Serial Number #19-20-18A

The attached BILL titled, Curricular Report No. 2019-20-8 from the Graduate Council to the Faculty Senate (courses), was adopted by vote of the Faculty Senate on February 20, 2020.

The Bill is effective on the date of signature below.

Bahram Nassersharif  
Chairperson of the Faculty Senate  

February 20, 2020
SECTION I
Informational Matters

400-Level Course Changes

COLLEGE OF ARTS & SCIENCES

CSF 410  Digital Forensics I
The science, technology, procedures, and law of acquiring and analyzing digital evidence from computers and devices. 4 credits
Changing prerequisite.

CSF 430  Introduction to Information Assurance
Fundamental concepts to understand threats to security; various defenses against those threats. Planning for security; technology used to defend computer systems; implementing security measures and technology. 4 credits
Changing prerequisite.

CSF 432  Introduction to Network and System Security
This course provides an overview of network and systems security. It provides the underlying theory of computer security. It further introduces hands-on skills and techniques that are essential to effectively secure the networks and systems of large and small organizations. 4 credits
Changing prerequisite.

COLLEGE OF BUSINESS

BUS 462  Supply Chain Network Modeling and Optimization
Strategic and change management practices necessary for planning/modeling/designing demand-driven value networks through the use of contemporary technologies. 3 credits
Allowing graduate credit.

BUS 464  Supplier Relationship Management
Examines the management and technological practices a firm deploys to develop supplier relationships including: plan, source, make, and deliver. 3 credits
Allowing graduate credit.

COLLEGE OF EDUCATION AND PROFESSIONALS STUDIES

EDC 461  (HDF 455) Assessment in Early Childhood Education
An overview of cognitive, affective, and psychomotor assessments used by early childhood development and education specialists, and examination of the assessment techniques and current trends and practices. 3 credits
Changing course code (HDF to EDC), course number, course title, and prerequisites.
COLLEGE OF ENGINEERING

ELE 401 Lasers, Optical Fibers, and Communication Systems
Introduction to lasers, LEDs optical fibers and detectors. Properties of Gaussian beams, optical resonators, and
diffraction of Gaussian beams. Properties of Fabry-Perot cavities. Introduction to fiber optical communications
systems. 3 credits
Course deletion.

ELE 402 Lasers, Optical Fibers, and Communication Systems Laboratory
Laboratory exercises related to topics in ELE 401. 1 credit
Course deletion.

ELE 432 Electrical Engineering Materials
Continuation of 331. Electronic and optical properties of materials, mainly semiconductors, applied to the
performance and design of electronic devices. Measurements and analysis of these properties will be
performed in the laboratory. 4 credits
Course deletion.

ELE 444 Advanced Electronic Design
Review of number systems, combinational and sequential logic, state machine. Design capture tools,
hardware/software design, system implementation using PC's, MSI circuits and FPGAs. 3 credits
Course deletion.

ELE 445 Advanced Electronic Design Laboratory
Laboratory exercises related to topics in ELE 444. 1 credit
Course deletion.

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. 3 credits
Changing prerequisite.

COLLEGE OF HEALTH SCIENCES

HDF/SOC 431 Families and Aging
An analysis of families and interpersonal relationships of older adults. With attention to social, psychological,
cultural, economic, and political factors. 3 credits
Cross-listing with Sociology. Changing course title, description, and prerequisites.

HDF 440 Housing & Social Services for Older Adults
Study of normal aging related changes as design determinants of the physical environment. Identifies theories
and models of person-environment interaction and environment-behavior issues and procedures for post-
occupancy evaluation studies. 3 credits
Changing course title and prerequisites.

500-Level Course Changes

COLLEGE OF ARTS AND SCIENCES

PSC 501 Seminar in Public Administration and Policy
Overview of the theoretical and historical evolution of public policy and administration; theories and problems of
organization and administrative reform; implementation and policy analysis; and theories of bureaucratic
control. 3 credits
Changing course title, description, and prerequisites.
PSC 524  Seminar in Public Policy Problems
An in-depth exploration of the policy process and public policy problems through the different traditions and approaches of public policy analysis. 3 credits
Changing course description and prerequisites.

COLLEGE OF BUSINESS

MBA 584  Buyer Behavior  Analysis of major factors influencing the behavior and demand of consumers. Emphasis on using these factors to identify and segment target markets and to assess the effects of these factors on markets. 3 credits
Changing course from lecture to online. 3 credits
Changing course from lecture to online.

COLLEGE OF EDUCATION AND PROFESSIONALS STUDIES

EDC 553  Higher Education Practicum
Supervised practicum in higher education placements. Emphasis on applied assignments in the initial stages of college student personnel program. 3 credits
Changing course code (HDF to EDC).

EDC 554  Contemporary College Student I
First course in sequence examining the learning and growth trajectories of students in higher education. Emphasis on typologies and psychosocial identities in a sociohistorical context. 3 credits
Changing course code (HDF to EDC), title, description and prerequisites.

EDC 556  Contemporary College Student II
Second course in sequence examining the learning and growth trajectories of students in higher education. Emphasis on cognitive-structural and integrative dimensions in a sociohistorical context. 3 credits
Changing course code (HDF to EDC), title, description and prerequisites.

EDC 560  Group Procedures and Leadership
Second course in sequence examining the learning and growth trajectories of students in higher education. Emphasis on cognitive-structural and integrative dimensions in a sociohistorical context. 3 credits
Changing course code (HDF to EDC).

EDC 561  Principles and Practices of College Student Personnel
Survey of the historical, philosophical, sociological, and cultural influences on college student personnel work as a profession and exploration of selected functional areas within student affairs. 3 credits
Changing course code (HDF to EDC).

EDC 571  Administrative Issues in Student Affairs
Overview of administrative issues faced by student affairs practitioners including: resource management, supervision, budgeting, technology and legal issues. 3 credits
Changing course code (HDF to EDC).

EDC 572  Environmental Theory and Assessment in Higher Education
Overview of selected person-environmental interaction theories and assessment frameworks applicable in higher education settings. Emphasis on campus ecology, cultural, perceptual, human aggregate, physical/architectural, and behavior setting approaches. 3 credits
Changing course code (HDF to EDC).

EDC 576  Diversity and Cultural Competence in Student Affairs
Overview of the development of cultural competencies (awareness, knowledge, skills) needed by student affairs professionals and issues faced by diverse college students. 3 credits
Changing course code (HDF to EDC).
COLLEGE OF ENGINEERING

CVE/OCG 480/580  Introduction to Marine Pollution  An introductory course in marine pollution emphasizing geochemical aspects of the sources, transport, and fate of pollutants in the coastal marine environment. 3 credits  
Cross-listing as CVE/OCG 480/580.

COLLEGE OF HEALTH SCIENCES

HDF 536  Family Dynamics and Health  
Provides an introduction to the research, theory and application of understanding of the major physical and mental health issues facing modern families. 3 credits  
Changing method of instruction from lecture to online or lecture.

KIN 530  Research Methods and Design in Kinesiology  
An introduction to the basic aspects of research, including problem selection, literature review, instrumentation, methodology, and the writing of research reports and articles. 3 credits  
Changing course title.

KIN 592  Internship in Kinesiology  
Directed field experience under the supervision of a faculty member and a professional member of the cooperating institution. Application of knowledge, synthesis of practical experiences. Paper required. 3 credits  
Changing course title and prerequisite.

KIN 595  Independent Study  
Development of an approved project supervised by a member of the graduate faculty. 1-3 credits  
Changing credits from 3 to 1-3.

PHT 585  Physical Therapy Internship II  
Assignment to various clinical settings that provide supervised experiences with practicing physical therapists and support personnel. Specific setting and rotational time schedule are determined by the student, academic clinical coordinator, and clinical site. 4 credits  
Changing prerequisites.

PHT 595  Physical Therapy Internship III  
Assignment to various clinical settings that provide supervised experiences with practicing physical therapists and support personnel. Selection of clinical specialty area of student's interest is considered in determination of the setting. 4 credits  
Changing prerequisites.

COLLEGE OF NURSING

NUR 507  Theoretical Basis of Advanced Nursing Practice  
Theories relevant to nursing practice and theories related to decision making, action, knowledge utilization, and influence are examined in relation to their applicability to advanced clinical nursing practice. 3 credits  
Changing course title and description.

COLLEGE OF PHARMACY

BPS/CHE 540  Advanced Drug Delivery Systems  
The course will present the design and principles of advanced drug delivery systems, which have specified drug delivery profiles and significant advantages in therapeutics over conventional dosage forms. 3 credits  
BPS/CHE 553  Bionanotechnology
Principles and applications of bionanotechnology. Intermolecular forces, self-assembly, biomolecular structure, biological processes, molecular manufacturing, and surface functionalization for designing biodevices and nanomaterials. Overview of current and emerging technologies, safety and ethics.

Cross-listing. Changing prerequisites and course number to utilize same course code in both colleges.

600-Level Course Changes

COLLEGE OF ENVIRONMENT AND LIFE SCIENCES

BIO 663  Phytoplankton Physiology
Metabolic processes and methods of their investigation in phytoplankton with primary emphasis on functions pertinent to their ecology. Includes adaptation, uptake of nutrients, excretion, rhythms, pigments, and photosynthesis. 3 credits.

Course deletion.

* Approved by Graduate Council on November 4, 2019

COLLEGE OF NURSING

NUR 688 DNP Capstone Practicum and Project  A synthesis of prior practicums in the student’s area of interest, applying theoretical knowledge and research findings at the individual, professional, organizational and societal levels culminating in a final written and defendable capstone project. 7 credits.


* Approved by Graduate Council on November 4, 2019

500-Level Temporary New Course Proposal

NRS 528X  Geographical Information Systems in Python
Using the Python programming language to undertake and automate GIS processing tasks. 3 credits (1 lecture, 2 laboratory). Prerequisites: NRS 410 or permission from instructor.

SECTION II
Curricular Matters Which Require Confirmation by the Faculty Senate

500 & 600-Level New Course Proposals

COLLEGE OF ARTS & SCIENCES

AMS 528  Mathematical and Computational Analysis of Data
Mathematical analysis of important techniques used to work with "large" data sets. There will be a special emphasis in Classification, Resampling, Generalized Additive Models and their implementation in R. 4 credits (3 lecture, 1 project). Prerequisites: MTH 215 and MTH 451 or Permission from the instructor.

AMS 590  Advanced Topics in Applied Mathematics
Advanced topics of current interest in applied and computational mathematics. Applications from engineering, biology, finance, data and network science, along with relevant numerical algorithms, will be considered. 1-4 credits (lecture). Prerequisite: Permission of instructor.

MTH 590  Advanced Topics in Mathematics
Topics in advanced mathematics to introduce the student to concepts beyond the standard curriculum. 1-4 credits (lecture). Prerequisite: Permission of chairperson.

**MUS 547  Literature Review in Music**
Knowledge of purpose, strategies, tools and techniques for reviewing literature in music. Results in a complex literature review for publication or for arguing and defining a music problem requiring further original research. 2 credits (lecture). Prerequisites: Graduate standing or permission of instructor.

**PHY 575  Introduction to Quantum Computing**
Qubits and their physical realization. Entanglement and Bell states. Quantum gates and circuits. Quantum algorithms: searches, factoring, Fourier transforms. Quantum information theory with applications to teleportation and cryptography. Physical applications. 3 credits (lecture). Prerequisites: PHY 451 or graduate standing in Physics.

**PHY 576  Advanced Quantum Computing**

**PHY 577  Quantum Computing Internship**
Provides students with practical experience in Quantum Computing while working on an internship. 4 credits (practicum). Prerequisites: PHY 575. S/U grading.

**COLLEGE OF EDUCATION AND PROFESSIONALS STUDIES**

**EDC 577  Master’s Internship in Student Affairs**
Supervised internship in higher education placements. Emphasis on applied student affairs learning in advanced stages of college student personnel program. 3 credits (lecture). Prerequisites: EDC 561 and permission of instructor.

**EDC 578  Master’s Internship in Student Affairs**
Supervised internship in higher education placements. Emphasis on applied student affairs learning in advanced stages of college student personnel program. 3 credits (lecture). Prerequisites: EDC 577 and permission of instructor.

**EDC 580  Seminar in Student Affairs in Higher Education I**
Integrative seminar applying student affairs theory and research to contemporary higher education issues faced by professionals in the field. 3 credits (seminar). Prerequisite: Permission of instructor.

**EDC 585  Seminar in Student Affairs in Higher Education II**
Integrative seminar applying student affairs theory and research to contemporary higher education issues faced by professionals in the field. 3 credits (seminar). Prerequisite: Permission of instructor.

**COLLEGE OF THE ENVIRONMENT AND LIFE SCIENCES**

**NRS 528  Geographical Information Systems in Python**
Using the Python programming language to undertake and automate GIS processing tasks. 3 credits (1 lecture, 2 laboratory). Prerequisites: NRS 410 or permission from instructor.

**NRS 528X  Geographical Information Systems in Python** (moved to informational section)
Using the Python programming language to undertake and automate GIS processing tasks. 3 credits (1 lecture, 2 laboratory). Prerequisites: NRS 410 or permission from instructor.
COLLEGE OF NURSING

NUR 505  Translating Research Evidence into Practice
This course provides an overview of qualitative and quantitative methods and addresses how advanced practice nurses can evaluate, translate and apply research evidence to improve clinical practice and healthcare outcomes. 3 credits (lecture). Prerequisites: Admission to the College of Nursing MS program or by permission of instructor.

NUR 521  Evidence-Based Strategies to Improve Health
This course examines individual health and health behavior within the larger socio-ecological context, identifies multi-level influences of health across family-, community- and macro-systems, and explores historical and geographic variations. 3 credits (seminar). Prerequisites: Admission to the College of Nursing MS program or by permission of instructor.

NUR 600  Philosophical Foundations of Healthcare Research
Study of ontological and epistemological foundations of healthcare science and analysis of nursing knowledge. A variety of philosophical positions, along with implications for theory, research and practice will be considered. 3 credits (lecture). Prerequisites: Admission to the PhD program in Nursing or permission of instructor.

NUR 649  Responsible Conduct of Nursing & Health Research
This course examines issues related to the responsible conduct and dissemination of research and meets the federal guidelines for graduate training in the responsible conduct of research outlined in the NIH's requirement for Responsible Conduct of Research (NOT-OD-10-019). 1 credit (seminar). Prerequisites: Admission to the PhD program in Nursing or by permission of instructor.

NUR 650  Research Roles & Methods in Nursing
This course provides an overview of research roles, trajectories and classic and emerging methodologies for answering research questions relevant to nursing. The strengths and limitations of various approaches are compared. 3 credit (seminar). Prerequisites: Admission to the PhD program in Nursing or by permission of instructor.

COLLEGE OF PHARMACY

BPS 537  Biomedical & Pharmaceutical Sciences V
A clear understanding of the physiology, pathophysiology, pharmacology, toxicology, medicinal chemistry, pharmaceutics, and pharmacokinetics of medications used to treat the disease indications covered in the CTS I-VI sequence. 3 credits (lecture). Prerequisites: Doctor of Pharmacy professional student. P3 standing.

BPS 538  Biomedical & Pharmaceutical Sciences VI
A clear understanding of the physiology, pathophysiology, pharmacology, toxicology, medicinal chemistry, pharmaceutics, and pharmacokinetics of medications used to treat the disease indications covered in the CTS I-VI sequence. 2 credits (lecture). Prerequisites: Doctor of Pharmacy professional student. P3 standing.

PHP 527  Clinical & Therapeutic Sciences V
Inpatient management of medically complex patients, including those requiring critical care. Focuses on severe or decompensated conditions - renal, cardiac, cerebrovascular, endocrine, hepatic, and infectious diseases. 4 credits (3 lecture, 1 recitation). Prerequisites: Third professional year Doctor of Pharmacy student.

PHP 528  Clinical & Therapeutic Sciences VI
Topics in hematology, oncology, dermatology, and ophthalmology are covered in the final course of the Clinical & Therapeutic Sciences (CTS) sequence. 4 credits (3 lecture, 1 recitation). Prerequisites: Third professional year Doctor of Pharmacy student.
PHP 548 Comprehensive Pharmacy Practice and Patient Care
This comprehensive capstone course will focus on integration and application of knowledge already gained throughout the didactic curriculum, providing students an opportunity to apply their clinical and practice skills before embarking on advanced pharmacy practice experiences (APPEs). 4 credits (practicum). Prerequisites: Third professional year Doctor of Pharmacy student. S/U grading.