

**Graduate Curricular Report # 9
April 2018**

**SECTION I
Informational Matters**

400 level course changes undergraduate courses for graduate credit:

**Feinstein College of Education and Professional Studies:
Education:**

EDC 478 Problems in Education

Change in prerequisites to Permission of Director.

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Change in prerequisites to Permission of Director.

**College of Environmental and Life Sciences:
Fisheries, Animal, Veterinary Sciences:**

AFS 415 Fisheries Ecology

Change in title, description and prerequisites

New description: Ecological characteristics of fishes and shellfishes in capture fisheries worldwide. Relationship between aspects of fishing, habitats, and community structure along with assessment methods. Prerequisites: AFS 215 and MTH 131 or MTH 141; concurrent registration in 416.

AFS 416 Fisheries Ecology Laboratory

Change in title and description.

New description: Practices and techniques of fisheries ecology. Field exercises in local model estuary and coastal zone on sampling methods, enumerating and documenting collections, measuring and reporting environmental attributes, estimating population parameters.

Geosciences:

GEO 450 Introduction to Sedimentary Geology

Change in prerequisites to: GEO 210 and GEO 320, or permission of instructor

**College of Health Sciences:
Human Development and Family Studies:**

HDF 420 Early language and literacy development

Change in prerequisite to: HDF 200 and either HDF 202 or PSY 301; or admission into the Early Childhood Education Teacher Certification Program; or permission of instructor.

400 level new undergraduate courses for graduate credit:

College of Arts and Sciences:

Mathematics:

MTH 481 Introduction to Optimization

Introductory concepts for optimization problems. Basic search methods for unconstrained optimization, Newton's method and conjugate gradient methods. Linear programming. Simplex method. Nonlinear optimization with equality constraints and inequality constraints. Prerequisites: MTH 215, MTH 243 ((Lec. 3)

Computer Science and Statistics:

CSF/CSC 462 Secure Programming

This class will present the basic topics in computer security and their relation to secure programming. Security models, threats, design principles and secure coding practices will be discussed. We will also look at programming language features and semantics to evaluate whether they help or hurt the ability to write secure programs. Prerequisite: CSC 212 ((Lec. 3, online 1)

CSC 493 Computer Science Topics with Programming

Advanced topics of current interest in computer science where course involves substantial programming projects. May be used to fulfill major programming elective requirement. Prerequisite: Permission of instructor (Lec. 1-4; Lab. 0-1)

College of Environmental and Life Sciences:

Cell and Molecular Biology:

CMB 426 Structural Biochemistry

Introduction to the theoretical foundations underlying protein and nucleic acid structure and experimental methods for three-dimensional structure determination. (lec. 3)
Prerequisite: CMB 311 or permission of instructor

College of Engineering:

Electrical Engineering:

ELE/MCE/OCE 456 Foundations of Robotics

The course provides the theoretical background to formulate and address problems in robotics. Its objective is to give a basic understanding of robot kinematics, sensing, actuation, localization, control, and planning. (Lec. 3) Pre: PHY 204 senior standing, or permission of instructor.

500/600 level course changes:

College of Arts and Sciences:

Library Sciences:

LSC 520 School Library Media Services

Change: Creation of online version of existing course

Prepare school librarians to meet RIPTS and AASL roles: teacher, information specialist, instructional partner, administrator and leader. Emphasize teaching AASL standards integrated with Common Core Standards. Includes 60 hour field experience (Lec. 2 prac 1/online 2, prac 1)

LSC 596 School Library Media Seminar

Change: title, credits, prerequisites, methods of instruction

Culminating class for candidates to demonstrate mastery of Professional Teaching and ALA/AASL Standards including five roles: teacher, information specialist, instructional partner, administrator and leader. (Sem 3/Online 3) Prerequisites: Concurrent enrollment or credit in LSC 598. LSC 520 with a B or better and 21 hours of library science with a B average or permission of the instructor.

SECTION II Curricular Matters Which Require Confirmation By the Faculty Senate

500/600 level new courses:

College of Arts and Sciences:

Library and Information Studies:

LSC 598 Supervised Internship/Practicum: School Library Media

Twelve-week directed field experience in two school library media programs. Candidates demonstrate mastery of Teaching and ALA/AASL standards including five roles: teacher, information specialist, instructional partner, administrator, and leader. (Practicum 6)

Prerequisites: Concurrent enrollment or credit in LSC 596. LSC 520 with a B or better and 21 hours of library science with a B average or permission of the instructor.

Mathematics:

MTH 581 Optimization Methods

Linear and nonlinear optimization emphasizing problem formulation, methodologies, and underlying mathematical structures. Topics covered: linear programming, simplex method, duality, sensitivity; constrained and unconstrained optimization; line search and Newton methods. Prerequisites: MTH 215 and MTH 243 or permission of instructor. (Lec. 3)

**College of Environmental and Life Sciences:
Marine Affairs:**

MAF 500 Social Studies of Science

Applies social science tools to the study of the practice of science (including ecology and marine science) as cultural phenomena. Prerequisite: Graduate student standing (Sem. 3)

Natural Resource Science:

EVS 510x Field Practicum Coastal Resilience and Management

This field practicum course is designed to expose students to the science, management, and policy challenges of achieving resilient coastal environments and communities in the face of a changing climate. (Practicum 3) Prerequisite: Permission of instructor.

**College of Health Sciences:
Nutrition:**

NFS 550/650 Epidemiology of Nutrition and Chronic Disease

This course explores population research in the area of diet and chronic disease. Students will learn basic epidemiologic methods, analysis, and interpretation. (Lec. 3) Prerequisites: Graduate standing or permission of the instructor. Students may take only NFS 550 or NFS 650 for program credit.

Notices of Change:

College of Arts and Sciences:

Library and Information Studies: (see Appendix A)

Minor changes in degree requirements; updated catalog entry.

Computer Science and Statistics:

Professional Science Master's Degree in Cyber Security: (see Appendix B)

Change in degree requirements.

Graduate Certificate in Digital Forensics and Incident Response: (see Appendix C)

Change in title and course requirements.

Department of Mathematics:

Consolidated BS/MS in Applied Mathematics: (see Appendix D)

Creation of consolidated BS/MS in Applied Mathematics

Department of History:

History MA: (see Appendix E)

Discontinue comprehensive exam for non-thesis track. Make GRE optional for admission except for Anthropology/archaeology track, which still requires the GRE.

College of Nursing:

Adult/Gerontological Nurse Practitioner in MS, post BS-DNP, and MS-DNP: (see Appendix F)

Eliminate Clinical Nurse specialist from this concentration; change name; and a 3-credit reduction in the number of required credits.

College of Health Sciences:

BS in Nutrition and Dietetics/MS in Nutrition: (see Appendix G)

Creation of consolidated BS/MS in nutrition.