

UNIVERSITY OF RHODE ISLAND FACULTY SENATE April 20, 2017

Faculty Senate Curricular Affairs Committee Five Hundred and Fortieth Report

At the March 27, 2017 meeting of the Curricular Affairs Committee and by electronic communication, the following matters were considered and are now presented to the Faculty Senate.

SECTION I Informational Matters

ONLINE COURSES

The CAC has approved the following course for online offering:

- AST 108, Introductory Astronomy: Stars and Galaxies
- AST 118, Introductory Astronomy: The Solar System
- CLA 391, Ancient Laughter: The Comic Tradition in Greece and Rome
- CLA 397, Greek Myth and Tragedy
- CVE 445, Sustainable Pavement Design
- PRS 100, Introduction to Public Relations

COURSE CHANGES

COLLEGE OF ARTS AND SCIENCES:

Change prerequisite:

SOC 440 (301), Sociological Research Methods

(3 crs.) Scientific method in sociological research; emphasis on the development of the ability to construct and evaluate data-based arguments; topics include the nature of evidence, research design, principles and techniques of sampling, data collection and interpretation. (Lec. 3) Pre: 9 credits in SOC. Open only to SOC or CCJ majors with junior or senior standing, or permission of instructor.

SOC/PSC/CCJ 476, Policy Issues In Criminal Justice

(3 crs.) Cross-listed as (SOC), CCJ, PSC 476. Examination of current and proposed criminal justice policies in light of social science theory and research, including capital punishment, community policing, gun control, intermediate sanctions, legalization of drugs, mandatory sentencing, privatization of prisons, restorative justice. (Seminar) Pre: SOC 274 or 274H (or PSC 274 or 274H, or CCJ 274 or 274H) and ECN 306, PSC 310, PSY 200, or SOC 440 (301), and senior standing; or permission of instructor. Not for graduate credit.

COLLEGE OF ENGINEERING:

Change prerequisite:

BME/CHE 466, Biomaterials Engineering

(3 crs.) Cross-listed as (BME), CHE 466. A biomaterial is any material designed to interact with a biological system. This course will examine the structure, properties, and processing of biomaterials in a wide variety of biomedical applications. (Lec. 3) Pre: (CHM 124 or CHM 227, and BIO 341, and MTH 244 or 362) or permission of instructor.

COLLEGE OF HEALTH SCIENCE:

Change method of instruction:

EDC 250, Supervised Preprofessional Field Experience

(1 cr.) Supervised early field experience and seminar for students wishing to explore one or more possible career choices in education. (Lec., Practicum) May be repeated for credit. S/U only.

SECTION II Curricular Matters Which Require Confirmation by the Faculty Senate

NEW COURSES

COLLEGE OF ARTS AND SCIENCES:

AAF 230, Black Lives Matter Movement

(3 crs.) Develop understanding of how and why the Black Lives Matter Movement came into existence, comparing it to the Civil Rights Movement. Defines African American culture today. (Lec. 3)

AAF / RLS 295, Religion in African American Thought & Culture

(3 crs.) Cross-listed with (AAF), RLS 295. Religion in African American Thought & Culture is an exploration of the role religion has played in African American cultural formation. (Lec. 3)

ASL 101, American Sign Language I

(3 crs.) For students with little or no previous knowledge of ASL. Acquisition of basic grammar and lexical skills to communicate in routine social or professional situations. (Lec. 3)

ASL 102, American Sign Language II

(3 crs.) Continuation of American Sign Language I. Builds on the basic grammatical, linguistic, communicative and cultural concepts learned in ASL 101. (Lec. 3) Pre: Students should have taken ASL 101 or equivalent.

COM 321, Social Media and Interpersonal Communication

(3 crs.) Explore theories and research on interpersonal communication and social media. Examine social media uses and impact on communication, perceptions, identity construction, relationships, and society. (Lec. 3)

DSP 393, Introduction to Predictive Analytics

(3 crs.) The course implements an active learning pedagogy for students to meticulously and systematically work with “Big Data” to develop data-driven predictive models for decision-making. (Lec. 3) Pre: BUS111 or MTH131 or MTH141, and STA308 or BUS210. Permission of instructor.

HIS 318, The Jews: Religion and People

(3 crs.) This course explores Jewish history, from the Bible to the present. By examining both text and art, we investigate how Jewish ideas and practices developed in dialogue with non-Jewish culture. (Lec. 3) Pre: Sophomore standing or permission of instructor.

LAN 220, Understanding Languages in Cultural Context

(3 crs.) Introduction to understanding the interaction of language and cultures from a linguistic perspective. Topics include cultural analysis, intercultural pragmatics, linguistics, sociolinguistics. (Lec. 3)

PRS 490, Practicum in Public Relations

(3 crs.) Supervised field and PR production lab experience. Entails substantial field and client-based activities in the collaborative drafting, design and production of public relations projects. May be repeated for credit up to a maximum of 6 credits. (Prac. 3) Pre: Permission of the instructor. Not for graduate credit.

COLLEGE OF BUSINESS:

BUS 249, Business of Innovation: Lean Startup

(3 crs.) Applies the Lean Startup Scientific Method for developing and commercializing ideas for new ventures (entrepreneurship), and innovating new products, services or business models within existing companies (intrapreneurship). (Lec. 3)

COLLEGE OF EDUCATION AND PROFESSIONAL STUDIES:

EDC 100, Great Public Schools: Everyone's Right? Everyone's Responsibility?

(3 crs.) Interdisciplinary, critical examination of the current diversity and equity issues in the American public education system PK-20. (Seminar 2, Online 1)

COLLEGE OF ENVIRONMENT AND LIFE SCIENCES:

AVS 442, Physiology and Behavior of Marine Mammals

(3 crs.) An exploration of how marine mammals exploit aquatic environments, combining examination of research literature with experiential learning in lab and aquarium facilities locally and abroad. Travel required; additional costs apply. (Lec. 1, Lab. 2) Pre: Sophomore standing or above and a major in any department in CELS and permission of instructor. Not for graduate credit.

BIO 181, The Information Age: From Politics to Medicine

(3 crs.) How big data affects our society, from advertising to politics to medicine. (Lec 3) Not for major credit for B.S. Biological Sciences or B.A. Biology.

BIO 308, The Invisible Living Ocean

(3 crs.) The goal of this course is to explore the major groups of marine organisms that are mostly invisible to the naked eye, which fuel food webs, drive global biogeochemical cycles and affect climate. (Lec. 3) Pre: BIO 101, BIO 102 or permission of instructor.

BIO 310, Bermuda Marine Biodiversity

(2 crs.) Based at the Bermuda Institute for Ocean Sciences, this course provides students with experience in biodiversity assessment in the field, blending fieldwork, lectures and laboratory manipulation. Additional fee required. (Lab. 2) Pre: Concurrent enrollment in BIO 308 or permission of instructor.

CMB 265, Science and Pseudoscience

(3 crs.) Course designed to introduce students to a variety of current subjects that are hotly debated between the scientific community and the public. (Lec. 3)

COLLEGE OF ENGINEERING:

ISE 334, Simulation Modeling and Analysis

(3 crs.) Simulation of complex deterministic/stochastic systems. Random number generation. Input and output analyses. Spreadsheet simulations Design of simulation experiments. Applications in manufacturing, supply-chain, networks, military, health care, service systems. (Lec. 2, Lab. 3) Pre: ISE 311 (411) or permission of instructor.

ISE / SUS 461, Solar Energy Systems

(3 crs.) The study of renewables via solar energy systems. Methods, economic criteria, and background for assessing the systems of solar energy conversion technologies both in local and international settings. (Lec. 3) Pre: (junior standing, PHY 204, and MTH 142), or permission of instructor.

MCE 485, Solar Thermal Engineering

(3 crs.) Course covers principles of solar radiation, natural and forced convection, radiation characteristics of materials, and applications to flat-plate and concentrating collectors, and tools designed for passive and active solar heating/cooling systems. (Lec. 3) Pre: MCE 348 or permission of instructor. Not for graduate credit.

NUE 475, Measurements in Nuclear Engineering

(3 crs.) Experimental methods in nuclear engineering including radiation detection and measurement experiments, reactor control and reactivity experiments. (Lab.) Pre: MCE 471 / CHE 471 or NUE 391, or permission of instructor. Not for graduate credit.

GRADUATE SCHOOL OF OCEANOGRAPHY:**OCG 150, Coastal Oceanographic Data in RI Waters**

(3 crs.) Collecting oceanographic data during on-the-water field experience in Rhode Island coastal waters. Students work in teams constructing, deploying, recovering and analyzing data from various oceanographic instruments. For declared STEM majors. (Lec. 2, Lab. 1) Pre: permission of instructor.

COURSE CHANGES**COLLEGE OF ARTS AND SCIENCES:****Change prerequisite:****CSC 211, Object-Oriented Programming**

(4 crs.) Problem specification, solution design, and algorithm development. Object-oriented programming and program structure. Functions, selection, iteration, recursion, classes, arrays, and files. Required programs will solve numerical and nonnumerical problems. (Lec. 3, Lab. 2) Pre: CSC 106 or major in Computer Engineering.

CSC 212, Data Structures and Abstractions

(4 crs.) Abstract data types and data structures. Pointers, linked lists, stacks, queues, binary trees, and tables. Fundamentals of software engineering. Development of object-oriented programming techniques. (Lec. 3, Lab. 2/Online) Pre: C- or better in CSC 211. Intended for computer science and computer engineering majors.

COLLEGE OF BUSINESS:**Change prerequisite:****BUS 111, Introduction to Business Analysis and Application**

(3 crs.) Selected mathematical tools and techniques for analysis of business and economic problems and as aids in decision making. Topics from finite and modern mathematics and applied calculus. (Lec. 3) Pre: open to students passing a placement test or earning a C- or better in MTH 110 or permission of instructor. (B3)

BUS 320, Financial Management

(3 crs.) Study of the basic principles of finance and the applications of these principles. Topics include time value of money, risk and return, valuation, capital budgeting and other corporate financial decisions. (Lec. 3) Pre: ECN 201 or EEC 105, BUS 201, 210 or STA 308.

BUS 359, Management Systems Analysis

(3 crs.) Analysis, concepts, methods, and techniques leading to the design of strategies to improve business processes. (Lec. 3) Pre: BUS 355 and junior standing in a degree granting college, or permission of instructor.

COLLEGE OF ENGINEERING:

Change course code, title, description, and prerequisite:

EGR (OCE) 313, Computational Solutions of Engineering Problems

(3 crs.) Fundamentals of computational techniques in engineering, including algorithm development, programming, MATLAB scripts, numerical solutions of problems from various engineering disciplines, and error, stability and accuracy analysis. (Lec. 3) Pre: MTH 244 or permission of instructor.

COLLEGE OF HEALTH SCIENCES:

Change number and prerequisite:

PSY 435 (302), Applied Methods in Psychological Research

(3 crs.) This course will provide a structured training experience addressing data management, statistical analysis, how to handle methodological problems, and interpretation of results for applied psychology research topics. (Lec. 2, Lab. 2) Pre: Grades of C or higher in either STA 308 or PSY 200 (previously PSY 300), and in PSY 301 and PSY 434, or permission of the instructor. Not for graduate credit.

PROGRAM CHANGES

1. COLLEGE OF ARTS AND SCIENCES:

a. Creation of (American Sign Language) ASL course code: (See Appendix A)

The Language Dept. requests creation of the new course code ASL (American Sign Language). New course proposals for ASL 101 and 102 are currently moving through the curricular approval process. We plan to offer ASL 101 in Fall 2017 and ASL 102 in Spring 2018.

b. Changes to the BA in Computer Science: (See Appendix B)

We are proposing several minor changes to the curricular requirements for the BA in Computer Science:

- 1) Change the requirements to transfer to the College of Arts and Sciences.
- 2) Add WRT 332 to writing requirement.
- 3) Change total number of credits to 120 from 121.
- 4) Change sample course of studies to reflect these changes.
- 5) Add CSC 462 to the list of accepted programming courses.

c. Changes to the BS in Computer Science: (See Appendix C)

We are proposing several minor changes to the curricular requirements for the BS in Computer Science:

- 1) Change requirements to transfer to the College of Arts and Sciences.
- 2) Add WRT 332 to writing requirement.
- 3) Change total number of credits to 120 from 124.
- 4) Change sample course of studies to reflect these changes.
- 5) Add CSC 462 to list of accepted programming elective courses.

d. Creation of (Data Science Program) DSP course code: (See Appendix D)

We are requesting a new course code for this class because it is highly interdisciplinary in nature and is not only a computer science, statistics, business or mathematics class. We expect that there will be other courses from our big data collaborative that we will develop for the general education program or for the proposed new data science majors that will request this code. This course in particular builds on computing, statistical, and mathematical concepts to analyze data in business and other application domains.

e. Creation of a BA, BS, and Minor in Data Science Program (DSP): (See Appendix E)

Data Science is a discipline that deals with all aspects of data, including procurement, archival, cleaning, analysis, and communication/visualization. It is a newly emerging discipline that is now being defined internationally. It is highly interdisciplinary in nature. Typical partners are from mathematics, statistics, business, and the computational and information sciences. Students preparing in data science are recommended to take coursework in math, statistics, and computing. Preparation in communication skills, curiosity and teamwork are also highly important, as are lifelong learning skills. [<http://www.bls.gov/careeroutlook/2013/fall/art01.pdf>]

NSF funded meetings on the nature of data science programs were consulted to develop this program. Reports from national meetings, existing programs, and information from industry about workforce needs have guided this proposal. We have also tapped into the talent that we have present in the big data collaborative and cluster hire. This takes advantage of talent and needs in six colleges at URI (A&S, BUS, ENG, GSO, Health, Pharmacy). This program also includes general education classes focused on data.

f. Creation of Creative Writing Option for the English major: (See Appendix F)

The Creative Writing Option will be a program within the framework of the English Major, designed to provide English majors with an interest in creative writing an opportunity to concentrate, develop and sequence their creative writing coursework over a series of semesters. A centralized Option will create stronger student recruitment opportunities than isolated elective courses do currently. Currently, English majors can take our department's creative writing courses as electives within the Major, but the Creative Writing Option will establish a sequence of required courses intended to realize the goals for the English Department's Creative Writing activities and our students.

2. COLLEGE OF BUSINESS:

a. Creation of a Business of Digital Media (BDM) Minor: (See Appendix G)

A BDM minor will help fulfill the vision of URI and fits perfectly into the critical strategic imperative. With this in mind, College of Business Administration (CBA) and Harrington School of Communication and Media (HSCM) recognize that they are both building an impressive array of courses touching on issues pertinent to digital media. The CBA courses focus on the marketing, analytical, and profitability implications, while the HSCM courses concentrate on creativity, production (film and editing), critical and theoretical aspects of media, and media history. However, at present, it is nearly impossible for a student to double-major in communications and marketing. At CBA, there is a general business minor, but no specific marketing minor. At HSCM, there are film media and public relations minors. Thus, as of yet, no BDM minor exists. Thus, a BDM minor represents a way for students to customize their digital media education according to the area(s) that most interest them and will make them the most marketable.

b. Creation of a Minor in Innovation Management and Entrepreneurship: (See Appendix H)

Students will learn and apply classic and contemporary business theories to the practice of:

- Entrepreneurship (new business ideation and creation, as applied to startups),
- Innovation - novel and creative ways to create value through new products or services, new business models or new processes,
- Intrapreneurship - innovations within existing companies (take a job, make a job),
- New venture development (including social ventures).

Courses and activities will emphasize application of business theories to small ventures plus experiential and project-based learning¹ in the classroom and in the business community internal and external to URI. With an interdisciplinary spirit, it will add value to URI majors such as management, supply chain, accounting, nursing, engineering, sustainable agriculture, and pharmacy. It will attract students who will one day own their own business, innovate within a larger firm, or provide advice and goods or services to a smaller firm. The logic for interdisciplinary programming is: first foundation courses in entrepreneurship and innovation delivered by the CBA, then the topics course would be developed and delivered by either the CBA or else other URI college levels, and then all students would take a capstone practicum course delivered by the CBA.

c. Change name of Entrepreneurial Management major to Management: (See Appendix I)

The area is undergoing growth and change and the title Management will be more inclusive. In the 'Management' area will be the General Business Major and the new Entrepreneur Minor. We are also developing themes in the major where students can select electives for People Management (Human resources) or Responsible Management (strategy and sustainability). Students do not have to follow one of these themes to major in management.

3. COLLEGE OF ENGINEERING:

a. Change to Environmental Engineering Minor: (See Appendix J)

Add a new course, CVE 325G Connecting Dots: the Water-Energy-Health Nexus, and update the designation of an existing course, CVE 323H to CVE 323G, on the list of acceptable courses.

b. Changes to BS in Industrial and Systems Engineering degree: (See Appendix K)

The Industrial and Systems Engineering program proposes the following changes to the B.S. degree requirements:

1. Add ISE 334 as a degree requirement (pending new course approval for AY 2017-2018) for the Junior year, Spring semester
2. Remove a professional elective requirement from the Junior year, Spring semester
3. Reduce the professional elective requirements by one three (3) credit course (15 credits/5 courses down to 12 credits/4 courses)
4. Adjust footnote regarding option of MBA courses as professional electives

c. International Engineering Program transcript statements: (See Appendix L)

International Engineering Program (IEP). A sub-plan on the transcript of each student pursuing IEP should be marked as "International Engineering Program-(Language BA)" (ex: International Engineering Program-German).

4. COLLEGE OF ENVIRONMENT AND LIFE SCIENCES:

a. Changes to the BA in Biology: (See Appendix M)

We propose the following changes to the B.A. Biology program

1. Increase the major credit requirements from 28 to 30.
2. Designate specific courses in CMB for major credit (list D).
3. Designate proposed course BIO 181G as not for major credit.

b. Changes to the BS in Biological Sciences: (See Appendix N)

We propose the following changes to the B.S. Biological Sciences program

1. Added course choices to core and list A.
2. Changed requirement to transfer to CELS from CHM 112 to CHM 101.
3. Other editorial changes with no impact on requirements.

c. Changes to the BS in Marine Biology: (See Appendix O)

We propose the following changes to the B.S. Marine Biology program

1. Added courses to Marine Biology Electives.
2. Other editorial changes with no impact on requirements.

d. Deletion of the Interdisciplinary Biological Sciences Minor: (See Appendix P)

Delete the Interdisciplinary minor in Biological Sciences

5. COLLEGE OF HEALTH SCIENCES:

Changes to Psychology Bachelor of Science Program: (See Appendix Q)

We are proposing some minor changes to our newly developed BS Program in Psychology in order to fine-tune our curriculum worksheet and make it more congruent with typical course substitutions previously approved through the “Curriculum Modification Form” process:

- a. Allow STA 308 to substitute for PSY 200,
- b. Change PSY 302 number to PSY 435,
- c. Allow PSY 302 (changed to PSY 435) to substitute for STA 412,
- d. Add WRT 104 and WRT 332 as alternative options to WRT 106,
- e. Add “and BIO 103,” to BIO 101 to clarify that BIO 101 requires concurrent enrollment in BIO 103,
- f. Add the following statement to the MTH requirement: “MTH 131 and MTH 141 are recommended for students pursuing graduate degrees requiring advanced math.”
- g. Replace SOC 430 with PSY/SOC 430 because this is a cross-listed course,
- h. Replace the term, “upper level,” with “300 level or above” to improve clarity,
- i. Add PSY 324 to the “Social/Multicultural Psychology Focus Area,” and
- j. Substitute PSY 340 for PSY 479 because this is now a permanent course.

6. COLLEGE OF NURSING:

Change admission GPA for RN to BS Online Program: (See Appendix R)

The College is requesting that the GPA for entry to the online RNBS program be changed from 2.4 to 2.6.

The two RNBS programs, face to face and online, have two different GPA requirements for admission, 2.6 and 2.4 respectively. We have had the 2.6 requirement in place for many years and need to bring the new online program requirements in line with our long-standing policy. Note that 2.4 was initially established at the request of Academic Partnerships, when demand for the course was unknown. The program is flourishing and now growing at an extraordinary rate. Fundamentally we believe that all RNBS students should have the same minimum academic qualifications upon admission.

7. GRADUATE SCHOOL OF OCEANOGRAPHY:

Creation of a Minor of Proficiency in Ocean Data Science: (See Appendix S)

The minor will comprise four newly-developed hands-on, data-centric courses addressing coastal and global ocean processes, a fifth course chosen among URI science offerings, and a research internship. PODS will be primarily offered to early career students, using the “lure” of the ocean as a way to retain them in science, given that the attrition rate in STEM programs is highest in the first two semesters. The four sequential courses are planned as one per semester: 1) Coastal Oceanographic Data in RI Waters; 2) Global Ocean Data Analysis and Visualization; 3) Ocean Data Integration I; and 4) Ocean Data Integration II.