

UNIVERSITY OF MINNESOTA
Graduate School

Minutes of the Executive Committee
Thursday, January 16, 1969
1:00 P.M. 102 Johnston Hall

Present: Professors Alfred C. Caldwell, Edwin Fogelman, Samuel Kirkwood, Jack Merwin, David W. Thompson, William H. Warner, E. W. McDiarmid, John G. Darley; Dr. Lewis Wannamaker; Deans Millard L. Gieske, Thomas W. Chamberlin, Warren E. Ibele, Francis M. Boddy; Dean Bryce Crawford, Jr., presiding; Shirley McDonald, secretary.

Dates for the next two Executive Committee meetings were set: Tuesday, February 18 at 1:00 P.M. in Room 105 Johnston Hall and Tuesday, March 18 at 1:00 P.M. in Room 113 Johnston Hall.

1. Proposed Programs

A. Specialist in Education (Elementary, Secondary, or General School Administration at Duluth)

Following recommendation by the Education Group Committee, Dean Crawford approved the Specialist in Education at Duluth, by an interim action. Since the December Executive Committee meeting was cancelled because of so much illness, this special action was necessary in order to meet the North Central Accrediting Association deadline for the submission of the application for review of the program. The Specialist Certificate represents a new program at Duluth and must be cleared by North Central before it can be established. Dean Ibele reported that the application has been sent.

B. M.S. (Plans A and B) and Ph.D. with a Major in Animal Physiology (Refer to Executive Committee Minutes, November 21, 1968, Item 8)

Dr. Wannamaker reported that the Medical Sciences Group Committee reviewed the proposal and recommends that the program be established. The Agriculture and Biological Sciences Group Committees will discuss the program during the January meeting.

C. Graduate Program in Chronobiology (Refer to Executive Committee Minutes, November 21, 1968, Item 10)

It has been recommended by the Medical and Biological Sciences Group Committees that there be no separate major in Chronobiology at this time, but that the emphasis be included in the graduate major in Biology. As particular areas of emphasis within Biology develop and are designated as graduate programs, this proposal can be reconsidered.

D. Ph.D. with a Major in Comparative Cultural Thought (Refer to Executive Committee Minutes, November 21, 1968, Item 2)

This item will be carried forward pending discussion and recommendation by the Social Sciences Group Committee at the January meeting.

E. Ph.D. with a Major in Library Science

Professor Fogelman said that Professors David Berninghausen, E. W. McDiarmid, and Wesley Simonton answered questions and supplied additional information about the proposed program during the December meeting of the Social Sciences Group Committee.

General Graduate School requirements for doctoral candidates would apply. In addition, there would be a provision for a research committee which would be assigned to supply the student with guidance in research. The proposed program is research oriented with a strong minor or supporting program. A student with a Master of Arts in Library Science would probably not take much additional course work in Library Science; the Master's degree would be the core of the program and the minor or supporting program tailored to the student's specialty.

The proposal has also been referred to the Physical Sciences Group Committee because the information retrieval and computer programming aspects will be of interest and concern to this committee.

A recommendation may be made at the February meeting of the Executive Committee.

F. Master of Engineering

Dean Crawford referred to several graduate programs administered by the Graduate School which differ from the established Master of Arts and Master of Science programs. The Master of Arts in Public Administration, the Master of Forestry, and the Master of Social Work are examples. Admission requirements are substantially the same as for the Master of Arts and Master of Science degrees.

The Master of Engineering is a post-baccalaureate program which is not research oriented but provides an opportunity for a 5th year of work with an emphasis on a design project. The detailed plan is set forth in a joint Graduate School - I.T. committee report, filed with these minutes.

The academic program will be administered by a faculty committee appointed jointly by the Dean of the Graduate School and the Institute of Technology. Dean Ibele pointed out that after the program has a 5 year trial, there will be an evaluation made and this would guard against the possibility that the program could become a "watered down" Master's program. He mentioned that in the early 1950's, the social sciences and humanistic requirement in the engineering program was to provide for the students own enrichment. Now the requirement is necessary to do the engineer's job in the complex urban situations of today.

Dean Crawford explained that, again, because the December Executive Committee meeting was cancelled, an interim action was necessary so that the proposal could be submitted to the Board of Regents. The chairman of the Physical Sciences Group Committee polled that committee. While there are some reservations, the value of the program to certain students is recognized and a recommendation for

approval was given. Although the other group committees aren't directly concerned, a majority of the chairmen were contacted. With the verbal agreement expressed, Dean Crawford acted for the Executive Committee, and approved the establishment of the Master of Engineering Degree.

The proposal has been transmitted to the Board of Regents for the approval necessary for any new degree.

2. Proposed Revised Program for the Ph.D. in Economics

This program would not supersede the current programs in Economics but would provide an alternative which might be more suitable to some students.

A Research Technique consisting of mathematics and statistics would be required. The proposal states that "the minimum level of competence acceptable is satisfactory completion of one year of calculus at the college level and one year of statistics of which at least half has calculus as prerequisite." Another departure involves the option of a supporting program, and following the precedent established recently in Mathematics, Philosophy, and English, would allow the student to include some Economics courses in the supporting program. The proposal does state, however, that the 21 minimum credit supporting program cannot include courses used for the Research Technique nor courses to prepare for the three preliminary written examinations in subfields of the major. The student's adviser would be expected to justify the supporting program and the Director of Graduate Studies and the group committee would provide additional checks against improper balance. The program proposes a time limit for completion of the Research Technique and preliminary written examinations.

Professor Fogelman reported that the Social Sciences Group Committee approved the proposed revision. The request is consistent with the Graduate School policy on the internal supporting program and Executive Committee approval is recorded with reference to requirements specified in the supporting program, Research Technique, and demonstration of competence in three subfields within the major. (Description filed with these minutes.)

3. Proposal that Romance Languages as a Graduate Status be abolished

No major in Romance Languages exists; nor does there seem to be any need for graduate activity in this general discipline. In view of this situation, a suggestion to remove Romance Languages as a graduate status has been approved by the Language, Literature, and Art Group Committee and the Executive Committee. The new Graduate Faculty book will reflect this change.

4. Proposed Internal Supporting Program for Physics Majors (Master's & Ph.D.)

✓ This proposal identifies seven areas within physics and specifies the number of areas and credits outside the field of specialization required for the minor for the Ph.D. and the Master's degrees. The plan would allow students to include physics courses in the minor.

Professor Warner reported that the Physical Sciences Group Committee considered the proposal. It is consistent with Graduate School requirements for the internal supporting program and represents sufficient diversity in breadth.

The Executive Committee approved the internal supporting program in Physics with the understanding that the Director of Graduate Studies will countersign as the minor adviser on these programs. Dean Crawford pointed out that while the Graduate School does not support the disestablishment of the minor as a general requirement, nor grant "blanket" approval for departures from the traditional minor, formal proposals such as this one are considered.

5. Expedition of Group Committee Business

Committee members exchanged views on methods for handling various group committee materials. One concern is the time lapse between submission of material to the Graduate School Office by the student and subsequent notification to the student of final action on that material.

It was agreed generally that all group committee material should clear through the Graduate School Office for the initial detailed check and the "logging" which is necessary in order to keep track of materials in various stages of processing. Graduate School group committee personnel receive many inquiries from students and faculty regarding the status of programs and petitions. The current practice of batching materials and sending them twice each quarter to the group committee chairmen or designated committee members, was questioned. Professors Warner and Fogelman said that the Physical Sciences and Social Sciences Committees would prefer to have materials sent on a continuous flow basis, since only the atypical cases receive attention by the full committee. Professors Caldwell and Kirkwood said that the current system works well with the Agriculture and Biological Sciences materials because all programs are referred to three committee members for recommendation prior to the group committee meetings. Professors Merwin, Thompson, and Wannamaker wish to discuss this alternative to the present procedure with members of their committees. Graduate School staff will also explore the feasibility of running the initial check on a continuous basis and transmitting the materials to the chairmen or designated members more often and in smaller amounts.

The item will be carried forward.

6. Cooperation between the State Colleges and the University of Minnesota and the Transfer of Credit toward the Master's Degree

Dean Crawford told the Committee that a report of the discussion at the Stillwater Conference between representatives of the State Colleges and the University of Minnesota will be forthcoming. The subject of transfer of outside credit to the Master's program at Minnesota is being discussed by the group committees.

Professor Warner reported that at the January meeting of the Physical Sciences Group Committee, reference was made to students in engineering fields who begin a Master's program at another college and then come to Minnesota and wish to continue their graduate studies. Perhaps a

transfer of credit toward the Master's degree could be permitted using the same procedures and credit limitation used with the transfer of graduate level courses taken in the General Extension Division. And it would be well to call attention to the special examination procedures to establish credit for coursework where there is any doubt. Acceptability of such credit should be determined by the individual departments at the time the students are admitted.

7. Composition of Examining Committees

In nearly all cases, examining committees include members outside of the field of the major. If the student has a supporting program, the committee might contain two members from that program, or the members could be outside the departments on which the supporting program is based. Members on a final oral committee should have some degree of interest in the thesis. Dean Crawford referred to the plan developed in the field of medical sciences in which specialty areas of interest of the Graduate Faculty in the medical fields were defined. This has been helpful to the Medical Sciences Group Committee in assigning examining committees. Other groups may be interested in making this kind of analysis.

As the use of the supporting program and internal minor is increased, the composition of the examining committees can help guard against narrowness. The Ph.D. candidate who selects the traditional minor may be expected to perform in the area of the minor after he receives his degree and is employed. Dean Crawford suggested that perhaps at the time of the preliminary oral examination, the examining committee should have the option of passing the candidate in the major if he has performed satisfactorily, but to withhold the privilege of the minor "label" if he has not demonstrated proficiency in that area. Perhaps the student should not declare himself absolutely at the time he submits the program for approval but indicate the supporting program; if at the time of the preliminary oral examination, he demonstrates proficiency in a minor field, it can be so identified.

Dean Ibele suggested that use of the supporting program might eventually reduce the number of examining committee members. Perhaps only one person representing the supporting program and three representing the major would suffice.

The dean asked that the group committees discuss the matter and communicate their reaction to the chairmen or the Graduate School.

8. Graduate Student Organization

Dean Boddy reported that some areas, mainly in St. Paul, have interest in a graduate student organization but on the Minneapolis Campus, interest in organizing beyond individual fields is not so apparent. However, the attempt to form an organization parallel to the group committee structure is moving ahead.

Dean Crawford suggested that one graduate student to represent each of the seven group committees be selected to attend the Executive Committee meetings. This might provide some demonstration of the potential value, to faculty and students, of getting the graduate student organization started. Student representatives might also have good ideas for improving procedures in the processing of student programs, petitions, and other group committee materials.

Respectfully submitted,
Shirley McDonald, secretary

January 29, 1969

Rec'd
12/5/68
in G.S.

Office of the Dean

December 3, 1968

Vice President W. G. Shepard
Academic Administration

Dear Dr. Shepard:

At the November 26 meeting of the General Faculty of the Institute of Technology, a proposal to institute a new degree, Master of Engineering, was approved. The academic program leading to such a degree and the rationale for such a program is contained in the attached document which had been distributed to the IT faculty.

You will note that this proposal originated from an ad hoc faculty committee appointed jointly by the deans of the Graduate School and the Institute of Technology. The academic program will be administered by a faculty committee appointed jointly by the deans of the Graduate School and IT. The detailed administration of the program will be carried on in the Graduate School.

It is our recommendation that you bring this proposed program to the attention of the Board of Regents for their action at the earliest opportunity to allow us to implement the program beginning Fall, 1969.

Sincerely yours,

Warren B. Cheston
Dean, Institute of Technology

✓
Bryce L. Crawford, Jr.
Dean, The Graduate School

Office of the Dean

To: Members of the IT-Graduate School Committee
on Engineering Programs

From: Warren Cheston and Bryce Crawford

The report of the joint IT-Graduate School committee recommending the establishment of a Master of Engineering degree program was approved by the General Faculty of IT at its fall meeting. As soon as this new degree program has the formal approval of the Board of Regents, we shall proceed to appoint a faculty committee to administer the program.

Since the Committee on Engineering Programs was created to consider faculty generated proposals to institute a Master of Engineering degree program, it would appear that the committee has carried out its charge. We wish to thank each member of the committee for the time and effort spent laboring with the issues involved in the establishment of this new degree program.

TO: Institute of Technology Faculty

FROM: Joint I.T. -Graduate School Committee on Graduate Programs in Engineering

Attached for your review and consideration is a revision of the document mailed to you in September which proposes the institution of the Master of Engineering program. This revised document, aside from some small changes, attempts to clarify somewhat further the respective roles of the engineering program committees and the Joint I.T.- Graduate School Professional Masters Committee. In addition, discussion of the educative philosophy associated with the program is somewhat expanded.

This document will be brought for action to the I.T. faculty at the November 26 meeting.

November 15, 1968

The Deans of the Graduate School and of the Institute of Technology appointed an ad hoc committee on April 1, 1965, "to discuss possible implications for graduate study of the change to a 4-year baccalaureate program, . . ." This committee, with some change in membership, has devised a concrete program which it would like you to consider prior to its formal submission to the faculty at the December 1968 meeting. You will find the proposal attached to this letter. Members of the committee will be pleased to discuss this proposal with departmental faculties upon request.

Subsequent to the formation of the original committee, the ASEE Committee on "Goals of Engineering Education" issued a report strongly urging Schools of Engineering to expand their offerings for post-baccalaureate education. This extensive report may have a strong influence on the future education of engineers. It is given in full in the January 1968 issue of the Journal of Engineering Education.

At the Spring 1967 meeting of the College of Engineering the report of the ad hoc committee was endorsed in principle and the details were to have been presented again in the fall quarter and voted upon at that time. The committee was unable to get concrete proposals from interested departments in time to meet that deadline and issued a negative and somewhat pessimistic memorandum on February 15, 1968. Shortly after this there were further expressions of interest accompanied by concrete proposals. The committee then agreed that it as a committee and its members as individuals could support the attached program with enthusiasm.

The recent Goals of Engineering Education report says that over 50% of the engineers holding Master's degrees in 1964 practiced in a design and development capacity. The Goals report concludes from this that there is a need for Master's programs to support the needs of the applications-oriented engineer as well as those of the teacher and scientist. This proposal is founded on the conviction that each of these professional functions is equally challenging and, therefore, each deserves supporting programs of equivalent value but of different character. It also recognizes that the ability of a student to pursue a quality program in the disciplines of synthesis and design may not be clearly established by his undergraduate Grade Point Average and that other performance criteria should also be considered to open the portals to further study in design-affiliated disciplines. The Goals report suggests that there is room for a post-baccalaureate program closely linked to the student's undergraduate study which is structured to accent the application of that body of knowledge rather than to pursue new and advanced levels of inquiry. Concurring with that recommendation, this program is identified as an extension of his undergraduate education.

The continuing discussion has resulted in a number of desiderata, some of which are formally included in the proposal and some of which are offered for the guidance of the governing committee and the administering departments.

1. This program should in no way be compared with the current M. S. program of graduate work. Some students may be equally eligible for both programs and should base their choice upon their ultimate objectives--professional design on the one hand and teaching and research on the other. Some students may be eligible for one or the other program but not both; in this case there can be no conflict.

2. The cornerstone of the program is the Design Project. It must be substantial, educational, and of a high professional level. It must be carried out by the student as an

...with no professional assistance other than the guidance provided by his ... and in particular by his project supervisor. Subprofessional assistance, properly ... may be permitted. While there is no essential objection to a design project ... with the student's employment, it must be clearly understood that exceptions to ... of individual responsibility, faculty supervision, and advance faculty ... cannot be permitted; no classified or "company confidential" material may be used.

3. While close liaison should be maintained with the Graduate School, the responsibility for the success of the program lies with the Institute of Technology. Because of the specialized nature of the program, its supervision must rest with those most intimately related to its objectives. In this way, any confusion between this program and graduate study leading to an M.S. with emphasis on research should be reduced.

4. Because of the difference in objectives, financial assistance in the form of well-known endowments and fellowships would not be available for the Master of Engineering program. In some special cases these students might be particularly qualified to assist with undergraduate design and laboratory courses as teaching assistants or associates. It is hoped that, in addition, new financial support programs—principally from industry—will develop to assist these students.

5. New criteria of admission must be developed to reflect the new requirements stated. For this reason, the objective criteria have deliberately been left for the admission-trying committee to develop.

6. Faculty support for this program should not be had at the expense of current graduate study offerings. While some departments can now offer this program on a modest and experimental basis with no increase in faculty burden, it is clear that any substantial programs must eventually be reflected in the available budget.

7. Finally, it is recommended that the program be adopted for a period of five years after its inception. At the end of the five-year period, a review should be initiated with a decision to be made concerning continuance of the program. If it appears desirable to make changes in the program before the expiration of the five-year period, individuals or departments proposing such changes should make recommendation to the Joint I.T. - Graduate School Professional Masters Committee. Any changes thus thought desirable by this committee should be brought before the I.T. faculty for action.

November, 1968

C. E. Bowers
W. Ibele
H. Isbin
R. Lambert
R. Plunkett
R. Swalin (Chairman)

PROPOSAL
(Revised)

The faculty of the Institute of Technology hereby institutes a nominal one-year program of design-oriented study beyond the B. S. degree subject to the following regulations:

Recent studies of engineering education have concluded that a year of further study beyond the customary four-year baccalaureate is often desirable to prepare engineers for future work in design or management. A prospective student may be neither interested in nor properly prepared to undertake the preparation for research and teaching embodied in the Master of Science programs now offered through the Graduate School. To satisfy this additional demand, the various engineering departments offer a one-year program, with emphasis on design methods, leading to a degree of Master of Engineering in a specific field (M. C. E., M. M. E., M. Ae. E., etc). The program is designed primarily for students who have already received a bachelor's degree in the same engineering field or who have a bachelor's degree in a related field and appropriate professional experience. The total effort for the year will be spent about 40% in a major field of study, about 20% in a minor, and about 40% on a design study of significant professional content. The program will be administered by departmental or other appropriate professional engineering program committees which will be monitored and advised by a Professional Masters Committee appointed by and jointly responsible to the Dean of the Institute of Technology and the Dean of the Graduate School.

The distinction between the objectives of this program and that of the Master of Science is not clear cut since it depends on intent. Design concerns itself with the application of the knowledge and methods of engineering and of the physical and social

sciences for the adaptation of materials and sources of power to the use of mankind. Thus, any study which focuses on the engineering application rather than on the method or material behavior may properly be called a design study. For example, applied mathematicians have developed mathematical methods for optimal structural design; engineers might well use these methods for a design study of different types of structures to determine construction possibility, cost, sensitivity to construction deviations, or other parametric studies. Studies of the economic tradeoffs involved in aesthetic and sociological compromises would be highly appropriate. In some cases a combination of analysis, synthesis and experimentation would be a suitable design project if the primary objective is the operation of the end product and not on the development of the method.

1. ADMISSION

Prospective students should inquire from the individual departments for appropriate forms and other information necessary. The criteria to be considered for admission will be:

a. Interest in and aptitude for design-oriented and creative programs as evidenced by performance in undergraduate laboratory, professional, and design courses.

b. Technical reports or other evidence of performance in industrial design. Reports on undergraduate projects.

c. Performance in undergraduate curricula. Greatest weight will be placed upon upper division and other professionally oriented courses. Unless there is evidence to the contrary, a GPA of 2.50 or better will normally be considered acceptable for admission.

In cases that do not fit the above criteria, consideration will be given to recommendations from faculty or practicing engineers.

2. PROGRAM

Each student will select an advisor from among the graduate faculty in the field

of his interest. After consultation with his advisor, he will submit a specific program to the appropriate Professional Engineering Program Committee for approval and the Professional Masters Committee for concurrence. This program will normally be considered by that committee before the end of the first quarter or equivalent. This program must include:

1. About eighteen credits of upper division or graduate level courses which the appropriate department considers as being a coherent program of major concentration. Courses offered by another department may be designated by the major department as being part of the major for an individual program where this is appropriate. Students whose backgrounds require strengthening may be required to complete additional course work.

2. About nine credits of upper division or graduate level study in a coherent minor program which falls into one of the following categories:

- a. Broadening the student's understanding of the social impact of engineering decision,

- b. Enhancing the student's potential as an executive, or

- c. Increasing the student's appreciation of alternative approaches to the problem of synthesis by being in a technical area which could not normally be considered as being closely related to his major field of interest.

3. A design project equivalent to about 18 credits. This project should involve design, analysis, and synthesis and will culminate in a formal written report and an oral presentation to a committee appointed by the Professional Masters Committee. This committee shall have at least three members:

1. The student's advisor

2. Another member of the Graduate faculty

3. A referee with considerable experience in the design process. It may often be desirable that this member of the jury be a practicing engineer skilled in the field of the design project.

4. If the project supervisor is not the advisor, he should also be a member of the committee.

4. There shall be no language requirement for the Master of Engineering degree.

5. A grade point average of 2.8 must be maintained in all course work exclusive of the design project. The performance on the design project must be acceptable to the committee.

6. All requirements for the degree shall be completed within five calendar years of initial registration.

7. Since the objectives of the two programs are completely different, the recipient of the Professional Masters degree must apply in the usual manner to the Graduate School if he subsequently wishes to pursue work toward an M.S. or Ph.D. Where appropriate, the Graduate School may accept course work from the Professional Masters program as appropriate for the Ph.D. program but is under no obligation to do so.

Soail

UNIVERSITY OF MINNESOTA

Department of Economics
Minneapolis, Minnesota 55455

October 11, 1968

MEMO TO: Group Committee for the Social Sciences

FROM: E. Scott Maynes, Economics Representative

Enclosed for your perusal are copies of a proposed Revised Ph.D. Program in Economics. This matter will come up for discussion at our next meeting and I thought you would like to have time to go over these materials beforehand.

The proposed revised requirements were thoroughly discussed and unanimously approved by the graduate faculty in Economics last spring.

PROPOSED REQUIREMENTS FOR PH.D. IN ECONOMICS

The Ph.D. degree in Economics has six components which are discussed separately below. The specific requirements are flexible but choice is not solely at the discretion of the student: his program must be approved by his adviser and the Director of Graduate Studies. Students should be familiar with the general requirements for the Ph.D. degree which are given in the Bulletin of the Graduate School.

Normally, the Director of Graduate Studies serves as temporary adviser to incoming graduate students. Each student is urged to choose a regular adviser during his first 12 months in residence. A student may change advisers at any time and, conversely, a faculty member may decline to serve as adviser for a given student.

A. Foreign Language

Evidence of a reading knowledge in one language other than English shall be submitted to the appropriate language department. The minimum level of competence accepted is about that of one year of college-level work completed within the past five years, in which grades of B or better were obtained. The language used to satisfy this requirements shall be relevant to the scholarly work of the student. Students are urged to take to the appropriate language department and file with the Graduate School a completed Language Certification Form as soon as possible. This and other forms referred to later are available in the Office of the Graduate School.

B. Research Technique

Evidence of a minimum proficiency in mathematics and statistics shall be submitted to the Director of Graduate Studies. The minimum level of competence acceptable is satisfactory completion of one year of calculus at college level and of one year of statistics of which at least half has calculus as prerequisite. The calculus requirement will usually be completed before admission and must be completed by the end of the first academic year in residence.

C. Preliminary Written Examinations

a. Each student shall pass a written examination in economic theory and its application. This examination shall be taken within 25 months of his initial registration. In special cases, this time limit may be extended with written permission of the adviser and Director of Graduate Studies.

b. Each student shall pass two additional written examinations selected from among the following fields. (By petition to the Graduate Faculty, examinations in other fields may be offered.)

agricultural economics	international trade
econometrics	labor economics
economic development	mathematical economics
economic history *	monetary economics
history of economic thought *	public finance
industrial organization	

* course offerings are limited.

c. Preliminary examinations are offered twice a year prior to the beginning of the Fall and Spring Quarters. Each examination is normally written in four hours. Examinations are prepared and graded by a committee of faculty members who do not know the names of students writing a given examination. Information regarding a normal pattern of preparation, reading lists and copies of old examinations are available in the office of the Graduate Economics Secretary. No examination has specific course prerequisites; no examination may be taken more than three times.

D. Supporting Program

A minimum of 21 credits of graduate-level work approved by the adviser and the Director of Graduate Studies. This work may not include courses which are used to satisfy requirement B above or courses which are used to prepare for the three written preliminary examinations. The purpose of this requirement is to enable the student to broaden his understanding of economics and to equip him with special skills and knowledge. By petition, graduate level work completed elsewhere may be used to satisfy part of this and other requirements. Credit for most courses at the University of Minnesota may be earned by examination. Students who wish to take a traditional minor in lieu of this requirement may do so.

E. Preliminary Oral Examination

Before this examination will be scheduled, (1) all of the requirements listed above must be satisfied, (2) the Written Examination Form must be submitted to the Graduate School, and (3) the Doctoral Program Form, signed by both adviser and Director of Graduate Studies, must have been on file in the Graduate School for at least one quarter. The examination is conducted by a five-man committee (three from inside and two from outside the department) appointed by the Graduate School, with the student's adviser serving as chairman. Usually the adviser will recommend some of the members of their committee. Unless there are special circumstances, this examination shall be taken during the quarter following that in which the student passed his last preliminary written examination. The examination is scheduled by the Graduate Economics Secretary.

F. Thesis and Associated Final Oral Examination

After passing the preliminary oral examination, a student is given the Certificate of Candidacy. Then, as soon as a thesis topic is selected and approved by his adviser, the Thesis Title Form is submitted to the Graduate School and the student is assigned a thesis reading committee of which his adviser is chairman.

In consultation with his adviser, each student shall next present and defend publically a thesis proposal. This presentation is scheduled by the Graduate Economics Secretary. If the reading committee accepts this proposal, it remains only to write the thesis, gain approval for it,

and defend it in a final oral examination. This final examination shall be taken not less than 30 days after registration of the thesis with the Graduate School, not less than 5 weeks before the Ph. D. is conferred, and not more than 5 years after successful completion of the preliminary oral examination. The Graduate Economics Secretary, together with the Graduate School, will schedule the final oral examination.

The purpose of the thesis is to provide evidence that the candidate is capable of conducting independent research in a professionally acceptable manner. The thesis should (a) be concerned with a significant problem, (b) involve analysis rather than mere compilation of data, and (c) be sufficiently limited in scope to permit a thorough analytical job. In many respects, therefore, the thesis is comparable to a high-quality journal article. Candidates are encouraged to keep the central core of the thesis short, i.e., less than fifty pages. If necessary, this central core can be supplemented by appendices containing supporting material. The thesis must display a fair degree of literary skill and familiarity with the appropriate sources.

THE M.A. DEGREE IN ECONOMICS

The Department does not normally admit students who wish a terminal master's degree but many students do in fact take an M.A. (Plan B) on the way to earning the Ph.D. degree. Other students change their career plans and stop graduate work at the M.A. level.

What follows is supplementary to "Requirements for the Master's Degree" given in the Bulletin of the Graduate School.

a. A student may elect to take the MA under Plan A or Plan B. No foreign language is required; one year of calculus at the college level is required.

b. Among the courses in economics taken by the student shall be Economics 185A, B and 176A (or equivalents). Alternatively, the student shall have passed either the preliminary written examination in economic theory for majors or minors. Courses found in the student's program shall be approved by his adviser and by the Director of Graduate Studies.

c. With permission of the instructor and the adviser, a "starred paper" may be written in any graduate course. In some circumstances, a preliminary written examination for the Ph.D. may be treated as a starred paper.

d. With respect to numbers of course credits required, the minima specified by the Graduate School stand.

e. An oral examination is required.

FINANCIAL ASSISTANCE FOR GRADUATE STUDENTS IN ECONOMICS

1. Positions in the Economics Department. Each year about fifty graduate students are employed in various quarter-time or half-time positions at salaries for nine months between \$1300 and \$3500. These positions carry the privilege of paying tuition at resident rates for oneself and one's dependents. Generally speaking, these positions are given to students who appear likely to obtain the Ph.D. (judged by performance in courses and on preliminary examinations) and who are making satisfactory progress toward this degree. Among the positions available are assistantships in undergraduate and some graduate courses, research assistantships, teaching of elementary and intermediate courses, and teaching or grading in Extension Division courses and in the Summer School. A half-time position requires about 15 hours of work per week. Applications for these positions should generally be made with the Graduate Economics Secretary in February for the following September, although some are filled on a quarter-by quarter basis.

A student who has received financial support from Departmental funds (including extension or summer employment) or fellowship monies for three years shall not be eligible for a fourth year of support unless he has passed all three preliminary written examinations or has been declared eligible by the Graduate Faculty. Support during a fifth year requires explicit approval by the Graduate Faculty.

2. Other Jobs. Within the University (but outside the Department) and in neighboring institutions and companies, there are various positions available in which the services of economists are required. Although the Department does not canvas such possibilities in a systematic manner, requests do come to it fairly regularly. If interested, leave your name with the Graduate Economics Secretary. Summer internships in public and private agencies are frequently available.

3. Pre-dissertation Fellowships. Except for some three-year fellowships awarded on admission, there are few fellowships of this sort. The three or four which do exist are to be found in the "Fellowship Book" in the Graduate Economics Office. Please notice deadlines for applications.

4. Dissertation Fellowships. Students who expect to pass the preliminary oral examination before November of a given year and who have average or better records should have applied for dissertation fellowships during the preceding January or February (some deadlines are earlier). Dissertation fellowships usually require a well-written thesis proposal. In terms of market criteria, it is desirable to have a vita containing both teaching experience and fellowship support. Details on various fellowships are found in the "Fellowship Book." If faculty nomination is required, students should notify the Graduate Economics Secretary of their interest well before the deadline. Notice that the Woodrow Wilson dissertation fellowship requires that the dissertation be completed within four and one-quarter years of first graduate registration.

Various government agencies also support dissertation research if the topic is relevant to current programs. A carefully drawn research proposal is usually required. Possibilities of this sort should be discussed with a student's adviser or the Director of Graduate Studies.

OBTAINING FIRST JOB

Each year notices of job vacancies around the country come to the Department and are placed in the "Job Book" kept by the Graduate Economics Secretary. The University's Bureau of Recommendations (Burton Hall) also operates a placement service as does American Economic Association at the time and place of the annual meetings of the Association. In addition, the Department each November sends information on students who are expected to receive their Ph. D. degrees within the coming year to approximately three dozen other departments of economics in the United States and Canada. Hiring for September usually takes place during the preceding winter and spring.

Students are urged to stay out of the job market until their dissertation proposals have been approved and the end of the dissertation is in sight. At that time, customary practice is for a student to search through the "Job Book" and inform his adviser and the Graduate Economics Secretary of the sorts of positions which would interest him. Then the adviser or the Director of Graduate Studies will write or otherwise provide introductions for the student. If interested, an official in the hiring institution then contacts the student and arranges an interview. Students who plan to attend the annual meetings of the American Economic Association should have made tentative arrangements for interviews which are to take place there by mid-December, and should have prepared vitae by mid-November.

A student being considered for jobs in a major university is customarily invited to present a seminar on his dissertation research.

To: Physical Sciences Group Committee

FROM: Physics Department Graduate Curriculum Committee

SUBJECT: Minor requirements for Physics Graduate students

At its meeting on November 25, 1968, the Physics Faculty voted its unanimous support of the following plan, which would enable Physics graduate students to satisfy their minor requirements by taking courses within the Physics Department.

Proposed minor requirements for Physics Graduate Degrees.

Physics is divided into the following areas:

1. Atmospheric physics
2. Atomic, molecular, solid state, and low-temperature physics
3. High energy physics
4. History and teaching of physics - (This cannot be an area of specialization for a Physics graduate student, but it can be used to satisfy the minor requirement.)
5. Nuclear physics
6. Space physics (astrophysics, plasma physics, cosmic rays)
7. Mathematical physics

A Ph.D. candidate needs 18 credits to satisfy his minor requirement. These can be chosen in three ways:

- A. From two of the above areas outside his field of specialization, with a minimum of 6 credits in each area.
- B. From one of the above areas outside his field of specialization and from courses in another Department, again with a minimum of 6 credits in each area.
- C. From courses in another Department.

The Master's Plan A minor requirement is 9 credits, chosen from any area of physics outside the student's field of specialization, or from courses in another Department.

The Master's Plan B minor requirement is the same as the Ph.D. minor requirement, except that choice C above must include at least two fields with a minimum of 6 credits in each.

If this proposal is approved by the Graduate School, its provisions will become operative immediately.

Benjamin F. Bayman

Benjamin F. Bayman
Chairman

BFB:ss

DEPARTMENT OF FRENCH AND ITALIAN
300 FOLWELL HALL · MINNEAPOLIS, MINNESOTA 55455

October 4, 1968

Dean Bryce Crawford
Graduate School
321 Johnston Hall
Minneapolis, Campus

Dear Dean Crawford:

In a recent conversation with Dean Gieske the matter of graduate status in "Romance Languages (no major)" came up. This question is not closely related to the realignment of the Department of Romance Languages into two departments: Spanish-Portuguese and French-Italian. There exist specialities in "romance languages" in universities with varying departmental structures but the point is that no person within this University has had "romance language" competence for at least a decade, possible for two decades or more.

The status was being used when I came here (1957) for Miss Nissen, who had a Ph.D. in French but in fact was teaching entirely in Italian, including many courses at the graduate level, - although we did not yet offer a graduate degree in Italian. This posed few problems.

The rank was subsequently recommended for other persons, primarily for administrative reasons. It came to have unfortunate consequences since the holders of "romance language" status were in some instances apparently considered to have graduate competence in several romance languages, which was not true.

To be specific about the administrative justifications, let me give two examples:

Romantic 114 is a basic course dealing with the evolution of Latin into the various romance languages. One of its primary functions is to show the regularity of linguistic laws and the nature of the interrelationship of the several romance languages. This course has been required of all French, Italian and Spanish undergraduate majors (CLA and Education) and may also be taken for credit in Portuguese. So it is carried as Romantic 114, French 114, Italian 114, Portuguese 114, Spanish 114. Very limited competence in some of these languages is required to teach the course, providing the person knows well the evolution of one romance language from Latin. The person teaching this course might know little or no Italian, or no Portuguese, etc. yet to facilitate the recording of grades he was given "Romance Language" status, at our request.

Romanic 230 is another example. This course deals with research materials and techniques, bibliography, periodization, etc. No competence in any romance language is really needed to put the facts across to the students, indeed we tried, 4 years ago, to have it taught in part by the Library School staff. So, as in past years, it remains a course taught by a dozen people, each person dealing with his area or subject of specialization. For administrative convenience (recording of grades) the course has one official instructor who is not required to have graduate competence in French, Spanish, Italian, Portuguese although major credit may be given in French, Italian, Portuguese and Spanish. (It is a required course for French and Spanish Ph.D. candidates).

This should suffice to illustrate the nature of the use we have made of the "Romance Language" status.

Because of a few problems that resulted in recent years from abuse of this status, and because it is an unnecessary administrative device to cover an academic fiction, we should like to request that the "Romance Language" status be abolished. This is specifically requested at this time because no person on campus at present may be said to have true graduate competence in the general discipline known as "Romance Languages" and there are no plans to bring in such a person.

As a substitute for Romance Language status, we should like to ask that only A-1 status be given to a person who is called upon to teach limited materials within a discipline where he or she lacks true graduate competence in some breadth or depth.

We recommend specifically that the persons now carried under "Romance Languages" be given the following status:

Russell G. Hamilton Jr., from "Romance Languages no major" to "Portuguese". No Portuguese graduate degree is yet offered here, but the University does offer some Portuguese graduate courses for credit. Professor Hamilton should have some kind of status showing that his graduate competence is in Portuguese (It also extends to Spanish, but not at a graduate level to French and Italian).

Arshi Pipa should not be listed under "Romance Languages" since he is not involved in any other romance discipline but Italian.

Lawrence C. Mantini had A-1 status in "Romance Languages" while he taught Romanic 114. He no longer teaches this course, so we request the status be terminated.

In the 1967-68 Graduate Faculty I see no one else listed under Romance Languages (p.94). Since Professor Walter T. Pattison and I have both taught Romanic 230 we may both be listed under "Romance Languages". If so, the status should also be terminated for us.

As a substitute we recommend, and would like to formally request that:

Professor Walter T. Pattison be given A-1 status for 1968-69 in French, Italian, Portuguese, specifically to teach (record grades) in Romanic 230 (French 230, Italian 230, Portuguese 230, Spanish 230).

Professor Ronald Akehurst be given A-1 status in 1968-69 for Italian, Portuguese, and Spanish, specifically to teach Romanic 114 (French 114, Italian 114, Portuguese 114, Spanish 114). After this year we shall probably change this course into an Upper Division course only.

No one else at this time to my knowledge needs new graduate status in more than one of the romanic disciplines. In all event we should like to ask that any request for graduate status in French, Italian, or Provencal, be cleared with this Department, since there are specialities taught only within the Department of French and Italian. If ever anyone is appointed at the University of Minnesota for a position in Romance Languages (not foreseen at present) we ask that no such status be granted before we have had a chance to decide, in cooperation with the Department of Spanish and Portuguese, on his general competence at the graduate level.

If our request to drop "Romance Language" as a graduate status is approved we should like to be informed promptly so that we may agree with the Department of Spanish and Portuguese on the persons who should be recommended for A-1 status this year and process the nominations promptly.

Sincerely yours,



Armand A. Renaud
Chairman, Department of French and Italian

AAR:jh