

University of Rhode Island

DigitalCommons@URI

---

Faculty Senate Bills

Faculty Senate

---

2-19-1970

## 60th Report of the Curricular Affairs Committee

University of Rhode Island Faculty Senate

Follow this and additional works at: [https://digitalcommons.uri.edu/facsen\\_bills](https://digitalcommons.uri.edu/facsen_bills)

---

### Recommended Citation

University of Rhode Island Faculty Senate, "60th Report of the Curricular Affairs Committee" (1970).  
*Faculty Senate Bills*. Paper 300.

[https://digitalcommons.uri.edu/facsen\\_bills/300](https://digitalcommons.uri.edu/facsen_bills/300)

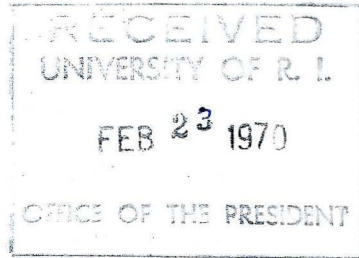
This Legislation is brought to you by the University of Rhode Island. It has been accepted for inclusion in Faculty Senate Bills by an authorized administrator of DigitalCommons@URI. For more information, please contact [digitalcommons-group@uri.edu](mailto:digitalcommons-group@uri.edu). For permission to reuse copyrighted content, contact the author directly.

UNIVERSITY OF RHODE ISLAND

FACULTY SENATE

BILL

Adopted by the Faculty Senate



TO: President Werner A. Baum

FROM: Chairman of the Faculty Senate

- 1. The Attached BILL, titled 60th Report of the Curricular Affairs Committee

is forwarded for your consideration.

- 2. The original and two copies for your use are included.
3. This BILL was adopted by vote of the Faculty Senate on February 19, 1970 (date)
4. After considering this bill, will you please indicate your approval or disapproval. Return the original or forward it to the Board of Trustees, completing the appropriate endorsement below.
5. In accordance with Section 8, paragraph 2 of the Senate's By-Laws, this bill will become effective on March 12, 1970 (date), three weeks after Senate approval, unless: (1) specific dates for implementation are written into the bill; (2) you return it disapproved; (3) you forward it to the Board of Trustees for their approval; or (4) the University Faculty petitions for a referendum. If the bill is forwarded to the Board of Trustees, it will not become effective until approved by the Board.

February 20, 1970 (date) Walter C. Mueller /s/ Chairman of the Faculty Senate

ENDORSEMENT 1.

TO: Chairman of the Faculty Senate

FROM: President of the University

- 1. Returned.
2. Approved [check] Disapproved

3. (If approved) In my opinion, transmittal to the Board of Trustees is not necessary.

2/24/70 (date) Werner A. Baum /s/ President

subject to Board of Trustees action on changes in Resource Development requiring Board approval.

ALTERNATE ENDORSEMENT 1.

TO: Chairman of the Board of Trustees.

FROM: The University President

1. Forwarded.
2. Approved.

\_\_\_\_\_/s/  
(date) President

---

ENDORSEMENT 2.

TO: Chairman of the Faculty Senate

FROM: Chairman of the Board of Trustees, via the University President.

1. Forwarded.

\_\_\_\_\_/s/  
(date) \_\_\_\_\_  
(Office)

---

ENDORSEMENT 3.

TO: Chairman of the Faculty Senate

FROM: The University President

1. Forwarded from the Chairman of the Board of Trustees.

\_\_\_\_\_/s/  
(date) President

---

Original received and forwarded to the Secretary of the Senate and Registrar for filing in the Archives of the University.

\_\_\_\_\_/s/  
(date) Chairman of the Faculty Senate

UNIVERSITY OF RHODE ISLAND  
KINGSTON, RHODE ISLAND

February 10, 1970

Faculty Senate Curricular Affairs Committee Sixtieth Report (full).

At meetings on January 22 and February 5, 1970, the Faculty Senate Curricular Affairs Committee considered the following matters which are now submitted to the Faculty Senate for information or confirmation as indicated.

I. Matters of Information (for further details consult the chairman of the department concerned).

A. College of Arts and Sciences

1. Department of Computer Science and Experimental Statistics.  
Change descriptions of CS500(200) and 551(251) to read:

500(200) Scientific Applications of Digital  
Computers I

I, 3 cr.

Algorithms, techniques, and practical procedures for digital computers related to well known applications of numerical methods. Approximation methods, numerical quadrature, solution of differential equations, zero's of functions, error analysis. Examples using the University Computer (Lec. 3). Prerequisite: Math. 43, C.S. 110 and permission of instructor. Hemmerle

551(251) Scientific Applications of Digital  
Computers II

II, 3 cr.

Algorithms, techniques and practical procedures for digital computers emphasizing linear computations and statistical applications. Monte Carlo methods. Matrix calculations, simultaneous linear equations, matrix inversion. Least square analysis, multiple regression. Characteristic value problems (Lec. 3). Prerequisite: Math. 115 and C.S. 110 or equivalent and permission of instructor. Hemmerle.

2. Department of Economics: cross-list the following under Economics offerings:

F&RE 577(277) Econometrics II

F&RE 675(275) Mathematical Economics II

3. Department of Education.

a. Cross-list the following under Education offerings.

H.Ec. Ed. 904 Curriculum Workshop (to be offered once only, Summer Session 1970, term II).

b. Change description of Ed. 370 to read:

Ed. 529 (370) Foundations of Educational Research I & II, 3 cr. An analysis of the current major research approaches to educational problems with an emphasis on interpreting published research which involves the language of statistics. Students should have functional skills in basic descriptive statistics prior to enrolling. (Lec. 3) MacMillan and Soderberg.

4. Department of Geology.

- a. Change prerequisites of Geol. 150 Geomorphology to read:

Prerequisite: Geol. 8 and 21 or E.S. 2 and permission of instructor.

- b. Change year offered. Starting September, 1970, the following will be offered every year instead of in alternate years: Geol. 110, 112, 115, 124, 130, 142, and 150.

5. Department of Languages.

- a.. Change titles and descriptions of Spanish 81 and 391 to read:

Spanish 461(81) The Generation of 1898 I, 3 cr.

A study of the major literary works of the Generation of 1898 including those of Benavente, Unamuno, Valle-Inclan, Baroja, Antonio Machado, and Azorin. (Lec. 3) Prerequisite: Spanish 326(24) or permission of department. In alternate years, next offered 1970-71. Bryan

Spanish 591(391) Introduction to Research and Criticism I, 3 cr.  
Introduction to scholarly research and literary criticism. Required as the first course for all candidates for the M.A. in Spanish. (Lec. 3). Hutton

- b. Change descriptions of French 391 and Spanish 82 to read:

French 591(391) Graduate Seminar I and II, 3 cr.  
Group and/or individual investigation of special problems in French Literature. Staff.

Spanish 462(82) Contemporary Spanish Literature II, 3 cr.  
An investigation of literary trends and movements after the Generation of 1898; Garcia Lorca and the Generation of 1927; Cela and the post Civil War novel; Spain's major contemporary figures and their works. (Lec. 3) Prerequisite: Spanish 326(24) or permission of department. In alternate years, next offered 1970-71. Freedman.

6. Department of Education

Change description of Ed. 427(27), 428(28), 430(30), 441(41), 444(44), 484(84), and 485(85) by adding the following to each:

Not for graduate degree program credit.

B. College of Engineering

1. Department of Industrial Engineering.

- a. Change description and prerequisite for IE432(132) and 433(133) to read:

IE432(132) Operations Research I I, 3  
Introduction to major areas of operations research and their application to systems analysis. Linear programming, game theory, elementary network analysis and related topics. (Lec. 3). Prerequisite: Math 43, IE 111. Math 115 or 171 or equivalent. Staff

IE433(133) Operations Research II II, 3  
Introduction to inventory and replacement models, queueing theory, simulation, simple stochastic models, and their relation to selected problems in industrial engineering. (Lec. 3). Prerequisite: Math 43, IE 112 Branson

- b. Change title and description of IE 411(111), 412(112) 422(22), 550(250) and 551(251) to read:

IE 411(111) Engineering Statistics I I, 3  
Elementary probability theory, random variables, and probability distributions. Moment generating functions, expected values, bivariate normal distributions. Introduction to applied statistics in engineering. (Lec. 3). Prerequisite: Math. 42 Staff

IE 412(112) Engineering Statistics II II, 3  
Continuation of IE 411(111). Estimation, hypotheses tests, sampling theory, linear regression. Other engineering applications of applied statistics. (Lec. 3) Prerequisite: IE 411(111) Staff

IE 422(22) Production Facilities Design II, 3  
Analysis and design of production facilities. Line and manpower balancing. Design of material flow networks. Quantitative modeling and simulation applied to production facilities design. (Lec. 3) Prerequisite: IE 432(132), IE 411(111)

IE 550( 250), 551(251) Advanced Topics in Probabilistic Operations Research I and II Semesters I & II, 3 cr. ea.

Concepts of simple random processes and their application in the analysis of industrial problems. Random walk, branching processes, recurrent events, discrete and continuous Markov chains, birth and death models and their application to inventory, replacement, reliability, and waiting line problems. (Lec. 3) Prerequisite: Math. 156 and permission of instructor. Branson



C. College of Home Economics

1. Department of Textiles and clothing

- a. Change course titles only for T.C. 224(24) and 238(38) to read:

224(24) Clothing and Human Behavior  
238(38) Textile Design

D. College of Pharmacy

1. Department of Pharmacology and Toxicology

- a. Change title and description of Pharmacology and Toxicology 544(244) to read:

544(244) Forensic Toxicology II, 3  
Theoretical and practical aspects of poisoning including the isolation and identification of toxic materials from pharmaceuticals, body fluids and tissues. Isolation and identification of physiological fluids from stains, hairs and tissue with application to forensic medicine. (Lec. 2, Lab. 3). Prerequisite: Pharmacology 441-422 and permission of department. In alternate years, next offered 1970-71.

2. Department of Pharmacy.

- a. Change lecture-laboratory distribution for Pharmacy 60 Hospital Pharmacy from (Lec. 3) to (Lec. 2, Lab. 3)

E. College of Resource Development

1. Department of Plant Pathology-Entomology.

- a. Change title only of Plant Path. 582(182) to Nematology.

F. Graduate School of Library Science

1. Change title only of L.S. 502(214) to Library Administration

G. Graduate School of Oceanography.

1. Change lecture-laboratory credit distribution, semester offered, and new number designation of 661(361) to:

662(361), (Lec. 3), Spring Semester.

2. Change lecture-laboratory credit distribution only of 501(201) to (Lec. 3).

II. Matters Requiring Confirmation by the Faculty Senate. Course numbers in parentheses will not be used for registration purposes after Sept., 1970

A. College of Arts and Sciences

1. Department of Botany.

a. Add (new)

Botany 526(226) Plant Geography  
(Geography 526(226)) Semester II, 3 credits  
A study of environmental and non-environmental factors  
controlling distribution of species and vegetative types,  
the origin, development and senescence of floras, distri-  
bution of modern vegetation-types and theories of modern  
day species distribution. Several lectures will be pre-  
sented by a member of the Geography Department. (Lec. 2,  
Lab. 2) Prerequisite: Botany 402(102), 424(124) or per-  
mission of the department. In alternate years, next  
offered 1970-71. Kuramoto and Geography Staff (Loughman)  
(Grad. #64)

To be listed in the Geography Department offerings as follows:

Geography 526(226) (Botany 526(226)) Plant Geography

2. Department of History (Grad. #65)

a. Add (new)

150(44) The Black American Experience  
Semester I <sup>OR</sup> and II, 3 credits  
A survey of Negro American History from African origins  
to the current racial confrontation. (Lec. 3) Carroll

405 Western Europe in the High Middle Ages  
Semester I <sup>OR</sup> and II, 3 credits  
Primarily France and England in the 12th and 13th Centuries.  
Emphasis on the Medieval Gothic-Catholic culture, the  
rise of towns and development of money economy. (Lec. 3)  
Tilton

414 Seventeenth and Eighteenth Century European Cultural  
History Semester I ~~and II~~, 3 credits  
A study of the intellectual and social movements of the  
Age of Reason and the Age of Enlightenment. (Lec. 3)  
Briggs

415 Nineteenth and Twentieth Century European Cultural  
History Semester I ~~and II~~, 3 credits  
A study of intellectual and cultural movements from  
Romanticism through Existentialism. (Lec. 3) Hermanson

416 History of Science to 1700 Semester I ~~and II~~, 3 credits  
A survey of the genesis and development of scientific  
thought, the formation of the scientific community, and  
the cultural influences of science from the Greeks to  
1700 (Lec. 3) Briggs



417 History of Science since 1700 Semester ~~I and~~ II, 3 credits  
A continuation of History 416 from about 1700 to the present.  
(Lec. 3) Briggs

448 American Social Reform Semester I <sup>OR</sup> ~~and~~ II, 3 credits  
A comparative study of the history of American social reform.  
(Lec. 3) Carroll

516 Seminar in the History of Science Semester I <sup>OR</sup> ~~and~~ II, 3 credits  
A seminar devoted to exploration of some historical aspects  
of scientific development. The major topics will change from  
semester to semester. (Lec. 3) Briggs

580 Colloquium in Latin American History Semester I <sup>OR</sup> ~~and~~ II, 3 credits  
An intensive study of major interpretative works in Latin  
American History. (Lec. 3) Bryan

b. Delete:

188 The British Empire 3 credits

158(413) Cultural History of Western Europe since 1600 3 credits  
(contingent upon the approval of History 414 and History 415)

3. Department of Languages

a. Add (new)

Russian 391, 392 Masterpieces of Russian Literature  
Semesters I and II, 3 credits  
Studies in Russian literature of the nineteenth and twentieth  
centuries with emphasis on the development of the Russian Novel.  
Readings in translation. (Lec. 3). May not be used toward  
a major or minor in Russian. Driver

Spanish 391, 392 Masterpieces of Spanish Literature  
Semesters I and II, 3 credits  
The reading and analysis of Spain's most significant contributions  
to world literature encompassing the epic, novel, drama and essay.  
All works read in translation. The first semester will deal with  
works through the 17th century and the second semester will deal  
with works of the 19th and 20th centuries. (Lec. 3) May not be  
used for credit toward the major or minor in Spanish. In alter-  
nate years, next offered 1971-72. Freedman

4. Department of Mathematics (Grad. #65)

a. Add (new)

641 Partial Differential Equations I Semester I, 3 credits  
First order systems. The Cauchy-Kowalewsky Theorem. The  
Cauchy Problem. Classification of partial differential equations.  
Hyperbolic equations. (Mainly the theory of the subject. Stu-  
dents interested in techniques for the solution of standard  
equations should take Math. 144). Prerequisites: Math. 115, 135  
and 162 (Lec. 3) Finizio

Mathematics 642 Partial Differential Equations II  
Semester II, 3 credits  
Elements of potential theory. Elliptic equations. Green's  
function. Parabolic equations. Introduction to the theory  
of distributions. Prerequisite: Math 641 (Lec. 3) Finizio

5. Department of Physical Education for Men

a. Delete:

1MA, 2MA, 3MA, and 4MA Adaptive-Corrective Physical Education  
(The correctives program will continue, but will be handled as  
a part of the basic 1M-4M sequence).

6. Department of Psychology

a. Add (new)

534 (220) Clinical Interpretation of Standardized  
Psychological Tests Semester II, 3 credits  
Emphasis is on test profile integration and pattern analysis.  
Practice will be given in the critique of personal evaluation  
reports based on standardized test results, and in the prepara-  
tion of such reports. A wide variety of the most often used  
standardized psychological group tests will be discussed in  
relation to interpretation of the test profiles and protocols.  
Prerequisite: Psychology 434(120) and permission of the de-  
partment. (Lec. 3) Merenda and staff (Grad. #64)

7. Department of Sociology and Anthropology

a. Add (new)

Anthropology 506(206) Psychological Anthropology  
Semester II, 3 credits  
An examination of behavior in different cultures employing  
psychological concepts and theories. (Lec. 3) Prerequisite:  
Psych. 235(30) and 435(105) or Soc. 204(2) and permission  
of department. Poggie

Anthropology 322 (new number) Anthropology of  
Modernization Semester II, 3 credits  
An examination of the patterns and processes of contemporary  
social and cultural change among traditional people. Pre-  
requisite: Anthropology 6 (Lec. 3) Poggie

B. College of Engineering.

1. Department of Chemical Engineering

a. Change credits only of Ch.E. 571(271) from 2 to 3 (Grad. #64)

C. College of Home Economics

1. Department of Child Development and Family Relations.

a. Add (new)

320 Human Relations Laboratory I and II, 1 credit  
Understanding individual behavior in the context of a social group; discussion and selected group dynamics techniques. Open only to students concurrently enrolled in H.M. 41. S. U. credit only. Fitzelle

450 Family Interaction I, 3 credits  
Interdisciplinary approach to the dynamics of intrafamily relationships interactions of family units and family members with elements of the socio-cultural environment. Prerequisites: Soc. 200 or CF 355 (Lec. 3) Schroeder (Grad. #64)

2. Home Economics Education

a. Add (new)

Home Ec. 904 (Ed. 904) Curriculum Workshop:

Individualized Instruction Summer Session II, 6 credits  
Individualizing instruction for self-paced learning. Development of continuous progress curriculum materials which will include the essential ingredients for individualizing instruction: concepts; behavioral objectives; pre-, self- and post evaluation and "quest" opportunities. (Class Sessions: 9:00-12:00 a.m.; 1:00-4:00 p.m. daily). Prerequisites: Teaching Experience or permission of the Instructor. (Offered once only. Summer Session II, 1970) (Grad. #65)

b. Authorize changes in Home Economics Education Curriculum

Rationale: Considering the new general core for all Home Economics students, a change in home economics education requirements is essential in order to provide some opportunity for free electives. The proposed curriculum meets the requirements for certification in the State of Rhode Island and most other states.

Additional choice within the curriculum will allow the student more opportunity to pursue special interest areas or to gain more specialization. Many high schools today are offering half year advanced courses in a single subject matter area.

A Master's Degree, or the equivalent, is required for a permanent teaching certificate within six years. As teachers, students will be returning for continued study in many areas.

PROPOSED CURRICULUM - HOME ECONOMICS EDUCATION

This curriculum meets the State of Rhode Island requirements for certification. Supervised teaching is included during the senior year.

REQUIREMENTS:

All courses listed under Group I. 48 credits  
All required courses listed under Group II  
which are:

CF 1	HM 1	
F&NS 1	TC 3	15 credits
F&NS 7		

Additional courses (some of which may also fill Group II alternative selection requirements)

CF	Two courses to be chosen from the following: (CF 5, CF 6, CF 21, CF 123)	6
ED. 2	Introduction to American Education	3
ED. 12	Psychology of Learning	3
ED. 37	Teaching Home Economics	3
ED. 39	Teaching Home Economics	3
ED. 84	Supervised Student Teaching - Home Ec.	8
ED.178	Education Elective	2
F&NS. 21	Meal Management	3
HM 33	Home Furnishings	3
HM 41	Home Management Residence	4
TC 5	Introductory Clothing	3
TC 25	Intermediate Clothing	3
		<u>3</u>
		44 credits

SUMMARY:

General - Group I	48
From Group II (required)	15
<u>Additional</u>	<u>44</u>
REQUIRED CREDITS	107

Free Electives 25

- c. Authorize a non-thesis option for the M.S. in Home Economics Education (Grad. #65)

REQUEST:

The Faculty of Home Economics Education requests permission to offer a Master's of Science Degree, without thesis, in addition to the program currently offered which requires a thesis of all candidates. It is also recommended that this change be retro-active so that students enrolled in our program, who are not actively engaged in writing a thesis, may be allowed this option.

RATIONALE:

Home Economics Education has witnessed an increase in undergraduate enrollment. Many of these students are capable of doing graduate work at the Master's level but do not intend to pursue a doctoral program. Certification requirements in the State of Rhode Island require a Master's Degree or 36 credits within six years for all home economics teachers. There is an increase in the number of



women returning to the professional field of teaching who upgrade their knowledge by pursuing a Master's program and then return to teaching.

Since the Master's program will be a terminal degree for the majority of students and since the majority will be returning to the classroom, it is felt that greater benefit will be derived from the two additional courses (six credits) than from a thesis. In addition to the heavier course requirement for the non-thesis option, opportunity for a practicum will be provided for the non-thesis student.

#### REQUIREMENTS OF THE PROPOSED MASTER'S DEGREE WITHOUT THESIS

Under the non-thesis option, a minimum of 36 credits must be earned, including a Research Methods course, such as Textiles and Clothing 332 or Education 370, or their equivalent. A course in statistics is recommended.

Each student will submit a substantial paper based on action research. This action research will be carried out as a practicum under the supervision of the major advisor and will be conducted, tested, and evaluated in the classroom. The results of this research will be submitted in acceptable written form (Turabian) to a committee. A final oral examination in defense of the paper will be given in a departmental seminar comprised of faculty and degree candidates.

All candidates for the degree must satisfactorily complete a written comprehensive examination based on the content of course work and a reading list.

3. Department of Home Management.

- a. Change credits only of HM 37 Household Equipment from 2 to 3

4. Department of Textiles and Clothing.

- a. Add T.C. 303 General Textiles as the fifth T.C. course from which Home. Ec. students will have a choice in the revised (FSCAC Report #56) Group II College of Home Economics requirements.
- b. Add (new)

T.C. 303 General Textiles I and II, 3 credits  
A study of current textiles and textile products. Emphasis will be placed on fabrication which includes fibers, yarns, fabrics and finishes. Field Trips (Lec. 2: Lab. 2) Pre-requisite: T.C. 3 or permission of instructor. Thomas

T.C. 390 Senior Seminar I, 1 credit  
Current professional trends, consideration of experiences in employment and opportunities for graduate study in textiles and clothing. Staff



- c. Change Group III requirements in Textiles, Clothing, and Related Art as follows:

Drop HM 33 and TC 132

Add TC 303 General Textiles 3 cr.

TC ~~224~~(24) Clothing and Human Behavior 3 cr.

T.C. 390 Senior Seminar 1 cr.

D. College of Pharmacy

1. Department of Pharmacology and Toxicology

a. Add (new)

546 Advanced Toxicology Semester II, 4 credits  
The toxic effects of selected drugs and other xenobiotics on physiological and biochemical processes. (Lec. 3, Lab. 4). Prerequisite: Pharmacology 142, or equivalent and permission of department. Alternate years; next offered 1971-72. Carlson (Grad. #64)

572 Neural Bases of Drug Action Semester II, 3 credits  
Review of neuroanatomy, neurochemistry, and neurophysiology as they are related to drug action. Alternate years; next offered 1970. Prerequisite: Pharmacol. & Toxicol. 142 and permission of instructor. Lal and Staff. (Grad. #64)

E. College of Resource Development

1. Department of Agricultural Chemistry--change name of department to:

Department of Food and Resource Chemistry.

2. Department of Forestry and Department of Food and Resource Economics

a. Add (new) Resource Development

R.D. 100 Natural Resource Conservation I, 3 or 4  
An introduction to man's use and management of his natural resources: land, food, forests, wildlife, water, minerals and air, with a survey of contemporary resource-use problems in environmental pollution. Laboratory credit is required of freshmen in Natural Resources. (Lec. 3, Lab. 2) Kupa and Staff.

R.D. 300 - Seminar in Contemporary Resource Problems II, 2  
Selected local resource-use problems will be analyzed from the several viewpoints represented by the training of the students involved. Prerequisite: Senior standing in Natural Resources. Owens and staff

3. Authorize a new curriculum in Natural Resources and delete the curriculum in Agricultural Business (contingent upon approval of the new curriculum).

#### NATURAL RESOURCES CURRICULUM

Society's growing concern for our continuing ability to maintain our way of life in a satisfactory environment means that increasing emphasis will be given to solving the complex problems arising from man's use or misuse of the nation's natural resources. The search for solutions means challenging careers for more and more people trained as resource scientists and technologists.

To these ends, this curriculum embodies the belief that a broad experience in the fundamentals of the biological, physical and social sciences, mathematics, the communicative skills and the humanities is essential to the fundamental competence of all students in the student's principal area of interest and should form the basic core of the curriculum. It also permits attainment of some depth in a principal area of professional interest by requiring directed electives. With the inclusion of free electives, the exploration of areas of knowledge that may be completely unrelated to career goals is encouraged.

The curriculum requirements that follow are structured in general terms. Students in the curriculum have widely differing aptitudes, experience, capabilities, interest and goals. The responsibility for selection of actual courses used to meet the requirements rests with the student and his advisor.

#### CURRICULUM REQUIREMENTS

##### Basic Core Courses

56-59 credits

##### Required Courses - (6 credits)

One elementary (freshman level) course that introduces students to the range of man-resource problems and the role of various disciplines in contributing to their solutions.

One seminar (senior level) in the analysis of contemporary resource problems designed to permit students to use the variety of tools acquired.

##### Biological Sciences - (11 credits)

One course in animal biology, plant biology, and ecology.

##### Physical Sciences - (18 credits)

One course in general chemistry, organic chemistry, physics, earth science, and soils.

##### Social Sciences - (12 credits)

One course in economic principles, resource economics, political science and sociology.

Mathematics - (3-6 credits)

It is desirable that all students secure a mathematics background that includes an introduction to calculus. For those not intending to pursue a graduate program the need to reach that level may not be as critical.

Communicative Skills - (6 credits)

One course in writing and one in speech.

General Education 25 credits

- English I and II - (6 credits)
- History - (6 credits)
- Physical Education - (4 credits)
- Humanities - (9 credits)

Major Areas of Concentration 24 credits

Course selections to develop an area of specialization made by the student in conference with his advisor, and shall require approval by the academic dean. Major areas include:

1. Resource Management and Conservation

Selections shall be made from among the advanced undergraduate courses offered by the basic and applied natural science departments directly related to the student's career goals.

2. Resource Economics

Selections shall be made from among the advanced undergraduate courses offered by the departments of Resource Economics and Economics

Directed Electives 13-16 credits

With advisor approval, students shall use these credits to increase their competence in their major area or to acquire experience in other aspects of resource development.

Undirected Electives 15 credits

Students may use these credits in any area they choose, with no administrative restraints.

Total - 136 credits

- 4. Department of Plant Pathology-Entomology
  - a. Add (new)

391, 392 Special Projects I and II, 1-3 credits  
Special work to meet individual needs of students in various fields of plant pathology and entomology, nematology, virology, agricultural or industrial mycology, biological aspects of water quality, biodegradation and related subjects. (Lec. and/or Lab. according to nature of the project). Prerequisite: Permission of the department. Staff

F. Graduate Curriculum in Community Planning and Area Development

a. Add (new)

410 Fundamentals of Urban Planning I or II, 3 credits  
Survey of urban planning principles, methods and techniques pertinent to contemporary urban problems. The history of city forms and functions and the development of urban planning as a profession. Problems and priorities in shaping the future urban environment. (Lec. 3) (Primarily for students not enrolled in the Graduate Curriculum in Community Planning and Area Development) Staff (Grad. #65)

G. Graduate Library School (Grad. #65)

1. Add (new)

511(338) Comparative Librarianship Semesters I and II, 3 credits  
The practice of librarianship in selected countries, including the social, economic, and political factors influencing its development, with consideration of the role of cooperation among international organizations. (Lec. 3) Prerequisite: LS 305 (LS 501, new system).

526(334) Automation in Libraries Semesters I and II, 3 credits  
The application of technology and systems analysis to the operation of various types of libraries. (Lec. 3) Prerequisite: LS 212, 213, 214, and 216, or permission of instructor.

544(335) Information Science for Librarians Semester I or II, 3 cr.  
Introduction to information storage and retrieval (analysis, semantics, thesaurus building, and data banks and their implications) as it applies to librarianship (Lec. 3). Prerequisite: permission of instructor.

2. Delete: 304 Information Retrieval, contingent upon approval of LS 526(334).

~~XXXXXXXXXX~~