PART I – NEW ACADEMIC PROGRAMS AND PROGRAM CHANGES

COLLEGE OF NATURAL SCIENCE

1. Request to change the name for the Graduate Specialization in Ecology, Evolutionary Biology and Behavior in the College of Natural Science to Ecology, Evolution, and Behavior. The University Committee on Graduate Studies (UCGS) will consider this request at its January 11, 2021 meeting.

Students admitted to the specialization prior to Fall 2021 will be awarded a Graduate Specialization in Ecology, Evolutionary Biology and Behavior.

Students admitted to the specialization Fall 2021 and forward will be awarded a Graduate Specialization in Ecology, Evolution, and Behavior.

Effective Fall 2021.

2. Request to change the name for the Doctor of Philosophy in Ecology, Evolutionary Biology and Behavior in the College of Natural Science to Ecology, Evolution, and Behavior. The University Committee on Graduate Studies (UCGS) will consider this request at its January 11, 2021 meeting.

Students admitted to the major prior to Fall 2021 will be awarded a Doctor of Philosophy Degree in Ecology, Evolutionary Biology and Behavior.

Students admitted to the major Fall 2021 and forward will be awarded a Doctor of Philosophy Degree in Ecology, Evolution, and Behavior.

Effective Fall 2021.

3. Request to delete the curriculum and degree requirements for the Bachelor of Science degree in Clinical Laboratory Sciences in the Biomedical Laboratory Diagnostics Program. The University Committee on Undergraduate Education (UCUE) will provide consultative commentary to the Provost after considering this request. The Provost will make a determination after considering the consultative commentary from the University Committee on Undergraduate Education.

No new students are to be admitted to the program effective Summer 2018. No students are to be readmitted to the program effective Summer 2018. Effective Spring 2021, coding for the program will be discontinued and the program will no longer be available in the Biomedical Laboratory Diagnostics Program. Students who have not met the requirements for the Bachelor of Science Degree in Clinical Laboratory Sciences through the Biomedical Laboratory Diagnostics Program prior to Spring 2021 will have to change their major.
PART II - NEW COURSES AND CHANGES

COLLEGE OF AGRICULTURE AND NATURAL RESOURCES

ANS 410  Stem Cells in Reproduction and Development
Fall of odd years. 3(3-0) P: (BS 161 and BS 171L) and (ANS 307 or approval of department) RB: (BMB 200 or BMB 401) and ANS 425 Not open to students with credit in ANS 810.
NEW Properties and classification of stem cells; methodology to isolate, culture, and differentiate stem cells; mechanisms underlying stemness and differentiation of stem cells; application of stem cells in agricultural studies, veterinary medicine, and biomedical research.
Effective Fall 2021

ANS 810  Stem Cells in Reproduction and Development
Fall of odd years. 3(3-0) RB: ANS 307 and ANS 425 Not open to students with credit in ANS 410.
NEW Properties and classification of stem cells; methodology to isolate, culture, and differentiate stem cells; mechanisms underlying stemness and differentiation of stem cells; application of stem cells in agricultural studies, veterinary medicine, and biomedical research.
Effective Fall 2021

FSC 813  Food Laws and Regulations in Latin America
Fall of every year, Fall of odd years, Summer of every year. 3(3-0) RB: (FSC 810) or food law background. Not open to students with credit in LAW 810G.
Current issues that have shaped Latin American food regulation. Overview of regional characteristics. Basic food laws, agency responsibilities, product registration requirements, basic standards, food labeling, food safety, food additives, and food importation. Trade issues, international organizations, and commercial agreements.
Effective Spring 2016 Effective Spring 2021

FSC 817  Animal Health, World Trade and Food Safety (OIE): Challenges and Opportunities
Global Animal Health, Food Safety, and International Trade
Fall of every year. 3(3-0) RB: (FSC 810) or animal science, veterinary medicine, food science, law, food safety, international development, agriculture, or related disciplines. Not open to students with credit in LAW 810E.
Examines the history, objectives, rules and operations of the World Organization for Animal Health (OIE), regarding global animal health, animal welfare, world trade, and food safety. This course will provide students with an overview the World Organization for Animal Health (OIE), global animal health patterns, and their relationship with international food law, world trade agreements, food safety, and their importance in international food and agricultural trade.
Effective Fall 2012 Effective Spring 2021

FSC 820  Regulatory Leadership in Food Law
Fall of every year, Spring of every year. 3(3-0) RB: (FSC 811) or prior coursework in food science, food law, or food safety RB: (FSC 811) or prior coursework in food law Not open to students with credit in LAW 810U.
Introduction to regulatory affairs through the regulation of food. Leadership in food law regulatory affairs and governance.
Effective Summer 2018 Effective Fall 2021

FSC 851  The Law of the Foreign Supplier Verification Program Rule
Food Import Law and the Foreign Supplier Verification Program (FSVP) Rule
Summer of odd years. 3(3-0) RB: (FSC 811) or prior coursework in food safety, food law, or food science Not open to students with credit in LAW 810V.
Legal perspective of FDA’s Foreign Supplier Verification Program of the Food Safety Modernization Act. The FDA and USDA law regarding the importing food into the United States, including the Foreign Supplier Verification Program (FSVP) rule and the Food Safety Modernization Act.
Effective Summer 2018 Effective Spring 2021
FSC 852  The Law of the Preventive Controls for Human Food Rule
The Law of the Preventive Controls for Human and Animal Food
Fall of odd years. Spring of every year. 3(3-0) RB: (FSC 811) or prior coursework in food safety, food law, or food science
Legal perspective of FDA’s Preventive Controls for Human Food Rule of the Food Safety Modernization Act.
Effective Summer 2018 Effective Fall 2020

FSC 853  The Law of the Produce Safety Rule
Fall of even years. Fall of every year. 3(3-0) RB: (FSC 811) or prior coursework in food safety, food law, or food science
Legal perspective of FDA’s Produce Safety Rule of the Food Safety Modernization Act.
Effective Summer 2018 Effective Fall 2020

HNF 415  Global Nutrition
Fall of every year. Spring of every year. 3(3-0) P: HNF 350
Burdens, causes, and consequences of undernutrition globally. Interaction of nutrition with illness, obesity, and reproductive health. Approaches, policies, and programs to prevent undernutrition.
Effective Fall 2017 Effective Spring 2021

COLLEGE OF ENGINEERING

CHE 201  Material and Energy Balances
Fall of every year. Spring of every year. 3(4-0) P: (MTH 133 or MTH 153H or LB 119) and (CEM 142 or CEM 152 or LB 172) and ((CSE 131 or concurrently) or (CSE 231 or concurrently) or (EGR 102 or concurrently))
Chemical engineering calculations. Synthesis of chemical process systems. Analysis of chemical processes using material and energy balances. Enthalpy calculations for changes in temperature, phase transitions, and chemical reactions.
Effective Spring 2014 Effective Spring 2021

MSE 880  Computational Materials Science
Spring of every year. 3(2-2) RB: MSE 860 or MSE 862 or MSE 964A or ME 820 or ME 872 R: Open to graduate students in the College of Engineering.
Modeling methods and computational techniques for predicting materials properties. Multi-scale simulation in different material classes. Techniques include density functional theory, molecular statics and dynamics, discrete dislocation dynamics, continuum crystal plasticity.
DELETE COURSE
Effective Summer 2021

MSE 880A  Atomistic and Quantum Simulations for Materials
On Demand. 3(2-2) RB: MSE 860 or MSE 862 or ME 820 or ME 872 R: Open to graduate students in the College of Engineering.
Atomistic and Quantum Simulations for Materials will cover modern computational techniques for the prediction of materials properties beginning from the quantum electronic structure to the atomistic level. These methods include density functional theory (DFT), molecular dynamics, Monte Carlo, parallel computing, machine learning, and multi-scale modeling.
SA: MSE 880
Effective Fall 2021
MSE 880B Microstructure Evolution  
On Demand. 3(2-2) RB: (MSE 860 or MSE 862 or ME 820 or ME 872) or Basic experiences of Matlab or Python programming are strongly recommended. R: Open to graduate students in the College of Engineering.

NEW Modeling mass transport and phase transformation at meso and microscales. Learn how the thermodynamics and kinetics lead to the formation of dendritic, eutectic, spinodal decomposed, and other microstructures from both theory and simulations. A variety of methods, such as Monte Carlo, particle dynamics, phase field model, and several numerical methods, will be explored in the course.
SA: MSE 880  
Effective Fall 2021

MSE 880C Mechanics of microstructured materials  
On Demand. 3(2-2) RB: MSE 860 or MSE 862 or ME 820 or ME 872 R: Open to graduate students in the College of Engineering.

NEW Modeling methods and computational techniques to predict the mechanics of microstructured materials. Constitutive models to describe single crystal plasticity and techniques to solve mechanics of polycrystalline matter. Simulation tools include discrete dislocation dynamics and solving static equilibrium in microstructured materials with the finite element method and spectral methods.
SA: MSE 880  
Effective Fall 2021

ECE 331 Microprocessors and Digital Systems  
Fall of every year. Spring of every year. 4(3-3) P: (CSE 220 or CSE 232) and ECE 230 P: (CSE 220 or CSE 232) and (ECE 230 and (ECE 203 or concurrently)) R: Open to students in the Department of Electrical and Computer Engineering and open to students in the Department of Computer Science and Engineering.

SA: EE 331  
Effective Fall 2017 Effective Fall 2021

ECE 402 Applications of Analog Integrated Circuits  
Spring of every year. 4(3-3) P: ECE 302 and ECE 303 R: Open to students in the Department of Electrical and Computer Engineering and open to students in the Department of Computer Science and Engineering.  
Circuit design using analog integrated circuits. SPICE macromodeling. Operational amplifiers, comparators, timers, regulators, multipliers and converters. Design project with hardware and software verification.
SA: ECE 484, EE 484  
DELETE COURSE  
Effective Spring 2021

ECE 424 Electrical Drives  
Fall of every year. 3(3-0) P: ECE 313 and ECE 320 R: Open to juniors or seniors in the College of Engineering.

Effective Fall 2021

ECE 434 Autonomous Vehicles  
Fall of every year. 3(2-2) Interdepartmental with Computer Science and Engineering. P: ECE 331 or CSE 331 RB: Proficiency in Python programming strongly recommended, equivalent to a one-semester Python class. R: Open to juniors or seniors in the College of Engineering.

NEW An overview of technologies integral to autonomous vehicles including sensors, sensing algorithms, machine learning, localization, mapping, object detection, tracking, communication and security. A central focus will be hands-on implementation of robotic sensing and navigation algorithms on both simulated and physical mobile platforms.  
Effective Fall 2021
PART II - NEW COURSES AND CHANGES – continued - 5
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ECE 474  Principles of Electronic Devices
Spring of every year. 3(3-0) P: ECE 302 and ECE 305
Energy levels in atoms. Crystal properties, energy bands and charge carriers, semiconductors, transport properties of bulk materials. P-n junction diodes, bipolar transistors, field effect transistors.
SA: EE 474
DELETE COURSE
Effective Spring 2021

COLLEGE OF HUMAN MEDICINE

FM 615  Addiction Medicine: What you need to know
Fall of every year. Spring of every year. Summer of every year. 3(3-0) A student may earn a maximum of 3 credits in all enrollments for this course. P: HM 556 R: Open to graduate-professional students in the College of Human Medicine.
NEW
Overview of addiction medicine including training in medication assisted therapy for opioid use disorder, safer medication prescribing for pain management, and prevention and treatment of overuse disorder of multiple substances.
Request the use of the Pass-No Grade (P-N) system.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
Effective Fall 2020

HM 628  Racism and Other Health Disparities
Fall of every year. Spring of every year. Summer of every year. 3(3-0) R: Open to graduate-professional students in the College of Human Medicine.
NEW
Provide an understanding of the magnitude of health disparities, particularly those that are perpetuated by systems inequity, racism, and discrimination.
Request the use of the Pass-No Grade (P-N) system.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
Effective Fall 2020

PSC 592  Happiness and Emotional Resilience for Health Care Providers
Spring of every year. 1(1-0) R: Approval of department.
NEW
Classroom setting with faculty instructors presenting on applied topics for well-being; interactive exercises throughout.
Effective Summer 2020

COLLEGE OF NATURAL SCIENCE

BMB 514  Medical Biochemistry
Fall of every year. 3 credits. R: Open only to students in the College of Human Medicine and the College of Osteopathic Medicine. Not open to students with credit in BMB 521.
Basic biochemical principles and terminology; metabolism and function of biomolecules of importance in medical biology and human pathophysiology.
Request the use of the Pass-No Grade (P-N) system.
SA: BCH 514
DELETE COURSE
Effective Fall 2020
BMB 515  Medical Biochemistry and Molecular Biology  
Fall of every year. 2(2-0) R: Open to graduate-professional students in the College of Osteopathic Medicine.  
Basic biochemical principles and terminology. Overview of metabolism of biomolecules of importance to medical biology and human pathophysiology.  
Request the use of the Pass-No Grade (P-N) system.  
DELETE COURSE  
Effective Fall 2020

BMB 527  Medical Genetics  
Fall of every year. 1(1-0) R: Open to graduate-professional students in the College of Osteopathic Medicine.  
Request the use of the Pass-No Grade (P-N) system.  
DELETE COURSE  
Effective Fall 2020

CMSE 401  Methods for Parallel Computing  
Spring of odd years. 4(4-0) P: (CMSE 202 and CSE 232) and (MTH 235 or MTH 349 or MTH 347H) P: (CMSE 202 and CSE 232) and (MTH 126 or MTH 133 or MTH 153H or LB 119) Not open to students with credit in CSE 415.  
Effective Fall 2019 Effective Fall 2021

CMSE 411  Computational Medicine  
Fall of odd years. Fall of even years. 3(3-0) Interdepartmental with Biochemistry and Molecular Biology and Microbiology and Molecular Genetics. P: (CMSE 201 and LB 144 and LB 145) or (CMSE 201 and BS 161 and BS 162) or (CMSE 201 and BS 181H and BS 182H) Computational approaches in biology with a focus on medicine.  
Effective Fall 2019 Effective Fall 2021

MTHE 926  Proseminar in Mathematics Education I  
Fall of odd years. Fall of every year. 3(3-0) Interdepartmental with Counseling, Educational Psy & Special Education and Teacher Education.  
Research on the learning and teaching of mathematics. Focus on curriculum, discourse, equity and teacher education.  
Request the use of ET-Extension to postpone grading.  
The work for the course must be completed and the final grade reported within 1 semester after the end of the semester of enrollment.  
SA: SME 926  
Effective Fall 2016 Effective Spring 2021

MTHE 927  Proseminar in Mathematics Education II  
Fall of even years. Spring of every year. 3(3-0) Interdepartmental with Counseling, Educational Psy & Special Education and Teacher Education.  
Research on the learning and teaching of mathematics. Focus on teaching, student learning, assessment and policy.  
Request the use of ET-Extension to postpone grading.  
The work for the course must be completed and the final grade reported within 1 semester after the end of the semester of enrollment.  
SA: SME 927  
Effective Fall 2016 Effective Spring 2021
NSC 844  Tools for Women in STEM
Spring of every year. 2(2-0) R: Open to graduate students in the College of Engineering. Approval of department.
NEW Directed at graduate students considering a career in STEM. This course provides strategies to help students advance their goals and mitigate the challenges they may encounter.
Effective Spring 2021

NEU 450  The Autonomic Nervous System
Fall of every year. 3(3-0) P: (NEU 301) and ((PSL 310 or concurrently) or (PSL 431 or concurrently)) R: Open to undergraduate students in the Neuroscience Major.
NEW Examination of the functional anatomy and physiology of the three autonomic nervous systems (enteric; parasympathetic; sympathetic)
Effective Fall 2021

NEU 460  Current Approaches in Molecular and Cellular Neuroscience
Spring of every year. 3(3-0) P: (NEU 301) and ((PSL 310 or concurrently) or (PSL 431 or concurrently)) R: Open to undergraduate students in the Neuroscience Major.
NEW Investigation of the molecular and cellular pathways that allow neurons to connect and communicate, including the latest tools and technologies used to understand how complex molecular machinery within neuronal membranes interact with electrical potentials.
Effective Spring 2022

COLLEGE OF OSTEOPATHIC MEDICINE

OST 828  Global Health Capstone
Fall of every year. Spring of every year. Summer of every year. 3 credits. R: Open to master's students in the College of Osteopathic Medicine or approval of college. R: Open to master’s students in the Global Health Major. Approval of department.
Integration of knowledge, skills and competencies acquired in global health.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
Effective Fall 2020 Effective Spring 2021

COLLEGE OF VETERINARY MEDICINE

VM 690  Special Problems in Veterinary Medicine
Fall of every year. Spring of every year. Summer of every year. 1 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. A student may earn a maximum of 12 credits in all enrollments for this course. R: Open only to graduate-professional students in the College of Veterinary Medicine.
Individual study directed by a faculty member on an experimental, theoretical, or applied problem. May involve off-campus experience in a preceptorial mode.
Request the use of the Pass-No Grade (P-N) system.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 1 semester after the end of the semester of enrollment.
Effective Summer 2004 Effective Summer 2020