen participated during the past year in the decisions of the Union Board.

Major Problems and Accomplishments—Each year seems to present a set of factors which calls for modification of previous precedents and customs. The past two years contained more than their share of complications. The sharp decrease in student enrollment resulted in a considerable reduction in Union fees, and only the income from servicemen's fees kept the financial scale balanced. Increased cost in labor and materials accentuated the financial problem, as did the expanded operating schedule. Staff problems also were

greatly magnified by war conditions. The rapid turnover materially increased the amount of time required for selection, training, and supervision of the 65 staff members who comprise the part-time staff. Even more trying have been the changes in the full-time staff. Of the thirteen major administrative and operative staff positions, only four are still filled by the experienced individuals who started the biennium.

The presence of thousands of servicemen in the building, together with the wartime behavior factors among young men and women, at times presented a serious situation. Through the efforts of the union social hostesses, the voluntary senior hostesses, and the co-operation of the office of the dean of students, the commanding officers, and local community leaders, the situation was minimized without recourse to drastic or distasteful measures.

Major changes in the operation of the building were the elimination of the party dining room service on the third floor and the closing of the recreation room, together with a greatly expanded operating schedule. These changes corresponded with the arrival of the large military training units in the spring of 1943. The building has been open several additional hours each week day as well as on Sundays and holidays. After four years of service, much of the furniture and decorations have begun to show marked signs of wear. Although wartime shortages of materials and labor have made repairs slow and costly, a definite effort has been made to keep the present equipment usable until replacements are again available.

An outstanding addition to the facilities of the Union has been the development of the Union Terrace Room. In November, 1943, by agreement with the Union Food Service management, the room was converted into a combination library, writing, and music room. Through the co-operation of the University Library, hundreds of volumes of excellently selected books for recreational reading have been made available for casual browsing. The servicemen as well as the students crowded its doors to read, write, or listen to the frequent music appreciation programs.

Building Traffic Survey—In the first biennium, surveys determined that the average week-day traffic in the building amounted to 13,117 in 1941 and 11,962 in 1942. In November, 1943, a similar count revealed 10,756—6,053 civilian students, 4,185 soldiers, and 532 sailors. This condition prevailed until spring when the number of servicemen messing in the building showed a marked decline.

Union War Service—For thousands of servicemen stationed at the University of Minnesota, the Coffman Memorial Union has served as a "home away from home." For some it meant a quiet place to write a letter home, listen to symphonic music, or read a current best seller. For others, it was a place to meet the wife or girl friend for dinner, dance, or party. Still others found relaxation in playing their favorite games. Outstanding in its service to the military training program was the Union messing service provided for more than a thousand servicemen. Whatever the need, the Union was there to fill it.

Once again, as in World War I, the Union provided quarters for emergency hospitalization of servicemen during an epidemic. It provided office and interview space in the building for several recruiting units for various branches of the armed forces. Included among these were the WAC's, WAVES, Army Air Corps, and the Navy V-7 and V-12 programs.

Servicemen's Center—One of the most effective mediums of providing for the social and recreational needs of trainees was the Union Servicemen's Center which originated under Union sponsorship. Housed originally in the Commuter's Lunchroom on Sundays only, this popular center was later expanded to the Recreation Room and finally to the Game Room where exclusive use of the space was provided for servicemen from 5:00 p.m. until 10:00 p.m. weekdays, and 12:00-8:00 p.m. on Saturdays and Sundays. In this Center, the men found scores of voluntary student hostesses with whom they could dance to music from a juke box, play table tennis, cards, or organized games, or talk of mutual interests. Books, magazines, home-town newspapers, and seasonal recreational equipment were always available.

Union Program—The years 1942-44 witnessed a tremendous expansion in participation in the program activities of the Union. Wartime changes and the thousands of servicemen on campus complicated program planning and development. Servicemen's free time was limited, so readjustment of programs was necessary. Additional programs were added to meet new needs, while curtailment of travel limited many of the peacetime trips and out-of-door activities. Activities held during 1942-43 were 453, and during 1943-44, 760, or a total of 1,213 for the biennium. Attendance figures were 68,296 and 118,450, respectively, for a grand total of 186,746 individuals. In view of the many complications, a review of the programs and activities shows many new ventures in the social, recreational,

and cultural programs, plus maintaining the well-established peacetime programs of the Union.

A major objective of the Union program is to develop student leaders. The twenty-odd activity committees are headed by student chairmen. Some 300 students voluntarily serve as committee workers. Both chairmen and committee workers are counseled and trained to perform their duties satisfactorily, to suggest new ideas and programs, to accept responsibility, and to learn the functions of handling personnel. The program as outlined would not have been successful nor would it have been possible without student interest, co-operation, and support. Providing the opportunities for all interested students to gain experience in leadership, the Union Merit Committee has pioneered in developing methods to accomplish this most satisfactorily. Reports were made by committee chairmen to the Merit Committee on the progress of their program as well as on the committee members themselves. These reports were summarized as a means of evaluating students' leadership abilities and the program. Approximately two hundred student leaders attended the first recognition event—a dessert dinner—at which time seven service keys were presented to outstanding chairmen. All student workers were commended for their contribution to the development of a well-rounded social and cultural program during the wartime period.

Program Outlook—The Union enters the next biennium with basic organizational factors well established. All of the twenty-seven committee chairmen have been selected, with most of the committees well organized. Preparatory meetings, discussing future problems, have already been held; and through the meeting of the Junior Board held last spring, the co-ordination and spirit of co-operation between committee workers are well advanced. The constant efforts to expand participation in the Union committee system to give that highly desirable experience to many students, together with the increased demands upon staff time for individualized attention, strongly indicates the need for added staff if a full realization of objectives is to be attained.

Farm Union—The Farm Union has matured under the rigors of a wartime biennium. The decrease in student enrollment has been off-set by the presence of several hundred Navy trainees on the Farm campus. Rather than diminishing, the demands for services and social and recreational activities have materially increased. In spite of frequent shortages and changes in staff personnel, the facilities have been available for several additional hours each week-day as well as on Sundays and holidays.

Although no major alterations were completed during the past two years, sufficient maintenance of furnishings, equipment, and building was undertaken to assure satisfactory physical plant conditions. The facilities are obviously inadequate. The Union Board, in visualizing an increased postwar student enrollment, has urged the immediate drafting of plans for a new building, which could be constructed as soon as funds and materials are available. The possibility of postwar federal financial aid for such buildings gives added weight to the wisdom of this action.

Future—It is difficult to predict what the next biennium will mean to the Union. Continued war conditions will intensify the financial and operational problems and cause a decided shift in emphasis in social and recreational program planning. Should the war terminate, the Union will soon find itself unable physically to accommodate the tremendous student body which has been predicted for the postwar period and will need to be ingenious in utilizing all facilities and activities to the fullest extent.—G. RAY HIGGINS, *director*.

DEPARTMENT OF MILITARY SCIENCE AND TACTICS

This period has seen changes in the composition of the Reserve Officers' Training Corps and the formation of the Army Specialized Training Program—all due to the participation of the United States in World War II.

Reserve Officers' Training Program—At the beginning of the biennium, the ROTC changed to an accelerated schedule which included the normal units, both advanced and basic students, in the Coast Artillery Corps, the Signal Corps, and the Medical Corps. Enrollment in the Signal Corps was limited in the main to students in the Department of Electrical Engineering; in the Medical Corps, to students in the Medical School; and in the Coast Artillery Corps, to students in all colleges of the University provided that such students would have completed by the end of the freshman year courses in plane trigonometry, higher algebra, and general physics.

During the summer and fall of 1942, the bulk of ROTC personnel enlisted in the Army Enlisted Reserve Corps program, and the Coast Artillery and Signal Corps students were called to active duty from this reserve in February and March of 1943, leaving the Medical Corps students to continue their schooling. This call to active duty included

TABLE I. ROTC STRENGTH BY QUARTERS

Quarter	Course	Basic		Advanced		Total
		1st yr.	2nd yr.	1st yr.	2nd yr.	
Summer, 1942	Coast Artillery	38	56	73	47	214
	Signal Corps	*	5	15	5	25
	Medical Corps	30	†	†	†	30
	Totals	68	61	88	52	269
Fall, 1942	Coast Artillery	439	142	62	50	693
	Signal Corps	*	16	16	5	37
	Medical Corps	†	42	47	†	89
	Totals	439	200	125	55	819
Winter, 1943	Coast Artillery	219	71	65	60	415
	Signal Corps	*	7	16	5	28
	Medical Corps	29	42	45	24	140
	Totals	248	120	126	89	583
Spring, 1943	ROTC General	4‡	§	§	§	4
	Medical Corps	†	†	38	†	38
	Totals	4		38		42
Summer, 1943	ROTC General	22‡		59	¶	81
	Totals	22		59		81
Fall, 1943	ROTC General	48‡		67	¶	115
	Totals	48		67		115
Winter, 1944	ROTC General	17‡		34	¶	51
	Totals	17		34		51
Spring, 1944	ROTC General	6‡				6
	Totals	6				6

* Signal Corps First Year Basics take the same courses that Coast Artillery Corps First Year Basics take and no distinction is made until the second year when they take different courses.

† Medical Corps students substitute regular academic work during some quarters for ROTC which results in no ROTC grade, consequently true strength must be obtained by examining the strength during the entire year of three quarters.

‡ Due to the extreme reduction of ROTC personnel because of the war, a general branch imaterial course was set up for the ROTC Basics, first and second years, that would give an opportunity to examine the Army as a whole and to obtain a general background that would aid them in any branch of the armed forces.

§ Advanced Corps discontinued.

¶ These figures represent the former ROTC men who came back to this unit as specialized ASTP trainees awaiting OCS vacancies.

the advanced corps whose members completed the academic program for the 1943 winter quarter and then were ordered to active duty. The seniors were sent to officer candidate schools which included Fort Monmouth, New Jersey, the Signal Corps School; Miami Beach, Florida, the Army Air Forces Technical Training Command; and Camp Davis, North Carolina, the Anti-aircraft Artillery School. The juniors were sent to replacement training centers to be given basic training as a substitute for the ROTC training they would be unable to complete at the University. A group of five unclassified advanced corps men stayed at the University and completed another quarter before going to the Anti-aircraft Artillery School. During this period the War Department issued instructions to the effect that no more advanced corps contracts would be signed until further orders, thereby eliminating the advance corps. By this time the remaining basics, who had not enlisted in the Army Enlisted Reserve Corps, were being drafted so swiftly that the ROTC had almost vanished.

During the late summer of 1943, the majority of the former ROTC juniors were sent back to the University from the field to continue their academic training while waiting for OCS vacancies. This resulted in second year advanced ROTC classes being given to these men. By fall all the men had returned. At the beginning of the winter quarter part of the group went to Fort Monmouth and to Camp Davis to attend OCS. Due to changes in officer requirements as the war progressed, all of the men did not go to Fort Monmouth and Camp Davis. Some went to Fort Belvoir, Virginia, the Engineer OCS, and Fort Benning, Georgia, the infantry OCS.

The ROTC still functions for freshmen and sophomores and provides courses in connection with the ASTP that will permit the University men to examine the Army as a whole and to obtain a general background that will aid them in any branch of the armed forces.

Army Specialized Training Program—The ASTP was inaugurated during the 1943 spring quarter when 317 men came for training in advanced engineering. The program underwent a tremendous expansion in July, the beginning of the second quarter of the ASTP. The variety of courses increased as well as the number of men taking them; these courses included advanced engineering, basic engineering, psychology, area and language groups that specialized in German and Japanese, medicine, dentistry, and graduate courses in language and engineering.

TABLE II. ASTP STRENGTH BY QUARTERS

Course	Spring, 1943	Summer, 1943	Fall, 1943	Winter, 1944	Spring, 1944
Advanced Engineering	317	523	493	527	.....
Basic Engineering	250	275	208	.....
Personnel Psychology	128	114	.....	.....
Area and Language Japanese	116	110	100	75
Area and Language European	133	169	360	99
Preprofessional	148*
Former ROTC	59	67	34	.....
Dentistry	183	181	157	205
Medicine	325	325	290	291
Totals	317	1,717	1,734	1,676	818

*Includes three ASTP Reserve trainees.

TABLE III. ASTP GRADUATES*

Course	Number	Course	Number
Advanced Engineering	164	Area and Language European	96
Basic Engineering	94	9A, Graduate Engineering	179
Personnel Psychology	110	9L, Graduate Language	131
Area and Language Japanese	57	Medicine and Dentistry	100

* These data are based only on graduates. A large proportion of the trainees never graduated due to the curtailments of the program before the course was completed and to the selection of trainees from various programs for the purpose of filling vital Army needs.

The fall of 1943 saw additional men entering the various programs and the return of the former first year advanced corps men who had not been sent to OCS because of the lack of vacancies. At the end of the 1943 fall quarter, this unit graduated men in engineering and personnel psychology.

Some big changes occurred at the beginning of the 1944 winter quarter. The Area and Language group was increased by the addition of Norwegian and Swedish trainees; the psychologists were transferred back to the field; and a portion of the ROTC was ordered to the various OCS. The usual number of men were transferred out of this unit for failing to meet program standards and a few additional replacements for advanced engineering and language training reported.

A huge curtailment of the ASTP went into effect at the close of the winter program. The Basic and Advanced Engineering groups and the Area and Language German group were transferred back to the field along with a part of the Area and Language Japanese, Norwegian, and Swedish groups who were separated from the program because of the reduced quotas set up under the ASTP curtailment rather than through unsatisfactory grades.

Spring quarter, 1944, was marked by the addition of the Preprofessional group who will eventually go into the ASTP medical and dental groups and by the reduced strength of the unit which left only the medical and dental trainees, the Area and Language Japanese, Norwegian, and Swedish groups. The Japanese section graduated at the end of this quarter.

The results derived from the ASTP from April, 1943 to June, 1944 are many. The Army has received a substantial group of college trained men, better fitted to carry on their work. Some are doing valuable experimental work that will not be revealed until after the war; others are now carrying on as commissioned officers; many have earned higher non-commissioned officer grades; and the country as a whole will benefit through the increased education of these trainees during the war and through the years of peace.

Faculty—Colonel Harry L. King, CAC, was the professor of military science and tactics, the commandant of the Army Specialized Training Unit, and the commanding officer of all Army units at the University of Minnesota. As a matter of interest this command was larger than Fort Snelling at one time during the biennium.

TABLE IV. MEMBERS OF THE DEPARTMENT OF MILITARY SCIENCE AND TACTICS (ROTC AND ASTP)

Name	Grade and Branch		Reported	Departed
Wesley J. Anderson*	Captain	CAC	October 14, 1942	April 14, 1944
Frank L. Barlow	First lieutenant	AUS	June 28, 1943	March 19, 1944
Henry E. Bollman	Captain	FA	January 8, 1944	June 12, 1944
Stanley F. Burk	First lieutenant	CAV	July 11, 1943	April 7, 1944
John M. Butler	Second lieutenant	AGD	May 15, 1943	January 22, 1944
Charles E. Caverly*	Major	CAC	September 5, 1940	October 15, 1942
Franklin C. Coubourn*	Second lieutenant	Sig C	November 9, 1943	March 29, 1944
James J. Cooke	Major	AGD	July 2, 1943	July 7, 1944
Nelson Fleck	Second lieutenant	CAV	July 11, 1943	August 13, 1943
Geoffrey E. Goring	First lieutenant	CWS	July 2, 1943	January 12, 1944
Melvin J. Happe	Captain	CE	January 8, 1944	April 7, 1944
John S. Harvey	Captain	CAV	July 11, 1943	
Leroy T. Heller	First lieutenant	AGD	December 15, 1943	February 24, 1944
Eugene L. Hess*	Captain	CAC	September 18, 1940	November 24, 1942
Carl A. Jacobson*	Major	Sig C	December 9, 1940	November 23, 1942
Wesley H. Johnson*	First lieutenant	CAC	September 25, 1943	March 1, 1944
Mack Jordan	First lieutenant	CAV	July 11, 1943	March 19, 1944
Harry L. King*	Colonel	CAC	February 20, 1941	
Earle E. Layton	First lieutenant	AUS	June 28, 1943	March 19, 1944
Robert S. Marvin*	Captain	CAC	September 28, 1941	March 5, 1944
Martin B. McKneally	Captain	AGD	July 2, 1943	
Kent Nelson*	Colonel	MC	September 5, 1940	
William C. Rindsland*	Major	CAC	September 14, 1940	June 19, 1944
William Schmunk	Second lieutenant	CAV	July 11, 1943	August 13, 1943
Robert F. Schomaker	First lieutenant	AUS	June 28, 1943	March 9, 1944
Philip M. Schroeder*	Captain	CAC	December 2, 1940	
Gilbert H. Sheely	Second lieutenant	CAV	July 11, 1943	August 13, 1943
John A. Sokol	Second lieutenant	CAV	July 11, 1943	August 13, 1943
Harold B. Wagstaff	Second lieutenant	CAV	July 11, 1943	August 13, 1943
Rudolph A. Weisbrich*	Captain	Sig C	November 3, 1942	April 10, 1944
Robert K. Williams*	Captain	CAC	November 12, 1942	March 29, 1944
Maurice C. Young	First lieutenant	AUS	June 28, 1943	August 11, 1943

* ROTC officers.

Originally, Colonel King had a small group of officers to assist him with the ROTC. With the advent of the ASTP, a large number of officers was stationed here for various periods of time depending on the strength of the unit and the demand from the field. A large part of this group were graduates of the various officer candidate schools rather than reserve officers, and most of them were college graduates. The ASTP has enjoyed much of its success because of the splendid co-operation between the university faculty and staff members.

Library—No additions were made to the library during this period except for the regular journal additions of the *Coast Artillery Journal*, *The Infantry Journal*, and the *Military Review*.

Rifle Team—The University Rifle Team was another varsity sport casualty because of the war due to the loss of team members and lack of replacements. There was some activity; however, it was greatly reduced. The team placed third among senior units in the Seventh Service Command in the 1943 National ROTC Rifle Competition for the William Randolph Hearst Trophies. In 1944 the matches were not fired because there were no men. All other rifle activity such as interfraternity, intramural, and women's was discontinued due to lack of ammunition and trained instructors, and to the increase in the army and navy training programs on the range.

Unit Rating—The ASTP unit was inspected by the Seventh Service Command in June, 1944 and was given a rating of "Excellent" for the annual general inspection which is the normal high standard maintained by this department.—HARRY L. KING, Colonel, *Coast Artillery Corps, P.M.S.&T.*

DEPARTMENT OF NAVAL SCIENCE AND TACTICS

History—The Naval Reserve Officers' Training Corps was authorized by the Act of March 4, 1925, which provided for the establishment and maintenance in civil educational institutions of naval training, leading to commissions as naval reserve officers of qualified

graduates. The unit at this University was established in the summer of 1939 and instruction was started in the fall quarter of the 1939-40 academic year.

Purpose—The purpose of the NROTC is to provide systematic training and instruction in essential naval subjects for university students in order to further the plan for national defense. This mission will be accomplished by:

1. Qualification of selected students for appointment as ensigns in the Naval Reserve or second lieutenants in the Marine Corps Reserve, thus assisting in meeting the demands for increased commissioned personnel in time of national emergency;

2. Education of students who fail to complete the entire course so that they will be of value to the Navy in time of national emergency in proportion to the time spent in the corps; and

3. Increased dissemination of knowledge concerning the Navy and the Marine Corps, their purpose, ideals, achievements, and handicaps, thereby gaining increased public interest in the maintenance of adequate naval defense.

Organization—The head of the Department of Naval Science and Tactics is a captain of the Navy. He is assisted by officers and chief petty officers selected by the Bureau of Naval Personnel.

Enrollment—The quota for this unit is 270. This will be filled for the duration of the men who have successfully completed the first two terms of the V-12 curricula.

Training—In addition to completing the required classroom and drill curricula students are given a practical cruise.

Naval Academy Appointments—Three regularly enrolled students of the unit may be nominated each year to take the entrance examination for the United States Naval Academy. Two students won such appointments in 1943-44.

Graduates—Graduates of the University of Minnesota NROTC unit are today serving in all theaters of war and on all types of naval vessels. Because of the education and training received in the Corps these men and others like them are an important element of the naval personnel. Graduates of the NROTC units are eligible for commissions in the regular service after serving one year afloat and upon recommendation of their commanding officer.—JOHN W. GATES, *captain, U.S. Navy, P.N.S.&T.*

UNIVERSITY NEWS SERVICE

The University News Service carried on its usual functions during the biennium. It sent news and feature material to Twin Cities papers, to state dailies, and Minnesota weeklies. It published *Minnesota Chats* and *The Calendar of Events*. It handled publicity on athletics, although handicapped by the difficulty in finding an experienced assistant for the athletic phase of the work. As usual, the department also answered a great many inquiries from elsewhere and maintained cordial relations with members of the press in this vicinity and, through correspondence, with many elsewhere. A good many university pictures were supplied in response to requests and some mat service was maintained. A special effort was made to issue stories that would interpret the University of Minnesota's war efforts and, latterly, to show what was being planned for returning veterans. It was the department's intention, as always, to maintain, in its service, complete impartiality between departments. It must be called to attention, however, that, first, the amount of news originating in a department, and second, the co-operativeness of the department, inevitably affect the amount of attention it receives. From the point of view of what could be written about the campus, one might say much more could be done. From the point of view of available space in publications under wartime conditions, the University of Minnesota could be said to have obtained its full share. The department also sent frequent items to *School and Society* and other specialized outlets. Furthermore, it released many stories to such national news services as the Associated Press and United Press.—T. E. STEWARD, *director.*

UNIVERSITY COMMITTEE ON DEFERMENT OF MILITARY SERVICE

The personnel of this committee has remained unchanged since its appointment early in 1941, except for the replacement of Dean Edward M. Freeman upon his retirement by Dean Henry Schmitz. Recommendations for the deferment of military service for staff members and students have been considered by this committee in relation both to the changing policies of Selective Service and the needs of the University. The recommendations for deferment approved by this committee have been forwarded to the president for transmission to Selective Service.

The changing policies of Selective Service have resulted in the loss of a few valuable members of the staff who, under later policies, would have been eligible for deferment. The deferment of students has been increasingly curtailed until at the present time the only students eligible for deferment are those in the schools of Medicine and Dentistry.

The co-operation of the officials of the State Selective Service System as well as of most local and appeal boards has been most gratifying and satisfactory. Almost without exception, the University's recommendations for deferment have been honored by Selective Service.—HAROLD S. DIEHL, M.D., *chairman*.

CHARLES FREMONT DIGHT INSTITUTE FOR THE PROMOTION OF HUMAN GENETICS

Instructional Program—During the biennium the institute supported a general lecture that was given on the campus April 19, 1943 by Dr. L. H. Snyder of Ohio State University, whose topic was "Hereditry and Modern Life." The director gave twelve lectures on human genetics, and five reports on the research of the institute before various groups, societies, and organizations, both lay and professional. In the lectures on human genetics, emphasis was given to the known genetics of some diseased conditions, the uses that can be made of that knowledge in alleviating and inhibiting the conditions, and the use that can be made of genetics in handling some of our racial and social problems. During 1943-44 an evening seminar in human genetics was established.

Research—The research projects with congenitally missing teeth, breast cancer, and mongolism involved co-operation with other university departments. Approximately 200 cases of congenitally missing teeth, including 40 deciduous sets, have been added during the biennium. The dental moulds, roentgenograms and familial data of 301 cases are on file. Two publications have been made and one is in preparation. The data have been presented before one national and two Minnesota professional groups. Three complete family records of breast cancer, including nursing histories, have been collected. The names of all members of the kinship have been filed in order that the cases may be followed into future generations. In addition, the names of 525 cancer patients are on file and are being contacted as the persons' physicians grant us permission to write them. Three complete family records have been collected in the study of mongolism.

The records, given to the institute, of 500 mental defectives have been surveyed. Most of the records, although not permitting a genetic analysis, will be valuable as leads for continuation studies.

During the biennium, the records of 40 families with 28 different traits have been collected from persons who came to the institute for consultation and from others to whom we have been referred by professional men. A family record is not considered complete until the data include collateral relatives and the variable manifestations of the anomaly or trait. The data include 5 families with metabolic defects, 11 with neurological disorders, 3 with skeletal defects, 2 with blood diseases, and 19 with miscellaneous traits. Two of the records have been presented for publication; one, in co-operation with another department, is in preparation.

Consultation and Public Service—Thirty persons have asked for knowledge or advice about personal genetic problems. In 10 cases, the person was interested in a trait that he had. In 11, the person was disturbed by a trait that was present in members of his family or in a family into which he expected to marry. Two asked about the probability of having defective children if they married relatives. Two wanted to know the chance of proving that a man was or was not the father of a child. Three wanted to know whether genetics might help prove that a man of mixed racial parentage was the father of a child. Two sought information of the probable occurrence of racial traits in children who had been born from mixed racial marriages. In addition, several other persons had genetic questions which were less personal in nature.

Other Activities—Dr. Royal C. Gray was appointed to the advisory committee in the place of Dr. Stuart W. Cook who resigned on entering the services of the United States. Professor W. S. Miller acted as chairman during the absence of Dean Theodore C. Blegen. A subcommittee of the advisory committee has been working on a program to establish a eugenics society. The institute has published as one of its bulletins the biographical sketch of Dr. Charles F. Dight. Photographs of hereditary anomalies and charts which can be used to explain heredity are being collected and prepared. The collections will be displayed for the general public as soon as exhibit cases can be prepared.—CLARENCE P. OLIVER, *director*.

PUBLICATIONS OF THE FACULTIES

A list of the publications of the faculties of the University of Minnesota for 1942-43 is published as Volume XLVII, No. 23, and for 1943-44 as Volume XLVII, No. 56, of the University of Minnesota Bulletin Series.

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