1971

68th Report of CAC

University of Rhode Island Faculty Senate

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TO: President Werner A. Baum

FROM: Chairman of the Faculty Senate

1. The Attached BILL, titled __68th Report of CAC______________________________

_________________________________________________________________________

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 __March 18, 1971____.

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 __April 8, 1971__ (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.

   March 19, 1971

   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.

   March 24, 1971

   President

Form approved 11/65
ALTERNATE ENDORSEMENT 1.

TO: Chairman of the Board of Trustees.

FROM: The University President

1. Forwarded.

2. Approved.

__________________________ /s/ President

__________________________
(Office)

ENDORSEMENT 2.

TO: Chairman of the Faculty Senate

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

1. Forwarded.

__________________________ /s/ President

__________________________
(Office)

ENDORSEMENT 3.

TO: Chairman of the Faculty Senate

FROM: The University President

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

__________________________ /s/ President

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

__________________________ /s/
Chairman of the Faculty Senate
Faculty Senate Curricular Affairs Committee Sixty-eighth Report.

At meetings of February 25 and March 4 and 5, 1971, 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 information, consult the Chairman of the department concerned).

A. College of Arts and Sciences

1. Department of Geology.
   a. Change prerequisite of GEL 430 to read:
      Prerequisites: GEL 420, CHM 110 and concurrent registration in GEL 401 or permission of the instructor.
   b. Change prerequisite of GEL 470 to read:
      Prerequisites: GEL 103 and 104, or ESC 102 and MTH 141, or permission of instructor.

2. Department of History.
   HIS 391 -- Add prerequisite: Permission of the department required.

3. Department of Mathematics.
   MTH 353 -- Change in description:
   MTH 353 Foundations of Mathematics
   Sets and relations. Construction of the integers, rational numbers, and real numbers from postulates. Completeness of the real number system. Axiom of Choice. Transfinite cardinal and ordinal numbers. Transfinite induction. (Lec. 3) Prerequisite: MTH 142 or equivalent. STAFF.

4. Department of Dental Hygiene.
   DHY 126, 135 -- Change in prerequisites:
   DHY 126 General and Oral Histology and Embryology -- Add: Pre-erquisite: DHY 125.
   DHY 135 Prophylactic Techniques Laboratory -- Add: Prerequisite: Permission of Department Chairman.
5. Department of Art.
   a. Remove three credits so that ART 403, 404, 405, and 406 may be enrolled for 3 or 6 credits rather than 3, 6, or 9 credits as presently indicated.
   b. ART 354, ART of Greece and Rome -- Change listing from Term I to Term II.
   d. Change: ART 221, Painting to ART 221, Two-dimensional Studio II.
   e. Change: ART 322, Painting to ART 322, Two-dimensional Studio III.
   f. Change: ART 207, Drawing to ART 207, Drawing I.
   g. Change: ART 208, Drawing to ART 208, Drawing II.

6. Department of Economics.
   Change in number and prerequisites:
   Change the number of ECN 102 to ECN 302 and add as prerequisites: ECN 123 or 126.

B. College of Civil and Environmental Engineering (CVE)
   Deletion of CVE 215, 357, 461, 476, 496 after Fall Semester 1971-72.

C. College of Home Economics
1. Department of Child Development and Family Relations.
   a. Change in prerequisites:
      1) CDF 331 Literature for Children -- Add: Prerequisite: Junior standing.
      2) CDF 340 Family and Community Health -- Add: Prerequisite: Junior standing.
      3) CDF 355 Marriage and Family Relationships -- Add: Prerequisite: Junior standing.
      4) CDF 370 Nursery School Practicum -- Change to: Pre- or corequisite CDF 330 and permission of department.
      5) CDF 403 Human Development During Adulthood -- Add: Pre-requisite: CDF 200, 302 or equivalent.
6) CDF 460 Family Life Education -- Add: Prerequisite: CDF 355 or permission of department.

7) CDF 500 Child Development Seminar -- Add: Prerequisite: CDF 400 or permission of department.

8) CDF 550 Family Relations Seminar -- Add: Prerequisite: CDF 355 or permission of department.

2. Department of Food and Nutritional Science.
   a. Add "and related areas" to description of credits in the major field on page 71 of the catalog.
   b. Minor changes in title for FNS 101 and 441:
      - FNS 101, from Introductory Food Study to Nutrition and Food Preparation.
      - FNS 441, from Advanced Nutrition to Advanced Human Nutrition.

3. Department of Home Economics.

   Home Economics Education and General Curriculum -- Editorial changes required, page 71 of catalog.

   HOME ECONOMICS EDUCATION AND GENERAL CURRICULUM

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

   In addition to the courses listed under Groups I and II, the following courses are required.

   CDF --- Elective 3
   EDC 102 Introduction to American Education 3
   EDC 312 Psychology of Learning 3
   EDC 334 Teaching of Home Economics 3
   EDC 337 Teaching of Home Economics 3
   EDC 484 Supervised Teaching of Home Economics 8
   EDC --- Elective 2
   FNS 221 Meal Management 3
   HMG --- Elective 3
   TXC 305 Intermediate Clothing 3

   NOTE: To meet Home Economics Education requirements, HMG 370 or 371 (married students only) is required.

   TXC 205 is a prerequisite for TXC 305 unless the exemption test is passed.
   a. HMG 350 -- Delete Semester II and change instructor from Crandall to Goertz.
   b. HMG 401 -- Change in alternate years, not offered 1970-71 to in alternate years, next offered 1971-72.
   c. HMG 470 Special Problems in Home Management -- In the third line of description drop "home planning, furnishing." The description should read: Special problems to be selected from the areas of home management theory, consumption economics, work simplification, and equipment depending upon the specific interest of the student.
   d. HMG 570 Special Problems in Home Management -- In the third line of the description drop "home planning and furnishing" and add "family economics and equipment." The description should read: Advanced study to be selected from areas of home management theory and its application, work simplification, family economics and equipment.

5. Department of Textiles, Clothing and Related Art.
   a. TXC 103 and 405:
      TXC 103 -- Change from (Lec. 2, Lab. 2) to (Lec. 2, Rec. 1).
      TXC 405 -- Change from (Lec. 1, Lab. 5) to Lec. 1, Lab. 4).
   b. Changes in Staff:
      1) TXC 224 -- Change from staff to Weeden.
      2) TXC 305 -- Change from Weeden to staff.
      3) TXC 390 -- Change from staff to Carpenter.
   c. Changes in description of student clientele to match course numbers for TXC 361 and 362:
      TXC 361, 362 -- Omit the words "graduate students" in description and add "juniors".
   d. Changes in prerequisites:
      1) TXC 403 -- Omit prerequisite TXC 103 -- Add prerequisite TXC 303 -- Correct spelling of Harabill to Harabin.
      2) TXC 433 -- Add prerequisites ECN 102 and TXC 103. This would now read Prerequisites: ECN 102 or 123 and TXC 103.
e. Changes in title.

On page 70 of the catalog change:

1) TXC 224 Clothing for the Family to Clothing and Human Behavior.
2) TXC 238 Textile Crafts to Textile Design.

D. College of Resource Development

1. Department of Forestry.

FOR 305, 306 General Wildlife Management -- To be offered every year instead of alternate years.

2. Department of Food and Resource Chemistry.

a. FRC 412 Soil Biochemistry -- Add "In alternate years next offered 1971-72".

b. FRC 421 Chemistry of Pesticides -- Change title to "Pesticide Chemistry".

3. Department of Animal Science.

GEN 352 General Genetics -- Add "Sophomore standing" to the prerequisites.

4. Department of Plant Pathology-Entomology.

PLP 342 Diseases of Turfgrasses, Trees and Ornamental Shrubs -- Change number to PLP 442. Change description to read: "Disease diagnosis, epidemiology, and control measures pertinent to these categories of plants (Lec. 3) Prerequisites: BOT 332 or equivalent or permission of instructor.

5. Department of Resource Development.

RDV 100 Natural Resource Conservation 1, 3 or 4 -- Change to 3 credits (Lec. 3). Change description by removing statement -- "Laboratory credit is required of freshmen in Natural Resources" and remove "Lab. 2".

6. Department of Plant and Soil Science.

a. Change designations of Agronomy (AGR), Horticulture (HOR), and Mechanized Agriculture (MAG) to PLS (AGR, HOR, or MAG).

b. Change semester offered and description of former Horticulture course HOR 101 as follows:
PLS 101 (HOR 101) Home Grounds 1 & 11, 3
Principles and practices in the culture and maintenance of flowers, lawns, shrubs, trees, fruits and vegetables, including plant propagation and labor-saving suggestions for the home property. (Lec. 3) Not for major credit for students in the College of Resource Development. HINDLE.

c. Change title and description of HOR (AGR) 104 as follows:
PLS 104 (AGR, HOR 104) Plants, Man and the Environment 11, 3
Plants in their economic, esthetic and survival relationship to man and other animals. Basic information on the ecology production, improvement, distribution and use of economic plants. (Lec. 3) Prerequisite: BOT 111 or BIO 101. GRIFFITHS and WAKEFIELD.

d. Change title and description of HOR 234 as follows:
PLS 234 (HOR 234) Flower Garden Management and Floral Design 11, 3
Culture and use of annuals and perennials in the home flower garden. Theory and practice of floral arrangement and garden layout and design with emphasis on shows and special uses. (Lec. 1, Studio 4). LARMIE.

e. Change PLS 242 (HOR 242) to Semester 1 and 11.

f. Change description and semester offered of HOR 306 as follows:
PLS 306 (HOR 306) Nursery Principles and Practice 1, 3
Principles of woody plant production with emphasis on cultural practices. Consideration of growing, pruning transplanting; including methods of digging, grading, storing, and marketing of plants. (Lec. 2, Lab. 2). In alternate years - next offered 1972-73. McGuire.

g. Change number of HOR 305 to PLS 405 (HOR 305) and semester offered from 1 to 11.

h. Change course description of HOR 311 as follows:
PLS 311 (HOR 311) Fruit Science 1, 3
Principles of fruit production with emphasis on home gardens. Topics include propagation, planting, soils, fertilization, cultural practices, pruning and storage of tree and small fruits and dwarf or semidwarf stocks. (Lec. 3). Shutak.

i. Change course title and description of HOR 324 as follows:
PLS 324 (HOR 324) Vegetable Science 11, 3
Management culture, varieties and harvesting of vegetables in the home garden and for fresh market and roadside sales. Soil characteristics and environment control in vegetable production. Vegetables for processing and production of seed. (Lec. 2, Lab. 2). GRIFFITHS.
j. Change title, description and instructor of HOR 331 as follows:

PLS 331 (HOR 331) Floriculture and Greenhouse Management 1, 3
The greenhouse environment and its relation to the culture of specific plants. Principles governing the production and culture of plants under controlled temperature, humidity, light and modified atmospheres. Greenhouse construction and environmental control. (Lec. 2, Lab. 2). SHAW.

k. Change title and description of HOR 343 as follows:

PLS 343 (HOR 343) Techniques in Landscape Design 1, 3
Exercises in the presentation of landscape concepts in graphic form. Emphasis is on drawing landscape plans for residential property, on arrangement of unit areas, and on ornamental plants suitable for specific landscape situations. (Lec. 1, Studio 4). HINDLE.

l. Change description of HOR 352 as follows:

PLS 352 (HOR 352) Herbaceous Plants 11, 3
Identification, growth characteristics and use of annuals, biennials, and perennials including plants propagated from seeds, bulbs and cuttings and used as foliage and flowering plants in and out of doors. (Lec. 2, Lab. 2). In alternate years, next offered 1972-73. LARMIE.

m. Change title and description of HOR 353 as follows:

PLS 353 (HOR 353) Fundamentals of Ornamental Plants Classification 1, 3
Classification and identification of ornamental plants by floral and vegetative characteristics. Introduction to their use, growth characteristics, and culture in various landscape situations. (Lec. 1, Lab. 4). HINDLE.

n. Change number, course title and description of HOR 354 as follows:

PLS 454 (HOR 354) Identification of Basic Ornamental Plants 11, 3
Identification, growth characteristics, culture and use of basic landscape plants. Materials include trees (with emphasis on evergreens); shrubs, vines and ground covers used in general landscaping. (Lec. 1, Lab. 4). Prerequisite: PLS 353 or consent of instructor. HINDLE.

o. Change title and description of HOR 432 as follows:

PLS 432 (HOR 432) Commercial Floriculture 11, 3
Growing commercial greenhouse crops including production, timing and marketing. Each student is assigned a greenhouse project. (Lec. 2, Lab. 2). Prerequisite: PLS 104 and 331 and junior standing. LARMIE.
p. Change title and description of HOR 444 as follows:

PLS 444 (HOR 444) Environmental Aspects of Landscape Design 11, 3
Relationships between principles of landscape design and elements of the environment that contribute to the development of ecologically based plans. Residential areas are used for subject emphasis. Client conferences and specifications for woody ornamental plants. (Lec. 1, Studio 4). Prerequisite: PLS 343 and 353 or consent of instructor. HINDLE.

q. Change title and description of HOR 472 as follows:

PLS 472 (HOR 472) Plant Improvement 11, 3
Breeding of economic crops with major emphasis on vegetables and flowers. Objectives and techniques of pollination, pure line and hybridization breeding, measures of variability, seed production, and applications of genetic principles to breeding problems are considered. (Lec. 2, Lab. 2). Prerequisite: Genetics or permission of instructor. In alternate years, next offered 1972-73. GRIFFITHS.

r. Change title, description and credits of HOR 491, 492 as follows:

PLS 491, 492 (HOR 491, 492) Special Projects and Independent Study 1 & 11, 1-3
Laboratory, library, studio, greenhouse and field facilities are available for special projects on storage, research methodology, mineral nutrition, plant propagation, growth and development and garden design and site planning. (Lab. 3-9). Prerequisite: permission of department. STAFF.

s. Change title and description of AGR 341 as follows:

PLS 341 (AGR 341) Lawn Management 1, 3
Grasses and other vegetation suitable for use on lawns where ground cover of turf quality is essential. Fundamental aspects of turfgrass science including identification, propagation, fertilization, pest control and other soil-plant relationships. (Lec. 2, Lab. 2). SKOGLEY.

t. Change description, semester offered, frequency and prerequisites of AGR 420 as follows:

PLS 420 (AGR 420) Crop Ecology 1, 3
Environmental factors affecting growth of crop plants. Influence of management, climate and soil factors on energy relationships, inter-plant competition, crop adaptation, persistence and productivity. Student project required. (Lec. 3). Prerequisite: BIO 101 or BOT 111, PLS 104. WAKEFIELD.
u. Change title and description of AGR 442 as follows:

PLS 442 (AGR 442) Professional Turfgrass Management 11, 3
Establishment and maintenance practices for specialty turfgrass areas such as golf courses, lawn tennis courts, bowling greens, athletic fields, public parks, industrial and institutional grounds, airports and roadsides. Design and construction specifications and construction and maintenance budgets. (Lec. 3).
Prerequisite: PLS 341 or equivalent. SKOGLEY.

v. Change number and course description of AGR 472 as follows:

PLS 470 (AGR 472) Soil Fertility 11, 3
Principles of soil science as interdependent factors related to soil productivity. Emphasis on the importance of controlled fertilizer use in production of economic plants. Basic principles governing the availability of plant nutrients and their movement in soils. (Lec. 2, Lab. 2). Prerequisite: PLS 212. BELL.

w. Change title and description of MAG 201 as follows:

PLS 201 (MAG 201) Wood-working Methods 1, 3
Principles and practice in various phases of carpentry to stimulate innovative thinking in use of wood in practices and processes related to plants, soils and resource development. Concrete work, sketching, lumber selection, wood fastening, painting, finishing, layout for rafters and stairs and care and use of wood-working tools. (Lec. 1, Shop 4). WILSON.

x. Change title and description of MAG 202 as follows:

PLS 202 (MAG 202) Metal-working Methods 11, 3
Principles and practice in working with various kinds and types of metals to stimulate innovative thinking in use of metals related to machinery and apparatus used with plants, soils and in resource development projects. Shop equipment, soldering, brazing, forging, welding, cutting, shaping, drilling, threading, tapping, and turning. (Lec. 1, Shop 4). WILSON.

y. Change number and description of MAG 222 as follows:

PLS 322 (MAG 222) Power Units 11, 3
Principles of operation, maintenance and adjustment of power units including gasoline and diesel engines and electric motors. Emphasis is placed on tractors and other power units important in farm, nursery, greenhouse and grounds maintenance operations. (Lec. 2, Lab. 2). MCKIEL.

z. Change number and description of MAG 242 as follows:

PLS 342 (MAG 242) Power Equipment 11, 3
Functional components of machines (exclusive of the power unit)
used for turfgrass maintenance and the production of specialized crops. Principles and techniques of selection, operation, adjustment and maintenance of machinery. (Lec. 2, Lab. 2). In alternate years, next offered 1971-72. McKIEL.

aa. Change number and description of MAG 384 as follows:

PLS 484 (MAG 384) Structures
Principles of design and construction of buildings and structures related to culture of plants, managing soils and resource development. Planning, materials, construction components, environmental control and waste disposal. (Lec. 3). Prerequisite: MTH 109 or equivalent and permission of instructor. In alternate years, next offered 1972-73. McKIEL.

bb. Change course description of MAG 451 as follows:

PLS 451 (MAG 451) Soil Conservation Technology
Principles and practices involved in mechanical protection, improvement and development of soil and water resources. Design of conservation features and structures are considered. (Lec. 2, Lab. 3). Prerequisite: MTH 109 or equivalent. McKIEL.

E. College of Nursing

Changes in title:

1. From: NUR 301 Maternal and Child Health
   To: NUR 301 Maternal and Child Health Nursing

2. From: NUR 302 Maternal and Child Health Practicum
   To: NUR 302 Maternal and Child Health Nursing Practicum

II. Items Requiring Confirmation by the Faculty Senate.

A. College of Arts and Sciences

1. Department of History.

   a. Add -- HIS 441 United States Since 1945
      Social, political, and economic developments since the end of World War II. Equal emphasis upon the domestic sphere and the role of the United States in the world. (Lec. 3). KLEIN.

   b. Change -- HIS 440 United States History from 1917 to 1945
      Social, political, and economic developments between the World Wars. Emphasis upon domestic affairs but special attention given to the involvement of the United States in World War II. (Lec. 3). KLEIN.
c. Add -- HIS 394 History as a Discipline 1 or II, 3
An introduction to the philosophy and history of history; the relation of history to other disciplines. Prerequisite: Junior Standing. STAFF.

d. Add -- HIS 395 Seminar in History 1 & II, 3
Introduction to historical research and writing. Topics vary. Required for History concentration. Prerequisite: Permission of the Department. STAFF.

e. Delete -- HIS 393 (193) Introduction to Research in History

f. Change in Concentration Requirements: The History concentration requirements stated on page 29 of the University of Rhode Island Catalog, 1970-71, should be changed to read as follows:

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

A minimum of 6 and a maximum of 12 credits in courses numbered 100 to 299.

The balance of required credits in courses numbered 300 or above, including one undergraduate seminar, HIS 395. Under unusual circumstances, with permission of the chairman of the department, a student may substitute, in place of the seminar, directed study HIS 391, leading to a substantial research paper.

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

2. Department of Languages.

a. Add -- GRK 101, 102 Introductory Greek 1 & II, 3 each
Grammar and syntax of ancient Attic Greek combined with reading practice. In the second semester a text of standard Attic prose will be read. (Lec. 3). CASHDOLLAR.

b. Add -- POR 101, 102 Elementary Portuguese 1 & II, 3 each
Communication at an elementary level through the aural, oral and written skills of Portuguese by means of class experience and language laboratory. (Lec. 3). STAFF.

c. Add -- POR 103, 104 Intermediate Portuguese 1 & II, 3 each
Communication at an intermediate level through the aural, oral and written skills of Portuguese by means of class experience including the reading of Portuguese and Brazilian representative authors and language laboratory. (Lec. 3). Prerequisite: POR 102 or equivalent. STAFF.
d. Add -- POR 497, 498 Directed Study 1 & 11, 3 each
Designed for the advanced student in Proto gente. Individual study and reports on problems of special interest. No graduate program credit. Prerequisite: POR 104 or equivalent, acceptance of a project by a member of the staff, and departmental approval. STAFF.

e. Add -- FRN 306 Oral Expression in French 11, 3
Designed to improve ability in conversation, discussion, short speech-making, pronunciation, everyday vocabulary. Work is built around matters of current interest in France which are selected by instructor and students. (Lec. 3). Prerequisite: FRN 206 or equivalent. STAFF.

f. Add -- FRN 305 Composition 1, 3
Training in the writing of literary French. Frequent compositions and critiques with emphasis on the stylistic devices. Recommended for those concentrating in French. (Lec. 3). Prerequisite: FRN 206 or equivalent. PORTER.

g. Substitute, "Literature in English Translation," for the title, "Classics," in Division A of the B.A. curriculum. The courses that should be considered in the category, "Literature in English Translation," are Classics 391, 392, 393; French 391, 392, 393; German 391, 392; Spanish 391, 392; and Russian 391, 392.

h. Change Concentration Requirements in French as follows:

Students selecting French as their concentration are required to complete thirty credits in French courses numbered 103 or higher, of which no less than nine are to be taken in literature. Courses in literature may be selected from among French 325, 326, courses at the 400 level, and, with permission of the instructor, courses at the 500 level. Courses in linguistics may also count toward the concentration. Additionally, students of proven competence in French language and literature and with permission of the adviser, the Section head, the Department Chairman, and the Dean of the College, may take courses in related fields such as history, art, or philosophy toward their concentration.

3. Department of English.

a. Add -- ENG 253 English Literature 1 & 11, 3 each
Selections from English literature, 1832 to the present. (Lec. 3). STAFF.

b. Change title of ENG 241, 242 as follows:

ENG 241, 242 American Literature 1 & 11, 3 each
ENG 241: Selections from American literature, beginnings to the Civil War.
ENG 242: Selections from American literature, latter part of the
nineteenth century to the present. (Lec. 3). ENG 241 not pre-
requisite for ENG 242. STAFF.

c. Change in title of ENG 251, 252 as follows:

ENG 251, 252 English Literature 1 & II, 3 each
ENG 251: Selections from English literature, beginnings to 1660.
ENG 252: Selections from English literature, 1660-1832. (Lec. 3).
None of these courses prerequisite for any other. These courses
recommended in preparation for more advanced courses in English
literature. Students who plan to become English majors should
elect them in sophomore year. STAFF.

d. Change in number:

From: ENG 102 The Negro in American Literature
To: ENG 444 The Negro in American Literature

e. Change in number:

From: ENG 243 The American Short Story
To: ENG 340 The American Short Story

f. Change concentration requirements as follows:

Students selecting this field of concentration must complete a
minimum of 30 credits in English. The following requirements per-
tain only to these first 30 credits.

1) Three courses (9 credits) on the 200 level, the maximum on
this level being four courses (12 credits).

2) Balance of courses on the 300, 400, 500* level, including a
minimum of three courses (9 credits) on the 400 level or
above.

* Undergraduates wishing to take these courses must secure per-
mission of the instructor.

5. Department of Geology.

a. Alteration in requirements in the B.S. curriculum in Geology.

Statement to Replace Page 37 of the 1970-71 University Catalog:

GEOLOGY

This curriculum is designed as a basic foundation for graduate study and careers
in the earth sciences. In addition to training for research and teaching oppor-
tunities in geology, it offers preparation for further work in geochemistry,
geophysics, paleontology, paleoecology, mineral resources, engineering geology,
environmental geology and Oceanography.
Students majoring in geology should note the requirement for field experience. A summer field camp normally is undertaken following the junior year and related costs are the responsibility of the student.

Freshmen year
First Semester
MTH 109* Algebra & Trigonometry 3
GEL 103 Physical Geology 3
BOT 111 General Botany (or BIO 101) 4 or 3
General Education Requirement 6 16 or 15

Second Semester
MTH 141* Introductory Calculus with Analytic Geometry 3
GEL 104 Historical Geology 3
ZOO 111 General Zoology (or BIO 102) 4 or 3
ESC 101 Principles of Earth Science 4
General Education Requirement 3 17 or 16

Sophomore Year
First Semester
CHM 101 and 102 or 103 and 105 General Chemistry 4
MTH 142* Intermediate Calculus with Analytic Geometry 3
PHY 213 and 285 Elementary Physics (or PHY 111) 4
GEL 410 Geomorphology 3
General Education Requirement 3 17

Second Semester
CHM 112 and 114 General Chemistry 4
PHY 214 and 286 Elementary Physics (or PHY 112) 4
Elective 3
General Education Requirement 6 17

*Students with adequate preparation in algebra and trigonometry may take Math 141 in the first semester and Math 142 in the second semester of the Freshmen year.

Junior and Senior Years
In addition to the remainder of the General Education Requirements (p.29) and free electives, the following geology courses are required:

GEL 410 Geomorphology (if not taken in Soph. year) 3
GEL 420 Mineralogy 3
GEL 421 Optical Mineralogy 3
GEL 430 Petrology 3
GEL 440 Introduction to Paleontology 3
GEL 450 Introduction to Stratigraphy & Sedimentation 3
GEL 470 Structural Geology 3
Approved Summer Camp (between junior and senior years) 4
Students must also take an approved course in statistical methods or computer science, and 12 credits of science electives which constitute an integrated group in earth science (selected in consultation with the faculty adviser).

Total credits required: 122.

6. Department of Psychology.

a. Add -- PSY 460 The Psychology of Violence and Aggression

Study of causal factors involved in understanding aggressive behavior. Reaction from clinical, physiological, and social viewpoints. Emphasis upon methods used to deal with and change violent or aggressive behavior. (Lec. 3). Prerequisites: PSY 113, and SGC 204, or permission of the instructor. A. Berman.

b. Add -- PSY 461 Social and Psychological Aspects of Alcoholism

Study of causes and effects of alcoholism. Oriented toward needs of those working with alcoholics, dealing with treatment and/or prevention of alcoholism. (Lec. 3). Prerequisites: PSY 113, junior standing and permission of the instructor. A. WIlLOUGHBY.

7. Departments of Bacteriology, Botany, Zoology.

Change in B.S. Curriculum

B.S. CURRICULUM IN BACTERIOLOGY, BOTANY, ZOOLOGY

The statement on p. 34 and 35 of the University of Rhode Island Catalog, 1970-71 edition, should be changed to read:

Bacteriology: A minimum of 30 credits in Bacteriology is required, including Bacteriology 201. The major in Bacteriology may include any course in Bacteriology, Animal Pathology 534 and 536, Botany 416, 432, and 534, Oceanography 567, Plant Pathology 561, Zoology 331, 441, and 512; students who plan to attend graduate school should take Mathematics 141 and 142 and Chemistry 331 and 332. In addition, the student must take Botany 111, Zoology 111, Chemistry 101 or 103, 110, 221, 222, and 212; Biochemistry 310; Physics 213, 285, 214, and 286 (or Physics 111 and 112); Mathematics 109 (or 141) and 141 (or 142); and a modern language to the intermediate level.

Botany: A minimum of 30 credits in Botany is required and must include Botany 111, 221, 262, 323, 352, 411, 442, and 416 or 432. In addition, the student must take Bacteriology 201; Chemistry 101 (or 103), 110, 221, and 222; Physics 213, 285, 214, 286 (or Physics 111 and 112); Zoology 111; English 110 and Speech 102; Math 141 and 142.
Zoology: A minimum of 30 credits in Zoology is required and must include Zoology 111, 264, 313, 316, 345, 354, 395 and 396. In addition, the student must take Botany 111; Chemistry 101 (or 103), 110, 221, and 222; Genetics 352; Math 141 and 142; Physics 213, 285, 214, 286, (or Physics 111 and 112); and a modern language to the intermediate level.

Freshman Year
First Semester
BOT 111 or 200 111 4  Second Semester
CHM 101 or 103 4
MTH 109 or 141 3
**Modern Language or Elective 3
General Ed Req or Free 3
Elective 3

17

Sophomore Year
First Semester
***BCT 201 4
CHM 221 4
General Ed Req or Free Electives 9

17

Second Semester
Curriculum Requirements 3-4
CHM 222 4
General Ed Req or Free Electives 9

16-17

TOTAL CREDITS REQUIRED: 130.

* Math 142 is required of Botany and Zoology majors
** Not required of Botany majors
*** Not required of Zoology Majors

8. Department of Chemistry.

Change: Beneath the statement under CHEMISTRY on pp. 35 and 36 of the University of Rhode Island Catalog, 1970-71, edition, the following statement should be inserted:

Freshman Year
First Semester
CHM 191 5
MTH 141 3
*Language or Free Elective 3
General Ed Req 6

17

Second Semester
CHM 192 5
MTH 142 3
*Language or Free Elective 3
General Ed Req 6

17
<table>
<thead>
<tr>
<th></th>
<th>Sophomore Year</th>
<th></th>
<th></th>
<th></th>
<th>Junior Year</th>
<th></th>
<th>Second Semester</th>
<th></th>
<th>Senior Year</th>
<th></th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>First Semester</td>
<td>Second Semester</td>
<td></td>
<td></td>
<td>First Semester</td>
<td></td>
<td>Second Semester</td>
<td></td>
<td>First Semester</td>
<td></td>
<td>Second Semester</td>
</tr>
<tr>
<td>CHM 221</td>
<td>4</td>
<td>CHM 222</td>
<td>4</td>
<td></td>
<td>CHM 441</td>
<td>3</td>
<td>CHM 442</td>
<td>3</td>
<td>CHM 401</td>
<td>3</td>
<td>CHM 392</td>
</tr>
<tr>
<td>MTH 243</td>
<td>3</td>
<td>MTH 244</td>
<td>3</td>
<td></td>
<td>CHM 335</td>
<td>2</td>
<td>CHM 336</td>
<td>2</td>
<td><strong>Curriculum Requirements</strong></td>
<td>3-0</td>
<td></td>
</tr>
<tr>
<td>PHY 213</td>
<td>3</td>
<td>PHY 214</td>
<td>3</td>
<td></td>
<td>CHM 425</td>
<td>4</td>
<td>CHM 412</td>
<td>3</td>
<td>Free Electives</td>
<td>3-6</td>
<td>Free Electives</td>
</tr>
<tr>
<td>PHY 285</td>
<td>1</td>
<td>PHY 286</td>
<td>1</td>
<td></td>
<td>PHY Elective</td>
<td>3</td>
<td>CHM 414</td>
<td>2</td>
<td><strong>Curriculum Requirements</strong></td>
<td>3-0</td>
<td></td>
</tr>
</tbody>
</table>
| *Language or Free Elective | 3 | *Language or Free Elective | 3 | General Ed Req | 3 | General Ed Req | 6 | General Ed Req | 6 | TOTAL CREDITS REQUIRED: 130. | 16 |}

**Students who desire certification by the American Chemical Society are required to complete intermediate German or Russian.**

**Chemistry 353, 354 or any 400 or, with permission of the department, any 500-level course in Chemistry.**

9. Department of Mathematics.

 a. Change in B.S. requirements:

The statement on pp. 38 and 39 of the University of Rhode Island Catalog, 1970-71, edition, should be changed to read:

The student must acquire at least 39 credits in mathematics exclusive of MTH 107, 108, and 109. The program usually includes MTH 141, 142 and 243; however, students who have had a substantial introduction to calculus should consult with the department chairman to determine whether they are ready to begin study at a higher level than MTH 141. In addition, the program must include MTH 215, 316, 335, 336, 425, 451, and 462. The department recommends that the student also take MTH 353 and 442.
The student must complete a minor concentration of 18 or more credits in one of these three areas: biological science, physical science, or the social sciences.

The program must include PHY 213, 285, and 214, 286.

TOTAL CREDITS REQUIRED: 130.

b. Change MTH 335, 336 from current reading to:

MTH 335, 336 Advanced Calculus I, II 1 & II, 3
Sets and functions, real topology, continuity and uniform continuity, the Riemann integral, improper integrals, sequences and series of functions, implicit and inverse function theorems, transformation of multiple integrals. Detailed proofs will be emphasized. (Lec. 3). Prerequisite: MTH 243. STAFF.

c. Add -- MTH 444 Ordinary Differential Equations 11, 3
Introduction to fundamental theory of ordinary and functional-differential equations. Series of numerical methods. Topics from stability, periodic solutions, or boundary-value problems. Applications to physics, engineering, biology. (Lec. 3). Prerequisite: MTH 244 and permission of the instructor. STAFF.

d. Drop -- MTH 345, 346 Introduction to Ordinary Differential Equations 1, 11, 3 each

e. Drop -- MTH 337 and MTH 338 contingent upon approval of the changes in MTH 335 and 336.

f. Change MTH 461 from current description to:

MTH 461 Methods of Applied Mathematics 1, 3
A discussion of most of the following topics: vector analysis, elementary complex analysis, Fourier series, Laplace transforms, special functions, elementary partial differential equations. Emphasis is on the development of techniques rather than on mathematical theory. (Lec. 3). Prerequisite: MTH 244. STAFF.

g. Change the B.A. curriculum in Mathematics (p. 30 of the 1970-71 Catalog) to read as follows:

MATHEMATICS

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>141</td>
<td>Introductory Calculus with Analytic Geometry</td>
<td>3</td>
</tr>
<tr>
<td>142</td>
<td>Intermediate Calculus with Analytic Geometry</td>
<td>3</td>
</tr>
<tr>
<td>215</td>
<td>Introduction to Algebraic Structures</td>
<td>3</td>
</tr>
<tr>
<td>243</td>
<td>Calculus &amp; Analytic Geometry of Several Variables</td>
<td>3</td>
</tr>
</tbody>
</table>
Six (6) credits are to be selected from the following:

- 322 (122) Concepts of Geometry
- 353 (53) Foundations of Mathematics
- 425 (125) Topology
- 444 (New) Ordinary Differential Equations
- 451 (151) Introduction to Probability and Statistics
- 462 (162) Functions of a Complex Variable

It is strongly recommended that students considering graduate study in mathematics take MTH 425 (125) and 462 (162).


10. Department of Medical Technology.

Change in requirements in B.S. degree in Medical Technology.

Change: The statement on pp. 39 and 40 of the University of Rhode Island Catalog, 1970-71 edition, should be changed to read:

This curriculum is designed to prepare men and women for work in a hospital or other diagnostic laboratory. During the first three years on campus, the emphasis is on general education and basic courses in biology, mathematics, and chemistry necessary as background in the applied sciences. Upon completion of these academic courses, the senior year provides a 52-week course in an approved hospital school of medical technology. This clinical program includes didactic and laboratory instruction in diagnostic methods. After successfully completing the course, the student is eligible for the national examination given by the Registry of Medical Technologists.

<table>
<thead>
<tr>
<th>Freshmen Year</th>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 101 or 103, General CHM</td>
<td>4</td>
<td>CHM 110</td>
</tr>
<tr>
<td>BOT 111 or ZOO 111</td>
<td>4</td>
<td>MTC 102</td>
</tr>
<tr>
<td>MTH 109 or MTH 141</td>
<td>3</td>
<td>ZCO 111 or BOT 111</td>
</tr>
<tr>
<td>MTC 101</td>
<td>1</td>
<td>General Ed Req</td>
</tr>
<tr>
<td>General Ed Req</td>
<td>3</td>
<td>Free Elective</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>18</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sophomore Year</th>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 221</td>
<td>4</td>
<td>CHM 222</td>
</tr>
<tr>
<td>PHY 111</td>
<td>4</td>
<td>PHY 112</td>
</tr>
<tr>
<td>MTC 201</td>
<td>1</td>
<td>MTC 202</td>
</tr>
<tr>
<td>General Ed Req</td>
<td>6</td>
<td>General Ed Req</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>Free Electives</td>
</tr>
<tr>
<td></td>
<td></td>
<td>18</td>
</tr>
</tbody>
</table>
The hospital clinical program provides 32 credits.

TOTAL CREDITS REQUIRED: 130.

11. Department of Physics.

Change in requirement in B.S. degree in Physics.

Change: Following the opening statement under Physics on page 43 of the University of Rhode Island Catalog, 1970-71 edition, the following statement should be inserted:

<table>
<thead>
<tr>
<th>Freshman Year</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Semester</td>
<td>Second Semester</td>
</tr>
<tr>
<td>MTH 141</td>
<td>MTH 142</td>
</tr>
<tr>
<td>General Ed Req</td>
<td>PHY 213 &amp; 285</td>
</tr>
<tr>
<td></td>
<td>General Ed Req</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>9</td>
<td>16</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sophomore Year</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Semester</td>
<td>Second Semester</td>
</tr>
<tr>
<td>MTH 243</td>
<td>MTH 244</td>
</tr>
<tr>
<td>PHY 214 &amp; 286</td>
<td>PHY 334</td>
</tr>
<tr>
<td>General Ed Req</td>
<td>PHY 340</td>
</tr>
<tr>
<td></td>
<td>General Ed Req</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>9</td>
<td>15</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Junior Year</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Semester</td>
<td>Second Semester</td>
</tr>
<tr>
<td>MTH Elective</td>
<td>MTH Elective</td>
</tr>
<tr>
<td>PHY 331</td>
<td>PHY 322</td>
</tr>
<tr>
<td>PHY 381</td>
<td>PHY 382</td>
</tr>
<tr>
<td>General Ed Req</td>
<td>Free Electives</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>3</td>
<td>18</td>
</tr>
</tbody>
</table>
A well-prepared student, upon consultation with the department, may begin his study of physics in the fall semester of the freshman year.

12. Department of Physical Education for Women.

Change in requirements in B.S. degree in Physical Education for Women.

Change: The statement on pp. 42 and 43 in the University of Rhode Island Catalog, 1970-71 edition, to read as follows:

**PHYSICAL EDUCATION FOR WOMEN**

This curriculum is designed for women students who wish to teach physical education at the elementary or secondary school level. In addition to a major concentration in the professional area, students are provided a liberal educational background. Completion of the program fulfills the requirements for teacher certification by the state of Rhode Island.
### Junior Year

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EDC 312</strong></td>
<td><strong>EDC 333</strong></td>
</tr>
<tr>
<td><strong>1</strong></td>
<td><strong>1</strong></td>
</tr>
<tr>
<td><em>PEW 212</em></td>
<td><em>PEW 213</em></td>
</tr>
<tr>
<td><strong>2</strong></td>
<td><strong>1</strong></td>
</tr>
<tr>
<td><strong>PEW 301</strong></td>
<td><strong>PEW 320</strong></td>
</tr>
<tr>
<td><strong>2</strong></td>
<td><strong>3</strong></td>
</tr>
<tr>
<td><strong>PEW 324</strong></td>
<td><strong>PEW 328</strong></td>
</tr>
<tr>
<td><strong>2</strong></td>
<td><strong>2</strong></td>
</tr>
<tr>
<td><strong>PEW 351</strong></td>
<td><strong>PEW 331</strong></td>
</tr>
<tr>
<td><strong>3</strong></td>
<td><strong>2</strong></td>
</tr>
<tr>
<td><strong>ZOO 143</strong></td>
<td><strong>General Ed Req or Free</strong></td>
</tr>
<tr>
<td><strong>3</strong></td>
<td><strong>Electives</strong></td>
</tr>
<tr>
<td><strong>General Ed Req or Free Electives</strong></td>
<td></td>
</tr>
<tr>
<td><strong>3</strong></td>
<td><strong>6</strong></td>
</tr>
</tbody>
</table>

**TOTAL CREDITS REQUIRED:** 17

Practicum courses during the junior and senior years are activity courses that follow PEW 101 through PEW 204. These courses are especially designed to provide instruction in all necessary additional activities. They are also open to other upperclassmen who have permission to take them from the department chairman.

Note: Students must purchase a uniform for student teaching as prescribed by the department, prior to the second semester of the sophomore year.

### Major Concentration 30 Credits in Dental Hygiene

| **DHY 101** | 1 |
| **DHY 125** | 3 |
| **DHY 135** | 1 |
| **DHY 141** | 1 |

Changes in requirements in B.S. degree in Dental Hygiene.

Change: The total number of credits for the Bachelor of Science in Dental Hygiene from: 137 to: 125 on page. 36 of the University of Rhode Island Catalog, 1970-71 edition, delete the last paragraph and all subsequent information in the current description and insert the following statement:

The required professional courses are made up of the elements which contribute directly to the skill and understanding of dental hygiene and are required in the professional sequence.
*DHY 126  3
*DHY 128  1
*DHY 136  2
*DHY 227  3
*DHY 231  2
*DHY 237  2
*DHY 238  2
*DHY 244  1
*DHY 246  1
*DHY 250  2
*DHY 252  2
*DHY 254  1
*DHY 260  2

30 credits

Retain the following courses in other departments required of Dental Hygiene majors:

- CHM 101  4
  or 103
- CHM 124  4
- ENG 110  3
- ENG 120  3
- ZOO 121  4
- ZOO 142  3
- PEW 172  1
- BAC 201  4
- SOC 202  3
- SOC 204  3
- FNS 207  3
- PCL 221  2
- PSY 113  3
- PSY 232  3
- SPE 101  3
- EDC 102  3
- EDC 312  3
- EDC 371  3
- MTH 107  3

58 credits

*Required for Associate in Science in Dental Hygiene Degree.

14. Department of Geography.

Add -- GEG 100 The Geography of Human Ecosystems  1 & II, 3
The evolution of human environments from the stone age to the con-
temporary megalopolis and emergent world city in terms of man-
earthspace-resource relationships. (Lec. 3). HIGBEE.

15. Department of Art.

a. Add -- ART 203 Color  11, 3
The visual perception of color and the manipulation of light as
they pertain to two and three dimensional formulations. (Studio
6). Prerequisite: Art 101 and 103 or permission of the instructor.

b. Add -- ART 344 Three-Dimensional Studio III 1 & II, 3
Continuation of Art 243. (Studio 6). Prerequisite: ART 243 or permission of the instructor. STAFF.

c. Change ART 241 as follows:
ART 103 Three-Dimensional Studio I 1, II, 3
Introductory studies emphasizing problems in three-dimensional organization and figure modeling in clay or plaster, observations from the live model with discussion and application of various molds and casting techniques. (Studio 6). Prerequisite: ART 101 or permission of the instructor. STAFF.

d. Change ART 342 as follows:
ART 243 Three-Dimensional Studio II 1 & II, 3
Formation of three-dimensional forms employing basic sculptural materials and techniques. Exploration of the basic media with emphasis on form, material and structural means in studio practice. (Studio 6). Prerequisite: ART 103 or permission of the instructor. STAFF.

e. Delete:
1) ART 102 Three-Dimensional Studio
2) ART 211 Calligraphy-Letterform I
3) ART 312 Lettering -- Letterform II

16. Department of Sociology and Anthropology.

Change B.A. Concentration as follows:

Sociology and Anthropology shall be considered as separate subject areas for purposes of distributive requirements and shall be listed separately in Division C with all courses for which a student has the prerequisite as being acceptable. Effective -- Fall Semester 1970.

B. College of Engineering

1. Department of Civil and Environmental Engineering.

a. Add -- CVE 315 Surveying I 1 & 3
Theory and practice of plane surveying including use, care and adjustment of surveying instruments, boundary surveys, horizontal and vertical curves, earthwork and topography. (Lec. 2, Lab. 3). Prerequisite: MTH 141. GENTILE.
b. Add -- CVE 334 Construction Planning and Specifications II, 3
Introduction to construction planning; procedures involved in construction activities with major emphasis on heavy construction. (Lec. 3). Prerequisite: CVE 220. GENTILE.

c. Add -- CVE 350 Structural Analysis I & II, 3
Structural systems: beams, frames, arches, plates, shells. Analysis of determinate and indeterminate structures. Virtual work, conjugate beam, general method for indeterminate structures. (Lec. 3). Prerequisite: CVE 220. STAFF.

d. Add -- CVE 351 Structural Analysis II II, 3
Advanced topics in truss and frame analysis: energy methods, slope deflection, moment distribution, matrix methods, influence lines, stability, approximate methods. (Lec. 3). Prerequisite: CVE 350. STAFF.

e. Add -- CVE 374 Environmental Engineering I II, 3
Systems concerned with urban environmental problems of water supply and treatment, sewerage treatment of municipal and industrial waste waters, stream pollution, air pollution, and disposal of solid waste materials. (Lec. 3). Prerequisite: MCE 354. STAFF.

f. Add -- CVE 396 Civil Engineering Analysis II, 3
Problems from several fields of Civil and Environmental Engineering solved by numerical methods with particular emphasis on use of electronic digital computers. Special problems requiring use of the University computer will be assigned in the area of each student's interest. (Lec. 2, Lab. 3). Prerequisite: CVE 216. LAVELLE or MARCUS.

g. Add -- CVE 460 Analysis & Design of Metal Structures I, 3
Properties of metals. Current design criteria and practice for the design of steel elements. Elastic and in-elastic behavior and design of tension, compression, flexural, and beam-column members. Design of connections. Comprehensive design problems. (Lec. 2, Lab. 3). Prerequisite: CVE 350. Not for graduate program credit. STAFF.

h. Add -- CVE 465 Analysis and Design of Concrete Structures II, 3
Current criteria and practice for design of reinforced and prestressed concrete structures. Elastic and ultimate strength analysis of beams, slabs, columns and frames. Comprehensive design problems. (Lec. 2, Lab. 3). Prerequisite: CVE 350. No graduate program credit. STAFF.

i. Add -- CVE 470 Water Supply and Treatment II, 3
Development of surface and ground water supplies, water transportation and distribution systems. Water treatment processes including chemical coagulation and precipitation, water softening,
iron and manganese removal, disinfection, corrosion control, and saline water conversion. (Lec. 2, Lab. 3). Prerequisite: CVE 374 or permission of the instructor. Not for graduate program credit. CAMPBELL.

j. Add -- CVE 471 Municipal Waste Water Systems. Development of systems for the collection and conveyance of municipal waste waters. Treatment of waste waters by physical, chemical, and biological systems. Reuse of waste waters. Regional systems development and financing. (Lec. 2, Lab. 3). Prerequisite: CVE 374 or permission of the instructor. Not for graduate program credit. CAMPBELL.

k. Change curriculum in Civil and Environmental Engineering:

For the Class of 1974

Sophomore

<table>
<thead>
<tr>
<th>Fall</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTH 243 Calculus &amp; Analytic</td>
<td>MTH 244 Differential Equations</td>
</tr>
<tr>
<td>Geometry</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ELE 210 Intr. to Electrical</td>
<td>PHY 340 Modern Physics</td>
</tr>
<tr>
<td>Engineering</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MCE 263 Dynamics</td>
<td>GEL 302 Engineering Geology</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>CVE 216 Metronics</td>
<td>CVE 220 Mechanics of Materials</td>
</tr>
<tr>
<td>2(1)</td>
<td>3</td>
</tr>
<tr>
<td>General Education Elective</td>
<td>General Education Electives</td>
</tr>
<tr>
<td>(Divisions A or C)</td>
<td>(Divisions A or C)</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>15</td>
<td>15</td>
</tr>
</tbody>
</table>

Junior

| CVE 322 Civil Engineering       | CVE 323 Civil Engineering             |
| Laboratory                      | Laboratory                             |
| 1(1)                            | 1(1)                                  |
| MCE 354 Fluid Mechanics         |                                       |
| 3                               |                                       |

The remaining courses in the Junior and Senior years shall be selected by the student to satisfy the following requirements.

1. Core Courses

Each student must select at least 5 of the following 8 courses.

CVE 350 Structural Analysis I
CVE 380 Soil Mechanics
CVE 374 Environmental Engineering I
CVE 346 Transportation Engineering
CVE 315 Surveying
CVE 334 Construction Planning & Specifications
CVE 396 Civil Engineering Analysis
CPL 410 Fundamentals of Urban Planning
2. **Mathematical Science Elective**

Each student must elect at least one course at the 400 level or above in Mathematics, Statistics or Operations Research.

3. **Professional Electives**

At least 24 credits of professional electives must be selected by the student in consultation with his advisor and approved by the Department. Courses may be chosen from Engineering, Computer Science, the Sciences, Social Sciences, Community Planning or other areas to develop a program appropriate to a Bachelor of Science degree in Civil and Environmental Engineering.

4. **General Education Electives**

An additional 9 credits in Divisions A and C are required to complete the University General Education requirements.

5. **Free Electives**

All students in the University may select 6 credits of free electives.

**TOTAL CREDITS: 125-128.**

**For the Class of 1973**

<table>
<thead>
<tr>
<th>Junior</th>
</tr>
</thead>
<tbody>
<tr>
<td>CVE 322 CVE Lab 1(1)</td>
</tr>
<tr>
<td>MCE 354 Fluid Mechanics 3</td>
</tr>
</tbody>
</table>

1. **Core Courses (Select 4 of 6)**

   - CVE 350 Structural Analysis I
   - CVE 380 Soil Mechanics
   - CVE 374 Environmental Engineering I
   - CVE 346 Transportation Engineering
   - CPL 410 Fundamentals of Urban Planning
   - CVE 396 CVE Analysis

   **12 credits**

2. **Mathematical Science Elective**

3. **Professional Electives**

4. **General Education Electives**

5. **Free Electives**

6. **Physics 340 or 341**

   **Total 58 credits**

   *(Junior and Senior Years)*

**For the Class of 1972**

1. Drop CVE 393 Senior Seminar from Spring Semester.
1. Delete the following courses:
   - CVE 234 Construction Planning and Specifications
   - CVE 354 Structural Mechanics
   - CVE 361 Structural Design
   - CVE 372 Water Supply and Sewerage
   - CVE 373 Public Health Engineering
   - CVE 463 Plastic Analysis & Design
   - CVE 466 Concrete Structures

2. Department of Mechanical Engineering and Applied Mechanics.
   Delete -- MCE 356 -- No longer required.

C. College of Home Economics
   1. Department of Child Development and Family Relations.
      a. Revise curriculum. New catalog entry corresponding to material in
         1970-71 Catalog, pages 70-71, should read as follows:

CHILD DEVELOPMENT AND FAMILY RELATIONS

This curriculum provides a general background for work with children and families,
building on the Home Economics Core (Group II) and in conjunction with the 26
elective credits necessary to complete the total of 128 credits required for grad-
uation. Courses in Group II not chosen to fulfill the Core requirements should be
considered for inclusion among the elective credits.

Most professions that deal with children and families require academic work beyond
the bachelor's degree for continuing professional work and advancement. Individuals
with a baccalaureate degree are employed as pre-professionals, however, in nursery
schools, day care centers, institutions and hospitals for children, recreational,
child guidance, 'case work and other community agencies. Similarly, some of the
courses in the curriculum plus certain others in Education, meet the requirements
for the Provisional Nursery-Kindergarten Certificate in Rhode Island. The Profes-
sional Certificate requires successful teaching experience for five years and
additional academic work.

Group III: In addition to the courses listed in Groups I and II, the courses
listed below are required:

   CDF 270  Introduction to Work with Children*  3
   CDF 340  Family and Community Health      3
   CDF 355  Marriage and Family Relationships  3
   CDF 390  Contemporary Philosophies of Guiding Children  3
   CDF 400  Child Development: Advanced Course  3
   CDF 450  Family Interaction                3
                      18
Any courses in the College of Home Economics, except CDF 375 for a total of 15

*Since CDF 200 Growth and Development of Children is prerequisite to CDF 270, CDF 200 should be selected as the second course in child development and family relations in Group II.

Students who wish to meet the requirements for the Provisional Nursery-Kindergarten Certificate in Rhode Island should apply at the end of the fourth semester for permission to take EDC 484, and should plan to take the following courses in addition to Group III.

- EDC 102 Introduction to American Education 3
- EDC 312 The Psychology of Learning 3
- CDF 330 Curriculum for Nursery School and Kindergarten 3
- CDF 370 Nursery School Practicum 4
- EDC 484 Supervised Student Teaching 8
- EDC 485 Seminar in Teaching 3

Students interested in pre-professional training in social work should plan to take the following sequence of courses: SWF 311, SWF 313, CDF 375, and SWF 317. They should apply at the end of the fourth semester for permission to take CDF 375.

b. Change title and description of CDF 150 as follows:

CDF 150 Personal Development I & II, 3
Emphasis on self-understanding and human relationships in general. Influence of societal roles, group interaction, and contemporary cultural issues on individual development. (Lec. 3). STAFF.

c. Change title and description of CDF 330 as follows:

CDF 330 Curriculum for Nursery School and Kindergarten I & II, 3
Program planning for nursery school and kindergarten. Theory and teaching techniques that foster full development of the young child through language, arts, creative activities, science and mathematics. Prerequisite: CDF 270. STAFF.

d. Change title and description of CDF 390 as follows:

CDF 390 Contemporary Philosophies of Guiding Children I & II, 3
Emphasis on factors involved in developing a philosophy of guidance of children and adolescents. The evolution of present-day theory is considered. Contemporary writers are read and discussed. Prerequisite: CDF 200 or permission of the department. STAFF.

e. Change description and change to S/U credit CDF 375 as follows:
CDF 375 Supervised Practice  I & II, 4-8
One quarter of the senior year will be spent in full-time practice in an agency for children or families. Students will work under properly qualified persons and will be supervised by the staff. (Application for permission to take this course should be made by the beginning of the junior year). (Lab arranged). Pre-
requisite: permission of the department. S/U credit. STAFF.

2. Department of Home Management.
   a. Change courses from Home Management to Textiles, Clothing and Related Art as follows:
      1) Change HMG 330 Home Furnishings to TXC 206 and delete HMG 330.
      2) Change HMG 335 Home Furnishings to TXC 306 and delete HMG 335.
      3) Change HMG 345 House Planning to TXC 406 and delete HMG 345.
   b. Reduce credits of Home Management HMG 370 Home Management Residence from 4 to 3.
   c. Add:
      HMG 371 Seminar in Home Management  I, II, 3
      The application and analysis of concepts of management in established households. Parallels HMG 370. Prerequisite: HMG 210, FNS 101, and open to married students only.
   d. Add to Home Economics Core:
      1) HMG 370 Home Management Residence
      2) HMG 371 Seminar in Home Management
   e. Delete from Home Economics Core:
      HMG 330 Home Furnishings
   f. Revise Home Economics Core entry in Catalog as follows:

This curriculum provides for general education in all areas of home economics and for professional fields such as home economics extension, social work, journalism, radio and other types of work requiring, in addition to a general background in home economics, training which can best be provided by other departments in the University.

The following courses are required in addition to the courses listed in Groups I and II:
ART 120 Introduction to Art
or
TXC 406 (HMG 345) Home Planning

CDF 340 Family and Community Health
CDF 270 Introduction to Work With Children
TXC 206 (HMG 330) Home Furnishings
HMG 350 Household Equipment
HMG 370 Home Management Residence
or
HMG 371 Seminar in Home Management

Textiles and Clothing Elective

Home Economics students interested in pre-professional training in social work should plan to take the following sequence of courses:

SWF 311
SWF 313
CDF 375
SWF 317

D. College of Resource Development

1. Department of Resource Development.

Add -- RDV 101 Natural Resource Conservation-Practicum 1, 1
A field course designed to acquaint students with the broad resource problem areas in Rhode Island. Required of Freshmen in Natural Resources. (Lab. 2). Prerequisite: Concurrent registration in RDV 100 and/or permission of instructor. KUPA.

2. Department of Plant and Soil Science.

a. Add -- PLS 105 Plants, Man and the Environment-Practicum II, 1
Practical aspects of the culture, ecology, improvement and use of plants in the environment of man. (Lab. 2). Prerequisite: Concurrent registration in PLS 104 or permission of the Instructor. GRIFFITHS and WAKEFIELD.

b. Add -- PLS 282 World Crops 11, 3
Influence of climate, soils and cultural factors on the production of crops used for man and livestock. Ecological distribution of important world crops. (Lec. 3) Prerequisite: PLS 104. WAKEFIELD.

E. College of Nursing

Add the following courses to options for meeting the curriculum requirement of 6 credits in communications skills:

1. SPE 231 Oral Interpretation of Literature
2. JOR 212 News Writing and Reporting
3. JOR 324 Magazine Article and Feature Writing