UNIVERSITY OF MINNESOTA
Graduate School

Minutes of the Executive Committee
Thursday, November 15, 1962
12:30 P.M. Campus Club

Present: Professors S. R. B. Cooke, W. P. Martin, C. L. Nelson, G. B. Ownbey, W. A. Russell, W. G. Shepherd, D. R. Torbert; Drs. C. P. Barnum and Victor Johnson; Deans F. M. Boddy, T. W. Chamberlin, J. H. Kruskopf; Dean Bryce Crawford, Presiding, Mrs. Shirley McDonald, Secretary.

1. Dean Crawford reported two actions taken during the summer. First, an additional variant of the School Administration program, "Intermediate Unit of School Administration," was approved in July, 1962. Second, a change in the identification of two majors, Poultry Husbandry to Poultry Science and Soils to Soil Science was approved in August, 1962. The Executive Committee APPROVED these interim actions by unanimous consent.

2. The Executive Committee APPROVED by vote the designation of seven Graduate Faculty members to represent the Graduate School on the University Senate. These representatives, presented to the Committee by the dean, include: Professors W. P. Martin, W. B. Cheston, A. H. Brown, Herman Ramras, J. C. Kidneigh; Dean Marcia Edwards and Dr. John Spizizen.

3. The question of the University's participation in the Standardized Language Test Experiment was discussed. This project is being sponsored by Cornell University in conjunction with the AGS and is concerned with administering standardized tests in French, German, and Russian on a nationwide basis. Dean Crawford stated that he had received a newsletter in which some of the pre-test results are given along with other information pertinent to the experiment. He asked that copies be circulated to Professors Ramras (German), Falk (French), and Mather (Russian) for their information.

   In this connection, several suggestions as to how the student might be assisted in becoming qualified to read the literature in his field were made by the Committee. A language requirement for all fields for the Master's degree, sections in special fields set up by the language departments, or use of the students materials in the language courses were among the suggestions.

   Professor Torbert stated that the Language and Literature Group Committee will meet soon and that, if it is possible, representatives from the other group committees will be invited to discuss these points as well as the possibility of participating in the Standardized Language Test Experiment.

4. A proposal that the final examination be eliminated for the Plan B Master's candidates has been presented to Dean Crawford by Professor Harold Deutsch. There is the opinion, shared by other Graduate Faculty members in History, that the kind of final oral examination covering all of the student's subjects is not satisfactory nor essential since the student has already written examinations in each of the courses. Although there was some agreement with the idea that the completion of an approved program with a designated quality of performance could satisfy the requirements, it was the sense of the Executive Committee that the present requirement of a final

oral or final written examination be retained. The recommendation as to whether or not the student be encouraged to work toward the Ph.D. may be based, in part, on the performance on the final examination.

Dean Crawford stated that he would write to Professor Deutsch to express the Committee's opinion and to suggest that the written final examination might be a better solution in this particular area.

5. During a previous Executive Committee meeting, Dean Crawford asked the members to consider means by which the great amount of paper work which falls to the graduate group committees might be reduced. He mentioned particularly that the standard language forms, such as French, German, and Russian, could be approved in the Graduate School offices. Certain standard types of programs might also be eliminated from the group committee's work load provided a type of guide book covering the several areas could be developed.

   Dean Kruskopf then suggested that several kinds of fairly routine petitions need not be sent to the committees but could simply be approved by Graduate School personnel. These include: (1) transfer of Adult Special credits to the graduate record; (2) transfer of Extension Division credits to the graduate record (on this point, Professor Nelson asked that such credits be endorsed by the instructors of the courses as well as the advisers to indicate to the Graduate School that the students had done graduate level work in the courses); (3) petition to graduate in 5 summer terms (the Graduate School would indicate to the nonresident that he would be held for tuition for 6 terms); (4) extension of time to complete the Master's degree (Dean Kruskopf suggested that a request for an extension of more than 2 quarters or a 2nd or 3rd request for an extension of time be referred to the group committees); (5) requests for special examinations; (6) petition to take the preliminary oral examination before the second language has been completed; (7) petition to waive, with the adviser's approval, the foreign language requirement.

   There followed some discussion on the petition to repeat a course in order to improve a grade. The Graduate School policy has been to disapprove such requests unless there is a very substantial reason. Dean Kruskopf reported that there have been an increasing number of these petitions, often from students with marginal records. Professor Martin asked whether some disposition could be made of these cases other than removing an unsatisfactory grade from the program. Professor Cooke expressed a desire to allow the student with an exceptionally good record to retake a course in which he received a D or an F grade. Dean Crawford mentioned that the use of the grade point average instead of letter grades would permit an occasional C or D to remain on the student's program.

   Dean Crawford asked the Executive Committee to take these suggestions back to their group committees for thought and comment and indicated that the discussion would be carried forward to the next meeting.

6. The place of the minor in the Ph.D. program was the next point of consideration. Dean Crawford referred briefly to the report made in 1957 by the special committee appointed to study this question. Recently, the dean has received communications from the Physics and English Departments which state in essence that breadth in the Ph.D. programs in their areas could be

achieved more adequately by knowledge over one or two broad fields rather than by a specific minor.

The proposal by the faculty in Physics had been referred to the Physical Sciences Group Committee. Professor Cooke reported its recommendation to the Executive Committee. The P.S.G.C. accepted the proposal as presented by Professor Nier with the controls as presented by Professor Cheston in his memorandum to Professor Cooke.

Dean Boddy remarked that there are two points to be considered: (1) should the minor be abolished, or its form be changed; and (2) who controls the minor--the major or the minor department? At the present time, the Ph.D. program must be approved by an adviser for the minor. Professor Cooke stated that the Physical Sciences Group Committee rather favors the appointment of an ad hoc committee to study the question of the minor for the entire Graduate School.

Dean Boddy suggested that the subject be discussed further in Executive Committee and also asked that any communications or proposals regarding the minor coming into the Graduate School be duplicated and sent to the Executive Committee.

Points of future discussion will be recorded in the minutes and circulated to the group committee members.

7. There was some discussion on the proposed Ph.D. program in Industrial Relations but further discussion and action was postponed until the new members on the Executive Committee have an opportunity to read the proposal.

8. Dean Boddy initiated the discussion on the transfer of credit for summer seminars held elsehere, particularly with regard to the cooperative programs involving the Schools of Public Health and departments of Biostatistics in various universities. An institute was held at the University of Michigan during the summers of 1958 and 1959 and at Minnesota during the summers of 1960 and 1961. In 1962, the seminar was held at Stanford University. There are a number of students who would like to have the credit for the Stanford seminar transferred to their Master's programs at Minnesota. The courses given were basically the same as those offered here. In addition, some of the Stanford faculty taught at Minnesota for this seminar, and a member of the Minnesota Graduate Faculty was a member of the teaching staff for the 1962 program at Stanford.

Some discussion followed as to whether a general policy ought to be developed for programs set up as a joint operation with Minnesota Graduate Faculty participating in teaching as well as serving on the coordinating committees. Since such cooperative programs are increasing, perhaps transfer of credit toward the Master's degree should not be handled on an individual basis. As usual, the students' programs would be submitted to the group committees for approval. Professor Nelson suggested that prior approval be required. If our Graduate Faculty are participating in such cooperative programs at other universities and wish their own students to receive credit for such work, prior approval should be obtained from the appropriate group committee.

In the case of the students who wish transfer of credit for the Stanford seminar, Dean Boddy agreed to ask Professor Bearman of the School of Public Health to circulate the Stanford program to the members of the Medical Sciences Group Committee. If this committee agrees that the courses were similar to those held at Minnesota earlier, transfer of credit for these students will be approved.

9. Dean Crawford briefed the Committee on the meetings held between representatives of the State Colleges and the University of Minnesota which have been concerned with problems of graduate work, especially in the area of teacher education. Meetings were held in February, March, April, and May. In October, an "exploratory" meeting was held with representatives of the Private Colleges (members of the Minnesota Private College Council) to determine whether there might be an interest in their participating in future joint meetings. Such an interest was expressed and the next meeting was scheduled for November 30. There was an emphasis at the October meeting on ways in which to get complete information about graduate scholarships and fellowships to undergraduate students. Dean Boddy mentioned that the Graduate School is getting requests for Graduate Faculty to talk to groups of undergraduate honor students at other Minnesota colleges on the subject of graduate study. Dean Crawford stated that the Graduate School will probably contact the group committees for suggestions as to who can be sent to do this sort of thing.

   Minutes of future meetings between the State College, Private College, and University representatives will be sent to the Graduate School Group Committees.

10. The Executive Committee agreed that it would be advisable to send each department a copy of the GRADUATE SCHOOLS OF NORTH AMERICA Resolution Regarding Scholars, Fellows, and Graduate Assistants. This resolution states that if the appointee indicates his acceptance of an award for the next academic year before April 15, he has until that time to submit in writing his resignation in order to accept another appointment. If, however, an acceptance is given or left in force after April 15, he is committed not to accept another appointment without first obtaining a formal release. A copy of this resolution should be sent with each offer of an appointment.

    The Graduate School office will have a supply of these printed resolutions which the departments may have upon request.

11. Professor Cooke mentioned that students often do not realize that all of the courses listed in the Graduate School Bulletin are not offered at all times. Although it is not possible to guarantee that courses will always be offered, perhaps the departments could indicate those courses which they know will not be offered every year.

    The departments will be asked to include this information when the materials for the 1964-66 Graduate School Bulletin are sent to them.

The date for the next Executive Committee meeting was set for Thursday, December 20 at 12:00 noon. An agenda will be sent to the members prior to the meeting.

Respectfully submitted,

Shirley McDonald
Secretary

November 23, 1962

7.5.

UNIVERSITY OF MINNESOTA
GRADUATE SCHOOL
MINNEAPOLIS 14

To: **The Executive Committee** **July 31, 1962**

From: **Office of the Dean**

Subject: **Specialist in Education certificate**

Enclosed is a copy of the additional variant of the school administration program for the Specialist Certificate for your information. The program has been approved by Dean Bryce Crawford as of July 26, 1962.

You will recall that after the first program for the Specialist Certificate was approved by the Graduate School Executive Committee several years ago, it was agreed that similarly patterned programs approved by the Education faculty, curriculum committee, and group committee would be submitted to the Dean of the Graduate School for final approval.

copies also sent to: Dr. Victor Johnson
Dean T. W. Chamberlin
Professor W. G. Shepherd

SPECIALIST IN EDUCATION--INTERMEDIATE UNIT OF SCHOOL ADMINISTRATION

The following two year graduate programs in school administration leading to the Specialist in Education certificate are now in operation:

General School Administration
Secondary School Administration
Elementary School Administration
School Business Administration

All of these programs include a common core of courses and a group of differentiated courses appropriate to the field of service. This new proposal merely adds a fifth area and includes the same common program as the above four approved programs, but there is also a differentiated group of courses designed to prepare the candidate for service in an intermediate unit of school administration.

The intermediate unit of school administration is the school unit providing a supervisory, administrative, or coordinating function for local school districts within the territory served. The geographic area covered by the service is larger than a school district and smaller than a state. Over thirty states have some form of intermediate unit of school administration. Some are the size of a county while others include a much larger geographic area. The trend is toward the discontinuance of the county as a school unit and the formation of an intermediate service area which includes several counties or parts of counties. The intermediate school unit administrator selected by the service area board of education has a staff of professional people whose competence is in keeping with the type of services needed to supplement the work of the local school district. Because the largest percentage of local school districts are small, the cost of specialized services cannot be justified by the number of pupils to be served. While the type of supplemental service varies from one intermediate school unit to another, it includes such as curriculum coordination, general or special supervision, education of handicapped children, counseling and guidance, adult education, library materials and librarians, audio-visual instruction, health and sanitation, school transportation, psychological services and instruction by itinerant teachers for small high schools.

The superintendent or coordinator of the intermediate school unit needs a broad type of preparation. The National Association of County and Intermediate School Unit Superintendents has been concerned with the development of a two year graduate program for such administrators. The approval of the attached program will recognize the significance of this profession position.

It will be recognized that this proposed program is not entirely new but merely adds a fifth area to the four existing specialists programs in school administration. The course work embodies graduate work taken at the masters degree level. Persons who have taken masters level work in other areas of school administration can move to the specialist program in the area here recommended.

TWO-YEAR GRADUATE PROGRAM
LEADING TO SPECIALIST CERTIFICATE
(Minimum: 90 Quarter Credits)

The Specialist program consists of two parts: one designated as the common core required of entrants in all fields of school administration and the other designated asthe differentiated program which permits specialization in the chosen area. The common program, as outlined, includes 9-15 credits in related academic fields selected on consultation with the adviser.

The common program is followed by all Specialist candidates and will basically adhere to the following outline. (The course numbers shown reflect current offerings and are intended to serve as illustrations rather than specific requirements.)

TWO-YEAR SPECIALIST PROGRAM
EDUCATIONAL ADMINISTRATION

COMMON PROGRAM
(Minimum: 45 Quarter Credits)

Course Number	Course Title	Credits
I. Educational Administration (Minimum 12 credits)		
Ed. Ad. 201, 202	Foundations of Educational Admin.	6
Ed. Ad. 224	Legal Aspects of Public School Admin.	3
Ed. Ad. 235	Advanced Seminar	3
II. Educational Psychology and Child Development (Minimum 15 Credits)		
Ed. Psy. 193 or 293	Psychology of Human Learning	3
Ed. Psy. 110 or 117	Measurement	3
Ed. Psy. 116 or 216	Statistical Methods	3
Electives	To be chosen from C.D. and Ed. Psy.	6
III. Foundations of Curriculum (Minimum 6 Credits)		
Ed. C.I. 113	High School Curriculum	3
Ed. C.I. 119	Elementary School Curriculum	3
IV. Philosophical Foundations (Minimum 3 Credits)		
At least one course from this field		3
V. Related Academic Fields (Minimum 9 credits)		

(See suggested list)

Suggested Academic Courses
Specialization in Rural Life

Ag. Ec 108	Agricultural Policy
Ag. Ec 110	Economics of Agricultural Development
Hist. 145	American Agricultural History
Anth. 100	Principles of Anthropology
Anth. 115	Indians of the Great Plains
Anth. 182	Language of Culture
Anth. 164	Social Anthropology
Anth. 165	Culture and Personality
Soc. 120	Social Psychology
Soc. 160	Rural Community Organization
Soc. 161	Rural Community Analysis
Soc. 162	Rural Social Institutions
H.E. 185	Family Relationships
Pol. Sci. 119A	Rural Local Government
P.H. 100A	Elements of Public Health
P.H. 125	Community Health Education Programs
Speech 106	Discussion
Ag. Ec. 172	Land Economics

Two-Year Specialist Program
Intermediate Unit of School Administration

Differentiated Program

Course Number	Course Title	Credits
	I. Educational Administration (9 Credits)	
Nine Credits Selected from the following:		
Ed. Ad. 117	Education in Rural Areas	
Ed. Ad. 118	The Community School	
Ed. Ad. 215	Elementary School Principalship	
	or	
Ed. Ad. 264	Secondary School Principalship	
Ed. Ad. 210	Financial Aspects of Public School Business Administration	
(Substitutions as recommended by adviser)		
	II. Research. Field Studies. Internship (15 Credits)	
Ed. Ad. 270 A	Problems in Elementary School Administration	
	or	
Ed. Ad. 270B	Problems in Secondary School Administration	
	or	
Ed. CI. 227	Problems in Rural Education	9
	or	
Ed. Ad. 228	Special Problems in School Administration	
	or	
Ed. CI. 271	Problems in Curriculum Construction	
	or	
Ed. CI. 261	Problems of Improvement of Instruction	
Field Study or Internship		6
	III. Educational Psychology (3 Credits)	
Ed. Psy. 182	The Exceptional Child	3
	IV. Curriculum and Instruction (15 Credits)	
Ed. CI. 150	Supervision and Improvement of Instruction (May substitute Ed. CI. 266)	3
Ed. CI. 105	Audio-Visual Materials in Education	3
	Methods and Materials of Instruction	9
	V. Electives to make 90 or more credits, to be selected with consent of adviser	

Recommended Elective Courses

In addition to the methods and materials courses listed in requirements of the differentiated program the following are recommended as electives:

Ed. CI 104	Adult Education
Ed. CI 106	Coordinating Audio-Visual Education Programs
Ed. CI 107	Radio and Television in Education
Ed. CI 151	Diagnosis of Learning Difficulties
Ag. Ed. 156	Rural Education Through Extension Methods
Ed. Ad. 210	Financial Aspects of Public School Administration
Ed. Ad. 230	Community School Relations
Ed. Psy. 184	Education of Mentally Retarded Children
Ed. CI 170A	Curriculum and Course of Study Construction
Ed. CI 121	Childrens Literature
Ed. CI	Adolescent Literature

Z.S

COPY

June 11, 1962

Dean Bryce Crawford, Jr.
Graduate School
321 Johnston Hall
Minneapolis Campus

Dear Dean Crawford:

The graduate faculty of the School of Physics has recently given extensive consideration to the minor requirements for the Ph.D. at Minnesota. It is the consensus of the physics faculty that the present minor requirements are no longer appropriate for a large fraction of our Ph.D. students.

To bring the problem into proper focus, it would be well to detail the operation of the conventional minor program as it has related to physics students in the past. It has been conventional for physics students to minor in mathematics; only rarely have physics students elected minor programs in areas such as chemistry and the engineering sciences. There are a variety of reasons for this: physics, even in its experimental aspects, is a highly analytical subject--yet ten years ago very few physics students entered graduate school with formal mathematical training beyond differential equations. Since it was essential that every physics student have a sophistication in mathematics beyond this, it was natural for physics majors to elect a mathematics minor program made up from courses such as advanced calculus, partial differential equations, function theory, etc. The situation has changed drastically; almost 100% of our entering physics graduate students have had advanced calculus and the best students invariably have had a year of mathematics beyond that as an undergraduate. It is certainly true that these students could profit from more mathematics, even a conventional mathematics minor. However, the physics faculty feels that there are other possible minor programs of much more value to the average physics Ph.D. student. To continue a bit further into the history of the problem, the breadth of course offerings in the engineering sciences has increased enormously in the past decade. There have been many course sequences introduced in these areas of vital interest and concern to the average physics Ph.D. candidate. These courses are spread over a number of departments and it does not make the best sense for a student to minor in a single such department. Nor does it make much sense to list these courses as part of the major course program since the major program is at present quite extensive and addition of more courses would increase the amount of time necessary to complete a Ph.D. beyond reasonable limits. (At present, the average time spent in obtaining a Ph.D. in physics at Minnesota is 5.2 years--this is uncomfortably long.)

The value of a minor program for a Ph.D. candidate in physics is the assurance of a certain amount of breadth in the total program. The certification by a department outside of physics of a certain proficiency in non-physics material is of no practical interest to a Ph.D. student in physics. The breadth in the Ph.D. program can be assured by other means than a formal minor. In addition, the physics faculty felt that it is the best judge of the nature of the desired breadth in the Ph.D. physics program. Therefore, the following suggestion is made for an alternative to the conventional minor for a Ph.D. candidate in physics.

1) A related area sequence of courses of which 18 quarter credits must be earned in courses outside the physics offerings. The total number of credits in the related area minor must exceed 18 quarter credits.

a) Whenever a course offering by an outside department has a physics equivalent, the physics equivalent may be considered as part of the related area minor (for example, the sequences EE 242-243-244 and Physics 273-274-275 are equivalent courses in Plasma Physics.)

b) Whenever a course is offered by the physics department which would not normally be required for a physics student, it may be used as part of the related area program but not a part of the 18 credits required outside of physics (for example, the sequence Physics 225-226-227, Advanced Quantum Theory, is not usually taken by a student majoring in an experimental area of physics; an occasional experimental student may wish to take the course as part of a minor program).

2) A student who chooses a related area minor must show evidence of a prescribed mathematical sophistication (at present time, the successful completion of a nine credit sequence which has Advanced Calculus as a prerequisite will suffice. This mathematics requirement may change as the content and level of present mathematics sequences change and as new sequences are introduced.)

3) The approval of a student's suggested related area minor must be recommended by a committee of the graduate faculty in physics. The student's advisor's approval is not sufficient for submission of the program to the Graduate School.

The proposal has already been discussed informally in the Physical Science Group Committee where no serious objections were raised. However, the nature of the proposal is such that the PSGC should take formal action. The physics faculty hopes that this proposal can be approved within the next academic year.

Sincerely yours,

(Signed) A. O. C. Nier

C O P Y

August 17, 1962

Professor Strathmore R. B. Cooke
Mines and Metallurgy 25

Dear Strath:

I have a letter from Al Nier proposing, as a recommendation from the physics faculty, that the present type of minor requirements for the Ph.D. be changed for physics majors. It is of course appropriate that this specific proposal should be referred to the Physical Science Group Committee, and that the group committee report to the Executive Committee of the Graduate School its opinion with regard to the specific proposal.

However I should like to ask that the group committee consider this proposal in a somewhat larger context. I should not be surprised to find that other areas in the physical sciences, and perhaps in wider ranges in our University, might have similar feelings. So I should like to ask that your group committee, first, give some thought to the general question of minor requirements. Would areas other than physics find it advantageous to permit this type of broad "related area" as a replacement of the traditional minor? Is the type of control of the "related area minor" proposed by the Physics Department, namely approval by a graduate committee drawn from the major area, the wisest provision? Is it an adequate safeguard against narrowness, even keeping in mind that the overall program is subject to review and approval by the group committee?

From the thoughts of the group committee on this type of question, I should like to move in the Executive Committee to a general discussion of the minor. There have from time to time been suggestions of revisions of the minor requirement in the Graduate School; the more I have pondered over this, the more I have felt that, as in other aspects of graduate education, the minor requirement will be viewed quite differently in different fields. I can easily visualize a situation in which a traditional minor might be required for majors in certain areas, while quite broad and diffuse "related area programs" might better serve the ultimate goals of graduate education in other areas. And therefore it may be that the question of minor requirements should be considered, not by a central Graduate School committee, but by appropriate committees in the several areas -- which is to say, in effect, by the group committees.

I hope these comments will indicate my present state of mind with regard to the question of the minor requirement, and I hope that, beginning from the Physical Science Group Committee, we can have some appropriate discussion of the question which will correct me if I am in error, and in any case show us how we should proceed. With regard to timetable, it is not a matter that calls for solution by next week, obviously; it would be most helpful if the Physical Science Group Committee could present some thoughts to the Executive Committee during the fall quarter, so that during the academic year 1962-63 we might move through some appropriate discussion, possibly even reaching some conclusions.

With very best regards,

Sincerely yours,

(Signed) Bryce Crawford, Jr.
Dean

BLC:pm
cc: Professor A. O. C. Nier

UNIVERSITY OF MINNESOTA

School of Physics

November 6, 1962

TO: Prof. S. R. B. Cooke

FROM: W. B. Cheston

At the request of the Physical Science Group Committee, I am writing this letter to amplify on the remarks made by Prof. A. O. C. Nier in his letter of June 1962 requesting that an alternative to the conventional Ph.D. minor program be allowed Ph.D. majors in physics.

One of the essential features of the alternative to a conventional minor is the existence in physics of a Graduate Study Committee. Its present function is to review the progress of every graduate student in physics at least twice each year. This is accomplished as follows: as part of registration in fall and winter quarters, each student must submit to his adviser a Progress Report in which he details what progress he has made to date on fulfilling degree requirements and what his intentions are for the near future. The student's adviser appends whatever comments he deems appropriate and the report is then added to the student's personnel file which is kept in the office of the chairman of physics. This file is reviewed in the fall and winter quarters by the Graduate Study Committee. On the basis of the committee's review, a student's graduate assistantship is either extended or discontinued, he is advised to accelerate his program, etc. Under the proposed alternative to a minor, the role of the Graduate Study Committee would be expanded. In addition to approval of such a program by the student's adviser, approval would have to be obtained from the Graduate Study Committee which would survey the student's complete program to see that it was consistent with the intent of the alternative minor program as described by Prof. Nier. The chairman of the Graduate Study Committee would approve the three-year Ph.D. program signing in place of a representative from the minor area. As is now the case with conventional minor programs, informal approval of the proposed minor program could be obtained before actual submission of the three-year program. As part of the student's progress report, early in his graduate career he could indicate his proposed alternative program, the adviser could append his comments, and the Graduate Study Committee could then either give or withhold tentative approval of the program. The existence of the Graduate Study Committee in no way circumvents the Group Committee since the Group Committee would still pass on the suitability of a given three-year program. The Group Committee would assign the preliminary examining committee; instead of representatives from the minor area, there would appear representatives from those departments in which the student took course work as part of the alternative minor. In essence, the Graduate Study Committee is a very effective force in insuring the development of reasonable Ph.D. programs in physics since it is a faculty group which examines each student's program in detail at least twice every year.

I don't believe that it serves much purpose to attempt to provide more detail than was contained in Prof. Nier's letter as to what specific programs of courses would constitute an alternative minor. It is our feeling that the programs have to be constructed with an individual's background and interests in mind. By insuring a sensible level of mathematics sophistication on the part of all students and a minimum number of graduate courses in related areas, Prof. Nier's proposal maintains the intent of a minor program; it lacks only the

mechanism for providing formal approval of a minor department and through the Graduate Study Committee substitutes a stronger control over Ph.D. programs in physics than we now possess.

Sincerely yours,

Warren B. Cheston

Warren B. Cheston
Associate Chairman

WBC:kk

UNIVERSITY OF *Minnesota*

SCHOOL OF BUSINESS ADMINISTRATION
DEPARTMENT OF INDUSTRIAL RELATIONS · MINNEAPOLIS 14

January 31, 1962

Professor Carl Nelson, Chairman
Social Science Group Committee
Graduate School

Dear Carl:

Yesterday you requested additional written information about our proposal for the Ph.D. in Industrial Relations. We are happy to comply; if you and the group committee so desire, I will gladly appear before your committee to answer any additional questions.

Question was raised concerning comparison of our proposed Ph.D. exams with those at other schools. As you know, industrial relations is both a specialized and interdisciplinary field of study with a unique body of problems centering about employment in all its aspects. The Ph.D. in Industrial Relations at Purdue is almost completely "tailor-made" to the student. Our proposal more nearly parallels the Ph.D. in I.R. programs at such schools as Cornell and Wisconsin where sub-fields are identified.

Our proposed sub-fields are: (1) scope and systems of industrial relations; (2) research methodology; (3) staffing, training and development; (4) compensation theory and administration; (5) collective bargaining; and (6) organization theory and administration. The Cornell sub-fields are: (1) collective bargaining, labor law and labor movements; (2) economic and social statistics; (3) human resources and administration; and (4) labor economics and income security. The Wisconsin sub-fields are: (1) public policy; (2) organizational behavior; and (3) interpersonal behavior. Illustrative materials from the Cornell and Wisconsin Ph.D. in I.R. programs are presented in Appendix A.

Our previous document was incomplete in that it did not show our total proposed program, which includes more mathematical and statistical analysis, and research design courses than we offer by our own industrial relations faculty. It is our plan for students to take these courses in sequences already available in the Departments of Statistics, Mathematics, Educational Psychology, Biostatistics, and Quantitative Analysis. Our courses in methodology deal with the application of these techniques to particular research problems in industrial relations.

In a similar manner our first letter was incomplete in that it did not specify suggested minor programs. The minor must be in a department in which work is logically related to industrial relations. Most commonly these will include: Economics, Psychology, Sociology, Political Science, Business Functions and Management and Industrial Engineering.

We would also like to stress two additional points not covered in our first presentation: (1) educational needs in industrial relations have risen sharply; (2) we are able to offer the degree now if it is authorized. May I elaborate briefly on each of these points.

A. The Need

There has been a substantial upgrading of standards for practitioners in the industrial relations field. Fifteen years ago a bachelor's degree in industrial relations was sufficient. Today a master's degree in industrial relations is essential. This has had a healthy effect upon research programs in shifting emphasis from descriptive surveys (typical of a new field) to more basic studies. Our Industrial Relations Center research program now reflects this emphasis. Here the important point is that research as well as training needs are also being upgraded quality-wise, thus requiring a higher quality of teachers and researchers, i.e. with the Ph.D.

Our experience at Minnesota has been in the direction of quality. We dropped the undergraduate industrial relations sequence several years ago and concentrated on a graduate degree program. We strongly urge a liberal education by way of undergraduate preparation, with professional training at the graduate level. We have made consistent efforts to evaluate our graduate program, as evidenced by Appendix B, "MA-IR Program, June 1961 (Since 1955)."

Other schools have followed our lead in the trend toward higher quality of our educational program. Many schools now offer the M.A. in Industrial Relations. Wisconsin for example started such a program three years ago, and now offers the Ph.D. in Industrial Relations, as previously noted. Enrollment in industrial relations at Wisconsin has grown rapidly. The demand for our own M.A. in I.R.'s is at least 10 times the supply.

As noted above, the need for a Ph.D. program in industrial relations is evident. Our previous memo to your committee told of the urgent demands for Ph.D.'s in I.R. for teaching and research posts. This demand will increase sharply in the years ahead.

B. Our Resources

Our present resources are adequate to provide a quality Ph.D. program, and to continue our efforts to raise standards of graduate training and research in the future.

1. We now have a young, very productive, and balanced graduate faculty in industrial relations. Our nine Ph.D.'s come from several disciplines--economics, psychology and sociology. They are from four different schools (Minnesota--5; University of Chicago--2; MIT--1; University of Washington at Seattle--1). In addition, we are actively recruiting a full professor (non-Minnesota Ph.D.), to replace Dale Yoder in our teaching and research programs. Our faculty is not parochical or over-specialized; seven of the nine Ph.D.'s are full members of the graduate faculties in other departments--psychology, economics, sociology and business.

2. Also important to a Ph.D. program, our current industrial relations library and reference collection is a magnificent and necessary resource. This is currently fully operational, and represent one of the top industrial relations collections in the nation--or in the world for that matter.

3. The substantial research program of the IRC is another currently available asset of great importance in the provision of a Ph.D. program of the highest quality. Graduate students can intern in experimental situations under skilled professional researchers. Participation of our teaching faculty in the research program, and vice versa, also helps to sharpen and maintain the quality of both teaching and research.

4. We currently have undergraduate classes wherein our I.R. Ph.D. students receive teaching experience as section or quiz instructors. This is of obvious value in training for the Ph.D. In fact, we possess unusually fine opportunities for our graduate students to get both teaching and research experience in their Ph.D. training. Such integration, we feel, is most desirable.

5. We currently have sufficient budget for the Ph.D. in I.R. program. We already have the courses we need to initiate a major program at the Ph.D. level (although from time to time the program will need revision).

6. We have an adequate supply of potential Ph.D. in I.R. students and a substantial demand for such graduates.

7. Our experience in offering the Ph.D. minor in I.R. lends itself to an easy transition to the major.

In conclusion, there is a definite need for specialized Ph.D. level education in industrial relations teaching and research, both of which are growing in amount and quality. To meet this need, a new Ph.D. degree program is essential. We have at hand resources of sufficient quality and quantity needed to conduct a Ph.D. program in industrial relations.

I hope that the above provides the information you need in your deliberations. If we can supply any further information, please let us know.

Sincerely,

Herbert G. Heneman, Jr.
Professor and Chairman

HGH:D

Appendix A

I. Cornell University requirements for Ph.D. in Labor and Industrial Relations

A. Approved Major Subjects for the Ph.D. in Labor and Industrial Relations (each has sub-areas of study)

1. Collective Bargaining, Labor Law, and Labor Movements

2. Economic and Social Statistics

3. Human Resources and Administration

4. Labor Economics and Income Security

B. Example:

"HUMAN RESOURCES AND ADMINISTRATION. For a major in this subject, the candidate must demonstrate:

I. Knowledge of the fields basic in individual and social behavior and of concepts of administration.

II. Competence in one of the three areas of study, as follows:

A. Human Relations. (1) Principal human relations problems found in industrial and labor relations, and the bearing of these problems on collective bargaining and labor and management organizations; (2) theories of human organization; (3) effect of organization structure, work-flow, and technology on individual and group relations; (4) problems involved in the relationship between industry and society.

B. Development of Human Resources. (1) Significant problems and issues related to the education and training of the work force. Historic trends in the philosophies, policies, and practices of public and private organizations concerned with the development of manual, technical, and managerial personnel; (2) current social, economic, political, and technological factors influencing the development of human resources; (3) organizational behavior and administrative practices as they affect the growth and development of the individual; (4) theoretical and applied aspects of organizing and managing developmental programs in particular organizations; (5) principal concepts of learning and of educational methods related to the development of human resources.

C. Personnel Management. (1) The nature and scope of the personnel function and the social, economic, and political factors which influence its development; (2) the organization of the personnel function and the techniques, methods, and procedures utilized in carrying on the personnel activities of an organization; (3) industrial and labor legislation and regulatory functions of government as related to the personnel function; (4) basic factors affecting the relationships between individuals and groups within an organization and among organizations as related to the personnel function.

III. Ability to isolate issues worthy of research, to identify and locate relevant studies or other sources of information, and independently to develop and conduct additional research."

II. University of Wisconsin requirements for Ph.D. in Industrial Relations

"Degree Requirements

Standard University Graduate School requirements of residence, language, preliminary examinations, minor requirement, and dissertation for the various degree levels are required. (on an interdepartmental basis. These are described in the Graduate School Bulletin). Graduate training is (thus) provided and competence tested in (1) subject matter, (2) research methods, and (3) the development of ideas and theories of industrial relations.

As indicated above, subject matter requirements are defined in terms of the three areas: (A) Public Policy; (B) Organizational Behavior; and (C) Interpersonal Behavior. Subject-matter requirements for a particular student will depend upon his orientation in the field of industrial relations. A major interest in public policy and organizational behavior will lead the student primarily to courses in economics, commerce, law, sociology, and political science. On the other hand a focus on the interpersonal behavior area will normally mean a concentration on industrial psychology, personnel management in commerce, or similar work which may be combined with journalism, engineering, education, and related fields. No rigid department groups are established, however, since each student's requirements for his graduate attainment goal in areas A, B, or C may demand a different combination of course offerings.

The development of ideas and theories of industrial relations extends through all three areas of subject matter. Guidance and assistance in this requirement are provided by the research seminars in industrial relations and the prescribed reading lists. Research methods requirements include a combination of research methodology

in existing departments. Specific requirements depend mainly upon the department or departments in which the individual concentrates his research efforts. General requirements in research methodology are discussed in the industrial relations seminars and the reading lists."

"B. Doctor of Philosophy in Industrial Relations

The Ph.D. curriculum has standard course requirements equivalent to three years residence with qualifying examinations and publishable research completed in at least the last year of graduate study. If the candidate seeks generalized graduate or professional competence in the three areas A, B, and C, he is expected to prepare in course work and methodology normally covered by at least two University departments in each area in addition to prescribed reading and familiarity with the development of ideas and theories of industrial relations. Work in more than one area of concentration may be taken in the same department, depending upon courses selected to comprise the student's integrated study program.

If the Ph.D. candidate concentrates in one area, he will prepare in course work and methodology covered by at least three departments in that area and work covered by at least one department in each of the other areas, as well as prescribed reading lists in all three areas. He will be tested on the development of ideas and theories throughout the entire scope of industrial relations.

His research efforts may be selected from any field but must include a continuous project or series of projects over two years, normally interdisciplinary in nature."

CONFIDENTIAL
6-61

University of Minnesota
Industrial Relations Center

September 1961

MA-IR PROGRAM, JUNE 1961 (Since 1955)

ALL APPLICANTS TO MA-IR PROGRAM	N	%
Rejected	126	30.2
Accepted	292	69.8
Total	418	100.0

ALL APPLICANTS WHO WERE ACCEPTED FOR ENTRANCE INTO PROGRAM		
Entered the program	184	63.0
Not enter	81	27.7
Current applicants	27	9.3
Total	292	100.0

ALL APPLICANTS WHO ENTERED THE PROGRAM		
Degrees granted	76	41.3
Drop outs	66	35.8
Currently enrolled	42	22.9
Total	184	100.0

1

Average HPR's of MA-IR Graduates Compared to Average HPR's of Drop-outs from the MA-IR Program

	N	Mean HPR	Median HPR	Range
Graduates	74	3.39	3.39	2.69 - 4.00
Drop-outs	59	2.98	3.00	1.00 - 4.00

1. The mean HPR of MA-IR graduates was found to be significantly higher than that of the Drop-outs at the .0005 level significance. t= 5.062 with df= 133.

2. Drop-outs are defined as those students who have been in the program at one time but have not completed the requirements for the MA-IR degree, and have not been enrolled during the past calendar year.

2

Average Miller Analogies Scores of MA-IR Graduates Compared to Average Scores of Drop-outs from the MA-IR Program

	N	Mean Miller	Median Miller	Range
Graduates	71	41.52	40	6 - 95
Drop-outs	64	43.02	42	6 - 99

* No significant difference between the mean Miller scores of MA-IR graduates and drop-outs appears at the .1 level of significance. t = .391, with 133 df.

Average HPR's of MA-IR Graduates for All Course Work and for IR Courses, Psychology Courses, Economics Courses, Business Administration, Courses and Other Courses Taken Separately.[1]

	N	Mean HPR	Median HPR	Range
All Courses	74	3.39	3.39	2.69 - 4.00
IR Courses	74	3.37	3.44	2.67 - 4.00
Psych. Courses	70	3.34	3.48	2.00 - 4.00
Econ. Courses	13	3.47	3.33	3.00 - 4.00
BA Courses	62	3.40	3.50	2.00 - 4.00
Other Courses	49	3.38	3.50	2.36 - 4.00

1. 'IR Courses,' includes all those BA and Econ., courses listed in the Graduate School Bulletin with numbers whose last digit is 2. The BA and Econ., categories shown here include all courses taken whose numbers do not end with the digit 2, and are not considered 'IR Courses'.

2. 'Other Courses,' includes courses from the following areas: Political Science, Sociology, Educational Psychology, Public Health, Industrial Engineering, Zoology, History, Social Work, Speech and Law.

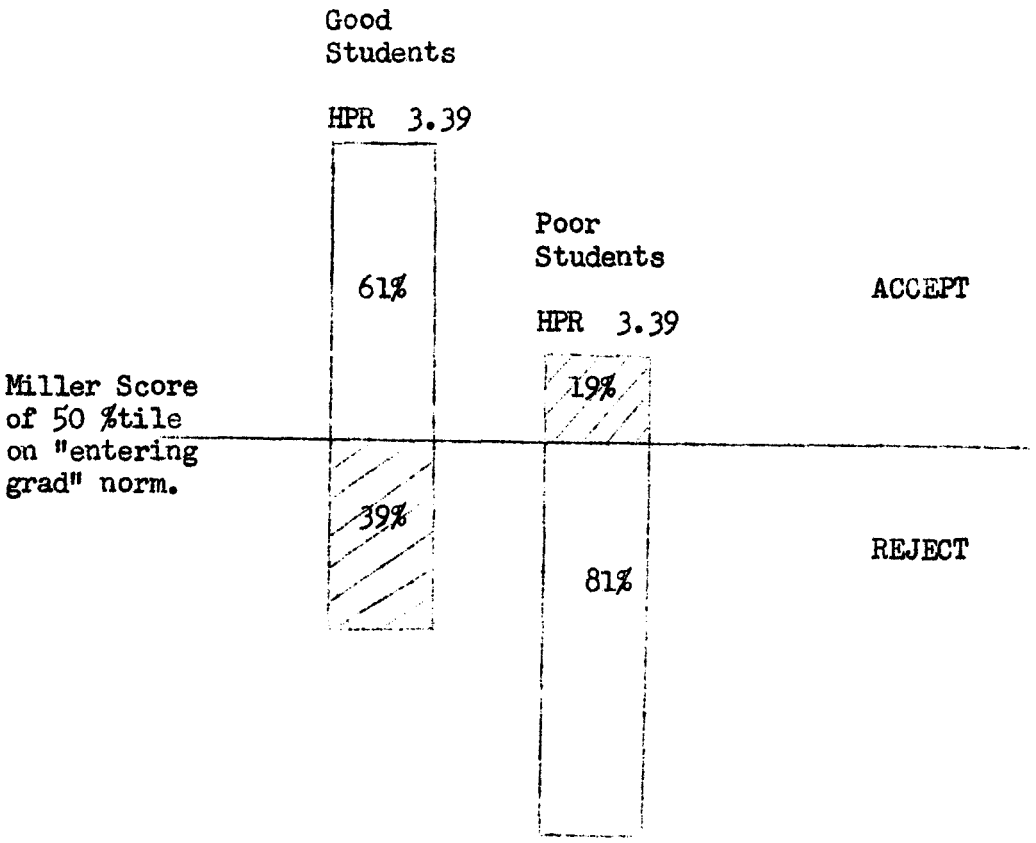
3. In analysis of variance indicates that the mean HPR's for IR, Psych. Econ., BA, and Other courses are not significantly different at the .01 level of significance. $F = .325$, with $df_1 = 4$, and $df_2 = 263$. $F_{99}(4,200) = 3.41$.

Correlation between the HPR's and Miller Analogies Scores of MA-IR Graduates

	N	r	*
Graduates from 1955 thru Spring 1958	30	.68	.001
Graduates from SS I 1958 thru Spring 1961	39	.16	not sig.
All MA-IR Graduates	69	.41	.001

* Pearson product moment correlation used.

Miller Analogies Scores as Predictors of Success in Graduate Work in Industrial Relations



Miller Analogies Scores on the "Entering Grad" Norm as Predictors of Success in Graduate Work in Industrial Relations

HPR

Miller Score		Low 3.39	High 3.39
	Low 50	29	15
	High 50	7	20

1. The HPR of 3.39 was chosen to differentiate high and low HPR's on the basis that it is the median HPR of MA-IR Graduates.

2. The Miller score of 50 was chosen to differentiate high and low scorers on the basis that this score gave the greatest index of differentiation between high and low HPR's.

3. Chi^2 analysis of high and low HPR's and Miller scores indicates that high miller scores are significantly related to high HPR's at the .001 level of significance. $X^2 = 12.25$ with df = 1.

4. The contingency coefficient was found to be C = .39, which is in agreement with the product moment correlation of .41 found between HPR's and Miller scores of MA-IR graduates.

MA-IR Students Who Have Completed the Program and/or Accepted Jobs in 1961 (June 1, 1961)

Name	Company
LeRoy L. Bradwisch	Ph. D. work at University of Minnesota
John C. Franke	Mead Johnson Company Evansville, Indiana
Thomas P. Greeley	Esso Research & Engineering Co. Linden, New Jersey
Gerhard Henschell	Return to Germany to continue studies
Arthur P. Johnson Jr.	Ford Motor Company, Steel Div. Dearborn, Michigan
James A. Kaehler	Minneapolis Honeywell Reg. Co. Minneapolis, Minnesota
William G. Rothstein	Ph. D. work at Cornell University
Donald A. Sandstrom	Fibreboard Paper Corp. San Francisco, Calif.
Glenn R. Schleede	Atomic Energy Commission Downers Grove, Illinois
John E. Schmid	Haloid Xerox Rochester, New York
William D. Young	Panama Canal Zone Company Balboa Heights, Panama

Starting Salaries

N = 7

Mean = $580 per mo.

Median = $585 per mo.

Range = $525 - 625 per mo.

Program for Degree of Doctor of Philosophy

The program of education for the Ph.D. with a major in industrial relations is intended for students planning careers in teaching, research, and professional practice. The program requires at least three years of study in approved subjects, thesis research and writing. The degree is granted in recognition of the candidate's high attainments and abilities as demonstrated by the preparation of a thesis and the passing of required examinations covering both the general field of industrial relations and the special fields of the candidate's study. Individual programs of study will vary in content and amount according to the candidate's individual needs and the extent of his undergraduate work in this and related fields. Each program shall be approved by the candidate's adviser.

1 A student is required to pass a written examination to demonstrate general competence in all fields of industrial relations.

2 A student is required to pass written examinations in two specialized fields of the following, one of which shall be designated as his thesis field: compensation theory and administration; manpower resources and allocation; staffing, training, and development; collective bargaining; organization theory and administration.

3 A student is required to attain a grade of B or better in three courses including a seminar in the field of research methodology. (9 credits).

4 A student must, within a reasonable time (normally one year) after successful completion of the written examinations, take an oral examination. This examination may cover any work in the student's approved graduate program with the exception of the thesis. Successful completion of this examination admits the student formally to candidacy for the degree.

5 Reading knowledge of two foreign languages, or one foreign language and either an approved collateral field or an approved research technique is required.

6 No courses or fields included in the minor may be included in the major.

Ph.D. Minor in Industrial Relations

A candidate for the Ph.D. degree who elects industrial relations as his minor shall complete a minimum of 24 credits in industrial relations. The minor program shall include courses in general industrial relations including the seminar in industrial relations, and courses from two special fields; not more than three courses can be taken from any single special field.

Graduate Offering*

Scope and Systems of Industrial Relations

I.R. 152. Principles of Industrial Relations: Labor Marketing. Introduction to current employment relationships, emphasizing an economic approach and analysis. Fundamentals of application and conservation of human resources in employment with consideration of related social and economic problems. Labor marketing, collective bargaining, unions and employer associations, industrial unrest and conflict, employment and unemployment, wage problems. (prereq Econ 2 or equiv)

I.R. 172. Principles of Industrial Relations: Manpower Management. Introduction to personnel management and labor relations; development and application of effective work-teams within firms and agencies. Overview of policy and practice in major manpower management functions of staffing, training, communications, motivation, compensation, and morale maintenance. (prereq 52 or 152)

#I.R. xxx Seminar in Industrial Relations. Integration of the various fields of industrial relations and related fields in psychology, business administration, sociology, economics, political science, and industrial engineering as they relate to major subjects, topics, and issues in industrial relations.

* Courses carrying the designation of "I.R." are courses currently offered by the Department of Industrial Relations although still carrying the designation "B.A." in the current catalog. Courses listed here with designations other than I.R. are offered by related departments and presumably will be cross-listed for purposes of graduate industrial relations training. Course numbers and descriptions other than those marked (#) are copied from the current catalog; many of these numbers and descriptions may be changed for future catalogs.

# Indicates a course to be offered for the proposed program although not presently offered.

Research Methodology

I.R. 192-3. Industrial Relations Practices and Techniques. Role of quantitative measurement and analysis in formulation, administration, and evaluation of a wide range of manpower management practices. (prereq 72 or 172) (Note the extension of the present course to two quarters.)

I.R. 372. Seminar in Industrial Relations Research Methods.

Compensation Theory and Administration

#I.R. xxx Compensation Theory. Analysis and evaluation of traditional economic wage theories, research findings in wage and salary determination and compensation levels and relationships, and development of modifications of wage theory appropriate to application in industrial relations.

I.R. 222. Wage and Salary Administration. Concepts and procedures for administration of compensation programs in plant and office, for managerial and nonmanagerial employees. Methods of job evaluation, wage surveys, incentives, fringes and benefits, and administration of wage and salary programs. (prereq 72 or 172)

Ec. 182. Economic Security. Origins and development of economic and social problems of the individual worker; public and private attempts to deal with these issues; economic and social implications. (prereq BA 52 or 152)

Law 161. Modern Social Legislation.

#I.R. xxx Seminar in Compensation Theory and Administration.

Manpower Resources and Allocation

I.R. 182A. Intermediate Labor Marketing. Advanced discussion and analysis of labor marketing concepts, structures, and processes. Examination of sources of information and different approaches to study, analysis, and resolution of problems in the labor market. (prereq 52 or 152)

Soc. 146. Industrial and Occupational Sociology. The occupational group; the factory and the business enterprise as social institutions; the contrasting functions of formal and informal organization; significance of co-operation, authority, communication, status, and group norms in the working situation. (prereq 1 and 15 cr in sociology, psychology, political science, or economics)

Psy. 130. Vocational and Occupational Psychology. Psychology of individual differences in intelligence, aptitudes, interests, and training, as related to vocational guidance and problems of occupational adjustment. (prereq 2, 5 or 5 cr in statistics)

I.R. 352. Seminar in Labor Marketing. (prereq 182A)

Staffing, Training, and Development

I.R. 202. Organization and Staffing. Translation of organization goals and objectives to specific manpower goals and objectives, and staffing to meet the organization's manpower needs. Techniques for recruitment, selection, and assignment of manpower resources for optimal utilization. (prereq 152)

I.R. 212A. Labor Education. For professional worker in labor education and industrial relations practitioner. Objectives, principles, content, and methods of university and union labor education programs and relationship of such programs to industrial relations. Program development and evaluation. (prereq 152)

I.R. 212B. Employee Development and Training. Determination of development and training goals, implementation and evaluation of programs for improved development and training from the standpoint of professional manpower management. (prereq 72 or 172)

I.R. 242. Management Development. Examination of today's management development movement including management development programs within industry and in universities. Basic policy, current problems, and research findings concerning selection of management trainees, management appraisal and inventory, management motivation and compensation, and methods and techniques of development. (prereq 72 or 172)

#I.R. xxx Seminar in staffing, Training, and Development.

Collective Bargaining

I.R. 142. Settlement of Industrial Relations Disputes. Nature of industrial conflict in employment relations pointing up the stresses contributing to conflict situations; and public and private approaches to the prevention, reduction, and resolution of conflicts. (prereq 52 or 152)

Ec. 152. Labor Movements. Origins and growth of labor organizations and their problems under various forms of government; economic and social consequences of these developments. (prereq BA 52 or 152)

Ec. 172. Public Policy: Labor Relations. Employer-employee-union relationships and their social control; legislative, executive, and judicial attempts to deal with these issues; economic and social implications. (prereq 52 or 152)

Law 156. Law of Labor Relations.

I.R. 232. Collective Bargaining Policies and Practices. Analysis of functions and procedures of union-management collective bargaining. Problems of collective bargaining and techniques for preparation and conduct of negotiations. (prereq 52 or 152)

#I.R.xxx Seminar in Collective Bargaining.

Organization Theory and Administration

I.R. 182B. Intermediate Manpower Management. Manpower policy development, application and evaluation within union and company managements; manpower research and auditing. (prereq 72 or 172)

B.A. 160. Management Organization and Business Policy. Functions of the executive and role he plays in operation of the firm. Development of understanding of executive functions by relating the several functional areas of the firm from the viewpoint of top management in building of organizational relationships and in policy formulation.

I.R. 162. Union Government and Policies. Internal administration and government of unions; economic and social issues; hours, wages, and other conditions of employment. (prereq BA 52 or 152)

Soc. 247. Seminar: Research in Large Scale Organization.

I.R. 362. Seminar in Manpower Management.

— — —

The following courses provide an opportunity for advanced study and research in any of the fields above as required to provide a program adapted to individual needs and objectives.

I.R. 262-272-282. Graduate Topics in Industrial Relations. Concepts, practices and eithic of professional competence and standards in industrial relations. Emphasis upon group and organized research, advisory and service functions. (prereq 72 or 172)

I.R. 292A. Readings in Manpower Economics and Industrial Relations. Special readings especially useful to student's individual program and objectives, but not available in regular course offerings. (prereq consent of adviser and instructor in field covered)

I.R. 292B. Graduate Research in Manpower Economics and Industrial Relations.