

1970

## 64th Report of Curricular Affairs Committee

University of Rhode Island Faculty Senate

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

---

### Recommended Citation

University of Rhode Island Faculty Senate, "64th Report of Curricular Affairs Committee" (1970). *Faculty Senate Bills*. Paper 357.  
[http://digitalcommons.uri.edu/facsen\\_bills/357](http://digitalcommons.uri.edu/facsen_bills/357)

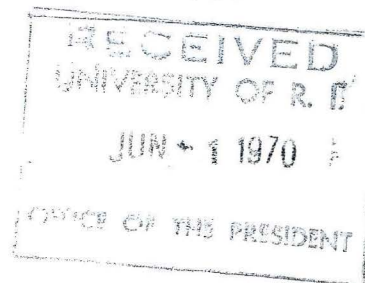
This Article is brought to you for free and open access by the Faculty Senate at DigitalCommons@URI. It has been accepted for inclusion in Faculty Senate Bills by an authorized administrator of DigitalCommons@URI. For more information, please contact [digitalcommons@etal.uri.edu](mailto:digitalcommons@etal.uri.edu).

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 64th Report of 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 May 28, 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 June 18, 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.

May 29, 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 ✓. Disapproved \_\_\_\_\_.

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

6/1/70  
(date)

Werner A. Baum /s/  
President

ALTERNATE ENDORSEMENT 1.

TO: Chairman of the Board of Trustees.

FROM: The University President

1. Forwarded.
2. Approved.

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

---

ENDORSEMENT 2.

TO: Chairman of the Faculty Senate

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

1. Forwarded.

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

---

ENDORSEMENT 3.

TO: Chairman of the Faculty Senate

FROM: The University President

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

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

---

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

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

UNIVERSITY OF RHODE ISLAND  
KINGSTON, RHODE ISLAND

May 22, 1970

Faculty Senate Curricular Affairs Committee Sixty-fourth Report (full).

At meetings on May 18 and 19, 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. Recommendation concerning General Education electives.

In the lists of courses used to satisfy curriculum requirements in each college, the terms Humanities Elective, Science Elective, and Social Science Elective, should no longer be used to indicate courses elected to satisfy General Education requirements. The committee recommends that the term General Education Elective, together with a Division designation when desired, be used to indicate such options.

B. College of Arts and Sciences.

1. Department of Computer Science and Experimental Statistics.

Cross-list IE635 (see FSCAC report #61) with department courses to read:

ES635 (IE635) Response Surfaces and Evolutionary Operations II, 3

2. Department of Geography.

a. Change descriptions of 103(3), 121(21), and 411(111) to read:

103(3) Economic Geography. Semester II, 3 credits  
Surveys the geographic backgrounds of economic activities. Populations and the resources of agriculture, industry and commerce are studied in terms of their world and regional distributions. (Lec. 2, Rec. 1). FITZPATRICK, HIGBEE

121(21) Cultural Geography Semesters I and II, 3 credits  
Surveys the world distributions of human activities and cultures as they have adapted to such natural geographic regions as the rainforests, deserts, polar areas, and mid-latitude grasslands and forests. (Lec. 3) STAFF

411(111) Urban Geography  
Concentrates upon the differentiation of urbanized and urbanizing spaces, locally and world-wide. The historical morphology of cities with particular emphasis upon the contemporary American scene and its antecedents. (Lec. 3) Prerequisites: Geography 103 or permission of the department. STAFF

- b. Change prerequisites of 441(141), 443(143), 544( ) to read:

441 -- prerequisite Geography 103, 131, or permission of the department.

443 -- prerequisite E.S. 101 and 102 or Geography 103.

544 -- prerequisite Geography 103 or 443.

3. Department of Languages.

- a. Change descriptions of all 400-level courses in French except French 497 and 498 by adding: Not for graduate degree program credit in French.

- b. Replace the present B.A. program statement which appears on page 36 of the catalog under the heading, Languages, with the following:

Students may major in French, German, Italian, or Spanish. Students majoring in a language will be required to take 30 credits in their major field not counting the 101(1), 102(2) levels. Linguistics 401(179), 410(180) may be used towards major credit. Spanish majors must take Spanish 472(92) and Spanish 481(133).

4. Department of Mathematics.

- a. Change descriptions of 551(251) and 552(252) to read:

551(251) Advanced Mathematical Statistics I Semester I, 3 credits  
A thorough development of classical and modern statistics: sampling theory, asymptotic sampling, theory for large samples and exact sampling distributions. Also the theory of estimation including unbiased estimates, consistent estimates, sufficient statistics, non-parametric and parametric statistics and multi-dimensional confidence regions. Utility of the theory will be illustrated by applications from various fields. (Lec. 3)  
Prerequisite: Math 152, 135 or 137 (old numbers), or permission of the instructor. Math 135 or 137 may be taken concurrently.  
HACHIGIAN

552(252) Advanced Mathematical Statistics II Sem. II, 3 credits  
A continuation of Math 551: tests of significance, sample hypothesis, composite hypothesis, most powerful tests, unbiased tests, analysis of variance, regression and multiple regression. Utility of the theory will be illustrated by applications from various fields. (Lec. 3) Prerequisite: Math 551. HACHIGIAN

- b. Modify the first sentence of the B.A. program statement which appears on page 37 of the catalog under the heading, Mathematics, to read:

Students selecting this field of concentration must complete 30 credits in mathematics, including: \_\_\_\_\_

5. Department of Music.

Change (editorial) number only of Music 541( ) to 441( ).

6. Department of Psychology.

a. Change prerequisite for Psych. 210(10) to read:

Prerequisite: Psych. 7 and at least one course in mathematics at the college level, sophomore standing. Cain, Merenda, and Staff.

Change prerequisite for Psych. 251(35) to read:

Prerequisite: Psych. 7 and Psych. 10. N. Smith and Staff.

c. The following statement should accompany the description of Psych. 251(35):

This course is required of all psychology majors and is a prerequisite for all courses in psychology numbered above 251(35) unless permission of the department has been granted.

d. Change prerequisite for Psych. 434(120) to read:

Prerequisite: Psych. 10 or Ed. 71 and junior standing. Staff.

7. Department of Zoology.

a. Change descriptions of 331(31) and 531(231) to read:

331(31) Parasitology Semester I, 3 credits  
Study of the structure, life cycles, ecology and economic relationships of the parasitic protozoa, helminths and arthropods. Origin and biological significance of parasitism and host-parasite relationships are stressed. Laboratory encompasses experimental work on life cycles of selected species, and on collection and identification of local parasitic forms including those from the marine fauna. (Lec. 2, Lab. 3)  
Prerequisite: Zoology 111 or Biology 102. K. HYLAND

531(231) Advanced Parasitology Seminar Semester I, 2 credits  
Advanced topics in the host-parasite relationships of protozoan and metazoan parasites. Reading knowledge of one foreign language assumed. Topics vary from year to year. Topic in 1971-72: Ecology of the Helminth Fauna of Fishes inhabiting New England Coastal Waters. (Rec. 2) Prerequisite: Zoology 331 or equivalent. In alternate years, next offered 1971-72.  
K. HYLAND & ZINN

- b. Change number, description, semester, prerequisite and instructor of 472(172) to read:

471(172) Evolution Semester I, 3 credits  
Consideration of the process of organic evolution, the genetic mechanisms, including the interaction of genotype and environment, the history of evolutionary thought, the palaeontological record and the biochemical origin of life. (Lec. 3) Prerequisite: Genetics 352 or permission of the instructor. CRENSHAW

- c. Change description, semester, year offered and cross-list as a Genetics course, 579(279), to read:

Zoology 579(279) (Genetics 579) Advanced Genetics Seminar Semester I and II, 1 credit  
Current topics in genetics, including cytological, ecological, molecular, physiological, population, quantitative and radiation genetics. (Lec. 1) Prerequisite: Genetics 352 and permission of the instructor. CRENSHAW

- d. Change 664(364) Seminar in Ichthyology by deleting: In alternate years, next offered....

C. College of Engineering.

1. Department of Civil Engineering.

Change prerequisite of 570(170) to read:

Prerequisite: permission of instructor.

2. Department of Electrical Engineering.

- a. Change number, title, and description of 609(309) to read:

509(309) Systems with Random Inputs I or II, 3 credits  
Study of both discrete and continuous linear systems with random inputs. Introduction to random processes in the context of linear systems. Applications to detection, smoothing and prediction. (Lec. 3) Prerequisite: A knowledge of differential equations, linear systems, and transform methods. Staff (Grad. #72).

- b. Change number and description of 661(361) to read:

561(361) Information Transmission I or II, 3 credits  
Introduction to information theory. Study of discrete and continuous communications channels. Techniques for coding and decoding information. (Lec. 3) Prerequisite: EE 509 or equivalent. Kelley, Spence (Grad. #72)

- c. Change description of 536(236) to read:

536(236) Semiconductor Electronics I or II, 3 credits  
Theory and technology of semiconductor devices. Junction, field effect, optoelectronic and microwave devices. Integrated circuits. (Lec. 3) Prerequisite: EE 131 or equivalent. Sadasiv (Grad. #72).

3. Department of Industrial Engineering.

a. Change (correct) prerequisite for IE 220, 221, (new, 61st Report, p. 16) by deleting: "credit or registration in IE 111."

b. Change description of (255) as follows:

delete: Engineering problems in dynamic and stochastic programming; add: An introduction to stochastic programming.

D. College of Resource Development.

1. Department of Agronomy and Mechanized Agriculture.

Change title and semester of 332(32) to read:

332(32) Forage Crops Semester I

II. Matters Requiring Confirmation by the Faculty Senate. Graduate level courses (numbered 400 and above) have been reviewed by the FSCAC and transmitted to the Dean of the Graduate School, with comments where appropriate. They are presented for action contingent upon Graduate Council approval at meeting No. 73, May 29, 1970

A. College of Arts and Sciences.

1. Change the new (59th Report) B.A. curriculum distribution subject matter designations as follows:

a. Drop Biology and Earth Science as "subject matter areas" within Division B. List Earth Science I as a Division B Geography "subject matter area" offering and list Earth Science II among courses under the "subject matter area," Geology. List Biology I as a course in the "subject matter area," Botany, and Biology 2 as a course in the "subject matter area," Zoology.

b. Add Philosophy 1 (101), Logic, to the approved list of courses under the "subject matter area," Philosophy in Division A.

c. Drop the "subject matter area," The Arts. Substitute for it under Division A four new "subject matter areas;" Art, Music, Theatre and Speech. Courses available in the new "subject matter areas" should remain the same as now listed for each department under the "subject matter area," The Arts.

Comment: The above proposals present no apparent conflict with present interpretations of the General Education requirements.

2. Department of Art.

Change B.A. curriculum statement as follows:

Replace the present program statement which appears on page 34 of the catalog under the heading, Art, with the following:



Students selecting this field of concentration must complete 30 credits in art. Courses required of all majors include:

101(1) and 102(2)	Two-dimensional Studio and Three-dimensional Studio	6
251(51) and 252(52)	Introduction to History of Art	6
207(7)	Drawing	3
Elective in Art History		3

An additional 6 credits must be selected from the following:

221(21) and 322(22)	Painting
231(31) and 332(32)	Printmaking I and II
233(33) and 334(34)	Graphic Design I and II
241(41) and 342(42)	Sculpture, Modeling and Introductory

An additional 6 credits must be selected from the following:

405 and 406	Studio-Seminar III, IV
469 and 470	Senior Projects--Art History

Majors will be required to register in six credits of art during the freshman year and six credits during the sophomore year. Art 120(20) may not be counted toward degree requirements if Art 251(51) and 252(52) have been previously completed. A minimum of nine credits of non-studio study in art is required. It is recommended that art majors elect at least three credits in the allied fields of music or theatre. Students enrolled prior to Fall 1970, may use up to 9 credits of electives for further courses in art without increasing their total graduation requirements.

3. Department of Botany.

Add (new) and cross-list under Genetics:

Botany 579 (Genetics 579) Advanced Genetics Seminar  
Semesters I and II, 1 credit  
Current topics in genetics, including cytological, ecological, molecular, physiological, population, quantitative and radiation genetics. (Lec. 1) Prerequisite: Genetics 352 and permission of the instructor. MOTTINGER (Grad. # ).

4. Department of Chemistry.

a. Change new number designations of 333 and 334 to 441(31) and 442(32), respectively, and add to the present catalog descriptions of both courses the sentence: May be taken for graduate credit only by students in M.S. programs in disciplines that do not require physical chemistry as part of their undergraduate program. (Grad. # ).

b. Add (new)

1) 537 Quantum Chemistry 1 Semester I, 3 credits  
Emphasis will be on the quantum theory of matter. Topics to be covered include: development of the Schrodinger equations, potential barrier problems, the harmonic oscillator and the hydrogen atom. (Lec. 3) Prerequisite: Chem. 442, Math. 244. GONZALEZ (Grad. # ).

2) 638 Quantum chemistry II Semester II, 3 credits  
Continuation of Chem. 537. Topics to be considered include: perturbation theory, the variational principle, time dependent perturbation theory, the helium atom, the hydrogen molecule, Hartree Fock calculations, pi electron systems and the development of the Huckel molecular orbital method. (Lec. 3) Prerequisite: Chem. 537 or equivalent.  
GONZALEZ (Grad. # ).

3) 639 Surface Chemistry Semester I, 3 credits  
Emphasis will be on contact catalysis. Topics to be considered include: physical and chemical adsorption, measurement of surface areas, heterogeneous kinetics, physical methods for studying adsorbed molecules and the mechanisms of selected catalytic reactions. (Lec. 3) Prerequisites: Chem. 442 and Math 244. GONZALEZ (Grad. #)

c. Contingent upon approval of Chem. 639, delete:

538( ) Colloid and Surface Chemistry (Grad. # ).

5. Department of English.

a. Change B.A. curriculum statement as follows:

Replace the present program statement which appears on pages 35-36 of the catalog under the heading, English, with the following:

Students selecting this field of concentration must complete a minimum of 30 credits in English including:

41 or 42	American Literature	3
45 & 46	Survey of English Literature	6

They must select two courses (6 credits) from the following period courses:

445 (174)	American Romanticism
450 (193)	The English Renaissance
452 (183)	The Seventeenth Century, 1603-1660
453 (184)	The Restoration Period
455 (173)	The Romantic Movement, 1798-1832
456 (191)	The Augustan Tradition in England
457 (182)	The Age of Johnson
482, 483 (177, 178)	English Literature, 1832-1900
*545 (145)	Problems in American Realism and Naturalism
*550 (298)	Middle English Literature
*552 (276)	Studies in the English Romantic Period
*553 (277)	Studies in Victorian Literature

They must select two courses (6 credits) from the following author courses:

441(141)	Great American Authors
470(195)	Chaucer
471(194)	The Poetry of Edmund Spenser
472,473(191,192)	Shakespeare
474(185)	Milton
475(186)	Major English Authors of the 18th Century
480(176)	Browning
*564	Modern Poets
*573(292)	Problems in Shakespeare

The remaining 3 courses (9 credits) may be freely elected from all courses on the 200, 300, 400, and with permission, 500 level, including the two areas listed above.

\*Undergraduates wishing to take these courses must secure permission of the department.

b. Add (new).

- 1) 264 An Introduction to Drama Semesters I or II, 3 credits  
A study of the various forms of Western drama. Designed to promote an intelligent understanding of drama as a literary art form. (Lec. 3).
- 2) 265 Introduction to the Novel Semesters I or II, 3 credits  
An introduction to the novel form which will include appreciation of fictional themes and methods as well as significant shifts of mode, the comic, sentimental, Gothic, novel of purpose, and others. (Lec. 3).
- 3) 101 Introduction to Literature: Genres  
Semesters I and II, 3 credits  
Extensive reading in various forms of literature. Discussion and regular written criticism. Not to be counted toward concentration in English. STAFF.
- 4) 102 Introduction to Literature: Theme  
Semesteris I and II, 3 credits  
Study of a theme such as Love and War, the Hero, Social Protest, Utopia, etc., in literature. Discussion and regular written criticism. Not to be counted toward concentration in English. STAFF
- 5) 310 Techniques of Critical Writing  
Semesters I and II, 3 credits  
Practice in the writing of literary criticism. Methods of literary analysis illustrated and applied to specific works. STAFF

6. Department of Geography.

- a. Change number (level) and description of 512(212) to read:

412(212) Seminar in Urban Geography Semesters I & II, 3 credits  
Urban patterns, their development, sizes, spacing, structure  
and relationship to the global urban network. Emphasis on the  
urban environment as a context for geographic studies. (Lec. 3)  
Prerequisites: Geography 103 or permission of the department.  
HIGBEE (Grad. # ).

b. Change number (level) of 551(151) to read:

451(151) Land Utilization (Grad. # ).

7. Department of History.

a. Change B.A. curriculum statement as follows:

Replace the present program statement which appears on page 36  
of the catalog under the heading, History, with the following:

Students selecting this field of concentration must complete a minimum of 30 credits in History including:

1. A minimum of 6 and a maximum of 12 credits in courses numbered 100 to 299;
2. The balance of required credits in courses numbered 300 or above, including one undergraduate seminar, History 391. With permission of the chairman of the department, a student may substitute, in place of the seminar, directed study leading to a substantial research paper.

Undergraduates wishing to take courses on the 500 level must secure permission of the department.

b. Add (new).

483 History of Modern Mexico Semesters I or II, 3 credits  
An analysis of the social, economic and political development  
of Mexico from 1810 to the present, emphasizing the Revolution  
of 1910, its background and aftermath. (Lec. 3) BRYAN (Grad.# ).

c. Drop or alter prerequisites of the courses listed below as indicated: (Grad. # ).

\*102(4) delete "prerequisite: History 101(3)"  
406(121) delete "prerequisite: History 101(3)"  
407(123) delete "prerequisite: History 101(3)"  
408(124) delete "prerequisite: History 102(4) and junior standing"  
409(128) delete "prerequisite: History 102(4)"  
410(131) delete "prerequisite: History 102(4) and junior standing"  
411(127) delete "prerequisite: History 102(4) and junior standing"  
418(129) to the phrase "prerequisite History 102(4)" add  
the following: "or permission of the instructor"  
421(135) delete "prerequisite: History 121(33)"  
422(136) delete "prerequisite: History 102(4) and junior standing"  
423(137) delete "prerequisite: History 102(4) and junior standing"  
430(177) delete "prerequisite: History 102(4)"

- 436(160) alter description to read as follows: "prerequisite: History 141(13) or permission of the instructor"
- 437(161) alter description to read as follows: "prerequisite: History 141(13) or permission of the instructor"
- 438(162) delete "prerequisite: History 141(13) and 142(14)"
- 439(117) alter description to read as follows: "prerequisite: History 142(14) or permission of the instructor"
- 440(120) alter description to read as follows: "prerequisite: History 142(14) or permission of the instructor"
- 442(165) delete "prerequisite: History 141(13)"
- 443(166) alter description to read as follows: "prerequisite: History 142(14) or permission of the instructor"
- 445(144) alter description to read as follows: "prerequisite: junior standing"
- 479(147) add "prerequisite: junior standing or permission of the instructor"
- 471(109) delete "prerequisite: History 101(3) and 102(4) or permission of department"
- 472(110) delete "prerequisite: History 101(3) and 102(4) or permission of department"
- 473(112) delete "prerequisite: History 102(4)"
- 474(111) delete "prerequisite: History 102(4)"
- 476(145) alter description to read as follows: "prerequisite: junior standing or permission of the instructor"
- 477(146) alter description to read as follows: "prerequisite: junior standing or permission of the instructor"
- 488(143) alter description to read as follows: "prerequisite: junior standing"

\*Information change approved; not subject to Graduate Council review.

## 8. Department of Languages.

### a. Add (new)

#### 1) French 301, 302 The Civilization of France

Semesters I and II, 3 cr. ea.

A review of the geographical, historical, economic, social, and aesthetic factors contributing to the cultural development of France. (Lec. 3) Prerequisite: for French 301--French 206(12); Prerequisite: for French 302--French 301 or permission of the department. Recommended for French majors in the General Teacher Education curriculum. In alternate years next offered, 1971-72. DEMERS.

## 9. Department of Mathematics.

### a. Add (new) (deletions are contingent upon approval of the immediately preceding courses).

#### 1) 215 Introduction to Algebraic Structures

Semester I, 3 credits

Elementary properties of groups, rings, fields, and vector spaces. Detailed study of finite dimensional vector spaces, linear transformations, matrices, determinants, and systems of linear equations. (Lec. 3) Prerequisite: Math 142 or equivalent.

Delete: 115 (old number) Introduction to Linear Algebra  
Semester I, 3 credits

- 2) 316 Algebra Semester II, 3 credits  
Theory and structure of groups. Topics from ring theory, principal ideal domains, unique factorization domains, polynomial rings, field extensions, and Galois theory. (Lec. 3) Prerequisite: Math 215.

Delete: 114 (old number) Introduction to Abstract Algebra  
Semester II, 3 credits

- ~~3) 418 Matrix Analysis Semester II, 3 credits  
Canonical forms, functions of matrices, characteristic roots, applications to problems in physics and engineering. (Lec. 3) Prerequisite: Math 215. (Grad. # ).~~

DELETE

~~Delete: 171 Matrix Analysis Semester II, 3 credits~~

- 4) 515, 516 Algebra I, II Semesters I & II, 3 credits each  
Groups, rings, modules, commutative algebra. (Lec. 3).  
Prerequisite: Math 316. (Grad. # ).

Delete: 214 (old number) Abstract Algebra Semester I, 3 cr.  
217 (old number) Topics in Abstract Algebra  
Semester II, 3 cr.

- b. Revise the program statement of the B.S. in Mathematics presently appearing on page 46 of the catalog by replacing the sentence which reads "In addition, the program must include Mathematics 114, 115, 125, 135, 136, 151 and 162" with a new sentence, stating: "In addition, the program must include Mathematics 215, 335, 336, 425, 451 and 462 plus either 316 or 418.
- c. Revise the present B.A. program statement which appears on page 37 of the catalog.

Delete the portion that reads:

114 Introduction to Abstract Algebra 3  
115 Introduction to Linear Algebra 3

Add in place of the above:

215 Introduction to Algebraic structures 3  
316 Algebra  
or 3  
418 Matrix Analysis

10. Department of Music.

a. Add (new)

1) 102 Music Masterworks Semester II, 3 credits  
A study of a selection of music masterworks from different eras stressing these elements which elevate these compositions above others. Discriminatory listening will be stressed. (Lec. 3) Prerequisite: Music 101 or equivalent.  
STAFF

2) 117 Applied Composition Semesters I & II, 1 credit  
Private study in composition for students interested in original work in contemporary idioms. Emphasis on the mastery of the basic craft and individual creative expression. May be repeated once for additional credit. (Lec. 1) Prerequisites determined by audition. GIBBS

3) 169 Percussion

Note: This entry should be added to those selections currently offered in Music Education 171 to 180 (71 to 80) which should be renumbered to read:

169 to 180 (71 to 80) Voice or Instrumental Classes

b. Change catalog entry as follows:

The current catalog under the area of concentration entitled Music Theory and Composition (page 55) now reads:

Majors in music composition must elect Music 119 and 123, 2 credits.

Change to read:

Students concentrating in composition must take Music 117 (new number), 419(119) and 422(123).

11. Department of Philosophy.

a. Change number (level) of 451(151) to 251(151) and delete the prerequisite. (Grad. # ).

b. Change B.A. curriculum statement as follows:

Replace the present program statement which appears on page 37 of the catalog under the heading, Philosophy, with:

Students selecting this field of concentration must complete no less than 27 credit hours in Philosophy. Three hours must include:

101 Logic: Principles of Reasoning

or

251 Symbolic Logic





13. Department of Physical Education for Men and Department of Physical Education for Women.

a. Add (new).

1) PE581 Psychological Aspects of Physical Activity Sem. II, 3cr. Scientific principles and research from the field of psychology are studied and related to the world of physical activity. Educational program situations amenable to research and the application of psychological principles are isolated. Major emphasis is utilized to recommend improvements in physical education methodology. (Lec. 3).  
SONSTROEM (Grad. # ). *Prerequisite Psych. 113(7), 232(32), and permission of Instructor.*

2) PE575 Perceptual-Motor Education Sem. I, 3 cr. Focuses on the role of motor activity in enhancing perceptual development and how the physical educator can become involved in cooperation with other school personnel in the implementation and continuing development of perceptual-motor programs. Also, directed toward teachers in elementary schools and in special education who wish to incorporate motor activities into their educational programs. (Lec. 3)  
McCORMICK (Grad. # ). *Prerequisite Psych. 113(7), 232(32), and permission of Instructor.*

3) PE591 Special Problems Sem. I or II, 3 cr. Requirements are satisfied by writing a paper reporting the in-depth investigation of a pertinent problem in the field. The paper includes a review of relevant literature, an analysis and solution of the problem based on scientific methodology, and recommendations for improved practices in this problem area. This course is limited to and required of all master's degree candidates in physical education who elect the non-thesis option. STAFF (Grad.# ).

14. Department of Sociology and Anthropology

a. Add (new).

Anthropology 319 Cultural Behavior and the Environment  
Semester I, 3 credits

A survey and analysis of the variety of cultural adaptations made by traditional and industrial societies to the surrounding physical environment; the inter-relations between cultural creations--including technologies and belief systems--and the limits and possibilities of the environment. (Lec. 3) MEAD

15. Department of Speech.

Change B.A. curriculum statement as follows:

Replace the present program statement which appears on page 38 of the catalog under the heading, Speech, with the following:

This program provides maximum flexibility in planning for a wide variety of academic and occupational goals, including pre-professional preparation for graduate programs in Speech Pathology and Audiology. The Speech curriculum is personalized for each student. While the student plays a dominant role in curriculum planning, his program is closely supervised by his adviser and specific curricular and extracurricular experiences are planned as integral parts of each student's program.

In addition to meeting the General Education requirements, the Department of Speech has established certain guidelines for its undergraduate majors. For students electing an undergraduate area of concentration in General Speech, it is recommended that 27 credits be the minimum for the area of concentration. These 27 credits must include the following:

- |   |             |
|---|-------------|
| A. Rhetoric and Public Address          | 6-9 credits |
| B. Oral Interpretation of Literature    | 3-6 credits |
| C. Speech Sciences and Speech Education | 3-6 credits |

For students electing an undergraduate concentration in Speech Education, it is recommended:

SPEECH SCIENCE: (30 hour concentration)

Core: Speech 372 or equivalent such as Zoology 143/144 (human physiology) or Zoology 21 (human anatomy) Audit & Speech Mech.

Speech 373 Phonetics  
Speech 375 Language Development  
Speech 260 Speech Development and Correction  
Speech 261 Survey of Hearing and Deafness

15 hours

6 hours of directed electives chosen from the following:

Speech 410 Semantics  
Speech 374 Communication Processes  
CF 200 Growth & Development of the Child  
Psych. 103 Towards Self Understanding  
Psych. 235 Theories of Personality  
Educ. 371 Educational Measurements  
Educ. 312 Psychology of Learning

Remaining 9 hours to be elective in area of Speech.

SPEECH EDUCATION: (30 hour concentration)

Core: Same as for Speech Science (15 hours)

6 hours of directed electives chosen as for Speech Science.  
Remaining 9 hours to be chosen in education area.

16. Department of Theatre.

Change B.A. and B.F.A. curriculum requirements and statements as follows:

Replace the present program statements which appear, respectively, on pages 40 and 53 of the catalog with the following:

**THEATRE**

Students selecting a major concentration in Theatre must complete a minimum of 30 credits distributed to fulfill the requirements of categories II through IV below. A total of 120 credits is required for graduation with a Bachelor of Arts degree in Theatre.

**Requirement Categories:**

**I. General Requirements:**

In keeping with the distribution requirements in the Bachelor of Arts curriculum of the College of Arts and Sciences, all candidates for the Bachelor of Arts degree in Theatre are required to select and pass 45 credits of course work in three divisions (see p. \_\_\_\_). For the Theatre student, it is recommended that courses in dramatic literature offered by the Department of English be used as partial fulfillment of the Division A requirements.

**II. Specific Courses Required of All Theatre Majors:**

Students will be expected to complete the credits from this category by the end of the sophomore year.

Theatre 101 (3)	Introduction to Theatre Studies	3
Theatre 110 (90)	Introduction to Acting	2
Theatre 161 (41)	Stagecrafts	3
Theatre 201 (12)	Principles of Theatre	<u>3</u>
		11

An additional 3 credits must be selected from the following:

English 255 (53)	Survey of English Drama
365 (61)	Modern Drama
433 (196)	Elizabethan Drama
446 (146)	Modern American Drama
465 (137)	Greek and Roman Drama
472 (191)	Shakespeare

**III. Advanced Courses in Theatre Studies:**

With the concurrence of his adviser, each student must select 9 credits from a combination of at least two of the divisions of the Theatre curriculum. The courses must be at the 300 level or above with the exception of theatre 211 and 212 which may also be applied to the fulfillment of this requirement category. The identification of the divisions is as follows:

Theatrical Performance Division (course numbers with the second digits 1, 2, or 3)  
Theatre Business and Management Division (second digit 4)  
Theatrical Design and Technology Division (second digits 5, 6, or 7)  
Theatre History and Theory Division (second digits 8 or 9)

#### IV. Electives in Theatre Studies:

In order that each student may develop a program suitable to his own needs, the courses in Theatre studies necessary to complete the 30 credit requirement for the Theatre major are open to free election by the student in consultation with his adviser. With the approval of the Department of Theatre, the student may also substitute courses that are appropriately related to his own program but which are offered by other departments of the University. Courses in dramatic literature, visual design, speech, voice, or music are considered particularly advantageous for the Theatre student.

Under the provisions of the Bachelor of Arts curriculum, up to 15 credits of additional courses from the student's major concentration may be taken as free electives in his total study program. However, the Theatre student should seek the consultation of his adviser before attempting to go beyond the normal 30 credit major.

BFA Curriculum, Department of Theatre.

#### THEATRE

A student in Theatre normally will be admitted only to the Bachelor of Arts degree program at the time of his initial registration at URI. Permission to register for work toward the Bachelor of Fine Arts degree in Theatre must be obtained through departmental evaluation and approval of the student's formal application accompanied by audition, interview, or submission of portfolio as appropriate to the student's planned area of specialization with the Theatre field.

Students in the BFA program in Theatre must complete 48 credits in Theatre studies according to the requirement categories below. To qualify for graduation with a Bachelor of Fine Arts degree in Theatre, each student must be approved, subject to annual review, for departmental certification of proficiency in one of these divisions of the Theatre curriculum: Theatrical Performance Division, Theatre Management Division, or Theatrical Design and Technology Division. A total of 124 credits is required for graduation.

#### Requirement Categories:

##### I. General Requirements:

In keeping with the University's general education policy, all candidates for the Bachelor of Fine Arts degree in Theatre are required to select and pass 45 credits of course work in three divisions. Of the total 45 credits, 18 shall be taken in one division, 15 in a second, and 12 in a third. Within each division, no more than two courses may be taken in one department or subject-matter area for general education credit.

Division A:		
Electives (see p. ___)		12-18
Division B:		
Electives (see p. ___)		12-18
Division C:		
Electives (see p. ___)		<u>12-18</u> 45

II. Specific courses Required of All Theatre Majors:

Students will be expected to complete the credits from this category by the end of the sophomore year.

Theatre 101(3)	Introduction to Theatre Studies	3
110(90)	Introduction to Acting	2
161(41)	Stagecrafts	3
201(12)	Principles of Theatre	<u>3</u>
		11

An additional 3 credits must be selected from the following:

English 255(53)	Survey of English Drama
365(61)	Modern Drama
433(196)	Elizabethan Drama
446(146)	Modern American Drama
465(137)	Greek and Roman Drama
472(191)	Shakespeare

III. Theatre Courses Outside the Area of Specialization:

With the concurrence of his adviser, each student must select 12 credits from a combination of at least two of the divisions of the Theatre curriculum other than the division in which the student plans to obtain certification of proficiency. The courses must be at the 300 level or above with the exception of Theatre 211 and 212 which may also be applied to the fulfillment of this requirement category. The identification of the divisions is as follows:

- Theatrical Performance Division (course numbers with the second digits 1, 2, or 3)
- Theatre Business and Management Division (second digit 4)
- Theatrical Design and Technology Division (second digits 5, 6, or 7)
- Theatre History and Theory Division (second digits 8 or 9)

IV. Area of Specialization:

The courses which make up the remainder of the student's 48 credit major are to be applied to the student's area of specialization. Majors may not exceed 48 credits without increasing the minimum credits required for graduation correspondingly. It is expected that these courses will be selected primarily from the division in which the student plans to obtain certification of proficiency. However, with the concurrence of the student's adviser, these courses may be supplemented by other Theatre courses or through selection of appropriate courses offered by other departments of the University. Courses in dramatic literature, visual design, speech, voice, and music are considered particularly advantageous depending on the student's area of specialization.

17. Department of Zoology.

a. Add (new)

- 1) 484 (E.E. 484) Modeling of Physiological Systems  
Semester II, 3 credits  
 Physiological study of selected systems and the development of dynamic models to describe their behavior. Lectures and laboratory projects are concerned primarily with the nervous system. Data collected from initial laboratory experiments with animals are used for later experiments with analog computer modeling. (Lec. 2, Lab. 3) Prerequisites: Math 41, Zoology 45. In alternate years, next offered 1971-72. HUBBELL & J. WOOD (Grad. # ).

(Cross-listing contingent upon anticipated approval by the College of Engineering).

- 2) 595, 596 Graduate Seminar in Zoology Sem. I & II, 1 cr. ea.  
 Consideration of philosophy and techniques of research and information, presentation at the graduate level consisting of reports by students, critique and discussion by the class. Required of entering graduate students in Zoology. Prerequisite: graduate standing. STAFF (Grad. # ).

C. College of Engineering.

1. Revise the list of courses required in the freshman year in all Engineering curriculums to read:

Freshman Year

First Semester		Second Semester	
Chem. 1a	5	Natural Sci. El.	3-5
Engr. 1 or	1	Engr. 1 or	1
Engr. 2		Engr. 2	
Gen. Ed. Elec.	6	Gen. Ed. Elec.	6
(Div. A or C)		(Div. A or C)	
Math. 41	3	Math. 42	3
	<hr style="width: 50%; margin: 0;"/> 15	ME 62 or	3-4
		Physics 3 + 5	<hr style="width: 50%; margin: 0;"/> 16-19

2. Department of Civil and Environmental Engineering.

a. Add (new).

- 1) 234(34) Construction Planning & Specifications II, 2  
 Introduction to construction planning; procedures involved in construction activities with major emphasis on heavy construction. (Lec. 2) Prerequisite: credit or registration in CE220(21). GENTILE OR MOULTROP.

- 2) 322,323 Civil Engineering Laboratory I and II I & II, 2 ea. Sequence of two laboratory courses investigating the properties and behavior of engineering materials. Includes directed work in concrete, soils and bituminous materials and experimental stress analysis. Independent student projects. Prerequisite: CE-220(21) (Lec. 1, Lab. 3). STAFF
- 3) 478(178) Solid Waste Disposal & Management I or II, 3 Sources, collection and treatment methods for the removal of solid wastes from the environment. Recovery and reuse of waste materials. Economics of solid wastes and by-products. Interrelation between solid wastes, air and water pollution. (Lec. 3) Prerequisite: Permission of Department. SUSSMAN AND POON. (Grad. #72).
- 4) 587(287) Ground Water Flow & Seepage Pressures I, 3 Hydrodynamics of fluid flow through porous media. Analytical methods for steady and unsteady seepage in aquifers; theoretical analysis with practical modification of seepage problems involving foundations, drainage structures, earth dams and wells. Prerequisite: Permission of instructor (Lec. 2, Lab. 3) NACCI AND WANG (Grad. #72).

b. Delete:

- 1) 222(22) Mechanics of Materials Laboratory
- 2) 233(33) Engineering Materials and Contract Specifications

c. Change curriculum in Civil Engineering as follows:

- 1) Delete:
  - a) Speech 1 3 cr.
  - b) C.E. 222(22) 1 cr.
  - c) G.E. 233(33) 3 cr.
- 2) Add:
  - a) C.E. 322( ) 2 cr.
  - b) C.E. 323( ) 2 cr.
  - c) C.E. 234(34) 2 cr.

- 3) The curriculum for classes beginning with the class which entered in Sept., 1969 will be as follows:

<u>Sophomore</u>		
Fall (no changes)		Spring
	CE 216(16) Metronics	3
	CE 220(21) Mech. of Mat.	3
	CE 234(34) Const. Planning	2
	Math. 244(44)	3
	Geol. 302(7)	3
	Gen. Educ. Elect.	3
	Phys. Ed.	1
		<u>18</u>

		<u>Junior</u>			
Fall			Spring		
CE 346 (46)	Transportation	3	CE 361 (61)	Structural Design	5
CE 354 (54)	Structural Mech.	3	CE 372 (74)	Water Supply	4
ME 354 (54)	Fluids	3	ME 356 (56)	Fluids Lab	1
CE 322 ( )	CE Lab	2	Phys. 223 (23)	Acoustics	3
CE 380 (80)	Soils	3	CE 323 ( )	CE Lab	2
Econ. 123 (23)		3	Gen. Educ. Elect.		3
		17			18

Senior

(no changes)

Total Credits - 136

- 4) For the class which entered in Sept., 1968, only the Junior year will be as follows:

CE 346 (46)	3	CE 361 (61)	5
CE 354 (54)	3	CE 372 (74)	4
ME 354 (54)	3	ME 356 (56)	1
CE 322 ( )	2	Phys 223 (23)	3
CE 380 (80)	3	Econ 123 (23)	3
Geol. 302 (7)	3	Gen. Educ. Elect.	3
	17		19

Total Credits for  
this Class is - 136

3. Department of Electrical Engineering.

a. Add (new). Courses will be staffed by present faculty (Grad. #72)

- 1) 411 Microwave and Quantum Electronics Semester I, 3 cr. Impedance transformation and matching on transmission lines and waveguides. Solution of wave equation for waveguides and resonant cavities. Modes in Laser resonators. Refraction and diffraction phenomena, holography. Introduction to generation of electromagnetic energy at microwave and optical frequencies. (Lec. 3) Prerequisite: EE23.
- 2) 413 Microwave and Quantum Electronics Laboratory Sem. I, 3 cr Measurements on distributed parameter systems such as transmission lines, waveguides and cavity resonators. Experimental study of tube and solid state microwave and optical generators (lasers), antenna systems, diffraction, refraction, imaging properties of lenses, spatial filtering, optical information processing and holography. (Lec. 1, Lab. 4) Prerequisite: EE 411 which may be taken concurrently.
- 3) 427 Electromechanical Devices and Systems Sem. I, 3 cr. Principles of electromechanics. Development of models for transducers, rotating electrical devices, inertial sensors, and other components used in energy conversion and electronic instrumentation systems. Dynamics of electromechanical systems. (Lec. 2, Lab. 3) Prerequisite: EE 13, EE 22.



- 4) 433 Electrical Engineering Materials and Direct Energy Conversion Laboratory Semester II, 3 credits  
Experimental course to supplement lecture courses EE 131, 132 and/or EE(ME) 417. Student projects involving film deposition, determination of electrical and optical properties, fabrication of elemental solid state devices and determination of their characteristics. Experimental study of thermo-electric, photo-electric and thermionic energy conversion devices. (Lec. 1, Lab. 4) credit or registration in EE 131, 132, and EE(ME) 417.
- 5) 457 Feedback Control Systems Semester I, 3 credits  
Classical design and analysis techniques for linear feedback systems. Sensitivity, stability, root locus techniques. Design and compensation of systems to meet various performance criteria. Prerequisite: EE 13.
- 6) 458 Systems Laboratory Semester II, 3 credits  
Analytical, experimental, and computer simulation studies of typical control, communication, and bio-systems problems. (Lec. 1, Lab. 4) Prerequisite: EE 456 or equivalent.
- 7) 538 Principles of Remote Sensing Sem. I or II, 3 credits  
The theory and techniques of remote sensing including spaceborne photometry and radiometry. Applications will be selected from the following topics: planetary atmospheres, geology and earth resources, and environmental problems. (Lec. 3) Prerequisite: EE 23, Physics 146, or permission of instructor. ZIRKIND
- 8) 539 Infrared Imaging Techniques Sem. I or II, 3 credits  
Elemental detectors and their application in radiometers and scanners. Principles of infrared imaging devices. Thermal radiation and its propagation through the atmosphere. (Lec. 3) Prerequisite: EE 137 or equivalent. ZIRKIND
- 9) 636 Solid State Electronic Devices Sem. I or II, 3 credits  
Selected topics of current research interest. Materials will be drawn from recent literature on solid state electronic devices. (Lec. 3) Prerequisite: EE 536. SADASIV
- 10) 660 Advanced Topics in System Theory Sem. I or II, 3 credits  
A seminar for advanced students. Selected topics of current research interest. Material will be drawn primarily from recent literature. (Lec. 3) Prerequisite: permission of instructor. STAFF
- 11) 665 Detection, Estimation & Modulation Theory Sem. I or II  
3 credits  
Advanced treatment of statistical detection, estimation and modulation theory. Applications to communication systems and radar or sonar systems. (Lec. 3) Prerequisite: EE 509 or equivalent and competence in probability and statistics. STAFF

b. Revise catalog statement as follows:

The following statement should replace the "Senior Year" section on page 71 of the 1969-70 catalog.

Senior Year:

The Senior year curriculum provides a large degree of flexibility and many opportunities for choice among individual courses and areas of specialization. Course sequences are available in "emphasis areas" such as Microwaves and Quantum Electronics, Communication and Control Systems, Solid State Theory and Applications, Computer Technology and Biomedical Engineering. Students should discuss the Senior program with their advisor early in the Junior year and if they select an "emphasis area" a faculty advisor in that area will be assigned. Whether a student chooses an "emphasis area" or elects to take a "general program" which combines basic courses from several areas he must file with the department before preregistration in the Spring term of the Junior year a detailed program of studies which has been approved by the appropriate faculty advisor.

Professional electives must be 400 or 500\* level courses in engineering, computer science, mathematics, a physical science or a life science.

Each electrical engineering student who chooses an emphasis area must elect in addition to the emphasis courses at least one emphasis laboratory (EE 413, EE 458, EE 433, CS 411 or EE 444)

Emphasis courses and laboratories are:

			Semester
EE 411	Microwaves and Quantum Electronics	3 cr.	I
EE 413	Microwave & Quantum Electronics Lab.	3 cr.	I
EE 457	Feedback Control Systems	3 cr.	I
EE 436	Communication Systems	3 cr.	II
EE 458	Systems Laboratory	3 cr.	II
EE 431	Electrical Engineering Materials I	3 cr.	I
EE 432	Electrical Engineering Materials II	3 cr.	II
EE 433	El.Eng.Mat. & Direct Energy Conversion Lab.	3 cr.	II
EE 444	Electronics II, Pulse & Digital Circuits	4 cr.	II
CS 410	Introduction to Computer Science and Algorithmic Processes	3 cr.	I or II
CS 411	Computer Organization, Programming and Information Structures (considered as an "emphasis laboratory")	3 cr.	II
EE 586*	Biomedical Electronics I, II	3 cr.ea.	
587*			I or II
EE 588*	Biomedical Engineering I, II	3 cr.ea.	
589*			I or II
Zoo 345	Basic Animal Physiology I	3 cr.	I

First Semester

EE 443	5
Emphasis course	3
Professional elective or emphasis lab.	3
Free elective	<u>3</u>
	14

Second Semester

Emphasis course	3
Emphasis lab. or professional elective	3
Professional elective	3
Free electives	<u>6</u>
	15

Minimum credits required: 125

The "general program" in Electrical Engineering must include EE 443 and EE 444 and four of the following courses: EE 411, EE 427, EE 431, EE 436, EE 457 and EE(ME) 417.

\* Undergraduates wishing to take 500-level courses must obtain permission of the department.

c. Contingent upon approval of the preceding curriculum changes,

- Delete: 1) 424(125) Transmission Lines, Waveguides and Antennas  
4 cr.  
2) 456(156) Feedback Control Systems, 4 cr.  
3) 426(126) Energy Conversion, 4 cr.  
4) 433(133) Electrical Engineering Materials Lab.,  
1 cr.

D. College of Home Economics.

1. Revise all curriculums by specifying the manner in which the General Education distribution requirements will be met as follows:

Division A (18, 15 or 12 credits)

Specified requirements--

- 1 course Art, Music or Theatre
- 1 course Written or oral communication
- 1 course Literature

Division B (18, 15, or 12 credits)

Specified requirements:

- 1 course Biological Sciences
- 2 courses Chemistry (Chemistry 101(1) or 103(3) and  
Chemistry 124(24)).

Division C (18, 15 or 12 credits)

Specified requirements--

- 1 course Economics
- 2 courses Psychology and/or Sociology

2. Change credits required for graduation from 132 to 128 credits.

E. College of Nursing.

Change curriculum requirements as follows:

1. Delete Phys. Educ. 1, 2, and 3 from the course requirements.
2. Add the three credits thus obtained to the number of free electives. Physical Education may be taken at the option of the student.
3. Add the following required option:

English 110(1) Composition 3 credits

or

Speech 101(1) Fundamentals of Oral Communication 3 credits

To be taken in the first semester of the freshman year; a total of 6 credits of communication skills is required in the curriculum.

F. College of Resource Development.

Change curriculums in Agricultural Science and Agricultural Technology by deleting English 120(2) and Physical Education 1, 2, 3, and 4 from the required courses. Add 7 credits to the electives in each.

G. Honors Colloquium.

1. Authorize the following numbers and catalog listings for the Honors Colloquium courses:

401 Honors Colloquium I I and II, 3 credits each  
Independent study, discussions, faculty conferences and attendance at the University of Rhode Island Honors Colloquium Distinguished Lecture Series. The general theme of the Colloquium changes each year. A different faculty member is appointed Colloquium Coordinator each year. Enrollment limited to University Honors Program students. Colloquium Coordinator, 1970-71: Arthur Stein

402 Honors Colloquium II I and II, 3 credits each  
See description under Honors Colloquium 401. Enrollment limited to Honors Program Students. Prerequisite: Honors Colloquium I. Colloquium Coordinator, 1970-71: Arthur Stein

403 Honors Colloquium III I and II, 3 credits each  
See description under Honors Colloquium 401. Enrollment limited  
to Honors Program Students. Prerequisite: Honors Colloquium II.  
Colloquium Coordinator, 1970-71: Arthur Stein

404 Honors Colloquium IV I and II, 3 credits each  
See description under Honors Colloquium 401. Enrollment limited  
to Honors Program students. Prerequisite: Honors Colloquium III.  
Colloquium Coordinator, 1970-71: Arthur Stein

2. Authorize inclusion in the catalog of suitable descriptive material  
selected and edited from that which appears in the University Manual  
(section 8.50.10-8.54.10) and elsewhere.

H. Delete from the University Catalog the following courses which have  
not been given for four consecutive years, since the academic year  
1965-1966 (Manual sec. 8.41.13):

Accounting 343 Advanced Taxation (S'66)\*  
Botany 222 Taxonomy of Vascular Plants (S'66)  
Chemical Eng. 284 (Nu.E.284) Nuclear Reactor Heat Transfer (F'65)  
Civil Eng. 366 Advanced Concrete Design (new'66)  
Education 208 Comparative Education (F'65)  
Food and Nutr. Sci. 8 Nutrition and Health ('66)  
Pharmacognosy 132 Pharmaceutical Microscopy (S'65)  
Pharmacognosy 134 Hormones and Glandular Substances (F'65)  
Physical Education for Women 32W (Educ.33) Procedures in Health Instruction  
(S'66)  
Speech 51 Broadcasting in America (F'65)  
Speech 52 Fundamentals of Broadcasting (S'66)

\*Letters and numbers in parentheses indicate spring or fall of the  
academic year last given).