

11-9-1995

## The Three Under and Twenty-Ninth Report of the Curricular Affairs Committee

University of Rhode Island Faculty Senate

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UNIVERSITY OF RHODE ISLAND  
Kingston, Rhode Island  
FACULTY SENATE

BILL  
Adopted by the Faculty Senate

TO: President Robert L. Carothers  
FROM: Chairperson of the Faculty Senate

1. The attached BILL, titled The Three Hundred and Twenty-Ninth 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 November 9, 1995.
4. After considering this bill, will you please indicate your approval or disapproval. Return the original or forward it to the Board of Governors, completing the appropriate endorsement below.
5. In accordance with Section 10, paragraph 4 of the Senate's By-Laws, this bill will become effective November 30, 1995, 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 Governors for their approval; or (4) the University Faculty petitions for a referendum. If the bill is forwarded to the Board of Governors, it will not become effective until approved by the Board.

November 10, 1995  
(date)

James G. Kowalski  
James G. Kowalski  
Chairperson of the Faculty Senate

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ENDORSEMENT

TO: Chairperson of the Faculty Senate  
FROM: President of the University

Returned.

- a. Approved .
- b. Approved subject to final approval by Board of Governors \_\_\_\_\_.
- c. Disapproved \_\_\_\_\_.

11/17/95  
(date)

Robert L. Carothers  
President

ELE 545 Design of Digital Circuits - desc/cr to-  
ELE 545 Design of Digital Circuits I or II,4  
Design techniques for digital systems. Combinational circuits and  
finite-state machines synthesis and evaluation. Test generation and  
design for testability for large digital systems. Hardware  
description language exercises of design and simulation of complex  
digital systems. (Lec 4) Pre: ELE 405 or equivalent. Staff

ELE 548 Computer Architecture -desc/cr to-  
ELE 548 Computer Architecture I or II,4  
Classification and taxonomy of computer architectures. RISC vs. CISC.  
Cache and virtual memory systems. Pipeline and vector processors.  
Multi-processor and multi-computer systems. Interprocessor  
communication networks. Dataflow machines. Parallel processing  
languages. (Lec 4) Pre: ELE 405 or equivalent or permission of  
instructor. Staff

ELE 549 Computer System Modeling - desc/cr to-  
ELE 549 Computer System Modeling I,4  
Basic techniques used in computer system modeling, queuing theory,  
stochastic processes, Petri net, product form networks, approximation  
techniques, solution algorithms and complexity, computer simulation,  
performance studies of modern computer systems. (Lec 4) Pre: ELE  
548 and 509 or MTH 451. Staff

ELE 601 Graduate Seminar -restrictions to-  
ELE 601 Graduate Seminar I and II, 1 each  
Seminar discussions including the presentation of papers based on  
research or detailed literature surveys. (Sem 1) Required of all  
graduate students with a maximum of 1 credit per semester allowed.  
May be repeated for a maximum of 2 credits. S/U credit. Staff

ELE 506 Digital Signal Processing -cr/lec/pre  
Credits from 3 to 4; (Lec 3) to (Lec 4); Pre to read:  
ELE 501 and 509. May be taken concurrently.

UNIVERSITY OF RHODE ISLAND  
Kingston, Rhode Island

FACULTY SENATE

October 25, 1995

Faculty Senate Curricular Affairs Committee  
Three Hundred and Twenty-Ninth Report

During the summer and at the October 23, 1995 meeting of the  
Curricular Affairs Committee the following matters were considered and  
are now presented to the Faculty Senate.

#### S E C T I O N I

##### Informational Matters

##### A. College of Arts and Sciences

##### 1. Department of English

CHANGE: Title for WRT 201 to "Intermediate Writing."

##### 2. Department of Marine Affairs

CHANGE: Title and description for the following  
courses:

1) MAF 100 Human Use and Management of the Marine  
Environment (I, 3) Examination of uses and  
management efforts in the coastal/ocean  
environment. Assessment of problems arising from  
those uses and attempts to conserve resources,  
protect the environment, and minimize use  
conflicts in context of changing technological  
capabilities, knowledge and values. (Lec. 3)  
Juda

2) MAF 120 New England and the Sea (II, 3) An  
examination of the human and environ- mental  
impacts of the sea and its uses on the New  
England/Gulf of Maine region. Considers marine  
resource use and management from colonial to  
modern times. (Lec. 3) Krauss

##### 3. Department of Modern and Classical Languages and Literatures

ADD: The following temporary courses:

1) FRN 099X Review French (I and II, 0) Review of  
basic structures and vocabulary. For students who  
have had two or more years of high school language  
but who are not prepared to start at the 102  
level. May not be used toward the minimum credits  
required for graduation or for General Education  
requirements. Staff

- 2) ITL 099X Review Italian (I and II, 0) Review of basic structures and vocabulary. For students who have had two or more years of high school language but who are not prepared to start at the 102 level. May not be used toward the minimum credits required for graduation or for General Education requirements. Staff
- 3) SPA 099X Review Spanish (I and II, 0) Review of basic structures and vocabulary. For students who have had two or more years of high school language but who are not prepared to start at the 102 level. May not be used toward the minimum credits required for graduation or for General Education requirements. Staff

## 4. Department of Music

## a. CHANGE: Catalog format and description for MUS 221:

MUS 221 History of Music I (I, 3) Historical development of classical and popular music in European and non-European cultures: world music, Medieval and Renaissance eras. (Lec. 3) Pre: 121 or equivalent competency. Ladewig

## b. CHANGE: Catalog format, description and prerequisite for the following courses:

- 1) MUS 222 History of Music II (II, 3) Continuation of MUS 221: Baroque, Classical, and Romantic eras. (Lec. 3) Pre: 121 or equivalent competency and 221 or consent of instructor. Ladewig
- 2) MUS 223 History of Music III (I, 3) Continuation of 221/222: European, African-American, Hispanic and other contributions to the classical and popular music of the twentieth century. (Lec. 3) Pre: 121 or equivalent competency and 221 or consent of instructor. Ladewig

## 5. Department of Political Science

ADD: PSC 205X Struggle for a Democratic Russia (I or II, 3) Introductory seminar on the politics and society of post-Communist Russia. Analysis of recent literature that attempts to understand the collapse of communism and seeks to determine what will take its place. (Seminar) Petro

## B. College of Engineering

ADD: EGR 105X Foundations of Engineering (I, 1) Introduction to Engineering. Basic engineering computer skills. Foundations for engineering design and manufacturing using a modular approach. Modules will include opportunities for teamwork and development of communication skills. (Lec. 1) Knickle

## C. Honors Program

ADD: HPR 204X Honors Course in Managerial Statistics: Special Honors Section of BAC 202 (II, 3) Statistical data analysis using micro computers. Data analysis techniques including hypothesis testing, estimation, regression, and time series. Emphasis is placed on hands-on, interactive computer learning. Includes electronic presentation of statistical material. Armstrong

## D. Marine and Environmental Academic Programs

ADD: The following Plant Sciences Courses to the list of Marine and Environmental Topics in the UNIVERSITY BULLETIN:

Plant Sciences (PLS)  
 401, 402 Plant Sciences Seminar  
 405 Propagation of Plant Materials  
 436 Floriculture and Greenhouse Crop Production  
 440 Diseases of Turfgrasses, Trees, Shrubs, and Ornamental Shrubs  
 441 Plant Disease Laboratory  
 442 Professional Turfgrass Management  
 461 Weed Science  
 463 Principles of Plant Disease Control  
 471, 472 Plant Improvement I, II  
 475 (or NRS) Plant Nutrition and Soil Fertility  
 476 Environmental Plant Physiology  
 501, 502 Graduate Seminar in Plant Sciences  
 511 The Nature of Plant Disease  
 512 Plant Growth and Development  
 572 (or BCH) Plant Biochemistry

## E. College of Nursing

ADD: The following temporary courses:

- a. NUR 230X General Methods and Strategies in Nursing Practice I (I and II, 3) Foundation course in studying general nursing strategies applicable to individual nursing care. Emphasis on theoretical and scientific bases of forms of nursing practice, nursing process, and nursing practice strategies. (Lec. 3) Pre: 100, foundation courses in natural and social sciences, credit or concurrent enrollment in 210. Evans

- b. NUR 235X Practicum in General Nursing Strategies I (I and II, 1) Practicum for developing nursing skills broadly applicable to various individual patient-care situations. Assessment, communication, and clinical decision-making skills. Techniques of general strategies in the context of the nursing process. (Practicum) Pre: FSN 207, one communications course, credit or concurrent enrollment in 230X. Staff
- c. NUR 250X Nursing in Health Promotion (I and II, 3) Examination of health promotion in nursing context. Emphasis on macro- and micro-level health promotion strategies applicable to nursing practice. (Lec. 3) Pre: PSY 232, credit or concurrent enrollment in 230X. Staff
- d. NUR 255X Practicum in Health Promotion Nursing (I and II, 1) Application of health promotion principles and nursing strategies in health promotion to clients of all ages. Emphasis on utilization of the nursing process in selected clinical situations for health promotion. (Practicum) Pre: credit or concurrent enrollment in 250X. Staff

F. College of Pharmacy

Department of Pharmacy Practice

CHANGE: Prerequisite for PHP 360 to "Pre: Third year standing."

G. College of Resource Development

1. Department of Plant Sciences

CHANGE: Prerequisite for the following courses:

- 1) LAR 344 to "Pre: 343, 345 and CVE 315."
- 2) LAR 346 to "Pre: 345 and CVE 315."

2. Resource Development

ADD: RDV 100X Exploration of International Development Issues (II, 3) A seminar to explore international development and the role of private voluntary and non-governmental organizations in international development. Organizations dealing with health, education, careers and the environment will be highlighted. (Seminar) McCreight and Abedon

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SECTION II

Curricular Matters Which Require Confirmation by the Faculty Senate.

A. College of Arts and Sciences

1. Basic Liberal Studies

CHANGE: The Basic Liberal Studies requirement for the Bachelor of Arts degree to be similar to the requirements for the Bachelor of Science, Bachelor of Fine Arts, and Bachelor of Music degrees with the following exceptions:

- 1) B.A. candidates who do not study abroad or test out of the foreign language requirements will be required to complete a one or two-course sequence in a foreign language as outlined in the university general education requirements;
- 2) Only one course per discipline (as identified by course code) may be used to fulfill the requirements in the Fine Arts and Literature, Letters, Social Sciences, and Natural Sciences divisions.
- 3) In the Fine Arts and Literature Division, 3 credits must be in Fine Arts and three credits must be in Literature. (This requirement is already in place for the B.S., B.F.A. and B.M. degrees.)

2. Department of Marine Affairs

DELETE: MAF 221 Introductory Cartography (I and II, 3)

3. Department of Sociology and Anthropology

CHANGE: Credits for APG 300 to "4" and method of instruction to "(Lec. 3, Lab. 2)."

B. College of Continuing Education

Bachelor of General Studies Program

CHANGE: Credits for BGS 100 to "3" and add the following statement to the description: "Must be taken concurrently with URI 101."

## C. College of Engineering

Department of Electrical and Computer Engineering

- a. CHANGE: Title for the B.S. degree program in "Biomedical Electronics Engineering: to "Biomedical Engineering"
- b. CHANGE: UNIVERSITY BULLETIN description and requirements as follows:

Biomedical engineering is an interdisciplinary area where engineering techniques are applied to problem solving in life sciences and medicine. Biomedical engineers design medical instruments for diagnosis and treatment of various diseases as well as for research in biology. Examples of instruments for diagnosis include electrocardiographs, electroencephalographs, automatic blood analyzers, and medical imaging systems such as X-ray imaging, radio-nuclide imaging, ultrasound imaging, computer-assisted tomography, and magnetic resonance imaging. Examples of instruments for treatment include radiotherapy machines, pacemakers, cardiac assist devices, intelligent drug delivery systems, and lasers for surgery. Biomedical engineers also develop artificial organs for prosthesis and various computer software/hardware systems to help provide high-quality, cost-effective health care.

Biomedical engineers are employed in: 1) the medical instrument industry, where they invent, design, manufacture, sell, and service medical equipment; 2) hospitals, where they evaluate, select, maintain, and provide training for the use of complex medical equipment; and 3) medical and biological research institutes, where they use their unique analytical ability and instrumentation skills to conduct advanced research.

The biomedical engineering program combines study in the biological sciences with the areas of engineering that are particularly important for the application of modern technology to medicine. With a few minor elective changes the program also satisfies the entrance requirements of most medical schools, but students who plan to go on to medical school should consult the premedical advisor and the coordinator of the biomedical engineering program.

For transfer from University College to the College of Engineering in the biomedical engineering program, students must have completed all science, mathematics, and engineering courses required during the first two semesters with a quality point average of 2.00 or better.

The major requires 131 credits.

## Minimum Requirements

Humanities and Social Sciences (27 credits): see the General Education requirements for the College of Engineering, listed on page 61. Students should consult with their advisors regarding distribution of credits and approved courses.

Mathematics (17 credits): MTH 141, 142, 243, 362, three credits MTH elective (215, any 300- to 500-level course except MTH 381).

Basic Sciences (23 credits): CHM 101, 102, 124; PHY 213, 285, 214, 286; ZOO 111, 242, 244.

Computer Science (3 credits): CSC 201.

Engineering Sciences and Design (58-59 credits): ELE 201, 202, 205, 212, 215, 313, 314, 322, 331, 342, 400, 443, 482, 588, 589; two engineering electives (chosen from CHE 333, 347, 547; CVE 220, 374; ELE 323; IME 404, 411, 412; MCE 323, 341, 354; and OCE 410); two electrical engineering electives (chosen from ELE 401, 405, 408, 427, 432, 436, 437, 444, 447, 457, or 458; one of the two courses must be chosen from 408, 427, 444, 447, or 458).

Free Elective: 3 credits.

## Freshman Year

First Semester: 15 credits

- |   |         |  |
|---|---------|--|
| 3 | CHM 101 | General Chemistry Lecture I                  |
| 1 | CHM 102 | Laboratory for Chemistry 101                 |
| 4 | MTH 141 | Introductory Calculus with Analytic Geometry |
| 4 | ZOO 111 | General Zoology                              |
| 3 |         | General Education requirement                |

## Freshman Year

Second Semester: 17 credits

- |   |         |  |
|---|---------|--|
| 3 | ECN 201 | Principles of Economics: Microeconomics      |
| 4 | MTH 142 | Intermediate Calculus with Analytic Geometry |
| 3 | PHY 213 | Elementary Physics I                         |
| 1 | PHY 285 | Physics Laboratory I                         |
| 3 | CSC 201 | Introduction to Computing                    |
| 3 | CHM 124 | Introduction to Organic Chemistry            |

## Sophomore Year

First Semester: 15 credits

- |   |         |   |
|---|---------|---|
| 3 | MTH 243 | Calculus for Functions of Several Variables |
| 3 | PHY 214 | Elementary Physics II                       |
| 1 | PHY 286 | Physics Laboratory II                       |
| 3 | ELE 201 | Digital Circuits Design                     |
| 1 | ELE 202 | Digital Circuits Design Laboratory          |
| 3 | ZOO 242 | Introductory Human Physiology               |
| 1 | ZOO 244 | Introductory Human Physiology Laboratory    |

Sophomore Year

Second Semester: 17 credits

- 3 MTH 362 Advanced Engineering Mathematics I
- 3 ELE 212 Linear Circuit Theory
- 2 ELE 215 Linear Circuit Laboratory
- 3 ELE 205 Microprocessor Laboratory
- 6 General Education requirement

Junior Year

First Semester: 15 credits

- 3 ELE 313 Linear Systems
- 3 ELE 322 Electromagnetic fields I
- 3 ELE 331 Introduction to Solid State Devices
- 6 General Education requirement

Junior Year

Second Semester: 17 credits

- 4 ELE 314 Linear Systems and Signals
- 3 Engineering elective1
- 4 ELE 342 Electronics I
- 6 General Education requirement

Senior Year

First Semester: 18-19 credits

- 5 ELE 443 Electronics II
- 4 ELE 588 Biomedical Engineering I
- 3 Engineering elective1
- 3-4 Electrical engineering design elective2
- 3 Mathematics elective3

Senior Year

Second Semester: 17 credits

- 5 ELE 589 Biomedical Engineering II
- 1 ELE 482 Biomedical Seminar
- 4 Electrical engineering design elective2
- 1 ELE 400 Introduction to Professional Practice
- 3 Free elective
- 3 General Education requirement

1. Engineering electives for this curriculum may be chosen from any two of the following courses: CHE 333, 347, 574; CVE 220, 374; ELE 323; IME 404, 411, 412; MCE 323, 341, 354; and OCE 410.
2. Electrical engineering design electives for this curriculum may be chosen from any two of the following courses: ELE 401, 405, 408, 427, 432, 436, 437, 444, 447, 457, or 458. However, one of the two courses must be chosen from ELE 408, 427, 444, 447, or 458.
3. A mathematics elective is MTH 215 or any 300- to 500-level mathematics course except MTH 381. MTH 451 is recommended as a mathematics elective.

D. College of Resource Development

1. Department of Plant Sciences and Department of Fisheries, Animal and Veterinary Sciences

ADD: ENT 390 (or AVS 390) Wildlife and Human Disease (I, 3) Introduction to the important diseases of humans carried by wildlife, including surveillance, epidemiology, transmission, public health impact and prevention. Interdisciplinary approach with emphasis on problem-solving using real-life examples. (Lec. 3) Pre: ZOO 111 or BIO 102; ZOO 262 or ENT 385 or equivalent. Mather

2. Department of Natural Resources Science

CHANGE: Credits for NRS 286 to "3."

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S E C T I O N III

Joint Report of the Curricular Affairs Committee and Graduate Council on 400-Level Courses.

During the summer and at the Curricular Affairs Committee's meeting of October 23, 1995 and the Graduate Council's meetings of September 22 and October 20, 1995, the following matters were considered and are now presented to the Faculty Senate.

A. Informational Matters

1. College of Arts and Sciences

- a. Department of Marine Affairs

- 1) CHANGE: Title and description for the following courses:

- a) MAF 410 Senior Seminar in Marine Affairs (I or II, 3) Advanced work in the management of the coastal and marine environment, with special emphasis on case studies and student projects. (Seminar) Required for seniors in marine affairs. Not for graduate credit in marine affairs. (Seniors only) Gordon
- b) MAF 461 Coastal Zone Management (I, 3) Examination of activities and management efforts in the coastal zone of both developed and developing countries and their impacts on the environment. Resolution of use conflicts. (Lec. 3) West

- c) MAF 471 Island Ecosystem Management (II, 3) An ecosystem approach to sustainable development and environmental management of mid-oceanic islands in the Caribbean and the Pacific Ocean. Topics include tourism, reef fishery, cultural heritage, and marine conservation. Simulation game on island-wide management process. (Lec. 3) Krauss
- d) MAF 472 Marine Recreational and Tourism Management Seminar (II, 3) Analysis of domestic and international case studies emphasizing identification and solutions to coastal recreation and tourism problems utilizing experiential learning. Emphasis placed on presentation, leadership and negotiation skills. (Seminar) West

## 2) CHANGE: Prerequisite for the following courses:

- a) MAF 456 by deleting "Pre: permission of instructor."
- b) MAF 465 by deleting "Pre: 221 or permission of instructor."
- c) MAF 484 by deleting "Pre: 461 or permission of instructor."
- \*d) MAF 490 to "Pre: permission of instructor, senior standing recommended."

## b. Department of Music

## CHANGE: Description for the following courses:

- a) MUS 407 The Symphony (I and II, 3) Study of the development of orchestration and of formal procedures such as sonata form, rondo, and variations. Includes works by composers such as Haydn, Beethoven, Brahms, and Tchaikovsky. (Lec. 3) Pre: 222. Offered every seventh semester. Next offered fall 1996. Ladewig
- b) MUS 431 The Baroque Era (I and II, 3) Music of 1600-1750 from the rise in Italy of opera, oratorio, idiomatic instrumental music, the sonata, and the concerto, through the works of German masters, Bach and Handel. (Lec. 3) Pre: 222 or the ability to read music. Offered every seventh semester. Next offered spring 1997. Ladewig

\* No action by Graduate Council. Not for graduate credit.

- c) MUS 432 The Classic Era (I and II, 3) Music of 1750-1825, beginning with the founders of the Classical style, including D. Scarlatti, Gluck and the sons of Bach, and culminating in the works of Haydn, Mozart, and Beethoven. (Lec. 3) Pre: 222. Offered every seventh semester. Next offered spring 1998. Ladewig
- d) MUS 433 The Romantic Era (I and II, 3) Music of 1825-1900, with emphasis on topics central to the era, including program music, nationalism, piano virtuosity, opera, lieder, the cyclic symphony, and turn-of-the-century Viennese post-Romanticism. (Lec. 3) Pre: 222 or the ability to read music. Offered every seventh semester. Next offered fall 1995. Ladewig

## 2. College of Nursing and College of Pharmacy (Department of Pharmacy Practice)

ADD: NUR 482X (or PHP 482X) Pharmacotherapeutics in Primary Health Care Nursing (I or II, 4) The integration of pharmacotherapeutic and decision-making theories with human pathophysiology. Case management approach to the prescription of medications in primary health care across the life span. Actions and interactions of pharmacological agents most utilized in primary health care settings will be presented. (Lec. 4) Pre: Matriculation in the Nurse Practitioner Program or permission of instructor. Barbour, Fimbel-Coppa and Owens

## 3. Graduate School of Oceanography

ADD: OCE 490X Global Environmental Change, A Course for Educators (II, 3) A survey of the latest information on Global Change. Emphasis is on issues such as climate, biodiversity, oceans, world resources, population, health, and international concerns. Recommended for all educators. (Lec. 3) Staff

## B. Curricular Matters Which require confirmation by the Faculty Senate

## College of Arts and Sciences

## Department of Sociology

ADD: APG 427 Unity of Anthropology (II, 3) Survey of recent advances in the subfields of anthropology. Designed to help majors appreciate the unity of anthropology in an age of specialization. (Seminar 3) Pre: Junior or senior standing. Loy