

UNIVERSITY FACULTY SENATE

SUMMARY OF AGENDA

April 7, 1997

I. ADOPTION OF THE AGENDA

II. APPROVAL OF THE MINUTES: March 3, 1997

III. REMARKS BY PROVOST SCHIAVELLI

IV. ANNOUNCEMENTS: Senate President Palley

ANNOUNCEMENTS FOR CHALLENGE:

1. Revision of the B.S. in Economics, College of Business
2. Revision of the B.A. in Economics, College of Business
3. Revision of the B.A. in Economics Education, College of Business
4. Revision of grading policy in the College of Nursing (to replace a minimum grade of C with C-)
5. Revision of the M.A. Program in Urban Affairs and Public Policy and M.P.A. Program
6. Revision of the M.S. Program in Individual and Family Studies
7. Revision of the Ph.D. Program in Individual and Family Studies

V. OLD BUSINESS - Draft Resolutions for Revision of the University Guidelines for Faculty Promotion and Tenure

VI. NEW BUSINESS -

- A. Approval of Bioresources Engineering's (formerly Agriculture Engineering) participation in Operations Research Ph.D. Program






INTERDEPARTMENTAL
MEMORANDUM

March 21, 1997

TO: All Faculty Members

FROM: Joann Browning, Vice President 
University Faculty Senate

SUBJECT: Regular Faculty Senate Meeting, April 7, 1997

In accordance with Section IV, paragraph 6 of the Constitution, the regular meeting of the University Faculty Senate will be held on Monday, April 7, 1997 at 4:00 p.m. in room 110 Memorial Hall. The agenda will be as follows:

AGENDA

- I. Adoption of the Agenda
- II. Approval of the minutes of the Senate meeting of March 3, 1997
- III. Remarks by Provost Schiavelli
- IV. Announcements: Senate President Palley

Announcements for Challenge

[Note: To save expenses, attachments do not always include the complete information and supporting materials available to the committee(s). A copy of all background information is being held for review in the Faculty Senate Office, 205 Hullihen.]

1. Revision of the B.S. in Economics (Attachment 1)
2. Revision of the B.A. in Economics (Attachment 1)
3. Revision of the B.A. in Economics Education (Attachment 1)
4. Revision of grading policy in the College of Nursing (to replace a minimum grade of C with C-) (Attachment 2)

5. Revision of the M. A. Program in Urban Affairs and Public Policy and M.P.A. Program (Attachment 3)
 6. Revision of the M.S. in Individual and Family Studies (Attachment 4)
 7. Revision of the Ph.D. Program in Individual and Family Studies (Attachment 5)
- V. **OLD BUSINESS** - Draft Resolutions for Revision of the University Guidelines for Faculty Promotion and Tenure (Attachment 6)
- VI. **NEW BUSINESS** -

- A. Recommendation from the Committee on Graduate Studies (R. Hampel, Chairperson) with the concurrence of the Coordinating Committee on Education, ((R. Carroll, Chairperson), for the approval of Bioresources Engineering participation in Operations Research Ph.D. Program. (Attachment 7)

WHEREAS: the Department of Bioresources Engineering is well qualified to participate in the interdisciplinary Ph.D. in Operations Research, and has written a thorough "Policy and Procedures" document describing its participation, therefore be it

RESOLVED: that the Department of Bioresources Engineering be permitted to participate in the Ph.D. in Operations Research, with the attached "Policy and Procedures" document governing its participation.

Attachments: Committee Activities Report

1. Revision of the B.S. in Economics
Revision of the B.A. in Economics
Revision of the B.A. in Economics Education
2. Revision of grading policy in the College of Nursing
3. Revision of the M.A. Program in Urban Affairs and Public Policy and M.P.A. Program
4. Revision of the M.S. in Individual and Family Studies
5. Revision of the Ph.D. Program in Individual and Family Studies
6. Draft Resolutions for Revision of the University Guidelines for Faculty Promotion and Tenure
7. Approval of Bioresources Engineering participation in Operations Research Ph.D. Program

COMMITTEE ACTIVITIES REPORT

APRIL 1997

Academic Priorities Review CTE. (John McLaughlin)

Long-range planning and Faculty Senate involvement.

Committees and Nominations, CTE, ON (Carol Denson)

1. A senate ad-hoc committee to study general education at UD was appointed, Professor Carol Hoffecker agreed to chair the committee.
2. COCAN filled vacant positions and began filling positions for the 1997-98 academic year.
3. Two subcommittees of COCAN continue the review of the Academic Priorities Review Committee and the Committee on Budgetary and Space Priorities.

Cultural Activities and Public Events, CTE, ON (Harris Ross)

Considered funding requests.

Faculty Welfare & Privileges, CTE, ON (John McLaughlin)

A complaint pertaining to the sexual harassment policy.
Consideration of provisions for handicapped students.

Graduate Studies, CTE, ON (Robert Hampel)

Revisions to PH.D. programs, Dept. of Educational Studies.
Revisions to PH.D. programs, Dept. of Educational Development.

Promotions and Tenure, CTE, ON (Lawrence Nees)

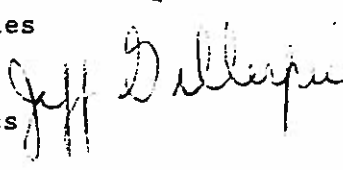
Recommendations on Promotions and Tenure for 47 candidates.

MEMORANDUM

TO: Committee on Undergraduate Studies

FROM: Jeff Gillespie, Associate Dean
College of Business and Economics

RE: New Concentrations in B.S. (Economics)
New Concentrations in B.A. (Economics)



The Department of Economics has set up optional concentrations for students working towards either the Bachelor of Science or the Bachelor of Arts in Economics. In the words of the enclosed memo from Eleanor Craig, these concentrations are intended to recognize students who "had accomplished additional work beyond the minimum required for the major."

The requirements for these concentrations are also shown on the memo.



COLLEGE OF BUSINESS AND ECONOMICS

DEPARTMENT OF ECONOMICS

University of Delaware
Newark, Delaware 19716-2720
Writer's Direct Number:

MEMORANDUM

TO: College Curriculum Committee
FROM: Eleanor D. Craig
DATE: November 4, 1995
SUBJECT: Undergraduate Concentrations in Economics

The Economics Department has voted to establish two concentrations certifying that students had accomplished additional work beyond the minimum required for the major. They are:

- (1) Applied Economics, which is work in econometrics and an ability to apply econometrics and economics in the real world (including 33 credits in Economics as specified below), and
- (2) Economic Theory and Econometrics, which is advanced study appropriate in preparation for graduate training in Economics (including 36 credits in Economics as specified below).

These concentrations are optional; students not fulfilling these requirements would receive a regular B.S. or B.A. Students may take a concentration with either a B.S. or a B.A. degree.

Existing Degree	Applied Economics Concentration	Economic Theory and Econometrics Concentration
ECON 151	ECON 151	ECON 151
ECON 152	ECON 152	ECON 152
ECON 300/301	ECON 300/301	ECON 300/301
ECON 302	ECON 302	ECON 302
ECON 303	ECON 303	ECON 303
ECON 4xx	ECON 4xx*	ECON 4xx**
	(or 6xx by approval)	(or 6xx by approval)
ECON 4xx	ECON 4xx*	ECON 4xx** or MATH 3xx
ECON 3xx/4xx	ECON 3xx/4xx	ECON 3xx/4xx
ECON 3xx/4xx	ECON 3xx/4xx	ECON 3xx/4xx
ECON 3xx/4xx	ECON 422/822	ECON 3xx/4xx
	ECON 423/823	ECON 422/822
		ECON 423/823
	ACCT 261 must be part of quantitative proficiency	12 hours of math only for quantitative proficiency

The Quantitative Proficiency requirements for the existing B.S. degree also apply to both of the new concentrations.

* not ECON 403, 405, 408, or 411

** from ECON 406, 426, 430, 441, 443, 461, 463 (exceptions possible)

**DEGREE: BACHELOR OF ARTS
MAJOR: ECONOMICS**

CURRICULUM

CREDITS

See page 56 for University and College requirements.

MAJOR REQUIREMENTS

Within the Department

(Minimum C- in all required ECON courses.)

ECON 151	Introductory Microeconomics: Prices and Markets	3
ECON 152	Introductory Macroeconomics: National Economy	3
ECON 300	Intermediate Microeconomic Theory	3

or

ECON 301	Quantitative Microeconomic Theory	3
ECON 302	Banking and Monetary Policy	3
ECON 303	Intermediate Macroeconomic Theory	3

Five Economics courses, at least two of which are at or above the 400-level 15

Within the College

STAT 201	Introduction to Statistics I	3
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or

STAT 370	Introduction to Statistical Analysis I	3
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STAT 202	Introduction to Statistics II	3
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or

STAT 371	Introduction to Statistical Analysis II	3
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Nine credits chosen from any 300-level or higher course in

Accounting, Anthropology, Business Administration, Computer Science, Finance, Geography, History, Mathematics, Philosophy, Political Science, Psychology, Sociology and Statistics. Also acceptable are ACCT 207, 208 and 261, any 200-level Mathematics course and any BUEC courses.

ELECTIVES

After required courses are completed, sufficient elective credits must be taken to meet the minimum credit requirement for the degree.

CREDITS TO TOTAL A MINIMUM OF 124

Credit will not be allowed for both courses of any of the following sets of corresponding courses: ECON 311 and ECON 411; ECON 332 and ECON 433; ECON 344 and ECON 444; and ECON 381 and ECON 483.

Departmental requirements and course descriptions are subject to continual revision. Up-to-date statements of requirements, course descriptions, and departmental policies are available in the department office.

HIST 493	Seminar: Problems in Teaching History and Social Sciences	3
EDST 420	Reading in the Content Areas	1
EDDV 400	Student Teaching	9

To be eligible to student teach, Economics Education students must have a g.p.a. of 3.0 in their major and an overall g.p.a. of 2.75. Students should consult the teacher education program coordinator (see list on p. 127) to obtain the student teaching application and other information concerning student teaching policies.

CREDITS TO TOTAL A MINIMUM OF 124

ENGLISH

The English Department has a widely varied undergraduate program. In the undergraduate literary studies major, students can study literature in English from Britain, America, and around the world. Undergraduates may elect concentrations in journalism, film, or business/technical writing, or, if they meet the admission requirements, may elect the program in English education. Journalism concentrators undergo intensive training in written journalism and serve on the staff of the University newspaper, *The Review*, in connection with their study. A number of undergraduate journalism concentrators also gain internship experience with local newspapers, TV stations, and other organizations. The film concentration includes courses in history and theory of film as well as film and literature, Black cinema, and other subjects. The program in business/technical writing is designed to prepare students for positions as professional writers or editors in industry and government. This concentration requires internships of qualified students. The concentration in English education prepares students to teach English in the secondary schools (grades 7-12). Graduates of this program receive the B.A. in English and are eligible for teacher certification in 27 states and the Overseas Dependent Schools System.

The department regularly offers a series of creative writing courses both comprehensive and tailored to individual student needs. Courses in writing poetry and fiction are available at all levels, and the department publishes the literary magazine *Caesura*. In addition, the students give poetry and fiction readings, both with the faculty and by themselves.

The following courses may not be counted toward the English major or minor: ENGL 200, 204, 210, 301, and 365. ENGL 307, 308, 309, 310, 407, and 409 may be counted only as part of the journalism concentration; ENGL 312, 410, 411, 412, 413, 414, 415, and 464 may be counted only as part of the concentration in business/technical writing; and ENGL 384 may be counted only as part of the concentration in English education.

**DEGREE: BACHELOR OF ARTS
MAJOR: ENGLISH**

CURRICULUM

CREDITS

See page 56 for University and College requirements.

MAJOR REQUIREMENTS

Within the Department

Five of the following six courses:

ENGL 202	Biblical and Classical Literature	3
ENGL 205	British Literature I	3
ENGL 206	British Literature II	3
ENGL 300	Texts and Contexts	3
ENGL 324	Shakespeare	3
ENGL 340	American Literature to the Civil War	3

or

ENGL 341	American Literature: Civil War to World War II	3
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Twelve credits at the 300-level or above distributed as follows: 12

- A course other than Shakespeare in Medieval or Renaissance literature.
- A course in literature between 1700 and 1900.
- A course in Modern literature.
- A course in cultural and theoretical studies.

**DEGREE: BACHELOR OF ARTS
MAJOR: ECONOMICS EDUCATION**

CURRICULUM

CREDITS

See page 56 for University and College requirements.

MAJOR REQUIREMENTS

Within the Department

(Minimum C- in all required ECON courses.)

ECON 151	Introductory Microeconomics: Prices and Markets	3
ECON 152	Introductory Macroeconomics: National Economy	3
ECON 300	Intermediate Microeconomic Theory	3

or

ECON 301	Quantitative Microeconomic Theory	3
ECON 302	Banking and Monetary Policy	3
ECON 303	Intermediate Macroeconomic Theory	3

Five Economics courses, at least two of which are at or above the 400-level 15

Within the College

POSC 105	The American Political System	3
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GEOG 120	World Regional Geography	3
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HIST 104	World History 1648 to Present	3
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HIST 206	United States History since 1865	3
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Additional credits to total 27 with nine credits in each discipline 15

(Political Science, Geography, and History)

Professional Studies

EDST 201	Education in a Multicultural Society	3
EDST 304	Educational Psychology - Social Aspects	3
EDST 305	Educational Psychology - Cognitive Aspects	3
HIST 491	Planning a Course of Instruction	3

Both a Bachelor of Arts and Bachelor of Science degree are available to students enrolled in the College of Business and Economics. The group and language (Bachelor of Arts) or quantitative proficiency (Bachelor of Science) requirements for students enrolled in the College of Business and Economics are described below.

A minor program in economics is also available.

Students majoring in economics will be advised by the faculty of the Department of Economics.

Application for Major:

Any University student who is not an economics major but wishes to become one must apply for admission into the major.

The principal criterion for acceptance is academic achievement, although it is also helpful to have taken some economics and quantitative courses required for the major.

Students may apply at the Office of the Department of Economics, 406 Purnell Hall. The department office will obtain a transcript to accompany your application. Applications may be submitted at any time. Decisions about acceptance will be made and notification will be mailed within one month.

DEGREE: BACHELOR OF SCIENCE MAJOR: ECONOMICS

CURRICULUM

CREDITS

UNIVERSITY REQUIREMENTS

ENGL 110 Critical Reading and Writing (with minimum grade of C-)	3
Three credits in an approved course or courses stressing multicultural, ethnic, and/or gender-related content (see p. 20).	3

MAJOR REQUIREMENTS

External to the College: General Requirements

Skill Requirements

Writing: (minimum grade C-)	3
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A writing course involving significant writing experience including two papers with a combined minimum of 3,000 words to be submitted for extended faculty critique of both composition and content.

Mathematics:

MATH 114 or 170 Elementary Mathematics and Statistics (designed for students who do not intend to continue the study of mathematics)	3
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or MATH 115 or 171 Pre-Calculus (designed for students who intend to continue the study of mathematics)	3
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One of the following:

MATH 221 Calculus I	3
MATH 241 Analytic Geometry and Calculus A	4

or
Successful performance on the college proficiency exam.

Quantitative Proficiency Requirements

Twelve credits of course work in the quantitative area. At least six credits must be taken in Mathematics at or above the 200-level except MATH 251 and 352. The remaining six credits may be chosen from other Mathematics courses at or above the 200-level, ACCT 208, 261, Statistics and Computer Science courses at or above the 300-level and BUAD 306, 430, and 446, BUEC 430 and 431, and ECON 415, 422, 423 and 426. A maximum of one economics course may be used to satisfy this requirement and used to satisfy Economics concentration requirements.

Breadth Requirements (See page 60)

Group A	12
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Understanding and appreciation of the creative arts and humanities. Twelve credits representing at least two departments.

Group B	12
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The study of culture and institutions over time. Twelve credits representing at least two departments.

Group C	12
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Historically based study of human beings and their environment. Twelve credits representing at least two departments.

Group D	13
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The study of natural phenomena through experiment and analysis. A minimum of thirteen credits representing at least two departments including a minimum of one course with an associated laboratory.

Related Areas

STAT 201 Introduction to Statistics I	3
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or

STAT 370 Introduction to Statistical Analysis I	3
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STAT 202 Introduction to Statistics II	3
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or

STAT 371 Introduction to Statistical Analysis II	3
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Nine credits chosen from any 300-level or higher courses in	9
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Accounting, Anthropology, Business Administration, Computer Science, Finance, Geography, History, Mathematics, Philosophy, Political Science, Psychology, Sociology, and Statistics. Also acceptable are ACCT 207, 208, 261, any 200-level Mathematics course not used to fulfill quantitative proficiency requirements and any BUEC courses.

Within the Department

ECON 151 Introduction to Microeconomics: Prices and Markets (minimum grade C-)	3
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ECON 152 Introduction to Macroeconomics: National Economy (minimum grade C-)	3
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ECON 301 Quantitative Microeconomic Theory (minimum grade C-)	3
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ECON 302 Banking and Monetary Policy (minimum grade C-)	3
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ECON 303 Intermediate Macroeconomic Theory (minimum grade C-)	3
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Five Economics courses, at least two of which are at or above the 400-level (minimum grade C-)	15
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ELECTIVES

Electives	32-41
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CREDITS TO TOTAL A MINIMUM OF 124

Certain corresponding courses offered at different levels of difficulty will not both be counted toward a degree. These corresponding courses include ECON 311 and ECON 411, ECON 332 and ECON 433, and ECON 381 and ECON 483.

Departmental requirements and course descriptions are subject to continual revision. Up-to-date statements of requirements, course descriptions, and departmental policies are available in the department office.

DEGREE: BACHELOR OF ARTS MAJOR: ECONOMICS

CURRICULUM

CREDITS

UNIVERSITY REQUIREMENTS

ENGL 110 Critical Reading and Writing (minimum grade C-)	3
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Three credits in an approved course or courses stressing multicultural, ethnic, and/or gender-related content (see p. 20)	3
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MAJOR REQUIREMENTS

External to the College: General Requirements

Skill Requirements

Writing: (minimum grade C-)	3
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A writing course involving significant writing experience including two papers with a combined minimum of 3,000 words to be submitted for extended faculty critique of both composition and content.

Foreign Language:	0-12
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Completion of the intermediate-level course (107 or 112) in a given language. Students with four or more years of high school work in a single foreign language may attempt to fulfill the requirement in that language by taking an exemption examination.

Mathematics:

MATH 114 or 170 Elementary Mathematics and Statistics (designed for students who do not intend to continue the study of mathematics)	3
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or MATH 115 or 171 Pre-Calculus (designed for students who intend to continue the study of mathematics)	3
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or One of the following:	
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MATH 221 Calculus I	3
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MATH 241 Analytic Geometry and Calculus A	4
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or Successful performance on the college proficiency exam.	
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Breadth Requirements (See page 60)

Group A	12
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Understanding and appreciation of the creative arts and humanities. Twelve credits representing at least two areas.

Group B 12
The study of culture and institutions over time. Twelve credits representing at least two areas.

Group C 3
Empirically based study of human beings and their environment. Cannot be satisfied by an Economics course.

Group D 13
The study of natural phenomena through experiment and analysis. A minimum of thirteen credits representing at least two areas including a minimum of one course with an associated laboratory.

Within the Department

ECON 151 Introduction to Microeconomics: Prices and Markets (minimum grade C-) 3
ECON 152 Introduction to Macroeconomics: National Economy (minimum grade C-) 3
ECON 302 Banking and Monetary Policy (minimum grade C-) 3
ECON 303 Intermediate Macroeconomic Theory (minimum grade C-) 3
ECON 301 Quantitative Microeconomic Theory (minimum grade C-) 3
Five Economics courses, at least two of which are at or above the 400-level (minimum grade C-) 15

Related Areas

STAT 201 Introduction to Statistics I 3
or
STAT 370 Introduction to Statistical Analysis I 3
STAT 202 Introduction to Statistics II 3
or
STAT 371 Introduction to Statistical Analysis II 3
Nine credits chosen from any 300-level or higher courses in Accounting, Anthropology, Business Administration, Computer Science, Finance, Geography, History, Mathematics, Philosophy, Political Science, Psychology, Sociology, and Statistics. Also acceptable are ACCT 207, 208, 261, any 200-level Mathematics and any BUEC courses.

ELECTIVES

Electives 32-53

CREDITS TO TOTAL A MINIMUM OF 124

Certain corresponding courses offered at different levels of difficulty will not both be counted toward a degree. These corresponding courses include ECON 311 and ECON 411, ECON 332 and ECON 433, ECON 340 and ECON 443, ECON 344 and ECON 444, ECON 360 and ECON 461 or ECON 463, and ECON 381 and ECON 483.

Departmental requirements and course descriptions are subject to continual revision. Up-to-date statements of requirements, course descriptions, and departmental policies are available in the department office.

THE MINOR IN ECONOMICS

The minor in economics provides students in other degree programs an opportunity to study the basic concepts and methodology in economics and to gain formal recognition for their efforts.

Required courses in minor:

Six courses (18 credits) with a grade of C- or better, including ECON 251 or 300 or 301 or 303 and five additional courses at or above the 300-level.

Application for minors:

Same as application for major. (see page 123)

DOUBLE MAJOR IN BUSINESS ADMINISTRATION AND ECONOMICS

Overall requirements:

For graduation, 137 credits are required rather than 124 (business majors) or 124 (economics majors).

Application and advisement:

Students must apply to both degree programs for this option. The student's double major program will be developed in consultation with an adviser.

INTERDEPARTMENTAL MAJOR IN ECONOMICS

The interdepartmental major consists of 51 credit hours selected from related fields with a minimum of 21 credit hours selected in each major field. In general, the Economics Department requires that the 21 hours of economics include ECON 151, 152, 302, 300 or 301, and 303. Before considering an interdepartmental major program, the student should strongly consider the option of a major in one field and a minor in the other.

International Relations is an established interdepartmental major in the College of Arts and Science. Interdepartmental majors have also been established for Economics and either French or Spanish, Economics and Political Science, and Economics and Mathematics.

Students wishing to explore the possibility of developing an interdepartmental major with other departments should arrange conference with their faculty advisers and the appropriate department chairs to plan their programs. Approval of the program is also required by the dean of the college or colleges in which the student is registered.

See also the section on Interdepartmental Major (page 56) in the College of Arts and Science section of this catalog for the requirements for an interdepartmental major combining economics with another field in the College of Arts and Science. The application process for an interdepartmental major in economics is the same as the application for a major in economics.

FINANCE

Professional education in finance serves to develop the capabilities of students so that they may assume positions of leadership and responsibility at all levels of financial management in our society. The undergraduate degree program in finance reflects the growing demand for greater financial management capability in banking and in the financial services related industries. Students majoring in Finance may also pursue a minor in international business and apply to the minors in management information/decision support systems or economics as well as minors offered outside of the college.

To earn the major in Finance, one must: (1) earn a minimum of 124 credits, (2) achieve a minimum cumulative grade point average of C (2.0) on all work undertaken at the University of Delaware, (3) fulfill the course requirements of the major, and (4) achieve at least a C- in specified business, finance, accounting and economics courses. Only one of the five required upper-level courses in Finance may be taken at another institution.

Students also take a broad range of courses throughout the University that are outside the College of Business and Economics. These include a specified number of courses in the humanities, sciences, social and behavioral sciences, and in disciplines that develop specific skills in mathematics, statistics, and written and oral communication. Additional electives are also required to give each student the opportunity to choose courses most consistent with his or her interests.

DEGREE: BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION MAJOR: FINANCE

CURRICULUM

CREDITS

UNIVERSITY REQUIREMENTS

ENGL 110 Critical Reading and Writing (minimum grade C-) 3
Three credits in an approved course or courses stressing 3
multicultural, ethnic, and/or gender-related content (see p. 20).

MAJOR REQUIREMENTS

External to the College: General Requirements

Humanities 12
Twelve credits from the following departments: Art History, History, English (except composition or similar courses), Philosophy, Music (except credit for participation in instrumental and/or choral organization).

NURSING

F 1=Help 2=Exit 3=Return 4=Query 5=Action 7=Backward 8=Forward EMCC0000

The Department of Nursing has approved the proposed changes in the nursing policy for undergraduate nursing and seeking approval from the undergraduate Faculty Senate. The rationale for the requested change is twofold. First, to make the department policies more consistent with those of the overall university and college. Second, to make the clinical and didactic department policies internally consistent.

The department's previous policy required a minimum grade of C in nursing course and allowed for no limit on repeating didactic nursing courses. The significant change are relaxing the minimum grade in nursing courses to C- and ~~limiting the repeating of all nursing courses to two attempts.~~

Requested Policy Change

A minimum cumulative grade-point index of 2.0 is required to enroll in all nursing courses. In order to meet degree requirements, nursing majors must have a minimum cumulative grade-point index of 2.0 to progress in the nursing sequence. A student who earns a grade lower than C- in a nursing course must repeat the course and achieve a grade of at least C- before enrolling in a more advanced nursing course.

Students are not permitted to repeat any nursing course more than once. (Further students who earn a grade lower than C- in more than one nursing course will not be permitted to continue in the program.) Program policies are currently under review, and all students must meet regularly with their faculty advisor to ensure that all requirements are being met.



COLLEGE OF URBAN AFFAIRS AND PUBLIC POLICY

University of Delaware
 Newark, Delaware 19716-7301
 Ph: 302/831-2394
 Fax: 302/831-3587

TO: Robert L. Hampel, Chair
 Committee on Graduate Studies

FROM: Jeffrey A. Raffel, Director *Jeffrey A. Raffel*
 M.P.A. Program
 Timothy K. Barnekov, Interim Director *Timothy K. Barnekov*
 Urban Affairs & Public Policy Program

DATE: December 2, 1996

SUBJECT: Revisions to M.A. Program in Urban Affairs & Public Policy and M.P.A. Program

The name of the area of concentration in the M.A. program will be changed to: Community Development and Nonprofit Leadership. The content will remain the same.

Add an area of specialization in the M.P.A. program entitled "Community Development and Nonprofit Leadership. The adoption of Community Development and Nonprofit Leadership as an area of specialization in the M.P.A. program formalizes a specialization that many students have pursued under the current guidelines that allow students to create their own area of specialization in consultation with their advisor. It is expected that this area of specialization will be very attractive to potential applicants as well as to current students. The content of the specialization will be the same as the concentration in the urban affairs & public policy program (copy attached).

These revisions have been voted (unanimously) by the Urban Affairs & Public Policy program faculty and the M.P.A. program faculty and approved by Dan Rich, dean of our College.

Could you please determine whether these changes require full Committee review and, if so, schedule our proposal for action at the next meeting. Thank you for your consideration.

lb
 Attachment
 cc: Mary Martin

Community Development and Nonprofit Leadership Specialization Basic Courses (12 credits)

Students must take seven core courses:

URAF 803--Seminar in Public Administration
URAF 815--Public Management Statistics
URAF 819--Management Decision Making
URAF 833--Public Finance and Fiscal Management
URAF 834--Public Economics
URAF 835--Organizational Theory and Administration
URAF 837--Public Sector Human Resources Management
URAF 860--Internship Seminar --unless waived
URAF 864--Internship Fieldwork --unless waived

In addition to the seven core courses, students in this specialization must take four 3 credit courses. One seminar is required:

URAF 607 Community Analysis and Development Seminar

Three of the courses listed below must be taken; however, with the permission of the advisor, a student may substitute another course for one of these.

URAF 606 Local Economic Development: Policy and Practice
URAF 608 Poverty, Neighborhoods and Community Development
URAF 612 Urban Housing Policy and Administration
URAF 840 Introduction to the Nonprofit Sector
URAF 868 Research in Community Analysis and Development
URAF 870 Readings in Community Analysis and Development

Analytical Paper or Thesis (3 to 6 credits)

The student must also complete an analytical paper (three credits) or a thesis (six credits) in the area of specialization.

4. Curriculum Specifics (Attachment)

Present Requirement

REQUIREMENT FOR M.S. IN INDIVIDUAL AND FAMILY STUDIES

The M.S. program in Individual and Family Studies includes content in areas such as individual development across the life span (infancy, early childhood, middle childhood, adolescence, adulthood, and gerontology), family studies, community studies, and early childhood education for typical and atypical children. Specific requirements are:

Research Methods - HURE 650	3 credits
Family Studies - IFST 621	3 credits
Development through the Lifespan - IFST 601	3 credits
Seminar - IFST 665	1 credit
Specialty Requirements and Electives	21 credits
Thesis or Equivalent	6 credits
TOTAL	37 credits

New Requirements

REQUIREMENTS FOR M.S. IN INDIVIDUAL AND FAMILY STUDIES

The M.S. program in Individual and Family Studies includes content in areas such as individual development across the life span (infancy, early childhood, middle childhood, adolescence, adulthood, and gerontology), family studies, community studies, and early childhood education for typical and atypical children. Specific requirements are:

Research Methods - HURE 650	3 credits
Family Studies - IFST 621	3 credits
Development through the Lifespan - IFST 601	3 credits
Seminar - IFST 665	1 credit
IFST Courses	9 credits
Statistics OR Research Methodology	3 credits
Electives	9 credits
Thesis or Equivalent	6 credits
TOTAL	37 credits

4. Curriculum Specifics (ATTACHMENT)

Present Requirements

REQUIREMENTS FOR PH.D. IN FAMILY STUDIES

The Ph.D. program in Family Studies focuses on the interdisciplinary nature of problems, issues, and the development of individuals and families over the life span. Emphasis is placed on life course transitions and family systems.

Core Credits (Total of 21 credits)

IFST 815 - Research Issues and Designs	3 credits
800 Level Statistics	3 credits
PLUS	
9 credits selected from:	
IFST 850 - Child and Family Theory	3 credits
IFST 855 - Family Processes	3 credits
IFST 860 - Diversity in Family Structure	3 credits
IFST 875 - The Family and the Life Span	3 credits
PLUS	
6 credits selected from:	
IFST 828 - Trends and Issues in IFS	3 credits
IFST 865 - Advanced Seminar in Family Studies	3 credits
IFST 870 - Family Crisis and Coping	3 credits
IFST 880 - Families and Institutions	3 credits
PLUS	
IFST 969 - Dissertation	9 credits

New Requirements

REQUIREMENTS FOR PH.D. IN FAMILY STUDIES

The Ph.D. program in Family Studies focuses on the interdisciplinary nature of problems, issues, and the development of individuals and families over the life span. Emphasis is placed on life course transitions and family systems.

IFST 815 - Research Issues and Designs	3 credits
800 Level Statistics	3 credits
PLUS	
12 credits selected from:	
600/800 Level IFST Courses	12 credits
PLUS	
1 credit selected from:	
IFST 865 - Advanced Seminar in Family Studies	1 credit
PLUS	
IFST 969 - Dissertation	9 credits
PLUS	
600/800 Level Research Methods	3 credits
600/800 Level Statistics OR Measurement	3 credits
600/800 Level electives	6 credits
TOTAL	40 credits

DRAFT RESOLUTIONS FOR REVISION OF THE UNIVERSITY GUIDELINES
FOR FACULTY PROMOTION AND TENURE

The following resolutions stem from the proposals made to the Senate in May 1996, then sent to an ad hoc Task Force appointed by the Senate Executive Committee in September 1996. The current resolutions are substantially the same as those circulated to all Deans and Chairs for distribution to the faculty in December 1996, and were the basis for the Open Hearing of February 1997. After the hearing the Task Force made changes in the following areas: Resolution #1, Part 2 under Professor; Resolution #3, Part 4 at d; Resolution #5, Part 6 at a [olim b]. In all other respects these resolutions are unchanged.

The overall intent of the proposed revisions is to improve the fairness and effectiveness of the promotion and tenure process at all levels. The proposed reformatting of departmental criteria is designed to highlight the unique features of each discipline and unit so that they can play the primary role they were meant to play at the University level of review. The various procedural changes aim at procedural fairness and increased effectiveness at levels of review beyond the department. The changes in schedule are designed to allow time for careful consideration and deliberation and for a less rushed appeals process at higher levels of review, where the number of cases is especially large.

[N.B. Words underlined are portions of the existing document to be deleted; words in brackets and bold are to be added]

Resolution #1

WHEREAS, the section of the Faculty Handbook dealing with Promotion Policy (Section K) has not been reconsidered or seriously revised for many years, and

WHEREAS, various areas of the existing Promotion Policy have proven either insufficiently explicit or unhelpful in practice, and

WHEREAS, the University Faculty Senate Committee on Promotion and Tenure has reviewed the existing Policy, and recommends several changes, and

WHEREAS, a Faculty Senate Task Force has reviewed these changes, consulted with Departments, and held an open hearing on the matter, and

WHEREAS, existing documents often make no clear distinction between the expectations for promotions at different ranks, therefore be it

RESOLVED, that Faculty Handbook, Section K, Parts 1 and 2 be amended as indicated in the attached draft, where words and passages in italics are to be deleted, and words and passages in bold face, set inside brackets, are to be added.

Part 1. Introduction

The ultimate objectives of promotion policies at the University of Delaware are [faculty] excellence and [procedural] fairness. In order to preserve and enhance its reputation as an institution of higher education, the University must establish and maintain high standards of teaching, scholarly and artistic activity, and service. At the same time, it must treat each faculty member with decency and respect. Thus, these procedures seek to promote the individual's welfare and professional development while at the same time fostering the University's growth toward excellence.

The process rests firmly on peer evaluations, for the faculty itself is best able to establish and apply promotion criteria. Furthermore, the promotion system recognizes the uniqueness of the disciplines that comprise the University community [faculty]. Indeed, departments have the major responsibility of [for] establishing and administering guidelines (subject to wider approval) and making initial promotion and tenure recommendations.

One should recognize, however, that Such [departmental] decisions affect the University as a whole, and consequently, college and University committees, together with appropriate administrators [at each level,] also play an important role. They insure that policies and decisions serve the interests of the University and are roughly comparable across its many divisions.

Part 2. Minimum Standards for Promotion

Since the mission of the University encompasses teaching, scholarship, and service, faculty members must strive for excellence in all three areas. Scholarship, whether in the form of research, publication, professional development, or artistic creativity, is a significant part of each person's contribution to the academic community. Everyone must pursue some form of scholarly activity. How this work is made available to other scholars obviously depends upon the particular discipline, but promotion requires

evidence that significant achievements have been and will continue to be made.

The University's obligation to scholarship notwithstanding, a major goal of any educational institution is to encourage and [to] demonstrate excellence in teaching. Hence, faculty members with teaching responsibilities must demonstrate high-quality teaching performance.

Service at all levels--department, college, University, community, profession, or nation--is also an integral part of the University's mission and must not be neglected on the grounds that scholarship and teaching have higher priority.

These considerations suggest University expectations for promotion to various academic ranks. Although departments [may] write specific criteria to fit their particular circumstances and needs, they must conform to the spirit of these standards. Unsatisfactory performance in any of the three areas, for example, precludes promotion. To provide comparability across the University, then, the following minimum achievements should be met [for promotion to these ranks:]

Assistant Professor: Apart from earning the doctorate or other appropriate terminal degree, the primary requirement is the demonstrated ability and desire to achieve excellence in scholarship and teaching and to make positive contributions in all three areas. At [For] this rank, past achievements are not so important as evidence of future growth and accomplishment.

Associate Professor: Inasmuch as promotion within the University to this rank [generally] carries tenure--a binding commitment on the part of the University--the qualifications must be especially rigorous. At a minimum, the individual should show excellent achievement in scholarship or teaching and high quality performance in all areas. Furthermore, there should be unmistakable evidence that the individual has progressed and will continue to do so. A mere satisfactory or adequate record as an assistant professor is not sufficient: there must be very clear indication, based on hard evidence and outside peer evaluations, that the candidate has in fact attained high levels of accomplishment.

Professor: This rank is reserved for individuals who have established reputations in their disciplines

[fields] and whose contributions to [their profession and] the University's mission are unquestioned [excellent]. There should be unmistakable evidence of significant development and achievement [in teaching, scholarship and service] since the last promotion. Once again, the candidate's claim to have met these requirements must be thoroughly and completely documented by outside peer evaluations and other materials.

University employees with professional contracts who also hold faculty appointments in academic units are eligible for promotion without tenure and will meet the same criteria for promotion as do members of the unit who hold academic appointments.

Resolution #2

WHEREAS, there has been much misunderstanding of important procedures regarding the rights and responsibilities of candidates for promotion, including the transmittal to the candidate of all letters recommending or not recommending promotion (as opposed to oral summaries or edited letters), at all levels, and

WHEREAS, differing from almost universal academic practice, and unsupported by any explicit authorization in existing policy guidelines, it has become common practice at this University that candidates for promotion to Associate Professor with tenure are considered in the sixth year, and then again in the seventh and terminal year, be it therefore

RESOLVED, that Faculty Handbook, Section K, Part 3 be amended as indicated on the attached Policy, where words and passages in italics are to be deleted, and words and passages in bold face, set inside brackets, are to be added. If the clause relating to no tenure decision in the terminal year is approved, it would not go into effect until the academic year 1998-1999.

Part 3. Candidate's [Rights and] Responsibilities

Faculty members have the right and responsibility to

know all relevant departmental, college and University promotion criteria, policies, and practices. They should exercise this right at the earliest possible time and [should] plan their academic development and activities with the guidelines in mind. (*The evaluation procedures described in the section, "Evaluation of Faculty" provide an excellent opportunity for making such plans on a regular basis. Also see Parts 10 and 11 of this section.)

A faculty member has the right to apply for promotion at any time [in any academic year] (subject to the provisions pertaining to tenure described previously in the section "Evaluation of Faculty") and has the sole right to advance or withdraw the dossier from the promotion process [schedule provided in section 8. However, tenure-track faculty in their terminal year may not apply for promotion.

Time-in-rank is not a criterion for promotion. Candidates must compile a record sufficient to warrant promotion prior to starting this process.

Each candidate will submit a promotion dossier to the department by September 1. This dossier is the basis of promotion decisions and it is the responsibility of the candidate to prepare an organized and cogent dossier, representing the case for promotion as well as possible. The organization of the dossier is described in section 9.

A candidate for promotion has the sole right to withdraw from the promotion process at any step. Otherwise, after review, the dossier is transmitted to the next level.]

A candidate for promotion also [will be provided the written recommendations of] has the right to be informed in writing by each reviewing body--department committee, chairperson, college committee, dean, University Promotions and Tenure Committee, and University Provost--of its decision. The reasons for adverse [All] recommendations must be explained to the candidate as specifically and [by such bodies must be justified] as completely as possible and reasonable.

Keeping in mind the schedule given in Part 8, which requires that dossiers be submitted for departmental review no later than September 30 [1], a candidate has the responsibility to consult with the department chairperson, promotion committees or any other appropriate person regarding the content and preparation of the dossier. (*Note, however, that the

schedule does not preclude the addition by the department of new evidence (e.g., recent publications or acceptances) at any time so long as the candidate concurs.)

[Other than letters from solicited peer reviewers and those individuals in the promotion ladder shown above, only materials approved by the candidate may be added to the dossier. These materials might be recent publications or journal acceptances and may be added to the dossier at any time during the promotion process.

Any appeals by the candidate will also be added to the dossier, along with any rebuttals from the appropriate committee or individual in the promotion ladder.]

Resolution #3

WHEREAS, there have been some irregularities in the proper composition of the promotion and tenure committee, which will neither include nor be selected by the Department Chair, be it therefore

RESOLVED, that Faculty Handbook, Section K, Part 4 be amended as indicated on the attached Policy, where words and passages in italics are to be deleted, and words and passages in bold face, set inside brackets, are to be added.

Part 4. Departmental Responsibilities (** In colleges, schools, or divisions without departments, all of the requirements for departmental action devolve upon the college or division.)

The department bears the major burden of defining standards, specifying the procedures to be followed in deciding whether the standards are met, and judging the credentials submitted in support of each application for promotion. Minimum requirements for the satisfactory discharge of these departmental responsibilities include:

a. After approval by the [departmental faculty,]

appropriate college committee, dean, the University Committee on Promotions and Tenure, and the University Provost (see below), promotion criteria, policies, and practices [adding to, or interpreting in light of the special features of the discipline or circumstance of the unit those provisions and guidelines contained in this document] must be published and distributed to all members of the department, to the appropriate committees and University officials, and to the University Faculty Senate through its Committee on Promotions and Tenure.

- b. Changes in promotion and tenure statements, which should be made only for the most compelling reasons, should first be sent to the appropriate college committee and dean. [If **approved**,] they should then be forwarded to the University Committee on Promotions and Tenure and to the University Provost, both of whom will review the proposals for compliance with general University guidelines [this document,] and suggest revisions if necessary. Upon acceptance of the revised document, they will sign and date it to signify its approval. Proposed changes to existing statements must be submitted to the University Committee and University Provost by March 1 to become effective by September 1.
- c. The specific criteria upon which recommendations are based must be clearly set forth in the formal statement of promotion policies and procedures of the [University, college, and] department. The qualities and achievements taken into account by the department in making its decisions have to [should] be explicitly described. The kinds of evidence by which the attainment of the stated criteria is to be judged must [should] also be specified in the published statement, as must [should] the specific weight given the various criteria and the kinds of evidence to be submitted in support of their having been met.
- d. Departmental promotion and tenure procedures must be democratic. Although the application of this principle will obviously vary from department to department, certain ground rules have to [must] be observed. The department's promotion and tenure committee should be constituted and operated in such a fashion that due respect is given to the opinions and advice of all faculty. Units which elect to include untenured faculty in the review

process should ensure that individual participation is voluntary and that the interests of those who wish to participate are protected (for example by using secret ballots). A majority of the committee should consist of faculty who are at or above the rank to which a candidate seeks promotion. (* Departments lacking **[a sufficient number of faculty at the appropriate rank]** one or several full professors should solicit participation [of faculty] by full professors from kindred departments whenever a person seeks promotion to that rank. [Procedures for this solicitation must be specified in the department's document.]) The committee should also consult with the department chairperson, who should offer counsel but not **[neither]** participate in its final deliberations nor vote on its recommendation. The committee should meet formally and follow recognized **[established]** procedures.

- e. The department's statement **[letter]** of recommendations, and decisions, which should **[must]** indicate the numerical vote, describe the committee's composition and explain the reasons for the decision, must be transmitted in **[full and in]** writing to the candidate and **[be signed by all committee members.]** to other individuals and committees reviewing the dossier. [The recommendations of the department committee shall be addressed to the department chairperson and inserted into the dossier.] When they arise, signed minority opinions may **[will]** be forwarded as appendices to the committee's recommendations.
- f. The **[departmental chairperson]** recommendations of the department committee shall be forwarded to the department chairperson, who will review the evidence **[dossier]** submitted by the candidate, the report of the committee, and the stated criteria, and make a recommendation supporting or failing to support the candidacy. The chairperson should explain, in writing, the decision to the candidate and to the department committee. [The chairperson's recommendation is transmitted in full and in writing to the candidate and also inserted into the candidate's dossier.]
- g. If the department committee and chairperson agree in recommending promotion, or if either or both recommend against promotion but the candidate chooses not to withdraw it, the application goes forward to the college committee and the dean,

together with the committee's and the chairperson's recommendations.

Resolution #4

WHEREAS, it is the fundamental premise of this process that it begins with recommendations at the Department level, made by colleagues most familiar with the candidate's field, while college and university committees are presumed to be composed of colleagues not from the candidate's Department, be it therefore

RESOLVED, that Faculty Handbook, Section K, Part 5 be amended as indicated on the attached Policy, where words and passages in italics are to be deleted, and words and passages in bold face, set inside brackets, are to be added.

Part 5. Promotion Procedures at the College Level

In order to assure that both candidates and the University are well served, each college or division will establish and maintain a promotion and tenure committee [**comprised of tenured faculty of the college.**] These committees must be sensitive to the special needs of their colleges while still observing these guidelines.

a. A Promotion and Tenure Committee, elected by the faculty of the college (or its representatives), shall evaluate the merits of each candidate's dossier as well as review departmental criteria to insure reasonable uniformity. (** In colleges, schools, or divisions lacking departments, this [**evaluation of the candidate's dossier**] review will be the initial peer evaluation and will assume the responsibilities described for departments in part 4 above.) The college committee should be broadly representative of the major fields within its purview. Not every discipline can be represented, of course, but the committee should be sufficiently large to encompass a wide range of viewpoints. Like departmental committees, it should publish and distribute its policies and practices and make every effort to see that they are applied consistently from year to year.

[b. Like departmental committees, a college promotion and tenure committee should publish and distribute its policies and practices and make every effort

to see that they are applied consistently from year to year. These policies must be approved by the University Committee on Promotions and Tenure and by the University Provost.

- c. Faculty members serving on college committees may neither participate in the discussion of, nor vote on, candidates from their own department at the college level.]
- [d.] The results of the review by the college committee shall be promptly reported in [full and in] writing to the candidate, and department [committee,] and [department chairperson and be] forwarded with the dossier for review and recommendation by [to] the dean or director. Fairness to the candidate and department requires that the committee explain its disagreements (if any) with recommendations made at an earlier stage.
- e. Before reaching a final decision, however, the committee may--indeed is encouraged to-- consult with the candidate or department regarding additional evidence that might clarify the promotion dossier. The committee should allow a reasonable amount of time for this purpose.
- f. The dean or director shall review the dossier and shall either endorse or recommend against the promotion in a written notification to the candidate, department committee, [chairperson] and college committee. The dean or director shall also forward the dossiers and statements of action on them to the University Committee on Promotions and Tenure and to the University Provost.
- g. Each college committee and dean will establish and publish procedures and schedules (consistent with Part 8) for hearing appeals to their decisions. [These procedures will be included in the College's document.]

Resolution #5

WHEREAS, it is the fundamental premise of this process that it begins with recommendations at the Department level, made by colleagues most familiar with the candidate's field, while college and university committees are presumed to be composed of colleagues not from the candidate's Department, be it therefore

RESOLVED, that Faculty Handbook, Section K, Part 6 be amended as indicated in the attached Policy, where words and passages in italics are to be deleted, and words and passages in bold face, set inside brackets, are to be added.

Part 6. The University Committee on Promotions and Tenure

This committee serves two major functions: first, it, together with the University Provost, assists departments (or colleges or divisions) in developing or revising their criteria for promotion and tenure; and, second, it makes recommendations to and consults with the University Provost concerning every candidacy for promotion and tenure.

[This committee serves two major functions. It recommends to and consults with the University Provost concerning every candidacy for promotion and tenure. Just as departmental and college committees work in concert with chairs and deans, the University committee works with the University Provost to oversee the promotion process from a faculty point of view. The committee also, together with the University Provost, assists departments in developing or revising their criteria for promotion and tenure.]

a.[b] [In addition,] the committee shall receive, consider, and confer with the University Provost and with the initiating unit on any proposed new statement or criteria for promotion or on any proposed changes in existing statements. No statement or revision shall become effective until approved by the Committee and the University Provost. (See #2, "Minimum Standards for Promotion" and #4, "Departmental Responsibilities" described earlier in this section.)

b.[a] The committee receives from the deans and directors all promotion dossiers [(except those withdrawn by candidates)] and makes a

recommendation about [on] each. In reviewing applications for promotion, the committee judges the relevance and appropriateness of the credentials offered to support the request for promotion. In doing so, the committee exercises its best judgment as to the adequacy of the evidence in meeting the unit's [University, College, and Department] published criteria.

[Before reaching a final decision the committee may solicit additional information from the candidate, the department promotion committee, the department chair, the college committee, or the dean of the college regarding additional evidence that might clarify the promotion dossier.

Committee members may neither participate in the discussion of, nor vote, on candidates from their own department at the University level.]

Following its review, the committee will forward the dossier, together with its recommendations to the University Provost and will notify [,in full and in writing,] the candidate, the department committee, the department chairperson, the college committee, and the dean or director of its recommendation and the reasons for it.

- c. The committee, in the course of its reviews of applications and the criteria statements applicable to them, may discover deficiencies in the statements. It shall communicate such inadequacies to the University Provost and to the unit and shall assist in the satisfactory amendment of the statement.

Resolution #6

WHEREAS, it has proven at all levels on many occasions that there is simply not sufficient time for the careful consideration and review of candidates' dossiers, especially in cases where the candidate has appealed a recommendation, resulting in undue haste, and

WHEREAS, the schedule of the Board of Trustees meetings cannot be moved back in time, the only means of increasing the time available for review of dossiers being to move the beginning of the process to an earlier date, be it therefore

RESOLVED, that Faculty Handbook, Section K, Parts 7 and 8 be amended as indicated on the attached Policy, where words and passages in italics are to be deleted, and words and passages in bold face, set inside brackets, are to be added.

Part 7. The University Provost

The final review of applications for promotion is made by the University Provost. Before the University Provost rejects recommendations made by the [University] committee, he or she must report to it the reasons for the rejection and will meet with the committee to try to resolve the disagreement.

Following consultation with the [University] committee, the University Provost forwards approved recommendations to the President for approval by the Board of Trustees. Should the University Provost fail to support an application for promotion, the reasons for the decision will be given to the candidate, the department committee, the department chairperson, the college committee, the dean or director, and the University Committee on Promotions and Tenure.

8. Schedule

The time schedule for the promotion process is [shown below]: Whenever possible, these dates [deadlines] should be anticipated and dossiers forwarded (with recommendations) at an earlier date. (Note: Candidates should [can] not be required to submit dossiers before September 1.)

[15 March	Candidate notifies chair of intention to apply for promotion in writing. Departmental Promotion and Tenure Committee begins the process of soliciting peer evaluations.]
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- <u>30</u> [1] September	Dossier to Department Committee and Chairperson.
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[1 October	Department's recommendation to the Chairperson.]
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<u>1 November</u> [15 October]	<u>Department's</u> [Chairperson's]
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recommendation to the College
Committee and Dean.

[1 December College Committee's recommendation
to the Dean.]

15 [2] January College Committee and Dean's
recommendation to the University
Promotions and Tenure Committee

1 March

[15 February] University Promotions and Tenure
Committee recommendations [to University
Provost]

10 March

[25 February] University Provost's recommendations.

As noted above, each college and dean will establish
schedules for hearing appeals. The University Senate
Committee on Promotions and Tenure and the University
Provost's Office will receive and hear appeals up to
but not beyond March 30. The deadlines are established
to provide candidates with an adequate period of
reconsideration consistent with deliberate reviews by
the appropriate persons and to prepare final
recommendations to the Trustee committee on Education
and Training, which meets in early April. Any appeals
not filed and heard by March 30 must be carried over to
the following academic year.

[Appeals are possible at every level. An intention to
appeal must be given to the appropriate body within two
working days of notification of the decision. Appeals
must be handled within two weeks, except under
extenuating circumstances. The University Faculty
Senate Committee on Promotions and Tenure will hear no
appeals beyond March 1, and the Provost's Office will
hear no appeals beyond March 15. Any appeals not heard
by these dates must be carried over to the following
academic year.]

Resolution #7

WHEREAS, at the level of the University Senate Promotion and
Tenure Committee and the University Provost, there are very large
numbers of dossiers, some very large, whose organization
sometimes varies substantially, so that much time is wasted in

searching for important materials, which are sometimes not found at all, and

WHEREAS, there have been chronic problems about the solicitation of letters of evaluation from external reviewers, with numerous violations of either reviewers' confidentiality or the candidate's right to be given the unedited text of Department and other level recommendations, as well as some concerns that all or none of the reviewers may have been those suggested by the candidate, be it therefore

RESOLVED, that Faculty Handbook, Section K, Part 9 be amended as indicated on the attached Policy, where words and passages in italics are to be deleted, and words and passages in bold face, set inside brackets, are to be added.

Part 9. Promotion Dossiers

It is the individual's responsibility to present the best case for promotion since he or she is most clearly involved in the outcome. It is extremely important that the dossier be well organized and carefully prepared for [because] redundant, superfluous or confusing information that may obscure more than it clarifies [enhances] one's qualifications and achievements.

All dossiers should be organized under the following headings in this order.

a. Preliminary Matter [Introductory Material]

1. Contents and Guidelines

- * Recommendation for Promotion form]
 - o A table of contents
 - o A copy of the [college's and] department's promotion and tenure criteria

[2. Application for Promotion

- * Candidate's letter requesting promotion]
 - o A curriculum vitae
- [* Candidate's statement (optional)

3. Internal Recommendations]

- o The department committee's recommendation
- o The chairperson's recommendation
- o College committee's recommendation (if any)
- o Dean or director's recommendation or endorsement

- o University committee's recommendation
[* Any appeal materials (appeals and rebuttals)]

4. External Recommendations]

- o Copies of Letters of evaluation from peer reviewers together with supporting material. (see below) [These letters will be numbered sequentially for reference.]
- o Candidates statement (optional)

b. Evidential Materials

1. Teaching

Teaching is an extremely important factor in promotion decisions and one must incorporate into the dossier several kinds of evidence. The Possibilities include:

- o Peer evaluations that attest to the candidate's pedagogical competence, knowledge of the subject matter, organization and preparation, ability to stimulate intellectual curiosity and willingness to work, innovative capacity, and such. [These evaluations will be solicited by the departmental Promotion and Tenure committee.]
- o Student evaluations, properly tabulated and summarized, with means, standard deviations, and the rate of return for each question. The procedures used in administering the evaluations should also be described. Where available comparable departmental evaluations and past measures of the candidate's performance should be provided. (*Note: Student evaluations should only be used in conjunction with other indicators and only to measure teaching competence, not [just] popularity. Also The type and size of courses should be taken into account.)
- o Verbatim copies [Samples] of student comments from student evaluations. [The means by which these samples were selected should be provided.]

- o Testimonials from a random selection of former and current undergraduate and graduate students. The procedures for drawing the sample should be clearly described.
- o Criterion-referenced measurement
- o Course portfolio evaluation
- o Student performance in later sequential courses
- o Standardized test scores
- o Self-evaluation
- o Long-term follow-up of students

2. Scholarship

As in the case of teaching, the evaluation of scholarship requires much thought and care. Some professional activities count more than others, and units should indicate their weighing of these activities.

The main types of evidence of scholarly attainment include:

Solicited Peer Evaluation

Solicited peer evaluations [serve as a major indicator of an individual's impact on the profession. (These evaluations will appear in the dossier under a.IV.)]

Solicited [These] peer evaluations are always required for promotion. Although the number will [may] vary by rank and department or division, every dossier should [must] include outside peer reviews, [solicited by the departmental committee and] written by individuals with established reputations in the candidate's field. These statements should analyze and evaluate critically the candidate's work and accomplishments and they should also comment on the candidate's potential for future development.

Since peer evaluations are such an important indicator of a person's achievements, they should be included in the preliminary matter of the dossier where they are easily accessible.

Furthermore, The solicitation of these evaluations must follow certain [these] guidelines:

- (1) A candidate may [will] submit a list of potential reviewers, but the department committee should suggest additional names. [some of whom will be approached for recommendations. The department committee will suggest additional reviewers. This total list of names will be greater than the total number of letters solicited.] Although the candidate must be informed of all potential reviewers and have an opportunity to comment on them, [it is] the department [committee], and not the candidate, [that] makes the final selection. [The final list of names will not be given to the candidate so as to preserve confidentiality of the reviewers.]
- [(2) Candidates must not contact potential reviewers about the promotion process at any time.]
- (2) [3] Letters of evaluation should [will] be confidential [and peer reviewers will not be mentioned by name or affiliation in any recommendations or evaluations. Reviewers may be referred to by number.]
- (4) Each peer review should be accompanied by the letter requesting the evaluation, and a curriculum vita or biographical statement describing the reviewer's credentials, [and a statement of] relationship to the candidate. Insofar as reasonable and possible, only reviewers without personal ties to the candidate should be selected.
- (5) If a person jointly authors an article, it must be known what the individual contributions of each contributor are to the finished work. Where authors are listed alphabetically or an individual

is the junior author on a number of joint publications, it is important that the individual's contributions to each scholarly publication be assessed. [If a candidate has collaborative works, it must be clear to the peer evaluator what the candidate's contributions were to the finished work.] Reviewers must be able to determine whether an individual can execute research in his or her own right.

[* Evidence of scholarly attainment include:

(a) Published Materials

Books, refereed and other articles, conference proceedings, works of art, recordings, and other permanent additions to the candidate's field are to be listed in the dossier.

For all of these works, the candidate should make clear the extent to which the work has been peer reviewed.

For collaborative works, the candidate's contributions should be clearly indicated. Different fields have entirely different traditions that determine the order of names associated with these works (e.g., alphabetically, by seniority) and the significance of the order of the names should be clearly stated in the dossier.

(b) Awards and prizes

© Lectures/presentations/performances at other institutions or conferences.]

(d) Unsolicited Peer Evaluations

There are other kinds of information that can be interpreted as peer evaluations, although not of the same kind as derived through solicitation. This material, which should also be included in the dossier since it too describes the candidate's accomplishments,

includes among others: articles citing the individual's work and the reasons for its importance; reviews of books, particularly when the reviews are in depth; reprinting of articles or parts of books in collections of distinguished contributions to a subject, and so forth.

(e) Professional Activity Prior to University Employment

Scholarly productivity for promotion to the rank of associate professor generally cannot be based on work completed in earning the doctorate or other appropriate terminal degree prior to arrival at the University of Delaware. The research involved for that degree was one of the reasons for initial employment; promotion, on the other hand, must consider evidence of scholarship accomplished subsequent to that performed for the degree.

This requirement does not mean that publications based on the dissertation should be totally ignored. Rather, the candidate must offer clear evidence of substantial scholarly achievement made after the awarding of the doctorate or other appropriate terminal degree.

Like research, any prior teaching or service plays its role in the hiring contract, the level of monies involved, and the responsibilities attached to it. Prior activity plays little or no role in the promotion except to form a meaningful context against which later development and accomplishments can be judged. The point is simply that There must be evidence of continuing productivity.

(f) Prestigious Grants

The acquisition of research or other grants, such as Guggenheim or NSF awards, is obviously a testimony to a person's competence and reputation and should be described in the dossier.

[g] Reviews of Published Materials,

Performances or Exhibits.]

(h) Unpublished Material

Unpublished material may in some circumstances be an important indicator of a candidate's competence and achievements. Its evaluation, however, must be especially thoughtful. In particular, if it is to be a formal part of the dossier, it should be sent to outside reviewers for a critical assessment of its merits. The comments are meant to apply to unpublished manuscripts as well as so-called "in house" publications, such as research reports that are not subject to an external review process.

[I) Other Evidence of Scholarship Appropriate to the Profession

This type of evidence, if important for a department, should be indicated in the department's promotion and tenure document.]

3. Service

Service includes innumerable types of activities rendered for the benefit of the department, college, university, community, profession, or nation. Willingness to undertake such work and competence in performing it are taken into account in the promotion process.

Evaluating service, however, is difficult. Promotion and tenure committees need to know when there has been an outstanding level of service that has taken appreciable effort or service that has been done in some way that can be noted as excellent. Other than that, the main concern is that a person has fulfilled his or her service commitment under the criteria of the academic unit concerned and that the unit is satisfied. Administrative responsibilities can be considered as part of the service component, but they may not be used as a substitute for accomplishment in a scholarly discipline.

Resolution #8

WHEREAS, given the importance of this process for the University and for its faculty, and

WHEREAS, it is important that faculty who are in the probationary period, and have been preparing for tenure review under the various existing systems have the right to be considered under those systems, while it is important also to recognize Departments' rights to change their focus of activity and the nature of their expectations for senior faculty, be it therefore

RESOLVED, that Faculty Handbook, Section K, Parts 10 and 11 be amended as indicated on the attached Policy, where words and passages in italics are to be deleted, and words and passages in bold face, set inside brackets, are to be added.

Part 10. Career Development of Assistant Professors

There should be a major plan worked out with every new arrival to a unit so that there is an orderly progression to a stated goal, in this case, promotion, within a reasonable time. Participation should be offered in a number of activities, and help and assistance given as needed. A coordinated plan of development suited to the academic unit and the candidate concerned should be devised and updated annually.

In units that have a considered plan for their members, this progression is worked out in great detail with allowance for an orderly development in all of the three categories that are concerned in promotion. Teaching functions and the setting up of courses should take priority. Then, in those units where scholarly output is heavily weighted, a research program should be mounted and, finally, some shouldering of service responsibilities should be undertaken. A new assistant professor should not be heavily laden with service commitments in the first year. The entire commitment should be under the guidance of senior people [**or a single designated mentor,**] who should take an active role in career development.

Part 11. Changes in Departmental Priorities

When departments and colleges change priorities (e.g., development of a graduate program, reorientation of the direction of departmental teaching at all levels) there are faculty members hired when their departments had one

set of priorities that are now at some disadvantage because of the change. Departments have clear obligations to recognize such situations and to provide such faculty members with both the time and the resources to accommodate themselves to the new priorities. [Those faculty during the probationary period prior to the granting of tenure have the right to be reviewed under the policy and procedure in force at the time of hiring, rather than under any revised policy or procedure subsequently adopted. Any candidate for tenure who wishes to be considered under the policy and procedure in force at the time of hiring must do so by informing the Department Chair of his or her desire at the time of the initial written application for promotion.]

Resolution #9

WHEREAS, Since the most important level of review for candidates for promotion within the faculty is that closest to the candidate's activities (normally at the Department level), where the reviewers will be most familiar with the candidate's field and its special characteristics, as well as with the nature and demands of the unit in which the candidate is seeking promotion, and

WHEREAS, consideration of a candidate's application at that level is guided by the general University guidelines as published in the Faculty Handbook as well as by the unit criteria for promotion, as approved by college and university committees, and ultimately by the Provost, it being the charge to higher levels of review most especially to assure that the approved guidelines are applied to the individual cases, and

WHEREAS, in reviewing large numbers of candidates from many different units, it is often difficult to ascertain the particular features in which the unit guidelines may vary from the University guidelines, most existing Unit guidelines' particularities now taking the form of substitutions within the existing University document, where they are difficult to find, be it

RESOLVED, that Faculty Handbook, Section K, the beginning of the section, preceding Part 1 be amended as indicated on the attached Policy, where words and passages in italics are to be deleted, and words and passages in bold face, set inside brackets, are to be added.

K. Promotion Policy

The present system of promotion and tenure [procedure] is a parallel structure allowing for faculty proposal, evaluation and appeal, as well as administrative evaluation at the several [each] levels of organization of the University. While this system is somewhat cumbersome, it does insure that no case is treated capriciously. There is no single element that controls enough of the variance to sway the decision one way or the other.

[This document governs the University process of review at every level. Departments, units, and colleges may make additions to and clarifications of this document to address their special circumstances. These elaborations, which must be approved by the University Committee on Promotions and Tenure and by the University Provost, will constitute the departmental document.]

Departmental documents should also include the procedure for choosing the departmental promotion and tenure committee and should specify required levels of achievement for each rank, such as excellence in research or teaching or in both. Appropriate modes of scholarly publication may also be specified.]

The promotion steps appear on the next chart [below]. Appeals may be made at each step. Procedures are discussed in detail below.

Individual
(Prepares dossier)

Department:

1. Committee on Promotion & Tenure
2. Chairperson

College:

1. Committee on Promotion and Tenure
2. Dean

University Senate Committee on Promotion & Tenure

University Provost

President

Board of Trustees

Resolution #10

WHEREAS, amendments to the University Promotion Policy must be reflected in each unit's own written policies in this area, and approved by the stipulated process culminating in approval by the Provost, and

WHEREAS, units ought to be given adequate time for the editing of their guidelines to conform to the new simplified system, and college and universities administrators and committees ought to be given adequate time for the consideration of the new documents proposed, be it therefore

RESOLVED, that existing Unit guidelines for promotion will continue in force until the revised guidelines have been approved, with the understanding and expectation that all Units will have submitted their newly edited or revised guidelines for approval before June, 1998.

**Ph.D. Program
Bioresources Engineering Department
Operations Research**

**Policy And Procedures Pertaining to Ph.D.
Program in Operations Research**

The Bioresources Engineering Department offers a Ph.D. program through the interdisciplinary Operations Research program. The Ph.D. program is intended to prepare well qualified students for management, research or teaching careers in industry, government or academia. The Department provides the students the opportunity to concentrate in the areas of soil and water resources, structures and environment, power and machinery or food processing engineering. The following policies and procedures have been established to assist the students in the satisfactory completion of all requirements for the degree.

General University policies and procedures for the Operations Research program are presented in Appendix A.

- A. Admission Requirements: An applicant for the Ph.D. degree in Operations Research through the Bioresources Engineering Department is expected to have an M.S. in engineering, operations research or a closely related field. The applicant must have had mathematics through differential equations. The applicant should have a minimum cumulative grade point average of 3.0 on a 4.0 scale. A Graduate Record Examination score of at least 1150 (math plus verbal) is required. A minimum of three letters of support are required from former professors or supervisors. Exceptions may be made for students with special backgrounds, abilities and interests. Applications must be made according to the guidelines of the Office of Graduate Studies. International applicants, for whom English is not a first language, must achieve a minimum TOEFL score of 600.

Competitive graduate assistantships may be available for qualified applicants on a highly competitive basis. Application for a graduate assistantship is made along with the application for admission into the degree program. Decisions on awarding graduate assistantships are made independent of admission.

- B. Credits: The student will be required to take a minimum of 51 credits of course work, nine credits of dissertation and complete a two-year residency. The courses must be approximately equally divided among OR related courses and course offerings from the area of application. No more than 27 credits can be at the 600

level. OR related courses are listed in Appendix B and suggested appropriate courses under each area of concentration in Bioresources Engineering are listed in Appendix C. Final course selection must be approved by the student's graduate advisor.

The following courses are required:

Operations Research Principles	ORES 801
Operations Research Applications	ORES 802
Probability Theory and Applications	MATH 630
Introduction to Stochastic Processes	MATH 631
Topics in Optimization	MATH 804
(or appropriate substitute)	
Operations Research Survey III	ORES 803
	(1 credit hr)
Operations Research Ph.D. Dissertation	
Proposal Presentation	ORES 899
	(0 credit hr)

One of the following, as appropriate:

For students with minimal (Masters in OR) level of statistics and some economics:

Econometric Theory	ECON 822
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For students with two to four undergraduate courses in statistics and some economics:

Seminar in Econometrics	ECON 823 or 824
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For students with several graduate level statistics courses and no economics:

Microeconomic Theory	ECON 801 or 811
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All Ph.D. students must register for four semesters of OR seminars and attend 80% of them and have completed ORES 601, ORES 602 and MATH 694.

- C. Comprehensive Qualifying Exam: The qualifying exam will consist of two written exams and an oral exam. The qualifying exam will be taken after all or most of the course work has been completed. This will generally be at the end of the second year of enrollment. One of the written exams will be the Operations Research qualifying exam which is administered once a year in August/September. Exam questions are taken from ORES 601, 602, 801, 802, MATH 630, 631, 694 and Econometrics. The second written exam will be on bioresources engineering related material and will be administered by the Bioresources Engineering faculty advisor. A student who fails either qualifying exam may be allowed to take the exam again if recommended to do so by the student's Ph.D. committee. If the committee recommends the student needs to take more courses, they must be completed before the student takes the exam a second time.
- D. Dissertation: A student's Ph.D. committee will be composed of at least four members, three which are OR faculty. Three members will be from the Bioresources Engineering Department and one from an allied discipline. One committee member from the Bioresources Engineering Department will serve as major advisor. The committee will be appointed by the faculty advisor.

The student in consultation with the major advisor will select a suitable dissertation topic. Once a dissertation topic has been chosen, the student is required to prepare a detailed technical outline of the proposed research before the end of the third semester of graduate study.

The proposal should be prepared complete with literature review, objectives, research methods, anticipated results and approximate timetable for completion of the dissertation.

The student is required to make an oral presentation of the proposed dissertation research to his or her committee and invited department faculty. A copy of the proposal must be provided to each of the committee members at least two weeks ahead of the scheduled defense. The dissertation proposal will either be approved or rejected by the Committee. Before the proposal is approved the student will be required to satisfy the committee's recommendations for any deficiencies in the proposal. The proposal should be defended before completion of the preliminary written and oral exams. If the dissertation proposal is rejected by the committee, the student may be allowed to rewrite the proposal and defend it the second time if recommended by the Committee.

- When departmental financial assistance is provided it will normally be for a period of three years. Hence, it is imperative that the student make satisfactory progress toward the degree.
 - The student should meet with his major advisor on a regular basis and keep the advisor informed of his/her progress both in the course and research work. Conversely, the major advisor is responsible for evaluating the student's performance to make sure that satisfactory progress is being made toward the degree. When a student has a serious academic concern, he may take the issue to the Departmental Graduate Committee and/or the Department chairperson.
 - It is the student's responsibility to make appropriate corrections and modifications suggested by the dissertation committee before submitting the dissertation to the Graduate College. The advisor will guide and verify that necessary changes have been made.
 - A total of twelve copies of the final dissertation may be required (3 for the Graduate College, 2 for the Bioresources Engineering Department, 5 for the student's committee, and 2 for the student). In case of special agency sponsored research, extra copies of the dissertation may be required for the funding agency. It is the responsibility of the student to make these copies available as necessary.
- E. Dissertation Defense: Upon completion of the dissertation, the student is required to make a public presentation and defense of the dissertation. The student is required to provide a copy of his/her dissertation to each of the committee members at least two weeks before the scheduled date of the dissertation defense.

Appendix A

University Policy and Procedures Pertaining To Ph.D. Program In Operations Research

The Operations Research Program is an interdisciplinary graduate program, drawing its faculty and students from various participating academic units that include: the College of Agriculture (Bioresources Engineering, Food and Resource Economics and Food Sciences), the College of Business and Economics (Business Administration and Economics), the College of Engineering (Civil Engineering and Electrical Engineering), the College of Arts and Science (Computer and Information Sciences, Mathematical Sciences and Statistics), and the College of Marine Studies and Urban Affairs. Programs of study are tailored to student and faculty interests and emphasize research. Course work includes a core in operations research, product optimization, statistics, and applied probability, in addition to supporting courses related to areas of application.

The student is encouraged to select an adviser among the relevant faculty as soon as possible. The director of the program will assist in the search. After the first semester but no later than during the second semester on campus, a student should have an adviser for course selection and thesis/dissertation purposes. Changes in the adviser are possible with special justification, but all concerned including the director of the program have to agree. The program encourages coadvisers for students if it is in their interest.

The Ph.D. program is intended to prepare well-qualified students for management, research or teaching careers in industry, government, or academia. Dissertations for the Ph.D. degree are a blend of empirical and theoretical research combining OR methodologies with application from a particular discipline. A dissertation committee consisting of at least five members, three of which are OR faculty, should be formed after the second year of study to advise the candidate and administer the comprehensive and final public exam.

Goals Of The Program

Students should acquire through the program:

1. Standard working knowledge of OR models and solution techniques including:
 - a. assumptions and limitations of models
 - b. an understanding of why analysis of a model should yield the results received
 - c. ability to question results for consistency and logic
 - d. appreciation of sensitivity analysis
2. Art of model building (i.e., ability to fit models to problems)
3. Computer skills (such as programming and software applications)
4. Presentation skills

5. Appreciation of recent literature on:

- a. a problem domain of student's choice and
- b. advances in an OR technique and relations to practical problem solving

Requirements For Admission

Students should apply to the Operations Research program whose faculty will help choose a suitable unit. Applicants should meet that unit's admission requirements. In addition, a student must have a minimum average grade of B in undergraduate studies with a grade of B or higher in calculus and linear algebra and a minimum combined verbal and quantitative score of 1150 on the Graduate Record Examination.

Foreign students must have a minimum TOEFL score of 600 for admission to the Operations Research Program.

For fall admission, the application deadline is May 1. For spring admission, the application deadline is October 1.

Requirements For The Degree

The degree requires at least 51 credit hours with nine credits fulfilling the dissertation requirement and the remainder equally divided among OR-related courses and course offerings from the area of application. Ph.D. candidates must take the ORES 800-level course sequence and register for four semesters of seminar attendance. Comprehensive exams are administered in three areas (OR and two other areas of concentration) after a majority of the course work has been successfully completed.

Appendix B
Operations Research Related Courses

ORES	601	Operations Research Survey I
ORES	602	Operations Research Survey II
ORES	603	Operations Research Applications
ORES	690	Operations Research Seminar
ORES	801	Operations Research Principles I
ORES	802	Operations Research Principles II
ORES	803	Operations Research Survey III
MATH	611	Introduction to Numerical Analysis and Scientific Computing
MATH	612	Introduction to Numerical Analysis and Scientific Programming II
MATH	630	Probability Theory and Applications
MATH	631	Introduction to Stochastic Processes
MATH	632	Topics in Applied Probability
MATH	688	Combinatorics and Graph Theory with Applications I
MATH	689	Combinatorics and Graph Theory with Applications II
MATH	694	Non-Linear Mathematical Optimization
MATH	801	Calculus of Variation
MATH	804	Topics in Optimization
MATH	850	Foundation of Probability Theory
MATH	851	Stochastic Processes
STAT	602	Mathematical Statistics
STAT	615	Design and Analysis of Experiments
STAT	616	Design and Analysis of Experiments
STAT	617	Multivariate Methods
STAT	618	Sampling Techniques
STAT	620	Nonparametric Statistics
STAT	635	Statistical Quality Control
STAT	800	Estimation and Statistical Inference
STAT	818	Multivariate Analysis
STAT	831	Time Series Analysis
FREC	608	Research Methods
FREC	615	Advanced Prices and Statistics
FREC	801	Advanced Food Marketing
FREC	806	Research Techniques and Procedures
FREC	810	International Agricultural Trade Special Topics
FREC	826	Issues in Domestic and Foreign Rural Development
FREC	827	Advanced Production Economics
FREC	834	Seminar in Resource Economics
BUAD	837	Decision Support and Expert Systems for Business
BUAD	870	Organization Behavior and Administration

BUAD	880	Competitive Marketing Strategy
BUAD	881	Research Methods for Marketing Decisions
BUAD	884	Special Topics in Marketing
ECON	675	Economics of Natural Resources
ECON	676	Environmental Economics
ECON	801	Microeconomic Theory
ECON	802	Macroeconomic Theory
ECON	811	Advanced Microeconomic Analysis
ECON	822	Econometric Theory
ECON	823	Seminar in Econometrics
ECON	824	Topics in Advanced Econometrics
ECON	841	International Trade and Development
ECON	842	International Finance and Development
ECON	861	Industrial Organization and Antitrust Policies
ECON	877	Advanced Benefit - Cost Analysis
ECON	894	Applied Regional Modeling
CHEG	691	Technical Project Management
CIEG	650	Urban Transportation Systems
CIEG	652	Transportation Facilities Design
CIEG	654	Urban Transportation Planning
CIEG	659	Railroad Engineering
ELEG	618	Modern Control Engineering
ELEG	631	Digital Signal Processing
MEEG	821	Advanced Dynamics
MEEG	863	Engineering Analysis I
MAST	679	Shipping and Port Management
CISC	621	Algorithms Design and Analysis
CISC	626	Simulation of Continuous Systems
CISC	627	Simulation of Discrete Systems
CISC	681	Artificial Intelligence
CISC	689	Topics: Artificial Intelligence
CISC	851	Systems Modeling
CISC	881	Knowledge Based Systems
URAF	681	Metropolitan Infrastructure and Analysis
URAF	817	Public Investment Policy
URAF	827	Program and Project Analysis
URAF	834	Public Economics

Appendix C

Suggested Courses For Areas of Application In Bioresources Engineering Related Subject Matter

FOOD PROCESS ENGINEERING

CHEM	621	Chemical Separations
CHEM	641	Biochemistry
CHEM	642	Biochemistry
CHEM	677	Chemical Thermodynamics
CHEM	680	Introductory Polymer Science
CHEG	602	Polymer Process Analysis and Design
CHEG	603	Polymerization Reaction Engineering
CHEG	604	Introduction to Polymer Science & Engineering II
CHEG	604	Multiphase Fluid Mechanics
CHEG	612	Applied Process Heat Transfer
CHEG	620	Biochemical Engineering
CHEG	825	Chemical Engineering Thermodynamics
CHEG	826	Chemical Engineering Thermodynamics
CHEG	830	Fluid Mechanics
CHEG	863	Diffusional Operations
FOSC	609	Food Processing I
FOSC	610	Food Processing II
FOSC	628	Food Chemistry
FOSC	629	Food Analysis
FOSC	639	Food Microbiology
FOSC	645	Food Engineering Technology
FOSC	646	Food Processing Engineering Technology
FOSC	649	Food Biotechnology
FOSC	670	Modern Food Packaging
FOSC	671	Package Product Interactions
MEEG	653	Manufacturing Processes
MEEG	801	Advanced Thermodynamics
MEEG	802	Conduction Heat Transfer
MEEG	803	Convection Heat Transfer
MEEG	864	Engineering Analysis II
PHYS	645	Electronics for Scientists
PHYS	646	Instrumentation for Scientists
MATH	610	Introduction to Partial Differential Equations with Applications
STAT	611	Regression Analysis
STAT	650	Statistics for the Engineering and Physical Sciences

STRUCTURES AND ENVIRONMENT

CIEG	601	Introduction to the Finite Element Method
CIEG	604	Prestressed Concrete Design
CIEG	605	Matrix Structural Analysis
CIEG	606	Structural Materials
CIEG	611	Structural Dynamics Design
CIEG	615	Reliability Design in Civil Engineering
CIEG	616	Random Vibration
CIEG	617	Advanced Structural Analysis
CIEG	618	Continuously Supported Structures
CIEG	801	Advanced Topics in Finite Element Analysis
CIEG	802	Advanced Steel Design
CIEG	803	Advanced Concrete Design
CIEG	811	Advanced Structural Dynamics Design
CIEG	816	Analytical Structural Dynamics
CIEG	817	Stability of Structures
MEEG	801	Advanced Thermodynamics
MEEG	802	Conduction Heat Transfer
MEEG	803	Convection Heat Transfer
MEEG	864	Engineering Analysis II
GEOG	620	Atmospheric Physics
GEOG	651	Microclimatology

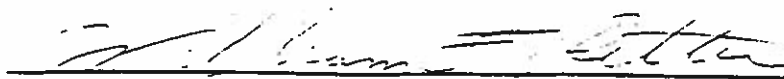
POWER AND MACHINERY

MEEG	606	Fluid Mechanics Measurements
MEEG	614	Fracture of Materials
MEEG	615	Mechanical Properties of Materials
MEEG	616	Composite Materials Structures
MEEG	617	Composite Analysis
MEEG	625	Vehicle Dynamics
MEEG	626	Random Vibration
MEEG	652	Flow of Viscous Materials
MEEG	663	Computer-Aided Design
MEEG	801	Advanced Thermodynamics
MEEG	802	Conduction Heat Transfer
MEEG	803	Convection Heat Transfer
MEEG	805	Special Topics in Thermodynamics
MEEG	813	Theory of Elasticity
MEEG	814	Theory of Plasticity
MEEG	815	Finite Element Analysis
MEEG	817	Composite Materials
MEEG	823	Vibration Analysis
MEEG	830	Special topics in Fluid Mechanics
MEEG	831	Fluid Dynamics I
MEEG	832	Fluid Dynamics II
MEEG	840	Special Topics in Continuous Mechanics
MEEG	862	Advanced Engineering Analysis
MEEG	864	Engineering Analysis II
AGEG	603	Soil Physics
STAT	611	Regression Analysis
STAT	650	Statistics for the Engineering and Physical Sciences
CIEG	620	Soil Mechanics II
CIEG	623	Soil Mechanics Lab
CIEG	624	Soil Dynamics

SOIL AND WATER RESOURCES

AGEG	603	Soil Physics
AGEG	621	Soil and Water Management Systems
AGEG	628	Land Application of Wastes
PLSC	606	Soil Genesis and Classification
PLSC	607	Plant and Soil Water Relationships
PLSC	608	Soil Chemistry
PLSC	619	Soil Microbiology
GEOG	620	Atmospheric Physics
GEOG	623	Atmospheric Dynamics
GEOG	651	Microclimatology
GEOG	653	Synoptic Climatology
GEOG	655	Water Budget in Environmental Analysis
GEOG	657	Climate Dynamics
GEOG	670	Computer Cartography
GEOG	681	Remote Sensing of Environment
GEOL	613	Fundamentals of Well Logging
GEOL	621	Environmental and Applied Geology
GEOL	628	Hydrogeology
CIEG	620	Soil Mechanics II
CIEG	623	Soil Mechanics Lab
CIEG	631	Water Quality and Pollution Control
CIEG	632	Chemical Aspects of Environmental Engineering
CIEG	634	Physical Aspects of Environmental Engineering
CIEG	636	Biological Aspects of Environmental Engineering
CIEG	637	Water and Wastewater Quality
CIEG	639	Hydromechanics
CIEG	679	Sediment Transport Mechanics
CIEG	691	Groundwater Hydrology
CIEG	831	Theory of Water Treatment
CIEG	832	Theory of Wastewater Treatment
CIEG	833	Fate of Pollutants in the Environment
CIEG	842	Design of Water and Wastewater Treatment Systems
CIEG	891	Mechanics of Fluids in Porous Media
MEEG	864	Engineering Analysis II

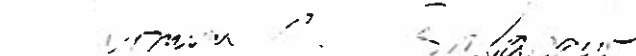
APPROVED:




William F. Ritter, Professor and Chair



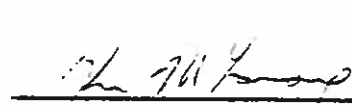
Norman E. Collins, Professor



Carmine C. Balascio, Associate Professor



Palaniappa Krishnan, Associate Professor




Kenneth M. Lomax, Associate Professor



James N. Scarborough, Associate Professor



James L. Glancey, Assistant Professor



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