UNIVERSITY OF MINNESOTA
Graduate School

Minutes of the Executive Committee
Tuesday, December 5, 1967
1:00 P.M. 306 Johnston Hall

Present: Professors D. W. Warner, D. W. Thompson, E. W. McDiarmid, W. S. Loud, M. C. Reynolds, E. Scott Maynes for George Seltzer, L. J. Pickrel, C. M. Stowe; Drs. Leslie Zieve and R. Drew Miller; Deans Francis M. Boddy, M. L. Gieske, W. E. Ibele; Miss Ruth Chovancek; Dean Bryce Crawford, Jr., presiding; Shirley McDonald, secretary.

Dean Crawford circulated copies of Doctorate Recipients from U. S. Universities 1958-66 published by the National Academy of Sciences. The contents may be of interest to group committee members. The dean asked that the books be returned to the Graduate School for further circulation.

1. Computer Use in the Graduate School - Subsequent to the November meeting of the Executive Committee, Miss Chovancek informed the dean that the alphabetical print-out showing examining committee assignments will be available after the 3rd week of the winter quarter. (Refer to Nov. 7 Executive Committee minutes, Item 1 for description and use of the print-out.) Following a check with most Executive Committee members, the Graduate School discontinued sending individual notices of committee assignment to all except the student and his adviser. Professor Maynes suggested that a copy to departments would be useful. Dean Crawford said that we can look into this possibility for the new computer, but our current facility will not permit further expansion in such services. Miss Chovancek said that the student copies of the QPR will be sent to departments beginning in 1968. Currently, students must pick up the QPR in the Graduate School Office; and they don't do this.

The dean mentioned also that the Graduate School no longer sends notices of preliminary and final oral examination schedules to committee members. Here again, only the student and his adviser receive notification. This seems sensible since the student has had to arrange with the committee the date, time, and place of the examination prior to the actual scheduling in this office.

Some of the group committee chairmen have asked that materials be sent to them on a monthly basis, rather than twice each quarter. If means can be developed which will permit a continuous check of group committee materials, allow the student adequate notice and give the group committee staff time to meet deadlines, perhaps the movement of material on a monthly basis can be accomplished.

2. Requests for Course Approvals at the 200 Level(Refer to Nov. 7 Executive Committee Minutes, Item 8) - The proposed form was revised incorporating suggestions made by the Executive Committee at the November meeting. The instructions will be modified somewhat and the form put into use.

Professor Stowe mentioned that there are times when it seems sensible to refer certain materials to other group committees for an opinion or recommendation. Professor Thompson spoke of the value of advice on proposed

programs and the like, given by "outside" experts. The dean said that this kind of activity is to be encouraged where it will be of benefit.

Dean Crawford suggested that the group committees might like to explore the idea of having a non-representative Graduate Faculty member assigned to each group committee for perhaps one year, for purposes of general information and to promote interaction between faculty in the various areas. For example, a Graduate Faculty member from education might be assigned to the Medical Sciences Group Committee, or a faculty member from engineering might serve on the Language, Literature, and Art Committee. The dean asked the Executive Committee members to consider the idea and give him their reactions.

3. Proposed Change in Designation of Majors in the Department of Entomology, Fisheries, and Wildlife - Currently the M.S. and Ph.D. with majors in Entomology, Fisheries and Wildlife are offered. The department has requested that three fields - (1) Entomology; (2) Fisheries; and (3) Wildlife be designated as graduate majors. There are separate programs for students in these three areas. The use of the combined term, Fisheries and Wildlife has caused problems in the review of applications for admission. And employers usually ask for a person with preparation and research in one or the other, but not both.

The Life Sciences Group Committee will discuss the proposal at the December meeting.

4. Proposed M.S. with a Major in Dietetic Nutrition - Dr. Zieve, for the Medical Sciences Group Committee and Professors Stowe and Warner for the Life Sciences Committee stated that while they have no objections to the proposal, they do wish additional information about the program. The Graduate School will ask that supplementary information be supplied, particularly in respect to the changes to be made which will make the program serve both in the non-medical and hospital aspects of dietetics.

5. Proposed M.A. with a Major in Mathematics Education - The proposal is under consideration by the Physical Sciences Group Committee and Professor Loud reported that the committee has suggested some changes. Further discussion will take place in the January meeting and the item will be carried forward.

6. Proposed M.S. with Majors in Biology, Zoology, and Botany at Duluth The Life Sciences Group Committee travelled to Duluth on Nov. 27 to meet with members of the faculty in Biology there. While there was some discussion about the proposed programs, no final recommendation has been made. The Life Sciences Committee will hold a special session on December 8 to continue deliberations on the proposals.

Some general discussion about procedures in the development of programs at Duluth followed. Recollection of the processes involved in several recent cases in Physics, Art, Chemistry, and Biology brought out that no formal pattern could be set forth, but that good communication and consultation between Duluth and Twin City colleagues over a period of time while the program was developing was useful - - the more useful the earlier it started. The point was reaffirmed that Duluth programs need not have precisely the same "shape" as Twin City programs even when the same rubric was used; but

that Twin City departments did have a proper interest in identically named or even closely related programs which also are given by the University of Minnesota, and that a good mutual understanding of the nature of programs on both campuses, by both departments was desirable and helpful both in the development of new programs and in their continued operation. We do need to take advantage of every opportunity to bring together Duluth and Twin City colleagues, especially as new programs begin to be considered.

7. Council of Graduate Schools Meeting - Dean Crawford reported that a joint committee from the Federation of Regional Accreditation Commission of Higher Education, and the National Commission on Accreditation will be working to achieve means by which graduate education throughout the whole country can be accredited by uniform standards. Also, this CGS/FRACHE/NCA group is seeking to encourage review prior to the approval of an institution's first offering at the graduate level and before any new doctoral program is initiated.

8. Proposed Ph.D. with a Major in History of Medicine and Science - This kind of program, according to the proposal, will probably attract students with varying backgrounds. A program emphasizing the history of medicine would require the M.D. degree or intensive preparation in those aspects of the biological sciences most closely related to medicine, while a student wishing to emphasize the history of a particular science should have a strong undergraduate major in the relevant science or in history.

The kind of earlier preparation the student has at the time he enters the program would probably determine the general subject area of the Ph.D. thesis. The proposal, which includes a list of suggested courses and an outline of possible course programs will be referred to the Medical Sciences, Social Sciences, Physical Sciences, Life Sciences, and Education Group Committees for consideration.

9. The Double Counting of Credits towards Two Degrees - The double counting of credits towards two degrees can be allowed in situations where the programs have been worked out by the two departments and reviewed and approved in advance by the appropriate group committee and the Graduate School. The recently approved joint J.D. and M.A.P.A. degree is an example. However, as Dean Gieske reported, there is a need for some guidelines to be applied in the cases where students request permission to apply credits to two degrees. He spoke of one instance where there was not only a double counting of credits, but a course for one of the Plan B papers was also to be used for the two degrees.

The Executive Committee agreed that a double counting of credits is permissible where there is a specified combination already approved (such as the J.D. and M.A.P.A.) but double counting should not be accepted within the required number of credits for the second degree, and certainly no Plan B paper should be used for two degrees. Exceptions to the general rule may be justified in certain cases, but the request would have to be by petition which would then require action by the group committee and the Graduate School.

10. The Composition of Examining Committees - The group committees had been asked to discuss the possibility of sometimes assigning someone other than the student's adviser as chairman of the examining committee. Prof. Loud reported that the Physical Sciences Group Committee feels that there is no reason to change the traditional practice and that the present system has

safeguards which would prevent any committee action influenced by possible bias on the part of the adviser. Dr. Zieve said that there should be no problem in this regard as long as the chairman of the committee is the last one to ask questions. Professor Reynolds reported that some within the areas represented by the Education Group Committee have expressed an interest in experimenting with a different kind of committee composition and will contact Dean Crawford about this.

Professor Maynes asked about the possibility of reducing the number of committee members on the Ph.D. examining committee from 5 to 4 in order to economize on resources. Would not 3 members from the major field and 1 member outside the major field be sufficient?

The item will be carried forward.

11. Proposed Internal Minor in Mathematics Proposed Internal Minor in Philosophy (Refer to Executive Committee Minutes, October 10, 1967, Item 8) Professor Loud reported that the Physical Sciences Group Committee discussion was not confined just to the Mathematics proposal, but was more general since there have been similar proposals from other areas and the whole subject of the Ph.D. minor is under consideration as well. In general the committee believes that the minor requirement should be a departmental matter. And of course, the external minor or supporting program would be retained in some cases. The proposal from Mathematics was broadened to include Master's students also and rephrased to read "internal supporting program" instead of "internal minor." The Physical Sciences Group Committee recommended that the proposal be accepted.

Dean Boddy asked about the effect on the major. Professor Loud explained that the current major will, no doubt, include additional courses and thus become a "stepped up" major.

Professor Reynolds commented on the request for the internal minor or supporting program for Philosophy majors. He said that there has been some questions raised about depth vs. breadth during the discussion about the minor and that perhaps a Saturday Group committee session could be spent discussing the subject. Professor Ibele said that the department of the major ought to consider the kind of breadth needed within the major - what a student needs outside of the major should be decided by the major department and should become a specific requirement for the major.

The group committees believe that these requirements have been taken into account in both the Philosophy and Mathematics Departments and recommend that the proposals be adopted.

The Executive Committee approved the internal supporting program for both the Mathematics and Philosophy majors.

Discussion on the subject of the Ph.D. minor as a Graduate School requirement will continue.

12. Nominations and Appointments to the Graduate Faculty - Dean Crawford distributed to the Executive Committee copies of a letter he wrote in response to questions on criteria used for appointment to the Graduate Faculty. He asked that the group committees convey their reaction.

13. Proposal that the Plan B Paper Requirement be a Departmental Option
Professor Loud said that the Physical Sciences Group Committee feels that the departments are happy enough with the current policy and in certain areas, preparation of the starred papers constitute the major portion of some courses. Professor Reynolds reported that the Education Group Committee agreed that the departments should have the authority to waive the requirement. The Social Sciences Committee thinks that the general Graduate School requirement should be retained, but that where departments believe that they have a compelling case for waiving the requirement, a request to the Graduate School could be considered.

The item will be carried forward.

14. Graduate Student Council (Refer to Executive Committee Minutes, Nov. 7, Item 11) - Dean Boddy reported on the November 28 meeting with some 65 graduate student departmental representatives. There was some general discussion on relationships between the graduate students and Graduate Faculty. Problems of organization were also mentioned. Areas in which a graduate student organization could be useful were outlined. Although 60 of the representatives approved a motion to form an organization, it was decided that another vote would be taken after these representatives poll the students in their departments.

An ad hoc committee, following group committee structure, was appointed to plan the next meeting of the group if an organization is approved. It was emphasized that such an organization will not undercut ASTRA which is concerned largely with students as University employees. Representatives of ASTRA attended the November 28 meeting also.

15. A Report on Hasteners _ Dean Gieske submitted a report on the progress of the Ph.D. candidates. The original number of students who had passed the preliminary oral examination and became eligible for the continuous registration was 788. By the March 1967 commencement, 546 or 69% of the 788 graduated. In the June, July, and August 1967 commencements, 578 or 72% graduated. The December 1967 commencement shows 599 or 76% completed the requirements. Of the group who had not received their degrees by the fall of 1966, about 3/4 of the candidates indicated that they needed approximately 1 additional year to complete the thesis. However, at the December 1967 commencement, approximately 1/3 of this group actually did complete the work and will receive the degree. At the present time there are still 94 or 12% who indicate that they are in the final stages of writing the thesis and do expect to complete the requirements in the next few months. Within approximately the past 12 months, some 65 or 8% of the original group have terminated candidacy.

16. The Candidate's Certificate - Dean Boddy reported that the CIC institutions have agreed on the meaning and definition of the designation of Candidate in Philosophy. A news release has been prepared and will be published on December 8.

The next meeting of the Executive Committee has been set for January 9 at 1:00 P.M. in the Graduate School Conference Room.

Respectfully submitted,

December 13, 1967

Shirley McDonald
Secretary

AUG 31 1967

UNIVERSITY OF *Minnesota*

INSTITUTE OF TECHNOLOGY
SCHOOL OF MATHEMATICS · MINNEAPOLIS, MINNESOTA 55455

August 25, 1967

Dean Bryce Crawford, Jr.
The Graduate School
321 Johnston Hall

Dear Dean Crawford:

This is to follow up our earlier correspondence concerning our suggestion for an internal departmental minor.

I am enclosing a somewhat revised proposal for an internal minor. I hope that it meets with your approval and that you will be able to submit it to the Group Committee for consideration.

May I say once again that I feel this matter to be of acute concern to our department. I have had numerous strong complaints from members of our department and from our graduate students about the present setup. There is no doubt in my mind that we are failing to get some good graduate students because of the nature of the present siutation.

Sincerely yours,

Steven Orey, Head
School of Mathematics

SO:sw

PROPOSAL FOR INTERNAL MINOR

A. Proposal for Internal Minor.

It is proposed that a candidate for the Ph.D. in Mathematics be allowed at the discretion of the Department of Mathematics to satisfy the minor requirement by an internal minor. That is to say that a student should be allowed to satisfy the requirement for a minor by preparing himself in depth in a branch of mathematics relatively remote from his thesis.

The candidate is to be tested in the area of his minor. Typically preparation for the minor might involve taking eighteen 200-level credits in the area of a minor.

As typical examples a student writing a thesis in differential equations might minor in geometry, a student doing his thesis work in mathematical logic might minor in analysis, or a student writing on analytic number theory might minor in algebra.

Frequently it may be desirable for a student to take an external minor. This proposal is in no way intended to preclude this possibility. It is anticipated that in many cases the advisor will strongly advise or even insist upon completion of an external minor.

B. Justification of the Proposal.

The proposed change is of great importance to us for the following reasons:

I. Mathematics has become such an extensive field that it is extremely difficult for a Ph.D. candidate to become even marginally well educated. With insistance on an outside minor it becomes almost impossible for our students to become well-rounded mathematicians.

One of the features of mathematics is that strong inter-relations do exist between superficially remote branches of the subset. Mathematical breadth is of major importance to the active mathematician. Mathematics is developing so rapidly and along such a broad front that for a narrowly trained mathematician it would be extremely difficult or impossible to penetrate other parts of mathematics after the completion of his Ph.D. study unless a good foundation already exists.

II. The outside minor requirement is damaging to our department in several respects.

Students are taking an excessive time to complete Ph.D. work. This problem is now quite acute and already has had a very demoralizing effect on our graduate students.

The department does not get the number of applications from well-qualified graduate students which it has felt it should get. There is no doubt that the requirement of an outside minor deters students from coming here. Among the top 25 graduate mathematics departments in mathematics (according to the Carter Report) only five require any kind of outside minor. In two of these five cases the outside minor is quite nominal. Among the top 10 schools, only MIT has a minor requirement and that consists of nine semester credits at any level, no examination. Among the top 25, only Illinois, Minnesota and Johns Hopkins have required substantial outside minor.

Paula – E. Comm 5/16 –

MAY - 9 1967

UNIVERSITY OF *Minnesota*

INSTITUTE OF TECHNOLOGY
SCHOOL OF MATHEMATICS · MINNEAPOLIS, MINNESOTA 55455

9

May 5, 1967

set forth the
several fields & guidelines
– will be used
– retain outside
minor possibility

Dean Bryce Crawford, Jr.
The Graduate School
321 Johnston Hall

Dear Dean Crawford:

Our department would like to make a proposal which would make it possible for a Ph.D. candidate to satisfy his minor requirement by an internal minor. You may recall that we have had some conversations on this subject.

This is a matter on which the department is nearly unanimous and about which it feels very strongly. Personally I am convinced that a change of the kind we are suggesting is vital to the health of our department. I have had extensive discussions with Professor Loud, our group committee representative, and our views are in full accord.

I thought as a first step I should formulate our suggestions informally and submit them to you along with an explanation of why we feel such changes are necessary. This informal proposal is enclosed with this letter.

Sincerely yours,

Steven Orey

Steven Orey, Head
School of Mathematics

SO:sw
Enc.

PROPOSAL FOR INTERNAL MINOR

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The candidate is to be tested in the area of his minor. Typically preparation for the minor might involve taking eighteen 200-level credits in the area of a minor.

As typical examples a student writing a thesis in differential equations might minor in geometry, a student doing his thesis work in mathematical logic might minor in analysis, or a student writing on analytic number theory might minor in algebra.

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November 27, 1967

To: Graduate School

From: W. S. Loud

Subject: Discussion by the Physical Sciences Group Committee of the proposal from the School of Mathematics for an internal minor, November 9, 1967.

The principal topic of discussion at the November meeting of the Physical Sciences Group Committee was the proposed internal minor for graduate students in mathematics. Present at the meeting were R. M. Dodson, M. Hamermesh, A. Nussbaum (representing R. Lambert), W. Ranz, W. H. Warner, T. Zoltai, H. F. Weinberger, and W. S. Loud. Mrs. LaVerne Wagner acted as secretary.

The discussion was purposely on a broader scale than just the proposal from the School of Mathematics, since several other departments wish to make changes in the minor requirement. The committee had no specific proposals of a general nature to make, but several departments will be having meetings to discuss the question of minors for graduate students. Some of the points made in the discussion were:

1. Some majors would not be complete without work outside the major department which now forms a minor. Thus in many cases minor work would still be required even if it were not so designated.

2. There was a strong feeling that requirement of a minor should be a departmental matter, and that departments should have more autonomy.

3. The committee felt that there is need for quality control and that there should be ways of obtaining this from outside of departments as well as from inside. It was suggested that this might be achieved by better thesis reading by persons outside the major department.

The proposal from the School of Mathematics was presented by Professor Weinberger. He outlined the principal reasons for the request. The principal reason given was the long time required by doctoral students in mathematics and the undoubted loss of graduate students by the University of Minnesota to schools with less extensive requirements outside the major. Statistics were cited to support the assertion that few major universities require very much in the way of a minor.

The general reaction of the committee was favorable although the proposal is recognized as a stop-gap measure pending broader action on the part of the Graduate School. The committee also felt that the proposal should be rephrased to say "Supporting Program" rather than "Minor", and that the proposal should be broadened to include master's degree students as well. Professor Weinberger agreed to rewrite the proposal. The revised form has been circulated to the group committee and no objection has been raised. The Physical Sciences Group Committee supports the revised form of the proposal, which is attached.

fwd grp

PROPOSAL FOR AN INTERNAL SUPPORTING PROGRAM IN MATHEMATICS

A. Proposal for Internal Supporting Program.

It is proposed that a candidate for the M.S. or Ph.D. degree in Mathematics be allowed at the discretion of the Department of Mathematics to satisfy the minor requirement by an internal supporting program. That is to say, a student should be allowed to satisfy the requirement for a minor by preparing himself in depth in one or two branches of mathematics relatively remote from his thesis. Such preparation would normally involve taking eighteen 200-level credits for the Ph.D. or nine such credits for the Plan A Master's Degree in such branches. (In the case of a Plan B Master's Degree, the student would have to acquire a firm foundation in at least two branches of mathematics.) For instance, a student writing a thesis in differential equations might have a supporting program in geometry and topology, a student doing his thesis work in mathematical logic might carry a supporting program in analysis, or a student writing on analytic number theory might prepare himself in algebra.

Frequently it may be desirable for a student to take an external minor or a supporting program involving at least some courses taught by other departments. This proposal is in no way intended to preclude this possibility. It is anticipated that in many cases the advisor will strongly advise or even insist upon completion of an external minor.

B. Justification of the Proposal.

The proposed change is of great importance to us for the following reasons:

I. Mathematics has become such an extensive field that it is extremely difficult for a Ph.D. candidate to become even marginally well educated. With insistance on an outside minor it becomes almost impossible for our students to become well-rounded mathematicians.

One of the features of mathematics is that strong inter-relations do exist between superficially remote branches of the subject. Mathematical breadth is of major importance to the active mathematician. Mathematics is developing so rapidly and along such a broad front that for a narrowly trained mathematician it would be extremely difficult or impossible to penetrate other parts of mathematics after the completion of his Ph.D. study unless a good foundation already exists.

II. The outside minor requirement is damaging to our department in several respects.

Students are taking an excessive time to complete Ph.D. work. This problem is now quite acute and already has had a very demoralizing effect on our graduate students.

The department does not get the number of applications from well-qualified graduate students which it has felt it should get. There is no doubt that the requirement of an outside minor deters students from coming here. Among the top 25 graduate mathematics departments in mathematics (according to the Cartter Report) only five require any kind of outside minor. In two of these five cases the outside minor is quite nominal. Among the top 10 schools, only MIT has a minor requirement and that consists of nine semester credits at any level, no examination. Among the top 25, only Illinois, Minnesota and Johns Hopkins have required substantial outside minor. Recently, the University of Illinois has approved an internal minor in mathematics, while Johns Hopkins University has apparently eliminated its minor requirement completely.

July 1 1967 - C proposal

Minor and Supporting Programs

Graduate students must complete work in the interest of the department of philosophy in order to receive a Ph.D. in philosophy from the University of Minnesota. This may be done either by taking a minor in another department or by completing a supporting program. The requirements for a minor are set by the department in which the minor is taken. The requirements for a supporting program are determined by the philosophy department. There are three requirements:

(1) A student must take a [illegible] written examination in the area of his supporting program. This examination will be administered by the philosophy department as the fifth of the five Ph.D. preliminary written examinations. It must be taken within two years of the student's entrance in graduate work in philosophy at Minnesota and may be taken before the other two requirements are completed.

(2) A student must complete between 9 and 18 credits of work in philosophy in the area of his supporting program. These credits cannot be counted toward the 45 credits of philosophy required for the major.

(3) A student must complete [illegible] courses and 45 credits of work in some department [illegible] credits of philosophy in the area of his supporting program.

There should be a total of [illegible] credits in the supporting program.

Following are ten areas in which supporting programs are offered in conjunction with a philosophy major. Students who choose this option should consult with the advisor associated with the area in which he wishes to work in order to work out a coherent program. Courses may be included in a supporting program though they are not listed by any department below. Also, readings courses and seminars may be substituted for the courses covering similar material. The courses listed below are offered to be suggestive of the type of work required.

1. Advanced Logic Brodbeck, Hanson

Philosophy 154, Elements of Symbolic Logic
Philosophy 155, Intermediate Symbolic Logic
Philosophy 156, Philosophy of Logic
Philosophy 227, 228, Seminar: Logical Theory

Mathematics 112, Elementary Set Theory
Mathematics 112A-B-C, Mathematical Logic
Mathematics 203A-B-C, Topics in Logic
Mathematics 204A-B, Formal Languages and Automata

2. Aesthetics Gunderson

Philosophy 151, Principles of Aesthetics
Philosophy 268, 269, Seminar: Studies in Aesthetics

Architecture 115-116-117, Structure and Form in Architecture
" 151-152-153, Theory of Architecture
Art History 176, 177, 178, Twentieth-Century Painting
" " 186-187-188, Art of the Film
" " 196-197-198, Readings in Art History and Criticism
English 120-121, The Interpretation of Poetry
" 123, 124, The Technique of the Novel
" 181, Modern Literary Criticism
" 184, 185, 186, Form and Idea in Dramatic Literature
" 246-247, English Literary Criticism
" 268-269, Studies in Aesthetics
" 290-291-292, Studies in Critical Theory
Music 144-145-146, Bach through Beethoven
" 151-152, Introduction to Musicology
" 177, Analysis of Contemporary Music

3. Ancient Philosophy Cohen, Mason

Philosophy 112, Plato
Philosophy 114, Aristotle
Philosophy 116, Plato and Aristotle
Philosophy 350,351, 352, Research in History of Philosophy

Greek 161, Plato: Selections
Greek 176B, Greek Literature: Philosophy
History 103B, 104B, 105B, Greece to 200 BC
Political Science 164, Ancient Political Thought
Political Science 205A, Topics in the Development of Political Thought

4. Medieval Philosophy Matthews

Philosophy 118, Medieval Philosophy
Philosophy 350, 351, 352, Research in History of Philosophy

Latin 135, Medieval Latin
History 106B, 107B, Europe in the High Middle Ages
Political Science 165, Medieval Political Thought
Political Science 205B, Topics in the Development of Political Thought

5. Modern Philosophy Lewis, Murphy, Terrell

Philosophy 121, Descartes
Philosophy 122, Spinoza
Philosophy 123, Leibniz
Philosophy 129, Locke
Philosophy 130, Berkeley
Philosophy 131, Hume
Philosophy 132, Later Empiricism
Philosophy 134, Kant
Philosophy 136, Brentano
Philosophy 350, 351, 352, Research in History of Philosophy

History 115A, 116A, Early Modern Europe
History 121C, Intellectual and Cultural History of Modern Europe
Political Science 166, Early Modern Political Thought
Political Science 205C, Topics in the Development of Political Thought

6. Philosophies of India Potter

Philosophy 171, Problems of Indian Philosophy
Philosophy 172, Indian Logic
Philosophy 173, Vedanta Philosophy
Philosophy 174, Indian Buddhist Thought
Philosophy 175, Indian Philosophy of the Medieval Period
Philosophy 176, Contemporary Indian Thought

Anthropology 125, Peoples and Cultures of India
Art History 110, Art of India
Avadhi 101-102-103, Introduction to Avadhi
Avadhi 121-122-123, Readings in Avadhi
Bengali 101-102-103, Advanced Bengali
Bengali 106, Bengali Syntax
History 148A, 149A, History of India
History 193B-194B-195B, Proseminar: History of India
History 243B-244B-245B, Seminar: History of India
Indic 130, Hindu Grammatical Thought
Indic 170, Survey of Modern Indian Literature Written in English
Sanskrit 101-102-103, Intermediate Sanskrit
Sanskrit 131-132-133, Readings in Philosophical Texts
Sanskrit 191-192-193, Research

X

7. Philosophy of Natural Sciences Feigl, Maxwell

Philosophy 160, Philosophy of Science
Philosophy 241, 242, 243, Seminar Philosophy of the Physical Sciences
Philosophy 244, 245, 246, Seminar Philosophy of Psychology
Philosophy 247, 248, 249, Seminar Logic of the Exact Sciences
Philosophy 360, 361, 362, Research in Philosophy of Science

Physics 108-110-112, Principles of Modern Physics
Physics 150, History of 20th century Physics
Physics 190, Introduction to Elementary Particle Physics
Physics 290, History of 20th century Physics
Psychology 200, History of Psychology
Zoology 117, Theoretical Biology

8. Philosophy of Social Sciences Brodbeck

Philosophy 164, The Logic of the Social Sciences I
Philosophy 165, The Logic of the Social Sciences II
Philosophy 244, 245, 246, Seminar Philosophy of Psychology
Philosophy 250, 251, 252, Seminar Philosophy of the Social Sciences
Philosophy 360, 361, 362, Research in the Philosophy of Science

Political Science 200- 201, Scope and Methods of Political Science
Political Science 212A-B-C, Contemporary Political Theory
Psychology 100, Theories of Learning
Psychology 104, 105, Human Learning
Psychology 117, Analysis of Behaviour
Psychology 120-121, Personality
Psychology 132-133, Psychology of Motivation
Sociology 170, Analytical Social Theory
Sociology 171, Social Life and Cultural Change
Sociology 173, Elements of Sociological Analysis

9. Philosophy of Religion Matthews

Philosophy 182, Philosophy of Religion
Philosophy 233, 234, 235, Seminar: Philosophy of Religion

Anthropology 127, Islamic Culture Sphere
Anthropology 161, Anthropology of Religion
History 108C, Europe in the Reformation
History 175F-176F-177F, Religious History of Modern Europe
History 187E-188E-189E, American Religious History
Hebrew 101-102-103, Advanced Biblical Hebrew
Sociology 142, Religion as a Social Institution

10. Social and Political Philosophy Murphy

Philosophy 108, Political and Social Ethics
Philosophy 168, Philosophy of Law
Philosophy 217, 218, 219, Seminar: Social and Political Philosophy

Anthropology 160, Anthropology of Law
Political Science 101,102, 103, Principles of the American Constitution
" " 109, The Judicial Process
" " 160, American Political Thought
" " 161, Problems of Democracy
" " 162, Recent Political Thought
" " 163, Political Theory and Utopia
" " 164, 165, 166, Development of Political Thought
" " 167-168, Political Behavior
" " 180-181-182, International Law (Peace)
" " 183, International Law (Conflict)
(also, seminars in Political Science which correspond to these topics)
Sociology 155, Social Structure and Political Behavior