

SENATE MEETING

THURSDAY, APRIL 29, 1965

3:30 P. M.

MURPHY HALL AUDITORIUM

The voting membership of the Senate totals 159 including the President and 158 elected members. For a quorum, a majority of the voting membership (80) must be present. Constitution changes require advance publication and 106 affirmative votes. By-Law changes require 80 affirmative votes. Other actions require only a simple majority of members present and voting. The members of the Administrative Committee are ex officio nonvoting members of the Senate.

All members of the faculty who hold regular appointment as defined in the Regulations Concerning Academic Tenure may be present at Senate meetings and are entitled to speak and to offer motions for Senate action, but may not vote.

Members of standing committees who are not faculty, including student members, may be present at a meeting of the Senate during such time as a report of their committee is under discussion and may participate in such discussion, but shall not have the privilege of making motions or of voting.

A special section will be provided for the seating of such faculty and such members of standing committees.

Provision has been made for the University News Service to send the Senate Docket to the news media in advance of each meeting and to arrange a news conference at the close of each meeting with the vice chairman and others he may designate.

ATTENDANCE RECORD

A roll of elected and ex officio members will be circulated during the meeting. Members will please check their names to indicate their presence. If the list misses you, please stop afterward to check your name. The roll, after adjournment, will be on the rostrum.

An attendance record for nonmembers will also be circulated and will be on the rostrum after the meeting.

As voted by the Senate, a summary of the attendance of members elected for the current academic year will be included in the June minutes.

NOT FOR RELEASE PRIOR TO THE SENATE MEETING

Year 1964-65

No. 5

UNIVERSITY OF MINNESOTA THE SENATE DOCKET

April 29, 1965

Your Committee on Business and Rules respectfully presents the following matters for consideration:

I. MINUTES OF MARCH 4, 1965

Reported for Action

II. SENATE ROSTER FOR 1964-65

Reported for Information

The College of Liberal Arts has elected Robert J. Ames to fill the unexpired term of Ralph G. Ross (63-65).

IIIA. NON-SENATE COMMITTEES FOR 1964-65

Reported for Information

The President reports the following change in committee membership:
University College Committee: Alfred L. Vaughan to replace Francis M. Boddy as chairman.

IIIB. SENATE COMMITTEES FOR 1964-65

Reported for Action

The President reports additional appointments as follows:
Administrative Committee: Alfred L. Vaughan to replace Francis M. Boddy.

Institutional Relationships: C. Lloyd Bjornlie (executive secretary)

IV. REPORT OF THE ADMINISTRATIVE COMMITTEE

Reported for Information

1. *Consideration of a Statement on Conflict of Interest in Government-Sponsored Research.* The joint statement from the Council of the American Association of University Professors and the American Council on Education which had been distributed at the February 1965 meeting was considered in detail. In general, it was asked what are the implications of the situations defined in Part "A," how should the University answer as regards its responsibility outlined in Part "B," and how should staff members engaged in research be made aware of this document. It was remarked that there is, whenever government-sponsored research is undertaken, an inherent danger of conflict of interest in distribution of time of the faculty member who does the research. Other conflict situations were discussed in reference to the points made in the document.

It was suggested that Assistant Vice President of Business Administration Clinton T. Johnson might draw on a form used in the College of Medical Sciences in drafting a proposed statement from the principal investigator and department that would be applicable in any school or to any type of project. Procedures to be followed will go before the Faculty Consultative Committee for consideration as they are developed. It was suggested that the President send the conflict of interest document, along with a covering letter, to all participants in government-sponsored research and that thereafter copies of the statement be given to each applicant for support of research from government sources.

2. *The Technical Utilization Program.* Vice President Shepherd discussed for information of the committee the steps being taken toward possible creation of a technical utilization program centered at the University of Minnesota. There is, he indicated, a need to do more work in bringing college resources to people in the engineering-technical field and related industry as agriculture has done so effectively. There exists, it seems, the possibility of stimulating the economy and of fostering good educational-industrial relationships without hampering the present interests of the University faculty or raising any threat to basic research. Concerns might be with techniques rather than with new products, and with better communication between state universities and the industrial community. Special financial support would, of course, be required and, if that is found, there would be need for an industrial liaison office at the University to encourage co-operation with industry.

3. *Discussion of Legislative Progress and the Welfare of the University.* Members of the committee in close touch with legislative work commented on the progress in this session and on the generally favorable attitude apparent toward the University. Various other matters were touched on, including ways in which the University might be more effective in drawing the Minnesota students of top-level talent who can attend here for the ultimate benefit of the state.

R. E. SUMMERS, Secretary

(There will be a pause in the proceedings to permit the seating of the non-Senate members of the Committee on Intercollegiate Athletics and Committee on Student Scholastic Standing for the discussion of their reports.)

V. REPORT OF THE COMMITTEE ON INTERCOLLEGIATE ATHLETICS

1. Reported for Action

Amendment of Eligibility Rule 3 Pertaining to Quantitative and Qualitative Scholastic Progress

At the March 1965 meetings, the faculty representatives voted unanimously, under the White Resolution procedure, hence subject to institutional review, to amend Eligibility Rule 3. From Sections 2(b) and 3(b), which specify minimum criteria for quantitative and qualitative scholastic progress respectively, the following was deleted: "A student who begins his first competition in either the third or fourth calendar year after his matriculation must meet the ('quantitative' in Section 2(b), 'qualitative' in Section 3(b)) requirements proper to that year; except in the case of a student who has been out of school for an academic year, in which case he is to be held for the requirements corresponding to his years in residence."

The deleted sentence had originally been adopted in May 1963 to preclude the possibility that a student in his fourth year of residence, for example, might have his first competition while meeting only the minimum qualitative progress requirements which are applicable generally to sophomores, that is, a grade point average of 1.7. An attempt was made at that time to avoid hardship in the application of this rule to students who may drop out of school for a year or more.

Since the adoption of this rule, it became apparent that:

1. The number of students who would become ineligible under this rule and who have not "been out of school for an academic year" is very small.

2. The implementation of the rule for those who have been "out of school for an academic year" became very cumbersome and has created hardship cases. The faculty representatives also had in mind that, at the present time, many students are advised for sound academic reasons to drop out of school for varying periods of time, but not necessarily for an academic year of 3 consecutive quarters.

3. The requirements for quantitative and qualitative scholastic progress toward a degree which the Conference prescribes for students who wish to compete in intercollegiate athletics reflect minimum standards. They were based on the premise that a student who meets these requirements can, in due course, qualify for a degree. Many students have done this. However, the requirements which students must now meet to qualify for Upper Division or similar status in various colleges or institutions are in many instances higher than those specified for athletic eligibility of third- or fourth-year students. Hence it has happened here and at other Conference institutions that students who meet minimum Conference requirements for eligibility were not retained in or admitted to any college of the institution and, in effect, dropped from the institution.

It is felt that this provides an adequate institutional safeguard and that through adoption of the amended rule the scholastic standards for eligibility are in effect not lowered.

With the gradual increase throughout the Conference in academic requirements for entrance, or progress toward a degree, for retention in college or for transfer between colleges, a Conference-wise safeguard to accomplish the purpose inherent in the sentence deleted from Sections 2(b) and 3(b) of Rule 3 is apparently not needed.

Recommendation: That the amendment of Eligibility Rule 3, Section 2(b) and 3(b), be approved.

2. Reported for Information

1. Actions by the Conference

a. *Reaffirmation of Amendment of Eligibility Rule 10.* The Universities of Minnesota and Illinois had rejected under the White Resolution procedure amendment of Eligibility Rule 10, dealing with approval of "open competition" by sports federations. (See *Minutes of the University Senate*, February 4, 1965, p. 67.) The faculty representatives by a vote of 8 to 2 (Minnesota and Illinois voting no) reaffirmed on March 4, 1965, the previous adoption of the amended Rule 10 which thereby became effective.

b. *Start of Freshman Football Practice.* Regulation II, Section 3(a)(3), pertaining to football provides that "Freshman practice shall not start until the opening day of classes." The Joint Group of the Conference (comprising the faculty representatives and directors of athletics) upon recommendation of a subcommittee voted "that notwithstanding the provision of Regulation II, Section 3(a)(3), the University of Minnesota be permitted to start freshman football practice on the Monday prior to the opening day of classes of its autumn term."

2. Actions by the Western Collegiate Hockey Association

a. *University of Minnesota, Duluth, Joins the Western Collegiate Hockey Association.* The University of Minnesota, Duluth is a member of the Minnesota Intercollegiate Athletic Conference and its teams compete against those of other members of that Conference except in ice hockey. In this sport the University of Minnesota, Duluth has in the past scheduled, as an independent institution, all members of the Western Collegiate Hockey Association. Having secured permission from the Minnesota Intercollegiate Athletic Conference to affiliate for the sport of ice hockey with another organization, the University of Minnesota, Duluth proposed to seek membership in the Western Collegiate Hockey Association. Your committee endorsed this proposal.

At the meeting of the Western Collegiate Hockey Association in Chicago, April 3, 1965, upon motion made by your faculty representative, the University of Minnesota, Duluth became a member of the Western Collegiate Hockey Association by unanimous vote.

b. *Play-off Games in Ice Hockey.* In order to eliminate conflicts with examinations, to reduce absence of players from classes and travel, the Western Collegiate Hockey Association adopted for the years 1966-67 a different format of the association play-offs. On the first Thursday and Saturday in March the four teams in the Eastern Section of the association's area, including the University of Minnesota, Duluth, will play a tournament-type play-off against opponents and at sites now designated. The four teams from the Western Section of the association's area, including the University of Minnesota (Twin Cities) will engage in a similar play-off against opponents and at sites now designated. The winners of the two Thursday games in the Eastern Section will play each other on Saturday at a predetermined site. The winners of the two Thursday games in the Western Section will also play against each other on Saturday at a predetermined site. These two tournament play-offs will terminate each year the WCHA-sponsored hockey season.

3. Approved Correction of Schedule

GOLF 1965
June 21-25 NCAA University of Tennessee, Knoxville
(instead of
June 14-19)

4. Intercollegiate Athletics and Academic Progress

As reported in the Senate Minutes of May 31, 1962, the Senate Committee on Intercollegiate Athletics was asked to give consideration to admissions, grades in certain activity courses, and probation status of student athletes at the University of Minnesota. The chairman conferred with the director of the Bureau of Institutional Research and learned that the bureau could conduct a comprehensive study of academic progress of student athletes providing some supplementary financial support could be obtained. Upon recommendation of the committee, such financial support was obtained from the Office of the President of the University. An advisory committee was appointed, consisting of members of the Senate Committee on Intercollegiate Athletics and faculty members at large, to work with the staff of the Bureau of Institutional Research in planning and implementing the study.

The study has been formulated in two phases. One part involves student athletes covered by eligibility rules in effect prior to December 8, 1961; whereas the second part deals with student athletes covered by the new eligibility rules instituted at that time. The first study presented here, in summary, was designed as a review of the academic histories of student athletes and nonathletes who entered the University of Minnesota as freshmen in 1956 and 1957 (graduating classes of 1960 and 1961). The second study will deal with student athletes who entered as freshmen in 1962 and 1963 (graduating classes of 1966 and 1967).

Summary of A Comparison of Academic Characteristics of Athletes and Nonathletes of the University of Minnesota

The purpose of the study was to make a thorough analysis of the academic characteristics, academic progress, patterns of study, and deterrents to academic progress of students who participated in intercollegiate athletics during their years of study at the University of Minnesota. To provide a basis for comparison, similar information was collected for a sample of students, stratified by college of registration, who did not participate in intercollegiate athletics during their time at the University of Minnesota. The study was focused on members of two graduating classes—the Classes of 1960 and 1961. Athletes were identified as those individuals who were certified at least once as eligible for intercollegiate competition at or after the beginning of their sophomore year. From the other male members of the Classes of 1960 and 1961 who were still in school as sophomores or later, the nonathletes were selected at random to conform to the distribution of athletes among the various colleges of initial registration. The resulting analysis involved 202 athletes and 293 nonathletes. Data used in the analyses were collected from eligibility lists, registration lists, student loans and scholarships files, and student transcripts. The entire study was developed around a framework of basic questions formulated by members of the Advisory Committee on the Study of Student Athletes and members of the research staff of the Bureau of Institutional Research. The summary which follows will be structured around these questions.

The inevitable year-to-year variations in the various academic characteristics, and the make-up of the athletes by sport and by college of registration, were dealt with by separate analyses of each class. However, the body of the report and the following summary are largely restricted to the results of the analyses of the Classes of 1960 and 1961 combined. If particularly significant differences were found for the individual classes, an appropriate comment has been included in this summary section. For a summary statement, however, it seems more appropriate that the points listed below refer to a composite of the sample of two years of student athletes and nonathletes at the University of Minnesota:

1. What was the distribution pattern of athletes by college?

More than two-fifths (41.5 per cent) of the athletes registered in the College of Science, Literature, and the Arts when they first enrolled at the University of Minnesota. The proportion of athletes registering in the other four major colleges were as follows: General College 22.8 per cent; Institute of Technology 17.8 per cent; College of Education 13.9 per cent; College of Agriculture, Forestry, and Home Economics 4.0 per cent.

2. In which colleges did athletes in the different sports first register?

In all of the 11 sport groups except two—gymnastics and hockey—the college of initial registration selected most frequently was the College of Science, Literature, and the Arts. Gymnasts and hockey players most frequently chose to register in the General College and the College of Education, respectively. Half or more of the athletes participating in basketball, cross-country, golf, tennis, and track initially registered in the College of Science, Literature, and the Arts, and more than 40 per cent of those participating in swimming, baseball, and wrestling did so. The General College was the second most popular college of registration for members of the baseball, football, golf, hockey, and wrestling squads.

3. What was the distribution of athletes by sports?

Of the 202 athletes in the study, 28.7 per cent were football players, 12.9 per cent were track men, and 11.9 per cent were baseball players. Participants on the swimming, golf, hockey, gymnastics, wrestling, and basketball teams accounted for a range of from 9.4 down to 5.9 per cent of the athletes. The smallest sport groups were the cross-country and tennis teams, with 3.5 and 3.0 per cent of the total group, respectively. The 7 per cent of the group that participated in two sports are represented in both sports in the figures just cited.

4. Were the proportions of resident and nonresident students different for athletes and nonathletes?

The proportion of athletes entering the University with nonresident status was greater than the similar proportion of all entering freshmen. Nonresidents accounted for slightly more than 14 per cent of the two classes of athletes, compared with only 4.3 per cent of all new entering freshmen who entered the University at the same time. An even smaller proportion (3.1 per cent) of the nonathletes in the sample were classified as nonresidents.

5. How many nonresident students were admitted to the General College who would not have been eligible to enter one of the four- or five-year programs?

In the sample studied, six nonresident athletes and two nonresident nonathletes were admitted to the General College. One of these (an athlete) would have been eligible for admission to one of the four- or five-year programs under the higher admissions standards set up for nonresidents.

6. How many athletes and nonathletes earned college credits before the study opened or at other institutions during the study?

Twelve men, all athletes, had earned some credits at the University in regular day school classes prior to the beginning of the experimental period. Two nonathletes had earned credit in the University's Extension Division, and 15 athletes and 10 nonathletes had earned credits at another institution before entering the University of Minnesota.

7. Did athletes differ from nonathletes (by college) in their tested ability?

Comparisons of high school ranks were made as well as comparisons of scores on the American Council of Education (ACE) Psychological Examination and the Cooperative English Test. The results show that the athletes, registered initially in all colleges except the College of Education, had slightly higher average high school percentile ranks than did the nonathletes registered in the same colleges. A comparison of the athletes and nonathletes as total groups showed that the average high school percentile rank for the athletes was 63.7; for the nonathletes it was 60.6.

A comparison of the ACE average scores, by college of initial registration, showed that the nonathletes had consistently higher scores than did the athletes. The average score for the nonathletes as a group was 103.7, compared with 98.5 for the athletes. Differences by college—all in favor of the nonathletes—did not exceed 7 points.

The Cooperative English Test scores of the athletes were also consistently lower than the English test scores of the nonathletes, for each college and for the two groups as a whole. The average test score for the athletes as a group was 129.0, as compared with 136.4 for the nonathletes as a group. Most of this difference was due to the large difference between scores of athletes and nonathletes initially enrolled in the General College (nonathletes had an average score 15.4 points higher).

In summary, although the average scores of the nonathletes were higher than the average scores of the athletes on the ACE and Cooperative English tests, and lower on the HSR, the differences were not appreciable.

8. Did athletes within various sport groups differ in their tested ability?

No statistically significant differences were found among the average high school percentile ranks of the members of the various sport groups. The average high school percentile rank for each of the 11 sport groups was above 50, ranging from 57.0 for football players to 76.2 for members of the cross-country team.

No statistically significant differences were found in the mean ACE scores earned by the members of the 11 sport groups. Average scores ranged from 90.6 for gymnasts to 105.8 for members of the cross-country team.

In the comparison of the Cooperative English scores, too, no statistically significant differences were found among the 11 sport groups. Average scores ranged from 115.4 for tennis players to 140.6 for members of the swimming team.

9. Was there any difference between the athletes and the nonathletes in the proportion who earned degrees?

More than half of the 202 athletes (53.0 per cent) earned either a four- or five-year degree within the five-year period after entering college, compared with 32.7 per cent of the 293 nonathletes who did so. An additional 4.5 per cent of the athletes and 11.6 per cent of the nonathletes earned a two- or three-year degree. These differences were statistically significant at better than the 1 per cent level of significance.

10. Of the students who earned degrees, were there differences between athletes and nonathletes in terms of the college in which the degrees of each type were awarded?

Of the four-year degrees that were awarded to athletes, the School of Business Administration, the College of Education, and the College of Science, Literature, and the Arts awarded the greatest proportions: 18.5 per cent, 40.8 per cent, and 29.1 per cent, respectively. The same three colleges awarded the highest proportions of four-year degrees earned by the nonathletes; 19.8 per cent, 29.6 per cent, and 34.6 per cent being awarded by the School of Business Administration, the College of Education, and the College of Science, Literature, and the Arts, respectively. Thus the athletes earned a slightly higher proportion of degrees from the College of Education than did the nonathletes, while the nonathletes earned a slightly higher proportion of their degrees in the College of Science, Literature, and the Arts.

11. Did athletes of the different sport groups earn degrees at a different rate?

There was a wide variation in the percentage of each sport group that earned a four- or five-year degree during the five-year span studied. The percentages ranged from 33.3 per cent for members of the basketball team to 85.7 per cent for the members of the cross-country team. The next highest proportions of team members earning either a four- or five-year degree were track (69.3 per cent), wrestling (64.3 per cent), baseball (58.3 per cent), and swimming (57.9 per cent). Following in decreasing order of percentages of athletes earning degrees were members of the golf, football, tennis, hockey, and gymnastics teams (55.6, 50.0, 50.0, 38.9, and 35.7 per cent, respectively).

However, the rate of degree receipt was one of the more widely fluctuating variables found when the individual classes were compared. For example, the percentage of football players in the Class of 1960 who earned four- or five-year degrees was 70.0 per cent compared with 28.6 per cent for members of the Class of 1961.

12. How did athletes whose initial registration was in a given college compare with nonathletes initially registering in the same college in the proportion who earned a four- or five-year degree?

Of the athletes who originally registered in the General College 30.4 per cent earned four-year degrees within the time span of the study, compared with 5.7 per cent of the nonathletes who originally entered General College. Of the athletes who originally registered in the College of Education, 46.4 per cent earned their four-year degree, compared with 40.5 per cent of the nonathletes. (None of the students entering these colleges had earned a five-year degree within five years).

A slight difference was found in the percentage of athletes and nonathletes who originally registered in the Institute of Technology who earned four- or five-year degrees. Nearly three-fifths (58.3 per cent) of the athletes earned such degrees compared with 48.2 per cent of the nonathletes. Considering five-year degrees only, 11.1 per cent of the athletes and 20.4 per cent of the nonathletes who originally registered in the Institute of Technology earned five-year degrees.

More than three-fifths (64.3 per cent) of the athletes and about two-fifths (38.5 per cent) of the nonathletes who were originally registered in the College of Science, Literature, and the Arts had earned baccalaureate degrees within the time span of the study.

In summary it appears that the athletes did as well as or better than the nonathletes in rate of degree earning, regardless of college of initial registration, except that athletes who started in the Institute of Technology were more likely to earn four-year degrees and less likely to earn five-year degrees than the nonathletes who started in this college.

13. How did the athletes and nonathletes compare in the length of time required to earn a degree?

For those who earned a four-year degree, the athletes took an average of about half a quarter longer of elapsed time to earn the degree than did the nonathletes. The average for the athletes as a whole was 13.3 quarters compared with 12.8 quarters for the nonathletes.

14. How many quarters did the typical athlete and nonathlete attend the University?

The total time span of the study was fifteen quarters (five calendar years). During this time, athletes registered for and completed an average of 11.7 quarters while the nonathletes averaged 9.3 quarters. Total elapsed time at the University—the average number of quarters from first to last registration—was 12.4 quarters for athletes and 10.9 quarters for nonathletes.

15. Did athletes and nonathletes differ in earned grade point average (GPA)?

The combined weighted grade point average for the athletes was 2.38 compared with 2.31 for the nonathletes. The respective unweighted grade point averages were 2.32 and 2.17.

16. What was the attrition rate of athletes and nonathletes and what was the academic progress of those still in attendance?

The analyses on attrition were based only on the group of athletes and nonathletes who entered in the Fall of 1956 and 1957. At the end of the sixth quarter after college entrance, 98.3 and 90.0 per cent of the athletes and nonathletes, respectively, were still in school. At the end of the ninth quarter, the percentages were 86.2 and 70.8 per cent respectively; at the end of the twelfth quarter 78.7 and 55.5 per cent, respectively, and at the end of five academic years, 36.2 and 28.8 per cent, respectively. Thus at each of these four points in time, the attrition rate was greater for the nonathletes than for the athletes. In every case the athletes had accumulated more credits at the end of a given quarter than the nonathletes.

A second indicator of academic progress showed that in nearly every case athletes exceeded the nonathletes in mean cumulative grade point averages earned quarter by quarter.

The third analysis of academic progress was based on a quarter-by-quarter study of athletes and nonathletes who had completed requirements for their degrees. By the end of the twelfth quarter, 25.3 per cent of the athletes and 16.0 per cent of the nonathletes had earned degrees; at the end of the thirteenth quarter 30.5 and 18.5 per cent, respectively, had earned degrees; at the end of the fourteenth quarter 35.1 and 21.4 per cent, respectively, had earned degrees; and by the end of the fifteenth quarter 54.0 and 32.7 per cent respectively, had earned four- or five-year degrees.

17. Did athletes take different distributions of courses than nonathletes (classified by college)?

Not much difference was found between subject areas studied by athletes and nonathletes registered within a given college. The most striking difference occurred in the College of Education, where the athletes took a much higher proportion of their courses in physical education professional courses than did the nonathletes (34.1 and 5.4 per cent, respectively). In contrast, the nonathletes took a much higher percentage of their course credits in education courses (other than physical education courses) than did the athletes (30.7 and 16.1 per cent, respectively).

When registrants in all of the colleges were considered together it was found that athletes took a slightly smaller percentage of their work in the mathematical, physical, and engineering sciences and in the humanities and took a larger share of their work in physical education professional courses than did their nonathlete counterparts.

18. Did athletes within various sport groups differ in their over-all grade point averages?

The mean grade point averages ranged from 2.17 for football players to 2.49 for swimming and cross-country team members. Other sport groups with grade point averages above 2.40 included golf, track, and hockey. In addition to football, the basketball, gymnastics, and wrestling groups had grade point averages below 2.30. Wide fluctuations were found on this variable, too, between the two classes studied.

19. Did athletes differ in grade point averages when they were competing and not competing?

Again some variation was found for the two classes individually but, for the two classes combined, the weighted grade point average earned by athletes during quarters in which they were competing in intercollegiate athletics was 2.41 compared with 2.38 earned in quarters when they were not competing. Obviously the difference is negligible.

20. What portion of the athletes' programs were activity or sport courses and what was their effect on an athlete's academic standing?

Sport or activity courses constituted only about 2 per cent of the total course work taken by athletes. In comparison, 0.5 per cent of the course work of the nonathletes was in activity or sport courses.

Athletes tended to receive a higher average grade in the sport courses than in their other course work, but so did the nonathletes. The net effect of the higher grades earned by athletes in these activity courses was to raise their over-all grade point average about .03 of a grade point.

21. Did athletes in the various sport groups differ in their course patterns?

Work in the three basic areas—social sciences, mathematical, physical, and engineering sciences, and humanities—made up the greatest bulk of the credits taken by all athletes combined. About 65.3 per cent of all the course work taken by the athletes was in these three areas. In comparison, 53.7 per cent of the credits taken by the hockey players was in these three subject areas—the smallest proportion taken by any of the 11 sport groups. The largest proportion of work taken in these three subject areas was 76.8 per cent, by tennis players. Except for the hockey players and the gymnasts,

these three areas represented the top emphasis for every sport group, with the social sciences most often being first, the mathematical, physical, and engineering sciences second, and humanities third. For hockey players and gymnasts, professional physical education courses replaced humanities in the top three, being second in emphasis for the hockey players and third for the gymnasts.

Professional physical education courses ranked as high as second and as low as ninth in rank of emphasis, while the physical education activity courses ranked seventh, eighth, or ninth out of the nine subject area classifications used. The largest proportion of course credits taken in physical education activity courses (3.1 per cent) was taken by members of the cross-country team.

22. Did athletes take different course loads or course patterns the quarters they participated in intercollegiate athletics?

For all athletes combined, results show that athletes took a slightly lighter load during quarters when they were involved in intercollegiate competition. This difference amounted to 0.6 credits for the members of the Class of 1960 and 0.4 credits for the members of the Class of 1961. In other words, the average difference in number of credits taken, when the athletes were competing and when they were not competing, was of the order of half a credit.

As might be expected, the athletes in each of the major colleges took a greater proportion of physical education activity courses when they were competing than when they were not competing. The difference was greatest for students registered in the School of Business Administration, who took 4.7 per cent of their course work in activity courses while competing and only 0.2 per cent while not competing. This difference was smallest for students in General College, for whom activity courses made up 5.6 and 2.5 per cent of their work while competing and not competing, respectively. The larger differences in other subject area emphases of athletes between competition and noncompetition quarters included the following: in the School of Business Administration competing athletes took more work in "other" professions and less work in the social sciences than when they were not competing; in the College of Education less work was also taken in the social sciences during competition quarters; Institute of Technology students took about the same distribution of courses whether they were competing or not; athletes in the College of Science, Literature, and the Arts generally took heavier loads in the social sciences and lighter loads in the MPE sciences and humanities while competing. For the athletes as a group, disregarding individual college differences, the athletes tended to take less work in the MPE sciences during a period of competition.

23. Was the pattern of internal transfer different for athletes than nonathletes?

Athletes who transferred out of General College most often transferred to the College of Education while nonathletes who transferred out of General College most often transferred to the College of Science, Literature, and the Arts. More than 20 per cent of each group transferred to the College of Education, however. Ten athletes transferred from another college into General College, and 19 nonathletes did likewise. Eighty per cent of the athletes who transferred into the General College moved from the College of Science, Literature, and the Arts, compared with 57.9 per cent of the nonathletes who did so. Of the athletes who transferred into the College of Education, 53.9 per cent came from the General College, while 36.5 per cent came from the College of Science, Literature, and the Arts. In comparison 56.6 per cent of the nonathlete transfers into the College of Education came from the College of Science, Literature, and the Arts, and 34.8 per cent came from General College.

24. What proportion of junior and senior athletes and nonathletes transferred from General College to other colleges?

Larger percentages of athletes than of nonathletes who began their college study in the General College attained junior or senior status. Thus, 71.7 per cent of the athletes and 34.3 per cent of the nonathletes who initially registered in General College transferred to another college at the University of Minnesota.

25. What were the academic probation rates of athletes and nonathletes?

The probation records of athletes and nonathletes were very similar. About half of each group had never been on probation and about one-third had been on probation at least 25 per cent of the time that they were registered in school. There was, however, considerable variation between the two classes in the study. For the total athlete group, 16.1 per cent of all registered quarters were spent on probation compared with 15.3 per cent of all registered quarters for the nonathletes.

26. Did athletes tend to cancel courses or take incompletes at different rates than nonathletes?

Athletes cancelled about the same percentage of the courses for which they registered as did nonathletes (4.5 per cent compared with 3.5 per cent, respectively). The highest rate of cancellation for any one individual in each group was 25 per cent of the courses for one of the athletes and 33 per cent for one of the nonathletes. However, the athletes and nonathletes did not differ appreciably in the percentage of the two groups who cancelled more than 10 per cent of their courses (7.9 and 8.9 per cent respectively).

About the same percentage (7 to 8 per cent) of the athletes and nonathletes had incompletes in more than 10 per cent of their courses. This proportion increased, however, during quarters of intercollegiate competition, when nearly 14 per cent of the athletes took incompletes in more than 10 per cent of their courses. While competing, the athletes in one class had cancelled courses more often than they had taken incompletes, but those in the second class had taken incompletes most often. When both cancellations and incompletes were combined, however, no significant difference was found between the two classes in the proportion of courses that were either cancelled or for which incompletes were given.

27. How did financial aid for athletes compare with that available to nonathletes?

Three out of five athletes received aid either in scholarships, loans, or both during the span of the study, compared with one in five of the nonathletes. Based only on those who received aid, the athletes received an average quarterly aid (in all forms) of \$128.10 while the nonathletes received an average of \$51.40. These differences in extent and amount of aid may play a big part in the better tenure and degree-completion rate of the athletes and the nonathletes.

28. Were probation decisions regarding athletes made any more leniently than for nonathletes?

Each college has its own criteria to determine probation status, and not all of this information was readily available. The analysis made in this study, therefore, was restricted to comparison of grade point averages, current and cumulative. In no college was the grade point average significantly lower for athletes than for nonathletes at the time that they were put on probation. In fact, in the College of Science, Literature, and the Arts, athletes were put on probation with higher cumulative and current grade point averages than nonathletes. Athletes in the College of Education also had higher cumulative grade point averages when put on probation than did the nonathletes.

In analyzing the cumulative grade point averages at the time when probation was removed, athletes in the College of Science, Literature, and the Arts had a higher average than did the nonathletes.

29. How many student athletes were on probation the quarter of their sport's competition?

The analysis of probation status in relation to competition was made in terms of the percentage of competitive man quarters on or off probation. Less than one out of six competition man quarters was spent on probation, when all 11 sports were considered in combination. No member of the swimming team was ever on probation during a quarter of competition, but at the other extreme, basketball, gymnastics, and tennis team members were on probation at least 25 per cent of the quarters when they were competing.

30. What was the dropout rate for athletes?

A larger percentage of the nonathletes than of the athletes dropped out of school each quarter except the very first quarter of the period studied. Over-all, athletes dropped out 6.5 per cent and nonathletes 14.4 per cent of the quarters between their first and last registrations.

31. How did athletes and nonathletes compare in rate of drops for low scholarship?

The percentage of athletes who were dropped for low scholarship at least once was 7.4 per cent, compared to 12.6 per cent of the nonathletes.

32. Did athletes in the various sport groups differ in their drop and withdrawal rates?

There was wide variation among the sport groups in the percentage of quarters dropped. Track men dropped the smallest percentage of quarters (1.2 per cent) and tennis players dropped the largest percentage of quarters (18.0 per cent). Of the major spectator sports, football players, basketball players and hockey players dropped 6.8, 4.9, and 8.2 per cent of their quarters respectively. The range in the mean number of quarters elapsed time spent at the University was more than one year. Averages ranged from 11.0 quarters for gymnasts to 14.8 quarters for tennis players. The differences among the means of the sport groups were statistically significant.

33. How did certain indicators of academic progress change in relation to participation in the 1961 Rose Bowl game?

Analyses were made of grade point averages, credit hour loads, incompletes, and cancellations of those football players who participated in the Rose Bowl game and who were also eligible to play football during the preceding year. Data were compared for pre- and post-Rose Bowl quarters: fall (regular and pre-Rose Bowl), winter (regular and post-Rose Bowl) and spring (regular and post-Rose Bowl). Grade point averages for the fall, winter, and spring quarters of the 1959-60 and 1960-61 academic years were practically the same, the amount of credits carried by the team members were about the same, and the rate of incompletes did not differ appreciably. What differences were found were related to the spring term comparison, where a larger percentage of incompletes and withdrawals were found for the spring quarter after the Rose Bowl. The reader is cautioned, however, that these findings are based on a very small sample, and no broad generalizations are warranted.

34. Are atypically high grades given in courses patronized by athletes?

Recorder's office results were obtained from a survey of 1957-58 courses for which the grades seemed to be unusually high. Courses numbered 100 or above were not considered, as they are limited to advanced undergraduates and graduate students, and a high percentage of A and B grades could normally be expected in them. Courses with enrollments of less than ten students were also ruled out inasmuch as these are often seminars, or they provide special work for the academically talented. Among the remaining courses, some 65 to 115 a term, there were considered those in which the sum of the A's and B's reported was 80 per cent or more of the total grades given. While the advisory committee believes it would serve no useful purpose to publish the details of this analysis, the following are pertinent conclusions.¹

The courses having a high percentage of A and B grades were not peculiar to any single instructional area of the University, but occurred in a number of seemingly unrelated areas. There was no special concentration of such "snap" courses in only those areas or departments where athletes would presumably be taking work. In fact, some of the more significant concentrations of high grades occurred in courses in which it is highly improbable that many of the students were or ever would be athletes. A possible exception was, to be sure, found in a few physical education courses, but these, in total, accounted for only a minor percentage of the courses studied and reported. Most generally courses having a disproportionate number of high grades were those required for graduation in programs of some type of professional certification, e.g., nursing, public health nursing, physical medicine, and teacher preparation. These courses had a fairly representative cross-section of successful students and students of good graduation potential.

Modally, the courses studied enrolled perhaps 10 to 25 students, although it was noteworthy that in education, art, music, various liberal arts subjects such as modern languages, and the work in technology or public health, the enrollments tended to exceed 25 students, apparently because of the broad interest in these subjects. Many students other than those having athletic interests must have been involved. The introductory music and glee club courses were among the not-specialized categories of those in which grades were high.

Whether or not one would assume that the standards were low or that earned high grades were given by design, there was no evidence that these were "easy" courses operated for athletes or that any large number of athletes benefited from taking such courses. It may be that students in a variety of study areas have such high motivation and specific ability for their fields of special interest that major-course grades should be grouped on the high side. Therefore, one might as well look to other groups of University students if it is supposed that certain types of students are favored in programming and grading. In sum, the grading of athletes at the University seemed to pose no special question of grade distribution.

¹ Supplementary study made by Office of Admissions and Records.

A. L. VAUGHAN, Chairman

VI. REPORT OF THE COMMITTEE ON STUDENT SCHOLASTIC STANDING

Reported for Information

During the current academic year, the committee has reviewed the regulations regarding student academic performance and problems of implementation in the individual colleges. There was a consensus that no major modifications of these regulations are required at the present time.

The committee noted from the individual college reports that relatively few students are availing themselves of opportunities for enriching or accelerating their degree programs through special examinations. The availability of these opportunities for independent study seems not to be generally known. The committee calls the attention of the faculty to the statements appearing in individual college bulletins regarding these programs.

FRANK VERBRUGGE, Chairman

(There will be a pause in the proceedings to permit the withdrawal of non-Senate committee members.)

VII. NEW BUSINESS

VIII. NECROLOGY

FREDERICK G. HOLDAWAY

1902-1965

Frederick G. Holdaway, professor in the Department of Entomology, Fisheries, and Wildlife at the University of Minnesota, died January 1, 1965, at the age of 62. Mr. Holdaway was born September 13, 1902, at Bundaberg, Queensland, Australia. He received his B.S. degree, with honors, at the University of Queensland in 1923, and the M.S. degree in 1925 from the same institution. He was awarded the first studentship of the Australian Council for Scientific and Industrial Research Endowment Fund while holding the position of assistant lecturer at the University of Adelaide. Mr. Holdaway pursued graduate work in entomology at Cornell University and at the University of Minnesota. He was awarded the Ph.D. degree at Minnesota in 1928.

Mr. Holdaway was a resident in research at the University of Toulouse, France, from 1928 to 1930. While in Europe he carried on research on blowfly populations and explored the possibilities of biological control of sheep blowflies for the Australian C.S.I.R. These studies were continued upon his return to Australia. From 1933 to 1937 he made an evaluation of the resistance of wood to termite attack and carried on other termite investigations.

In 1937 Mr. Holdaway was appointed head of the new Department of Entomology at the University of Hawaii Agricultural Experiment Station, and supervisor of instructional work in entomology in the Department of Zoology, later the Department of Zoology and Entomology. He was promoted to full professor in 1942 and served in this capacity until 1948. He also served as a special entomologist with the Imperial Bureau of Biological Control, Canada, while on leave from Hawaii in 1947. During this time he investigated the biological control of scale insects threatening natural

vegetation in Bermuda at the University of California Citrus Experiment Station.

In 1948 Mr. Holdaway accepted an appointment at the University of Minnesota to develop a comprehensive program of research on the European corn borer which had recently invaded the state. His most recent research and teaching responsibilities dealt mainly with the resistance of plants to insect attack, biological control of field crop pests and the ecology of agricultural insects. In 1960 he received a National Science Foundation grant to attend the 11th International Congress of Entomology at Vienna. He also attended the 12th International Congress held in London in 1964. His wife, Ellen, accompanied him to London. They relived fond memories by visiting the church in Bournemouth, England, where they were married in 1928.

During his professional career he published over 70 papers on the biology, ecology, taxonomy, and control of agricultural and livestock insects, resistance of plants to insect attack, biological control of pest insects, the ecology of termites, and the ecology of blowflies. While this research production is impressive, he will be remembered most for his teaching enthusiasm and his strong personal interest in the professional development of his students. This interest in the people associated with him persisted long after they had left to take up their careers in other places.

Mr. Holdaway was a member of a number of professional and honorary societies including Sigma Xi, Australian Institute of Agricultural Science (founding member), Hawaiian Entomological Society, Entomological Society of America, Royal Entomological Society of London, and American Association for the Advancement of Science.

He is survived by his wife; two sons, David of Lakeville, Minnesota, and Michael of Dallas, Texas; one daughter, Margaret, a student at Hamline University; brothers and sisters in Australia; and three grandchildren.

GERTRUDE ROSE HULL

1886-1965

On January 19, 1965, Gertrude Rose Hull, associate professor of music emeritus, was released from the misery of a long and obscure illness. She had served in the Department of Music from 1916 until her retirement in 1954. During her tenure the department grew steadily, and no small portion of that growth was due to her effort.

A conspicuous aspect of her work was visible in the success of many of her pupils on the concert and operatic stage. A less visible aspect of it was more significant. To watch the transformation of freshmen—intellectual and cultural raw recruits—into contributing members of that humanistic society, whose organization it is the real purpose of a state university to foster, is the most cherished reward of the teachers who work toward that end. Skill and understanding combine toward that contribution.

The technical skill of the finished singer is hard to acquire. It is still harder to use that skill effectively toward the communication of the humanistic values resident in the vast literature of the song. Miss Hull was a finished singer. She understood and communicated those values to her hearers. But she communicated them also to a host of students whose skill remained unequal to their full communication; and in that way she exerted an incalculable influence on hundreds of cells in the cultural community. Her colleagues watched this influence with high admiration. It will not cease for a long time.

JULIUS MOSHER NOLTE

1894-1965

Dean Emeritus Julius M. Nolte, former head of the General Extension Division of the University of Minnesota, died January 15, 1965 at the age of 70 after a long illness.

Dean Nolte, who lived in Woodland, retired in 1963 after 26 years on the faculty, 17 as dean.

Under his direction, the Extension Division, which offers evening and special classes, correspondence courses, seminars and conferences for business and professional groups, became the University's largest enrollment category.

Born in Duluth, Minnesota, August 24, 1894, he was a graduate of Yale and of the University of Minnesota Law School. He was second lieutenant in the Air Corps in World War I.

Dean Nolte was appointed by University President Lotus D. Coffman to be director of the Center for Continuation Study in 1937 and became head of the General Extension Division during World War II.

He was a member of Phi Beta Kappa, Psi Upsilon, and the Hennepin County, Minnesota and American Bar Associations. He was past president of the National University Extension Association. He received an honorary doctor of laws degree from Macalester College in 1963.

He formerly was a member of the United States National Commission for UNESCO, the advisory committee for the Department of Defense Armed Forces Educational Program, Minnesota Historical Society Executive Committee and Minnesota Statehood Centennial Commission. In 1948-49 he was director of the Minnesota Territorial Centennial.

Dean Nolte served as consultant on such projects as the Survey of Liberal Education for Adults of the Michigan State Legislature (with similar assignments of Oklahoma, Pennsylvania, and Alaska), and the Council on General Extension for the Association of Land Grant Colleges and Universities.

He had been a member of the League of Minnesota Municipalities Executive Committee since 1943.

A textbook, "A Living Grammar," which he co-authored in 1937 with Winifred A. Watson, is in its 16th printing.

On his retirement Dean Nolte was offered the presidency of several colleges in the United States and abroad, but declined in order to continue research and writing.

He is survived by his widow, Mildred; two sons, Richard H., Riverside, Conn., and Charles M., Woodland; two daughters, Mrs. Sam McClellan, Cambridge, Mass., and Mrs. Winton Jones, Woodland; and a brother, Walter, Duluth.

Julius Nolte was a many-sided man who excelled in a dozen different fields. He fascinated and charmed those who knew him well. He was truly a gentleman and a scholar. He was loved and revered by many in Minnesota and throughout the nation.

FRED SMITH

1911-1965

Fred Smith, professor of biochemistry at the University of Minnesota, died on February 1, 1965 at the age of 54. He is survived by his wife, Katherine; four children, Pamela, Linda, Jayne, and James; one brother, James, in England; three sisters in England, Mrs. Hilda Hook, Mrs. Emma Lees, and Mrs. Kitty Saunt.

Professor Smith was born in the village of Bagworth, Leicester, England, on February 5, 1911. His father was a coal miner and through a scholarship established by the Coal Miner's Union, Smith was able to attend the University of Birmingham after a brilliant elementary and secondary school career. He graduated with a B.Sc. in chemistry in 1932, standing at the top of the Honors Chemistry Class. It was this performance that attracted the attention of Sir W. L. Haworth, head of the Department of Chemistry at Birmingham, and Smith was immediately accepted as a graduate student in Haworth's laboratory. He received his Ph.D. in 1935 and was appointed to the staff of the Department of Chemistry at Birmingham where he served as assistant lecturer from 1935 to 1936 and lecturer from 1936 to 1944. He received the D.Sc. degree in 1940. From 1944 to 1946 he served with the group appointed by the British Government to the Manhattan Project in Oak Ridge, Tennessee. It was at Oak Ridge that he met his future wife, Katherine Grandy. They were married in 1945. Mr. Smith returned to the staff at Birmingham and served as senior lecturer from 1946 to 1947 at which time he accepted a professorship of biochemistry at the University of Minnesota.

Smith's research record is impressive. He had the privilege of working in Haworth's laboratory at the culminating point of the achievements of the Birmingham School of Carbohydrate Chemistry. Haworth received the Nobel Prize in 1937 and his work on Vitamin C, in which Smith was deeply involved, is regarded by many as his greatest achievement. The first three publications bearing Smith's name are: (1) a paper in which the first correct molecular formula for Vitamin C was announced (*Nature*, 131, 617 [1933]); (2) a paper in which the correct detailed structure of Vitamin C was announced, including its configuration, together with all of experimental data resulting from degradative studies (*J. Chem. Soc.*, 1270 [1933]); (3) a paper announcing the first synthesis of Vitamin C which completely confirmed the previously postulated structure (*J. Chem. Soc.*, 1419 [1933]). Smith made all of his contributions to the above work as a Ph.D. candidate, showing that his research abilities expressed themselves from the very first. His subsequent work was largely centered around the determination of the structure of polysaccharides and was characterized by a series of fresh and ingenious experimental approaches to the problem that placed him in the very forefront of the field. Smith also made significant contributions to the chemistry of the fluorocarbons and the steroids. The former work resulted from his connection with the British atomic energy effort. Professor Smith retained a child-like curiosity in all natural phenomena to his last days. As a result of this he made very significant contributions to a number of areas that have only fringe connections with the mainstream of carbohydrate chemistry. For instance, he contributed to our knowledge of the process of ore flotation and to the mechanism of winter hardiness in insects.

Smith's contributions were recognized from time to time by the chemical community. He received the Claude S. Hudson Award of the American Chemical Society in 1962 and the Award of the Minnesota Section of the American Chemical Society in 1964. His published works consist of 210 original papers, one book, and chapters in several other books. Professor Smith also produced several patents on chemicals and chemical processes.

In addition to his abilities as a researcher, Smith was a great teacher. He could readily communicate his enthusiasm for chemistry and as a result attracted able students to chemistry. He was even more impressive in his teaching of graduate students on a person-to-person basis. Many of his former graduate students testify as to his effectiveness as a graduate adviser.

Fred Smith was a very good and great individual.

JAMES B. TORRANCE
1883-1964

James B. Torrance, assistant professor emeritus of agricultural engineering, died December 21, 1964, at the Hillcrest Nursing Home in Wayzata, Minnesota. He was born at LaCrosse, Wisconsin, in 1883. He received his secondary education at South High School in Minneapolis. He received a B.S. degree in agriculture at the University of Minnesota in 1906. For the greater part of the next 10 years he managed a large horse and cattle ranch in South Dakota.

He joined the University of Minnesota in 1916 as instructor in the training program for army aviation mechanics during World War I. Following the war he remained to teach regular University courses in farm tractors in the School of Agriculture, the College of Agriculture, and the Institute of Technology. His early courses included both theory and practice pertaining to internal combustion engines used on the farm. He also participated in a series of short courses in traction engineering, covering large traction steam and gasoline engines.

On July 1, 1919, he was made assistant professor and head of the Farm Motors Section in the Department of Agricultural Engineering. During World War II he participated in the University training program for electrician and machinists' mates for the United States Navy. He did research and field testing of combine harvesters and field forage harvesters when these machines were first introduced in the early 1930's. The period of his professional career marked the transition from the use of horses for farm power to the development of the farm tractor.

He was author of a number of bulletins and technical articles dealing with big team hitches for farm use and tractor fuels and lubricants. He was an exceptional teacher, with a personal interest in his students. His sense of humor and fairness to his students won for him their high regard and respect. He possessed a faculty for remembering students, their names, and any unusual incidents pertaining to them for many years after they had left the University.

One of his special interests was music. From 1914 to 1931 he was an active member of the Minneapolis Apollo Club, and for 55 years sang in his church choir. He was a member of Emmanuel Baptist Church which later became Temple Baptist. After retiring from the University of Minnesota in 1951, he spent considerable time at the family cottage on Balsam Lake in Wisconsin.

Surviving are his wife Florence, his son Frank, and his daughter Jean (Mrs. William H. Chaffee).