

**GRADUATE MAJOR CHANGE BULLETIN NO. 6**

**Spring 2016**

**Faculty Senate Approved February 11, 2016**

The courses listed below reflect the graduate major curricular changes approved by the Catalog Subcommittee and the Graduate Studies Committee since approval of the last Graduate Major Change Bulletin. All new and revised courses are printed in their entirety under the headings Proposed and Current, respectively. The column to the far right indicates the date each change becomes effective.

<b>Subject</b>	<b>Course Number</b>	<b>New Revise Drop</b>	<b>Current</b>	<b>Proposed</b>	<b>Effective Date</b>
<b>AMER ST</b>	<b>515</b>	<b>New</b>	<b>--N/A--</b>	<b>The Neoliberal University 3</b> Critically considers the pedagogical, professional, institutional, and social effects of neoliberalism on higher education.	<b>8-16</b>
<b>CHEM</b>	<b>535</b>	<b>New</b>	<b>--N/A--</b>	<b>Applied Spectroscopy 3</b> Application of optical (UV-visible, Fourier transform infrared, Raman, and fluorescence) and NMR spectroscopies to problem solving in chemical research. Recommended preparation: CHEM 331, 332, 345, and 425. Typically offered Fall.	<b>8-16</b>
<b>ECE</b>	<b>501</b>	<b>New</b>	<b>--N/A--</b>	<b>Fundamentals of Laboratory-on-Chip 3</b> Operating principles of laboratory-on-chip (LoC) technologies, basics of design and fabrication, integration with microdevices, digital and high-frequency circuits, sensors, and power systems. Typically offered Spring.	<b>8-16</b>
<b>ECE</b>	<b>525</b>	<b>New</b>	<b>--N/A--</b>	<b>Experimental Methods for Electrical Engineering 3</b> Design of experiments; data analysis methods; statistical testing; dynamic measurements; uncertainty analysis, yield concepts; data acquisition; probability distributions; and report writing. Recommended preparation: basic statistics knowledge. Typically offered Fall.	<b>8-16</b>

<b>ECE</b>	<b>537</b>	<b>New</b>	<b>--N/A--</b>	<b>High Frequency Circuit Design</b> 3 Active microwave components (diodes, transistors); microwave transistor amplifiers; oscillators; mixers; stability criteria and circles; noise in microwave circuits; noise figure. Recommended preparation: ECE 370; ECE 425. Typically offered Fall.	<b>8-16</b>
<b>ECONS</b>	<b>522</b>	<b>New</b>	<b>--N/A--</b>	<b>Financial and Commodity Derivatives</b> 3 Design, trading, structure, and pricing of derivatives; working knowledge of how derivative securities work, how they are used, and how they are priced. Typically offered Spring.	<b>1-17</b>
<b>ECONS</b>	<b>536</b>	<b>New</b>	<b>--N/A--</b>	<b>Applied Statistics and Econometrics for Economics and Finance</b> 3 Data and problem driven approach to formulating, estimating, and interpreting models that address problems in the area of finance and financial economics; review relevant basic statistics and probability concepts, and apply these to linear regression, regression diagnostics, and time series econometrics. Recommended preparation: 3-credit introductory statistics (MGTOP 215); 3-credit microeconomics or macroeconomics course; 3-credit mathematics with calculus course; 3-credit introductory finance course. Typically offered Summer.	<b>5-16</b>
<b>MBIOS</b>	<b>525</b>	<b>Restore</b>	<b>--N/A--</b>	<b>Advanced Topics in Genetics V</b> 1-3 May be repeated for credit; cumulative maximum 4 hours. Recent genetics research in selected areas. Recommended preparation: MBIOS 503 or an equivalent course providing a basic understanding of molecular biology or molecular genetics. Typically offered: Spring.	<b>5-16</b>

<b>MBIOS</b>	<b>585</b>	<b>New</b>	--N/A--	<b>Molecular Biotechniques 2</b> Background and application of classical and current techniques involved in cloning, characterization, modification, and expression of genes. Typically offered Summer.	<b>5-16</b>
<b>MBIOS</b>	<b>586</b>	<b>New</b>	--N/A--	<b>Molecular Biotechniques Laboratory 1 (0-3)</b> Laboratory exploration of classical and current techniques involved in cloning, characterization, modification, and expression of genes. Recommended preparation: MBIOS 585 or concurrent enrollment. Typically offered Summer.	<b>5-16</b>
<b>NEP</b>	<b>577</b>	<b>Drop</b>	<b>Introduction to Research 3</b> Philosophy, standards, and practices of scientific inquiry and scholarship appropriate to basic, clinical, and social and administrative sciences in healthcare, and the performance expectations of researchers and scholars. (Crosslisted course offered as PHARMSCI 577, NEP 577).	--N/A--	<b>8-16</b>
<b>NURS</b>	<b>582</b>	<b>New</b>	--N/A--	<b>PMHNP Internship 3 Course</b> Prerequisite: NURS 501; NURS 502; NURS 530; NURS 544; NURS 545; NURS 547; NURS 555; NURS 560. A culminating internship focusing on the provision of comprehensive psychiatric mental health care to individuals and families across the lifespan. Typically offered: Spring.	<b>8-16</b>
<b>PHARMSCI</b>	<b>560</b>	<b>New</b>	--N/A--	<b>Molecular and Cellular Methods in Biomedical Sciences 3</b> Basic experimental methods and approaches in cell and molecular biology, with an emphasis on practical skills and their appropriate application. Typically offered Fall.	<b>8-16</b>

PHARMSCI	577	Revise	<del>Introduction to Research-3</del> Philosophy, standards, and practices of scientific inquiry and scholarship appropriate to basic, clinical, and social and administrative sciences in healthcare, and the performance expectations of researchers and scholars. (Crosslisted course offered as PHARMSCI 577, NEP 577).	<u>Responsible Conduct in Biomedical Research</u> 3 Training in biomedical research ethics consistent with NIH requirements; <u>introduction to literature searching and analysis, scientific writing, and oral presentations.</u> Typically offered Fall.	8-16
PL P	513	Revise	<del>Plant Nematology 4(3-3)</del> Anatomy and morphology of plant-parasitic nematodes, molecular plant-nematode interactions, genomics, symptoms, identification, techniques and control. Typically offered odd years - Spring. Cooperative: Open to UI degree-seeking students.	<u>Plant Nematology 3</u> Anatomy and morphology of plant-parasitic nematodes, molecular plant-nematode interactions, genomics, symptoms, identification, techniques and control. Typically offered odd years - Spring. Cooperative: Open to UI degree-seeking students.	8-16
PL P	514	Revise	<del>Phylobacteriology 4(3-3)</del> Isolation and characterization of bacteria having a saprophytic, symbiotic or pathogenic association with plants, molecular structure, function, and genetics. Typically offered even years - Fall. Cooperative: Open to UI degree-seeking students.	<u>Phylobacteriology 3</u> Isolation and characterization of bacteria having a saprophytic, symbiotic or pathogenic association with plants, molecular structure, function, and genetics. Typically offered even years - Fall. Cooperative: Open to UI degree-seeking students.	8-16
PL P	521	Revise	<del>General Mycology 4(2-6)</del> The structure, life histories, classification, and economic importance of the fungi. Typically offered odd years - Fall. Cooperative: Open to UI degree-seeking students.	<u>General Mycology 3</u> The structure, life histories, classification, and economic importance of the fungi. Typically offered odd years - Fall. Cooperative: Open to UI degree-seeking students.	8-16