# Graduate Curricular Report #7 February 2018

# SECTION I Informational Matters

### 400 level: Course changes undergraduate courses for graduate credit:

### **College of Environmental and Life Sciences**

### **EEC 432 Environmental & Resource Economics and Policy**

New Description: Economic analysis of policies that address environmental and natural resource problems using problem-based learning. Topics include pollution control, economic incentives and resource use, focusing on data analysis and communication skills. (D1) (B4)

### NRS 450G Soil, Land Use, and the Environment

New title, new course description, and new prerequisite.

Old title: Soil Conservation and Land Use

New Description: Application of soils and landscape level data to address land use issues and environmental problems such as waste management, storm-water runoff, water quality, sustainability, restoration, and reclamation in urbanizing environments. Prerequisites: NRS 212 or permission of instructor, and concurrent enrollment in NRS 452G.

### 400 level: New Courses undergraduate courses for graduate credit:

### **College of Environmental and Life Sciences**

### **BIO 422X Biology of Sharks and Their Relatives**

Description: A rigorous treatment of the biology of sharks, skates and rays including their classification, evolutionary history, physiology and ecology. Prerequisites: BIO 101, BIO 102 and junior standing or permission of the instructor.

### **College of Arts & Sciences**

### **CSC 461** Machine Learning

Description: "Broad introduction to fundamental concepts in machine learning. Survey of traditional and newly developed learning algorithms, as well as their application to real-world problems. Prerequisites: CSC 310 and MTH 215. Computer Science majors must take as CSC 461. Data Science majors must take as DSP 461.

### STA 441 Introduction to Multivariate Statistical Learning

Description: Multivariate data organization and visualization, multinomial and multivariate normal distribution, tests of hypotheses on mean vectors, multivariate regression and classification, principal component analysis, clustering, cross-validation and bootstrapping. Prerequisites: MTH 215; and STA 409, or STA 411, or STA 412; or permission of instructor.

# **500 level: Course Changes**

# **College of Arts and Sciences**

### LSC 530 Children's Materials and Services

New title and description: An introduction to children's literature and digital materials. Learn about authors, genres, formats, selection tools, and evaluation criteria. Create and engage in programming and services that support children's multi-literacy development. (Lec. 3)

### LSC 531 Young Adult Materials and Services

New title and description: An introduction to Young Adult literature and digital materials. Learn about authors, genres, formats, selection tools, and evaluation criteria. Create and engage in programming and services that support teen's multi-literacy development. (Lec. 3)

# **College of Environmental and Life Sciences**

# AFS 500 Diseases of Aquatic Organisms

New title, description, and prerequisite: New title - **Advanced Diseases of Aquatic Organisms** Lec: (3 crs) Application of ecology and evolution to the advanced study of diseases affecting aquatic organisms. Prerequisite: AFS 300, graduate standing, or permission of instructor.

#### AFS 501 Seminar

New Description: Preparation and presentation of scientific papers on selected subjects in aquaculture and fisheries (Seminar).

### AFS 502 Seminar

New description: Preparation and presentation of scientific papers on selected subjects in aquaculture and fisheries (Seminar).

# AFS 516 Early Life History of Aquatic Resource Animals

Course deletion.

#### AFS 599 Master's Thesis Research

Course deletion.

### **College of Health Sciences**

### NFS 582 Internship in Advanced Medical Nutrition Therapy

Course deletion.

### **SECTION II**

# Curricular Matters Which Require Confirmation By the Faculty Senate

### **500 level: New Courses**

### **College of Arts and Sciences**

### LSC 511 Critical Disability Approaches in LIS

Description: Introduction to critical disability studies, disability rights in the US, policy, culture, social justice, activism & intersectional approaches in the library, differently-abled use, users and professionals in the library. (Online 3)

### LSC 512 Immigrant & Migrant Information Contexts & Practices

Description: Studies immigrant and migrant information histories, uses, behaviors, encounters, and social justice approaches in information institutes in the US. Addresses linguistic, cultural, religious practices, race and literacy in information institutes. (Online 3)

### LSC 513 Social Justice in Children's and Young Adult Literature

Description: Select, evaluate and analyze social justice and injustice in children's & young adult literature. Includes: power, racism, diversity, violence, publishing trends, authorship, illustrations, & ideology & library programming. (Online 3)

### MTH 518 Matrix Analysis and Applications

Description: Topics in matrix analysis with applications – similarity and eigenvalues; Hermitian and normal matrices; canonical forms; norms; least square, eigenvalue localizations; singular value decomposition; definite matrices. (Lec. 3) Pre: MTH 142 and 215 or permission of instructor.

### **College of Engineering**

# **Electrical, Computer and Biomedical Engineering**

### **ELE 598** Non-thesis Master's Project

Description: Culminating project for non-thesis Master of Science students in Electrical Engineering. Small scale engineering projects drawn from industrial and academic research and development environments. Prerequisite: Open to ELE non-thesis MS students in good standing after successfully completing 14 credits of ELE graduate courses. Permission of instructor. Not for undergraduate credit. (Ind. Study 3)

### MCE 586 Adaptive Control for Robotic Systems

Description: Classical adaptive control theory, including Lyapunov stability, parameter identification, model reference adaptive control, adaptive pole placement, robust adaptive control, and their applications in robotic manipulators and autonomous mobile robots. Prerequisites: MCE 566 or ELE 502, or permission of instructor. (Lec. 3)

# **Notices of Change**

# **College of Business Administration**

# Human Resources and Labor Relations (see appendix A)

Master's Program: Decrease core courses from 18 to 15 credits; increase elective courses from 18 to 21 credits. Total number of credits (36) remains the same.

Eliminate GRE/GMAT as requirement for admissions. Add writing sample and interview with director.

Non-Thesis Master's Program in Human Resources: students may take the Society for Human Resource Management Certified Practitioner (CP) credentialing exam in place of a comprehensive exam.

Certificate in Labor Relations: update required courses.

Certificate in Human Resources: update required courses.

### **College of Engineering**

### Electrical, Computer and Biomedical Engineering (see appendix B)

Addition of ELE 598 Master's Project as an alternative to comprehensive exams for the non-thesis Master of Science program in Electrical Engineering.

#### **Graduate School**

# **Interdisciplinary Neuroscience Program (see appendix C)**

Change degree requirements for MS and PhD: add NEU/PHT 511 as a requirement for both degrees. For MS, decreased requirement of NEU 591 from two semesters to one semester. For PhD, reduce number of credits of NEU 587 to three.

Remove GRE from application requirements.

### **College of Health Sciences**

### **Nutrition and Food Sciences (see appendix D)**

Increase total number of program credits for the Dietetic Internship Master of Science program from 33 to 34 credits.

Replace thesis with culminating experience (NFS 591).

Change admission requirements.

Change course requirements.

### **Human Development and Family Studies (see appendix E)**

Change in admission requirements: raise GPA from 3.0 to 3.3; drop GRE.