

## MEMORANDUM

**Faculty Senate approved October 3, 2024**

TO: Deans and Chairs  
 FROM: Becky Bitter, Sr. Assistant Registrar  
 DATE: September 26, 2024  
 SUBJECT: Minor Change Bulletin No. 1

The courses listed below reflect the minor curricular changes approved by the catalog editor since approval of the last Minor Change Bulletin. The column to the far right indicates the date each change becomes effective.

Subject	Course Number	New Revise Drop	Current	Proposed	Effective Date
ACCTG	338	Revise	<del>Cost Accounting 3 Course</del> <del>Prerequisite: ACCTG 231 or 298 with a C or better; admitted to a major or minor in the College of Business.</del> Management uses of cost information; cost systems and system design; cost analysis. Typically offered Fall and Spring.	<u>Cost Accounting 3 Course</u> <u>Prerequisite: ACCTG 231 or 298; admitted to a major or minor in the College of Business.</u> Management uses of cost information; cost systems and system design; cost analysis. Typically offered Fall and Spring.	8-24
AFS	445	Revise	<del>Field Analysis of Sustainable Food Systems 3</del> Experiential course visiting farms, food processing and marketing sites to develop understanding of issues in food systems sustainability. Field trip required. Credit not granted for both AFS 445 and 545. Offered at 400 and 500 level. Typically offered Spring.	<u>Field Analysis of Sustainable Food Systems 3 Course</u> <u>Prerequisite: By instructor permission.</u> Experiential course visiting farms, food processing and marketing sites to develop understanding of issues in food systems sustainability. Field trip required. Credit not granted for both AFS 445 and 545. Offered at 400 and 500 level. Typically offered Spring.	1-25
ART	371	Revise	<del>Screenprinting 3 (0-6) Course</del> Prerequisite: ART 102. Introduction to the basic techniques, processes and history of screenprinting; collage, repetition, multiples, hand-drawn, photo and digital	<u>Screen Printing 3 (0-6)</u> <u>May be repeated for credit; cumulative maximum 9 credits.</u> Course Prerequisite: ART 102. Introduction to the basic techniques, processes and history of screen printing for art	1-25

			processes. Typically offered Fall.	and design. Typically offered Fall.	
ART	381	Revise	<b>Beginning Photography 3 (0-6)</b> Fundamentals in digital photography in conjunction with image editing and printing techniques; formal, conceptual, and aesthetic concepts introduced. Typically offered Fall, Spring, and Summer. Cooperative: Open to UI degree-seeking students.	<b>Beginning Photography 3 (0-6)</b> <u>May be repeated for credit; cumulative maximum 9 credits.</u> Fundamentals in lens-based media (photography) tools and techniques, in conjunction with image capture, editing, printing, and display; formal, conceptual, expressive, and aesthetic concepts explored. Typically offered Fall, Spring, and Summer. Cooperative: Open to UI degree-seeking students.	8-24
ASTRONOM	511	Revise	<b>Astronomical Methods 3</b> Detectors and telescopes; radio astronomy; interferometry and Fourier methods; data handling; statistics; data mining. Typically offered Fall.	<b>Astronomical Methods 3</b> Detectors and telescopes; radio astronomy; interferometry and Fourier methods; data handling; statistics; data mining. Typically offered Fall. <u>Cooperative: Open to UI degree-seeking students.</u>	8-24
B A	600	Revise	<b>Beyond the MBA: Applications of Principles, Theory, and Practice 1 Course</b> <del>Prerequisite: 31 credits in MBA coursework. Course must be taken the last semester in the MBA program.</del> Leveraging the MBA for lifetime success; framework and tools for successfully synthesizing and applying the MBA in the global workplace, as a manager and a leader. Typically offered Fall, Spring, and Summer. S, F grading.	<b>Beyond the MBA: Applications of Principles, Theory, and Practice 1 Course</b> <u>Prerequisite: B A 579 or concurrent enrollment; admission to the Online MBA program or to the Executive MBA Online program.</u> Leveraging the MBA for lifetime success; framework and tools for successfully synthesizing and applying the MBA in the global workplace, as a manager and a leader. Typically offered Fall, Spring, and Summer. S, F grading.	8-24
BIO ENG / ME	425	Revise	<b>Biomechanics 3 Course</b> <del>Prerequisite: BIO ENG 321 with a C or better or CE 215 with a C or better; MATH 315 with a C or better.</del> Methods for analysis of rigid body and deformable mechanics; application to biological tissue, especially bone, cartilage, ligaments, tendon and muscle.	<b>Biomechanics 3 Course</b> <u>Prerequisite: CE 211 with a C or better; MATH 315 with a C or better.</u> Methods for analysis of rigid body and deformable mechanics; application to biological tissue, especially bone, cartilage, ligaments, tendon and muscle. (Crosslisted course offered as BIO ENG	8-24

			(Crosslisted course offered as BIO ENG 425/525, ME 525). Credit not granted for more than one of BIO ENG 425, BIO ENG 525, or ME 525. Offered at 400 and 500 level. Typically offered Spring.	425/525, ME 525). Credit not granted for more than one of BIO ENG 425, BIO ENG 525, or ME 525. Offered at 400 and 500 level. Typically offered Spring.	
<b>BIOLOGY</b>	<b>401</b>	<b>Revise</b>	<b>[CAPS] [M] Plants and People 3</b> <del>Course Prerequisite: BIOLOGY 106 or 120; BIOLOGY 107; junior standing.</del> Relationships between plants and people, especially cultural and economic applications of plants.	<b>[CAPS] [M] Plants and People 3</b> <u>Course Prerequisite: BIOLOGY 301, 305, 370, 372, 395, 403, 405, or MBIOS 301.</u> Relationships between plants and people, especially cultural and economic applications of plants.	<b>8-25</b>
<b>BIOLOGY</b>	<b>438</b>	<b>Revise</b>	<del>[M]</del> <b>Animal Behavior 3 (2-3)</b> Course Prerequisite: BIOLOGY 106. Biological study of animal behavior as viewed from ethological, genetic, developmental, ecological, and evolutionary perspectives.	<b>Animal Behavior 3 (2-3)</b> Course Prerequisite: BIOLOGY 106. Biological study of animal behavior as viewed from ethological, genetic, developmental, ecological, and evolutionary perspectives.	<b>8-24</b>
<b>BIOLOGY</b>	<b>446</b>	<b>Revise</b>	<b>Mutualism and Symbiosis 3</b> <del>Course Prerequisite: BIOLOGY 372, 403, or 405.</del> Critical evaluation of the ecology, evolution, and molecular biology of mutualism and symbiosis. Credit not granted for both BIOLOGY 446 and 546. Offered at 400 and 500 level.	<b>Mutualism and Symbiosis 3</b> <u>Course Prerequisite: BIOLOGY 305, 370, 372, 395, 403, or 405.</u> Critical evaluation of the ecology, evolution, and molecular biology of mutualism and symbiosis. Credit not granted for both BIOLOGY 446 and 546. Offered at 400 and 500 level.	<b>1-25</b>
<b>BIOLOGY</b>	<b>513</b>	<b>Revise</b>	<b>Plant Metabolism 3</b> Metabolic processes unique to plants, including the primary incorporation of nitrogen, sulfur, carbon dioxide and phosphate into bio-molecules.	<b>Plant Metabolism 3</b> Metabolic processes unique to plants, including the primary incorporation of nitrogen, sulfur, carbon dioxide and phosphate into bio-molecules. <u>Cooperative: Open to UI degree-seeking students.</u>	<b>8-24</b>
<b>BIOMDSCI</b>	<b>563</b>	<b>Revise</b>	<b>Deconstruction of Research 3</b> Course Prerequisite: Graduate standing in a WSU biomedical based graduate program. Nature and development of scientific investigation through oral and written avenues, and methods of critical analyses applied to	<b>Deconstruction of Research 2</b> Course Prerequisite: Graduate standing in a WSU biomedical based graduate program. Nature and development of scientific investigation through oral and written avenues, and methods of critical analyses applied to	<b>8-24</b>

			questions of biomedical interest. Typically offered Fall.	questions of biomedical interest. Typically offered Fall.	
CE	302	Revise	<b>Introduction to Surveying 2</b> (1-3) <del>Course Prerequisite: MATH 171; admitted to the major in Civil Engineering, Construction Engineering, or Construction Management; junior standing.</del> Surveying data collection, analysis and application; measuring distances and angles using total stations and global positioning systems; analysis of errors in measurements. Typically offered Fall and Summer.	<b>Introduction to Surveying 2</b> (1-3) <u>Course Prerequisite: MATH 171; admitted to the major in Civil Engineering, Construction Engineering, or Construction Management; sophomore standing.</u> Surveying data collection, analysis and application; measuring distances and angles using total stations and global positioning systems; analysis of errors in measurements. Typically offered Fall and Summer.	8-24
CES / ENGLISH	373 / 341	Revise	<del>[M] <b>Native American Literature 3</b> Native American literature, by and about the original inhabitants, image and counter image, with emphasis on the 20th century.</del> (Crosslisted course offered as CES 373, ENGLISH 341).	<b>[M] <u>Indigenous Literature 3</u></b> Literature, by Indigenous authors and about Indigenous communities, reflecting on dominant images and counter-images, with emphasis on the 20th century. (Crosslisted course offered as CES 373, ENGLISH 341).	8-24
CES / WGSS	411	Revise	<del><b>Asian Pacific American Women 3</b> Course Prerequisite: CES or WGSS course; junior standing. Intersection of ethnicity, race, class, gender and sexuality in the lives of Asian Pacific American women.</del> (Crosslisted course offered as CES 411, WGSS 411.)	<b><u>Asian and Pacific American Women 3</u></b> Course Prerequisite: CES or WGSS course; junior standing. <u>Intersection of ethnicity, race, class, gender and sexuality in the lives of Asian and Pacific American women.</u> (Crosslisted course offered as CES 411, WGSS 411.)	8-24
CES	435	Revise	<del><b>African American Women in U.S. Society 3</b> Course Prerequisite: Junior standing. Critical terms and models for understanding the experiences of African American women in antebellum America to the present; an interdisciplinary forum concerned with the national experience of the African American woman experience.</del>	<b><u>Black Feminism 3</u></b> Course Prerequisite: Junior standing. <u>Explores the history, praxis, movements, and politics of Black feminism; examines the intellectual traditions, social movements, and contemporary debates surrounding Black feminism.</u>	8-24
CHEM	338	Revise	<del><b>Physical Chemistry for Chemical Biology 3</b> Course</del>	<b><u>Biophysical Chemistry 3</u></b> Course Prerequisite: CHEM 345	8-24

			Prerequisite: CHEM 345 with a C or better; MATH 140 or 171 with a C or better; 4 credits of PHYSICS 101 or 102 with a C or better, or PHYSICS 101 and 111, each with a C or better, or PHYSICS 102 and 112, each with a C or better. The modern tools and insights of physical chemistry are covered by interconnecting these fundamental concepts with key biological phenomena. Typically offered Even Years - Fall.	with a C or better; MATH 140 or 171 with a C or better; 4 credits of PHYSICS 101 or 102 with a C or better, or PHYSICS 101 and 111, each with a C or better, or PHYSICS 102 and 112, each with a C or better. The modern tools and insights of physical chemistry are covered by interconnecting these fundamental concepts with key biological phenomena. Typically offered Even Years - Fall.	
CHEM	543	Revise	<b>Bioorganic Chemistry 3</b> <del>Course Prerequisite: CHEM 542.</del> Chemistry of biological systems, medicinal chemistry, protein chemistry, enzyme mechanisms and inhibitors. Typically offered Spring.	<b>Bioorganic Chemistry 3</b> Chemistry of biological systems, medicinal chemistry, protein chemistry, enzyme mechanisms and inhibitors. Recommended preparation includes two semesters of undergraduate organic chemistry and one semester of undergraduate biochemistry. Typically offered Spring.	8-24
CHEM	564	Revise	<del><b>Molecular Phenomena 3</b></del> Phenomena which yield information on structures, energy levels, and interactions of molecules in solid, liquid, and gaseous phases. Typically offered Spring.	<b>Molecular Spectroscopy 3</b> Phenomena which yield information on structures, energy levels, and interactions of molecules in solid, liquid, and gaseous phases. Typically offered Spring.	1-25
COM	495	Revise	<b>Communication Professional Internship V 2-12</b> May be repeated for credit; cumulative maximum 12 credits. <del>Course Prerequisite: COM 101; COM 102; COM 105; COM 138; COM 210 and 300, both with a C or better; admitted to a major in the College of Communication.</del> Typically offered Fall, Spring, and Summer. S, F grading.	<b>Communication Professional Internship V 2-12</b> May be repeated for credit; cumulative maximum 12 credits. <u>Course Prerequisite: Application required; COM 101; COM 102; COM 105; COM 138; completion of COM 210 and 300, both with a C or better; admitted to a major in the College of Communication.</u> <u>Taken in conjunction with an internship, students are introduced to NACE Competencies which employers</u>	1-25

				are seeking in candidates; through a reflective process students will connect classroom to career while immersed in the internship experience. Typically offered Fall, Spring, and Summer. S, F grading.	
CPT S	421	Revise	<del>Software Design Project I 3 (1-6) Course Prerequisite: C or better in CPT S 321 and 322; or C or better in CPT S 322 and CPT S 360 or 370; or C or better CPT S 322 and concurrent enrollment in CPT S 360 or 370; admitted to a major or minor in EECS or Data Analytics.</del> Large-scale software development including requirements analysis, estimation, design, verification and project management. Typically offered Fall and Spring.	<b>Software Design Project I 3 (1-6) Course Prerequisite: C or better in each of CPT S 322; CPT S 360 or 370; one 400-level CPT S course taken at WSU; admitted to a major in EECS; senior standing.</b> Large-scale software development including requirements analysis, estimation, design, verification and project management. Typically offered Fall and Spring.	1-25
CPT S	423	Revise	<del>[CAPS] [M] Software Design Project II 3 (1-6) Course Prerequisite: CPT S 421 with a C or better; admitted to a major or minor in EECS or Data Analytics; junior standing.</del> Laboratory/group design project for large-scale software development, requirements analysis, estimation, design, verification techniques. Typically offered Fall and Spring.	<b>[CAPS] [M] Software Design Project II 3 (1-6) Course Prerequisite: CPT S 421 with a C or better; admitted to a major in EECS.</b> Laboratory/group design project for large-scale software development, requirements analysis, estimation, design, verification techniques. Typically offered Fall and Spring.	1-25
CRM J	400	Revise	<del>[M] Special Topics in Criminal Justice and Criminology 3</del> May be repeated for credit; cumulative maximum 6 credits. <del>Course Prerequisite: CRM J 101.</del> Selected topics in criminal justice and criminology. Typically offered Fall, Spring, and Summer. Cooperative: Open to UI degree-seeking students.	<b>[M] Special Topics in Criminal Justice and Criminology 3</b> May be repeated for credit; cumulative maximum 6 credits. <u>Course Prerequisite: CRM J 101; junior standing.</u> Selected topics in criminal justice and criminology. Typically offered Fall, Spring, and Summer. Cooperative: Open to UI degree-seeking students.	8-25

CRM J	405	Revise	<b>[M] Comparative Criminal Justice Systems 3 Course</b> <del>Prerequisite: CRM J 101.</del> Comparative study of criminal justice systems in the US and selected foreign countries. (Crosslisted course offered as CRM J 405, POL S 405.) Typically offered Fall and Spring. Cooperative: Open to UI degree-seeking students.	<b>[M] Comparative Criminal Justice Systems 3 Course</b> <u>Prerequisite: CRM J 101; junior standing.</u> Comparative study of criminal justice systems in the US and selected foreign countries. (Crosslisted course offered as CRM J 405, POL S 405.) Typically offered Fall and Spring. Cooperative: Open to UI degree-seeking students.	8-25
CRM J	420	Revise	<b>[M] Criminal Procedure 3 Course</b> <del>Prerequisite: CRM J 101.</del> Principal court decisions concerning standards of conduct and rights in the criminal process. Typically offered Fall, Spring, and Summer. Cooperative: Open to UI degree-seeking students.	<b>[M] Criminal Procedure 3 Course</b> <u>Prerequisite: CRM J 101; junior standing.</u> Principal court decisions concerning standards of conduct and rights in the criminal process. Typically offered Fall, Spring, and Summer. Cooperative: Open to UI degree-seeking students.	8-25
CS	320	Revise	<b>[M] Fundamentals of Software Engineering 3 Course</b> <del>Prerequisite: CS 223 with a C or better; CS 224 with a C or better; admitted to the major in Computer Science.</del> Introduction to software engineering; requirements analysis, definition and specification; software process models; prototyping; architecture; object-oriented design with UML. Typically offered Fall.	<b>[M] Fundamentals of Software Engineering 3 Course</b> <u>Prerequisite: CS 223 with a C or better; CS 220 or 224 with a C or better; admitted to the major in Computer Science.</u> Introduction to software engineering; requirements analysis, definition and specification; software process models; prototyping; architecture; object-oriented design with UML. Typically offered Fall.	8-24
CS	351	Revise	<b>Introduction to Database Systems 3 Course</b> <del>Prerequisite: CS 215 with a C or better, CS 223 with a C or better, or CS 224 with a C or better.</del> Introduction to database concepts, data models, database languages, database design, implementation issues. Typically offered Spring.	<b>Introduction to Database Systems 3 Course</b> <u>Prerequisite: CS 215 with a C or better, CS 220 with a C or better, CS 223 with a C or better, or CS 224 with a C or better.</u> Introduction to database concepts, data models, database languages, database design, implementation issues. Typically offered Spring.	8-24
CS	355	Revise	<b>Programming Language Design 3 Course</b> <del>Prerequisite: CS 223 with a C or better; CS</del>	<b>Programming Language Design 3 Course</b> <u>Prerequisite: CS 223 with a C or better; CS</u>	8-24

			<del>224 with a C or better.</del> Design concepts of high-level programming languages; survey of existing languages, experience using some languages. Typically offered Spring.	<u>220 or 224 with a C or better.</u> Design concepts of high-level programming languages; survey of existing languages, experience using some languages. Typically offered Spring.	
CS	426	Revise	<b>Applied Systems Security 3 Course</b> Prerequisite: CS 360 <del>with a C or better or concurrent enrollment.</del> Foundations, theory, and practice of non-cryptographic computer security; design of secure software; adding security to existing systems; other contemporary topics in security. Typically offered Fall.	<b>Applied Systems Security 3 Course</b> Prerequisite: <u>CS 251 with a C or better, or CS 261 with a C or better.</u> Foundations, theory, and practice of non-cryptographic computer security; design of secure software; adding security to existing systems; other contemporary topics in security. Typically offered Fall.	8-24
CS	458	Revise	<b>Mobile Application Development 3 Course</b> Prerequisite: <del>CS 223, 224, or 360, each with a C or better.</del> Design and development of mobile applications; introduction to mobile application frameworks, including user interface, sensors, event handling, data management and network communication. Typically offered Spring.	<b>Mobile Application Development 3 Course</b> Prerequisite: <u>CS 220, 223, 224, or 360, each with a C or better.</u> Design and development of mobile applications; introduction to mobile application frameworks, including user interface, sensors, event handling, data management and network communication. Typically offered Spring.	8-24
DATA	219	Revise	<b>Data Structures for Data Analytics 3 Course</b> Prerequisite: <del>CPT S 121, CPT S 131, or CS 121.</del> Programming techniques including data structures, sorting and searching, object-oriented design, and an introduction to algorithmic analysis. Typically offered Fall and Spring.	<b>Data Structures for Data Analytics 3 Course</b> Prerequisite: <u>CPT S 121, CPT S 131, or CS 121; DATA 115 or concurrent enrollment.</u> Programming techniques including data structures, sorting and searching, object-oriented design, and an introduction to algorithmic analysis. Typically offered Fall and Spring.	1-25
DATA	422	Revise	<b>Corporate Data Analytics 3 Course</b> Prerequisite: <del>DATA 219; STAT 360; DATA 324 or concurrent enrollment; STAT 435 or concurrent enrollment;</del>	<b>Corporate Data Analytics 3 Course</b> Prerequisite: <u>DATA 324 or concurrent enrollment; STAT 360; STAT 435 or concurrent enrollment; admitted to the</u>	1-25



			<del>admitted to the major in Data Analytics; junior standing.</del> Project-based class that integrates the main aspects of data analytics. Typically offered Fall.	<u>major in Data Analytics; junior standing.</u> Project-based class that integrates the main aspects of data analytics. Typically offered Fall.	
ECE	101		<b>Introduction to Electrical Engineering 2 (1-3) Course</b> <del>Prerequisite: MATH 106 or a minimum ALEKS math placement score of 80%.</del> Introduction to the field of electrical engineering and the fundamental concepts behind electronic devices and systems. Typically offered Fall.	<b>Introduction to Electrical Engineering 2 (1-3) Course</b> <u>Prerequisite: MATH 106, or MATH 171 or concurrent enrollment, or a minimum ALEKS math placement score of 80%.</u> Introduction to the field of electrical engineering and the fundamental concepts behind electronic devices and systems. Typically offered Fall.	8-24
ECE	471		<b>Antenna Design and Analysis 3 Course</b> Prerequisite: ECE 370. <del>Antenna types and radiation, wire antennas, antenna arrays broadband and aperture antennas; theory and simulation of antenna performance, laboratory testing and measurement.</del> Typically offered Spring.	<b>Antenna Design and Analysis 3 Course</b> Prerequisite: ECE 370. <u>Antenna types and radiation, wire antennas, antenna arrays broadband and aperture antennas; theory and simulation of antenna performance.</u> Typically offered Spring.	8-24
ECONS	427	Drop	<b>Economic Development 3 Course</b> Prerequisite: ECONS 301 or 305. Development theories, policies, and performance of Third World economies; population, land reform, foreign trade, aid, investment, debt, dependency.	--N/A--	1-25
ECONS	491	Drop	<b>Advanced Topics in Economics V 1-3 Course</b> Prerequisite: ECONS 301; ECONS 302; ECONS 311. Advanced topics in economics. Typically offered Fall and Spring.	--N/A--	1-25
ENGLISH	199	Drop	<b>English Composition and Literature Honors 3</b> Open to students only in the Honors College. Credit not granted for both ENGLISH 108 and 199.	--N/A--	8-24

ENGLISH	200	Drop	<b>Expository Writing V 1-2</b> Course Prerequisite: Sophomore standing For transfer students who need to make up writing credits.	--N/A--	8-24
ENGLISH	202	Drop	<b>Grammar in Context 1</b> May be repeated for credit; cumulative maximum 5 credits. Tutorial to assist students in mastering conventions of Standard Edited American English. Assigned tutorials in the WSU Writing Center. Typically offered Fall, Spring, and Summer. S, F grading.	--N/A--	8-24
ENGLISH	299	Drop	<b>Writing Tutorial for Honors Students 1 (0-3)</b> May be repeated for credit; cumulative maximum 5 credits. Course Prerequisite: Must be an Honors student. Student-centered group tutorial focusing on writing improvement usually connected to the ENGLISH 298 course. Typically offered Fall, Spring, and Summer. S, F grading.	--N/A--	1-25
ENGLISH / <u>ANTH</u>	256	Revise	<b>[SSCI] Introduction to the Study of Language 3</b> Introduction to the ways in which sound, meaning, and structure of words and sentences in natural languages are described and analyzed by linguists. Typically offered Spring.	<b>[SSCI] Introduction to the Study of Language 3</b> Introduction to the ways in which sound, meaning, and structure of words and sentences in natural languages are described and analyzed by linguists. ( <u>Crosslisted course offered as ENGLISH 256, ANTH 256.</u> ) Typically offered Spring.	1-25
ENGLISH	443	Revise	<b>Phonetics and Phonology 3</b> Technical introduction to the analysis of the speech patterns and sound systems across human languages. Credit not granted for both ENGLISH 443 and 543. Offered at 400 and 500 level. Typically offered Odd Years - Spring. Cooperative: Open to UI degree-seeking students.	<b>Phonetics and Phonology 3</b> Technical introduction to the analysis of the speech patterns and sound systems across human languages. <u>Recommended Preparation: English 256.</u> Credit not granted for both ENGLISH 443 and 543. Offered at 400 and 500 level. Typically offered Odd Years - Spring. Cooperative:	8-24

				Open to UI degree-seeking students.	
<b>FS</b>	<b>465 / 565</b>	<b>Revise</b>	<p><b>Wine Microbiology and Processing 3 Course</b> Prerequisite: CHEM 370 or MBIOS 303; MBIOS 101 or 305. Technical principles related to the processing and fermentation of wines with an emphasis on microbiology. <del>(Crosslisted course offered as FS 465, VIT ENOL 465). Credit not granted for both FS/VIT ENOL 465 and FS 565.</del> Recommended preparation for graduate students: CHEM 370 or MBIOS 303; MBIOS 304; MBIOS 101 or 305. Offered at 400 and 500 level. Typically offered Fall. Cooperative: Open to UI degree-seeking students.</p>	<p><b>Wine Microbiology and Processing 3 Course</b> Prerequisite: CHEM 370 or MBIOS 303; MBIOS 101 or 305. Technical principles related to the processing and fermentation of wines with an emphasis on microbiology. <u>Credit not granted for both FS 465 and FS 565.</u> Recommended preparation for graduate students: CHEM 370 or MBIOS 303; MBIOS 304; MBIOS 101 or 305. Offered at 400 and 500 level. Typically offered Fall. Cooperative: Open to UI degree-seeking students.</p>	<b>8-24</b>
<b>FS</b>	<b>496</b>	<b>Revise</b>	<p><b>Internship in a Winery 2</b> May be repeated for credit; cumulative maximum 4 credits. Course Prerequisite: Sophomore standing. Industrial assignments at a regional, national or international winery. <del>(Crosslisted course offered as FS 496, VIT ENOL 496).</del> Typically offered Fall, Spring, and Summer. Cooperative: Open to UI degree-seeking students. S, F grading.</p>	<p><b>Internship in a Winery 2</b> May be repeated for credit; cumulative maximum 4 credits. Course Prerequisite: Sophomore standing. Industrial assignments at a regional, national or international winery. Typically offered Fall, Spring, and Summer. Cooperative: Open to UI degree-seeking students. S, F grading.</p>	<b>1-25</b>
<b>HBM</b>	<b>258</b>	<b>Revise</b>	<p><b>Fundamentals of Cooking 3</b> (1-6) Practical applications of cooking techniques, dining room service, and restaurant operations including safety, sanitation, flow of goods and industry trends. Typically offered Fall and Spring.</p>	<p><b>Fundamentals of Cooking 3</b> (1-6) Practical applications of cooking techniques, dining room service, and restaurant operations including safety, sanitation, flow of goods and industry trends. Typically offered Fall and Spring. <u>Cooperative: Open to UI degree-seeking students.</u></p>	<b>8-24</b>
<b>HORT</b>	<b>313</b>	<b>Revise</b>	<p><b>Viticulture 3 Course</b> Prerequisite: BIOLOGY 106, BIOLOGY 107, BIOLOGY 120, or HORT 202. Botanical</p>	<p><b>Viticulture 3 Course</b> Prerequisite: BIOLOGY 106, BIOLOGY 107, BIOLOGY 120, or HORT 202. Botanical</p>	<b>8-24</b>

			relationships, plant characteristics, fruiting habits, location, culture, marketing, and utilization of grapes, berries, and other small or bush fruits. Field trip required. ( <del>Crosslisted course offered as HORT 313, VIT ENOL 313</del> ). Typically offered Fall. Cooperative: Open to UI degree-seeking students.	relationships, plant characteristics, fruiting habits, location, culture, marketing, and utilization of grapes, berries, and other small or bush fruits. Field trip required. Typically offered Fall. Cooperative: Open to UI degree-seeking students.	
<b>HORT</b>	<b>399</b>	<b>Revise</b>	<b>Professional Work Experience V 1 (0-3) to 4 (0-12)</b> May be repeated for credit; cumulative maximum 8 credits. Course Prerequisite: Admitted to the Viticulture and Enology major, IPS major or by interview; junior standing. Planned and supervised work experience. ( <del>Crosslisted course offered as HORT 399, VIT ENOL 399</del> ). Typically offered Fall, Spring, and Summer. S, F grading.	<b>Professional Work Experience V 1 (0-3) to 4 (0-12)</b> May be repeated for credit; cumulative maximum 8 credits. Course Prerequisite: Admitted to the Viticulture and Enology major, IPS major or by interview; junior standing. Planned and supervised work experience. Typically offered Fall, Spring, and Summer. S, F grading.	<b>8-24</b>
<b>HORT / VIT ENOL</b>	<b>409</b>	<b>Drop</b>	<b>Seminar in Viticulture and Enology 1</b> Current topics and recent developments in the field of viticulture and enology. (Crosslisted course offered as HORT 409, VIT ENOL 409). Typically offered Fall.	--N/A--	<b>8-24</b>
<b>HORT / CROP SCI</b>	<b>480</b>	<b>Revise</b>	<b>Plant Genomics and Biotechnology 3 Course</b> Prerequisite: <del>MBIOS/ BIOLOGY 301</del> . Advanced concepts in plant genomics and biotechnology with emphasis on approaches, techniques, and application. (Crosslisted course offered as HORT 480, CROP SCI 480). Recommended preparation: BIOLOGY 420 or HORT 416. Typically offered Even Years - Fall.	<b>Plant Genomics and Biotechnology 3 Course</b> Prerequisite: <u>MBIOS/ BIOLOGY 301 or HORT 345</u> . Advanced concepts in plant genomics and biotechnology with emphasis on approaches, techniques, and application. (Crosslisted course offered as HORT 480, CROP SCI 480). Recommended preparation: BIOLOGY 420 or HORT 416. Typically offered Even Years - Fall.	<b>8-24</b>
<b>KINES</b>	<b>590</b>	<b>Revise</b>	<b>Kinesiology Seminar 1</b> May be repeated for credit; cumulative maximum 4 credits. <del>Course Prerequisite: By instructor</del>	<b>Kinesiology Seminar 1</b> May be repeated for credit; cumulative maximum 4 credits. <u>Course Prerequisite: Enrolled in</u>	<b>1-25</b>

			<del>permission.</del> Experience in presentation and discussion of scientific data broadly within kinesiology. Typically offered Fall and Spring. S, F grading.	<u>Kinesiology graduate program.</u> Experience in presentation and discussion of scientific data broadly within kinesiology. Typically offered Fall and Spring. S, F grading.	
<b>MATSE</b>	<b>503</b>	<b>Drop</b>	<b>Advanced Topics in Materials Engineering V 1-3</b> May be repeated for credit; cumulative maximum 6 credits. Cooperative: Open to UI degree-seeking students.	--N/A--	<b>8-24</b>
<b>MATSE</b>	<b>600</b>	<b>Drop</b>	<b>Special Projects or Independent Study V 1-18</b> May be repeated for credit. Independent study, special projects, and/or internships. Students must have graduate degree-seeking status and should check with their major advisor before enrolling in 600 credit, which cannot be used toward the core graded credits required for a graduate degree. Typically offered Fall, Spring, and Summer. S, F grading.	--N/A--	<b>8-24</b>
<b>MED CLIN</b>	<b>599</b>	<b>Revise</b>	<b>Special Projects V 2-4</b> May be repeated for credit; cumulative maximum 20 credits. Course Prerequisite: By department permission. <del>Laboratory research, clinical research, or comprehensive review of selected subjects.</del> H, NH, S, F grading.	<b>Special Projects V 2-4</b> May be repeated for credit; cumulative maximum 20 credits. Course Prerequisite: By department permission. <u>Enriched clinical experiences or non-patient care experiences that extend student's medical education. Objectives modified depending on specific plan formulated by student and faculty mentor.</u> H, NH, S, F grading.	<b>8-24</b>
<b>MED LMH</b>	<b>503</b>	<b>Revise</b>	<del><b>Physicians as Leaders, Scientists, and Advocates 1</b></del> Course Prerequisite: MED LMH 502. Leadership in the context of physicians as leaders and advocates in a complex system of healthcare delivery; discovery (research) driven by a different set of stakeholders and political agendas that affect our	<u><b>Leadership through Emotional Intelligence 1</b></u> Course Prerequisite: MED LMH 502. Leadership in the context of physicians as leaders and advocates in a complex system of healthcare delivery; discovery (research) driven by a different set of stakeholders and political agendas that affect our	<b>8-24</b>

			current payment and delivery systems. S, F grading.	current payment and delivery systems. S, F grading.	
MED LMH	512	Revise	<del><b>Improving Healthcare through Leadership, Advocacy, and Innovation: Person to Profession</b></del> 1 Course Prerequisite: MED LMH 511. Identification and analysis of physician participation in leadership, advocacy, and innovation from the patient level to the national level in both public and private sectors. S, F grading.	<b><u>Administration of Groups</u></b> 1 Course Prerequisite: MED LMH 511. Identification and analysis of physician participation in leadership, advocacy, and innovation from the patient level to the national level in both public and private sectors. S, F grading.	8-24
MED LMH	513	Revise	<del><b>Information Management in Healthcare: Clinical Information Systems</b></del> 1 Course Prerequisite: MED LMH 512. Leadership skills as related to healthcare information management, including clinical information systems. S, F grading.	<b><u>Transformative Change</u></b> 1 Leadership skills as related to healthcare information management, including clinical information systems. S, F grading.	8-24
MED LMH	523	Revise	<del><b>Value-based Care</b></del> 1 Course Prerequisite: MED LMH 522. Introduction to principles and practice of value-based care. S, F grading.	<b><u>Teaching and Advocacy</u></b> 1 Course Prerequisite: MED LMH 522. Introduction to principles and practice of value-based care. S, F grading.	8-24
MED LMH	533	Revise	<del><b>Personal Leadership Development III</b></del> 1 Course Prerequisite: MED LMH 532. Completion and presentation of capstone project; creation of coalitions and synthesis as part of personal leadership development plan; includes application of knowledge and experience from coursework, clerkships and/or healthcare-related volunteer activities. H, S, F grading.	<b><u>Preparing for a Personal and Professional Life in Medicine</u></b> 1 Course Prerequisite: MED LMH 532. Completion and presentation of capstone project; creation of coalitions and synthesis as part of personal leadership development plan; includes application of knowledge and experience from coursework, clerkships and/or healthcare-related volunteer activities. H, S, F grading.	8-24
MKTG	495	Revise	<del><b>[M] Marketing Management</b></del> 3 Course Prerequisite: MKTG 360; admitted to a major or minor in the College of Business; senior standing. Integrative marketing capstone course; the evaluation and	<b><u>[M] Marketing Management</u></b> 3 Course Prerequisite: MKTG 360; MKTG 368 with a C or better; admitted to a major or minor in the College of Business; senior standing. Integrative marketing capstone	8-25

			design of marketing strategy; covers industry, competitor, and customer analysis with the goal of recommending and implementing an appropriate marketing strategy. Recommended preparation: MKTG 368 and 407.	course; the evaluation and design of marketing strategy; covers industry, competitor, and customer analysis with the goal of recommending and implementing an appropriate marketing strategy. Recommended preparation: MKTG 368 and 407.	
<b>MSE</b>	<b>505</b>	<b>Revise</b>	<b>Advanced Materials Science 3</b> Broad baseline in materials science including relationships between structure and properties. <del>(Crosslisted course offered as MSE 505, MATSE 505).</del> Typically offered Fall. Cooperative: Open to UI degree-seeking students.	<b>Advanced Materials Science 3</b> Broad baseline in materials science including relationships between structure and properties. Typically offered Fall. Cooperative: Open to UI degree-seeking students.	<b>8-24</b>
<b>MSE</b>	<b>506</b>	<b>Revise</b>	<b>Biomaterials 3</b> Overview of the different types of materials used in biomedical applications such as implants and medical devices. Credit not granted for both MSE 406 and MSE 506. <del>(Crosslisted course offered as MSE 506 and MATSE 506.)</del> Offered at 400 and 500 level. Typically offered Fall.	<b>Biomaterials 3</b> Overview of the different types of materials used in biomedical applications such as implants and medical devices. Credit not granted for both MSE 406 and MSE 506. Offered at 400 and 500 level. Typically offered Fall.	<b>8-24</b>
<b>MSE / ME</b>	<b>513</b>	<b>Revise</b>	<b>Theory of Plasticity and its Physical Foundations 3</b> Phenomenological plasticity and viscoplasticity of polycrystalline metals and alloys, polymers and granular media; deformation mechanisms; dislocation mechanics and interactions; dislocation motion; slip and climb; crystal plasticity; size effects and gradient models. <del>(Crosslisted course offered as MSE 513, ME 513, MATSE 513).</del> Typically offered Spring. Cooperative: Open to UI degree-seeking students.	<b>Theory of Plasticity and its Physical Foundations 3</b> Phenomenological plasticity and viscoplasticity of polycrystalline metals and alloys, polymers and granular media; deformation mechanisms; dislocation mechanics and interactions; dislocation motion; slip and climb; crystal plasticity; size effects and gradient models. <u>(Crosslisted course offered as MSE 513, ME 513).</u> Typically offered Spring. Cooperative: Open to UI degree-seeking students.	<b>8-24</b>
<b>MSE</b>	<b>516</b>	<b>Revise</b>	<b>Phase Transformations 3</b> Thermodynamics, nucleation, interface motion, mechanisms and kinetics of chemical	<b>Phase Transformations 3</b> Thermodynamics, nucleation, interface motion, mechanisms and kinetics of chemical	<b>8-24</b>

			reactions between solid metals and their environment. <del>(Crosslisted course offered as MSE 516, MATSE 516).</del> Typically offered Fall. Cooperative: Open to UI degree-seeking students.	reactions between solid metals and their environment. Typically offered Fall. Cooperative: Open to UI degree-seeking students.	
MSE	521	Revise	<b>Statistics of Microstructures 3</b> Stereology, orientation and spatial distributions, percolation, measurement techniques and application to modeling of microstructures. <del>(Crosslisted course offered as MSE 521, MATSE 521).</del> Recommended preparation: MATH 540. Typically offered Spring. Cooperative: Open to UI degree-seeking students.	<b>Statistics of Microstructures 3</b> Stereology, orientation and spatial distributions, percolation, measurement techniques and application to modeling of microstructures. Recommended preparation: MATH 540. Typically offered Spring. Cooperative: Open to UI degree-seeking students.	8-24
MSE	524	Revise	<b>Glass Science and Technology 3</b> Glass composition design, processing, and properties; engineering and technology related to glasses and glass-ceramics; case studies in applied glass science and characterization. <del>(Crosslisted course offered as MSE 524, MATSE 524.)</del> Recommended preparation: Basic knowledge in materials science and manufacturing.	<b>Glass Science and Technology 3</b> Glass composition design, processing, and properties; engineering and technology related to glasses and glass-ceramics; case studies in applied glass science and characterization. Recommended preparation: Basic knowledge in materials science and manufacturing.	8-24
MSE / ME	531	Revise	<b>Nanoscience and Nanotechnology 3</b> Overview of nanoscience and nanotechnology and their biomedical, energy, and environmental applications; structures, properties, synthesis of nanoscale materials and fabrication of nanostructured devices. <del>(Crosslisted course offered as MSE 531, MATSE 531, ME 531.)</del> Recommended preparation: Basic knowledge of materials, engineering, chemistry. Typically offered Odd Years - Spring.	<b>Nanoscience and Nanotechnology 3</b> Overview of nanoscience and nanotechnology and their biomedical, energy, and environmental applications; structures, properties, synthesis of nanoscale materials and fabrication of nanostructured devices. <u>(Crosslisted course offered as MSE 531, ME 531.)</u> Recommended preparation: Basic knowledge of materials, engineering, chemistry. Typically offered Odd Years - Spring.	8-24



<b><u>MSE</u> (formerly MATSE)</b>	<b>538</b>	<b>Revise</b>	<b>Special Topics V 1-3</b> May be repeated for credit. Selected topics of current interest in advanced materials science.	<b>Special Topics V 1-3</b> May be repeated for credit. Selected topics of current interest in advanced materials science.	<b>8-24</b>
<b><u>MSE</u> (formerly MATSE)</b>	<b>571</b>	<b>Revise</b>	<b>Microscopic Analysis of Solid Surfaces 3</b> Modern spectroscopic methods for microscopic analysis of solid surfaces; emphasizes electron, ion, laser, and x-ray techniques. Typically offered Spring.	<b>Microscopic Analysis of Solid Surfaces 3</b> Modern spectroscopic methods for microscopic analysis of solid surfaces; emphasizes electron, ion, laser, and x-ray techniques. Typically offered Spring.	<b>8-24</b>
<b><u>MSE</u> (formerly MATSE)</b>	<b>800</b>	<b>Revise</b>	<b>Doctoral Research, Dissertation, and/or Examination V 1-18</b> May be repeated for credit. Course Prerequisite: Admitted to the Materials Science or the Materials Science and Engineering PhD program. Independent research and advanced study for students working on their doctoral research, dissertation and/or final examination. Students must have graduate degree-seeking status and should check with their major advisor/committee chair before enrolling for 800 credit. Typically offered Fall, Spring, and Summer. S, U grading.	<b>Doctoral Research, Dissertation, and/or Examination V 1-18</b> May be repeated for credit. Course Prerequisite: Admitted to the Materials Science or the Materials Science and Engineering PhD program. Independent research and advanced study for students working on their doctoral research, dissertation and/or final examination. Students must have graduate degree-seeking status and should check with their major advisor/committee chair before enrolling for 800 credit. Typically offered Fall, Spring, and Summer. S, U grading.	<b>8-24</b>
<b>NURS ADV</b>	<b>565</b>	<b>Revise</b>	<b>Information Management for Clinical Practice 3 Course</b> <del>Prerequisite: NURS ADV 505; NURS ADV 576; admission to Nursing graduate program.</del> Application/evaluation of nursing informatics; information systems to support clinical research, practice, administration, and education. Required preparation must include competency in word processing/spreadsheets. (Formerly NURS 565.)	<b>Information Management for Clinical Practice 3 Course</b> <u>Prerequisite: NURS ADV 576; admission to Nursing graduate program.</u> Application/evaluation of nursing informatics; information systems to support clinical research, practice, administration, and education. Required preparation must include competency in word processing/spreadsheets. (Formerly NURS 565.)	<b>8-24</b>
<b>PHARDSCI</b>	<b>502</b>	<b>Revise</b>	<b>Integrated Pharmacology I 4</b> Integrated autonomic and central nervous system	<b>Integrated Pharmacology I 4 Course</b> <u>Prerequisite: Admission to the Pharmacy program.</u>	<b>8-24</b>

			pharmacology. Typically offered Fall.	Integrated autonomic and central nervous system pharmacology. Typically offered Fall.	
PHARDSCI	504	Revise	<b>Pharmacy Calculations 2</b> The mathematics of prescription preparation and dispensing. Typically offered Fall.	<b>Pharmacy Calculations 2 Course Prerequisite: Admission to the Pharmacy program.</b> The mathematics of prescription preparation and dispensing. Typically offered Fall.	8-24
PHARDSCI	508	Revise	<b>Pharmaceutics I 3</b> Principles of dosage from design and drug delivery, with an emphasis on physiochemical principles. Typically offered Fall.	<b>Pharmaceutics I 3 Course Prerequisite: Admission to the Pharmacy program.</b> Principles of dosage from design and drug delivery, with an emphasis on physiochemical principles. Typically offered Fall.	8-24
PHARDSCI	510	Revise	<b>Basic and Clinical Pharmacogenomics 2</b> Introduction to the science involving pharmacogenomics and how this knowledge is clinically applied to individualized patient therapy. Typically offered Spring.	<b>Basic and Clinical Pharmacogenomics 2 Course Prerequisite: Admission to the Pharmacy program.</b> Introduction to the science involving pharmacogenomics and how this knowledge is clinically applied to individualized patient therapy. Typically offered Spring.	8-24
PHARDSCI	512	Revise	<b>Integrated Pharmacology II 4</b> Integrated hepatic, gastrointestinal, and endocrine pharmacology. Typically offered Spring.	<b>Integrated Pharmacology II 4 Course Prerequisite: Admission to the Pharmacy program.</b> Integrated hepatic, gastrointestinal, and endocrine pharmacology. Typically offered Spring.	8-24
PHARDSCI	518	Revise	<b>Pharmaceutics II 2</b> Principles of dosage from design and drug delivery, with an emphasis on pharmaceutical technology and biopharmaceutics. Typically offered Spring.	<b>Pharmaceutics II 2 Course Prerequisite: PHARDSCI 508.</b> Principles of dosage from design and drug delivery, with an emphasis on pharmaceutical technology and biopharmaceutics. Typically offered Spring.	8-24
PHARDSCI	519	Revise	<b>Pharmaceutics Laboratory 1 (0-3)</b> Laboratory experience in the preparation of medicines. Typically offered Spring.	<b>Pharmaceutics Laboratory 1 (0-3) Course Prerequisite: PHARDSCI 504; PHARDSCI 508.</b> Laboratory experience in	8-24

				the preparation of medicines. Typically offered Spring.	
PHARDSCI	528	Revise	<b>Pharmacokinetics 3</b> Qualitative and quantitative understanding of the processes of drug absorption, distribution, and elimination. Typically offered Fall.	<b>Pharmacokinetics 3 Course</b> <u>Prerequisite: Admission to the Pharmacy program.</u> Qualitative and quantitative understanding of the processes of drug absorption, distribution, and elimination. Typically offered Fall.	8-24
PHARDSCI	532	Revise	<b>Integrated Pharmacology III 4</b> Integrated cardiovascular, pulmonary, and renal pharmacology. Typically offered Fall. H, S, F grading.	<b>Integrated Pharmacology III 4 Course</b> <u>Prerequisite: Admission to the Pharmacy program.</u> Integrated cardiovascular, pulmonary, and renal pharmacology. Typically offered Fall.	8-24
PHARDSCI	542	Revise	<b>Integrated Pharmacology IV 4</b> Integrated immuno- and anticancer pharmacology. Typically offered Spring. H, S, F grading.	<b>Integrated Pharmacology IV 4 Course</b> <u>Prerequisite: Admission to the Pharmacy program.</u> Integrated immuno- and anticancer pharmacology. Typically offered Spring. H, S, F grading.	8-24
PHARMACY	501	Revise	<b>Applied Patient Care I: Patient Assessment 1 (0-3)</b> Laboratory course teaching hands-on physical assessment techniques from a pharmacy perspective, to provide patient-specific care. Typically offered Spring.	<b>Applied Patient Care I: Patient Assessment 1 (0-3) Course</b> <u>Prerequisite: Admission to the Pharmacy program.</u> Laboratory course teaching hands-on physical assessment techniques from a pharmacy perspective, to provide patient-specific care. Typically offered Spring.	8-24
PHARMACY	506	Revise	<b>Pharmacy Practice and Professional Development I 1</b> Introduction to the essential skills, attitudes, and values for practicing health care professionals. Typically offered Fall.	<b>Pharmacy Practice and Professional Development I 1 Course</b> <u>Prerequisite: Admission to the Pharmacy program.</u> Introduction to the essential skills, attitudes, and values for practicing health care professionals. Typically offered Fall.	8-24
PHARMACY	507	Revise	<b>Introduction to Therapeutic Agents: Top 200 Drugs 1 (0-2)</b> Drugs most frequently prescribed in the US as a basis	<b>Introduction to Therapeutic Agents: Top 200 Drugs 1 (0-2) Course</b> <u>Prerequisite: Admission to the Pharmacy program.</u> Drugs	8-24

			for pharmacy practice. Typically offered Fall.	most frequently prescribed in the US as a basis for pharmacy practice. Typically offered Fall.	
PHARMACY	509	Revise	<b>Professional Communications Lab 1 (0-3)</b> Professional communication skills as an essential foundation for career development. Typically offered Fall.	<b>Professional Communications Lab 1 (0-3) Course</b> <u>Prerequisite: Admission to the Pharmacy program.</u> Professional communication skills as an essential foundation for career development. Typically offered Fall.	8-24
PHARMACY	513	Revise	<b>Pharmacy Practice and Professional Development II 1</b> Prepares student pharmacists for a focused 4-week Community Pharmacy Practice Experience. Typically offered Spring.	<b>Pharmacy Practice and Professional Development II 1 Course</b> <u>Prerequisite: PHARMACY 506.</u> Prepares student pharmacists for a focused 4-week Community Pharmacy Practice Experience. Typically offered Spring.	8-24
PHARMACY	514	Revise	<b>Pharmacotherapy I 4</b> First in a sequence of courses that focuses on the clinical use of medications in the prevention, mitigation, or cure of disease. Typically offered Spring.	<b>Pharmacotherapy I 4 Course</b> <u>Prerequisite: PHARDSCI 502; PHARMACY 507.</u> First in a sequence of courses that focuses on the clinical use of medications in the prevention, mitigation, or cure of disease. Typically offered Spring.	8-24
PHARMACY	516	Revise	<b>Health Care Systems 2</b> US healthcare system, financing of health care delivery and the role of the pharmacist. Typically offered Fall.	<b>Health Care Systems 2 Course</b> <u>Prerequisite: Admission to the Pharmacy program.</u> US healthcare system, financing of health care delivery and the role of the pharmacist. Typically offered Fall.	8-24
PHARMACY	530	Revise	<b>Point of Care and Clinical Services 2</b> Providing point of care and clinical services in a pharmacy setting. Typically offered Fall. H, S, F grading.	<b>Point of Care and Clinical Services 2 Course</b> <u>Prerequisite: Admission to the Pharmacy program.</u> Providing point of care and clinical services in a pharmacy setting. Typically offered Fall.	8-24
PHARMACY	531	Revise	<b>Applied Patient Care II: Clinical Assessment and Documentation 1 (0-3)</b> Clinical assessment and documentation skills necessary for effective	<b>Applied Patient Care II: Clinical Assessment and Documentation 1 (0-3) Course</b> <u>Prerequisite: Concurrent enrollment in PHARMACY 534.</u> Clinical assessment and	8-24

			pharmaceutical care. Typically offered Fall. H, S, F grading.	documentation skills necessary for effective pharmaceutical care. Typically offered Fall.	
PHARMACY	533	Revise	<b>Community Introductory Pharmacy Practice Experience 4</b> Provides student pharmacists with a 160-hour Institutional Pharmacy Practice Experience with additional patient care activity assignments. Typically offered Fall. S, F grading.	<b>Community Introductory Pharmacy Practice Experience 4 Course</b> <u>Prerequisite: Pharm. D. year 1 didactic coursework completed, including PHARDSCI 510; 512; 518; 519; PHARMACY 501; 513; 514.</u> Provides student pharmacists with a 160-hour Institutional Pharmacy Practice Experience with additional patient care activity assignments. Typically offered Fall. S, F grading.	8-24
PHARMACY	534	Revise	<b>Pharmacotherapy II 4</b> Second in a sequence of courses that focuses on the clinical use of medications in the prevention, mitigation, or cure of disease. Typically offered Fall. H, S, F grading.	<b>Pharmacotherapy II 4 Course</b> <u>Prerequisite: PHARMACY 514.</u> Second in a sequence of courses that focuses on the clinical use of medications in the prevention, mitigation, or cure of disease. Typically offered Fall.	8-24
PHARMACY	536	Revise	<b>Pharmacy Practice and Professional Development III 1</b> Continuing development of the essential skills, attitudes, and values for practicing health care professionals. Typically offered Fall. S, F grading.	<b>Pharmacy Practice and Professional Development III 1 Course</b> <u>Prerequisite: PHARMACY 513.</u> Continuing development of the essential skills, attitudes, and values for practicing health care professionals. Typically offered Fall.	8-24
PHARMACY	541	Revise	<b>Applied Patient Care III: Medication Therapy Management 1 (0-3)</b> Identification of pertinent patient findings, assessment of drug-related problems and clinical problem solving. Typically offered Spring. H, S, F grading.	<b>Applied Patient Care III: Medication Therapy Management 1 (0-3) Course</b> <u>Prerequisite: PHARMACY 544 or concurrent enrollment.</u> Identification of pertinent patient findings, assessment of drug-related problems and clinical problem solving. Typically offered Spring. H, S, F grading.	8-24
PHARMACY	543	Revise	<b>Pharmacy Practice and Professional Development IV 1</b> Prepares student pharmacists	<b>Pharmacy Practice and Professional Development IV 1 Course</b> <u>Prerequisite:</u>	8-24

			for a focused 3-week Institutional Pharmacy Practice Experience. Typically offered Spring. S, F grading.	<u>PHARMACY 536.</u> Prepares student pharmacists for a focused 3-week Institutional Pharmacy Practice Experience. Typically offered Spring. S, F grading.	
PHARMACY	544	Revise	<b>Pharmacotherapy III 4</b> Third in a sequence of courses that focuses on the clinical use of medications in the prevention, mitigation, or cure of disease. Typically offered Spring. H, S, F grading.	<b>Pharmacotherapy III 4 Course</b> <u>Prerequisite: PHARMACY 534.</u> Third in a sequence of courses that focuses on the clinical use of medications in the prevention, mitigation, or cure of disease. Typically offered Spring. H, S, F grading.	8-24
PHARMACY	545	Revise	<b>Pharmacy Management 3</b> Management principles essential for common practice settings in the profession of pharmacy. Typically offered Fall. H, S, F grading.	<b>Pharmacy Management 3 Course</b> <u>Prerequisite: PHARMACY 516.</u> Management principles essential for common practice settings in the profession of pharmacy. Typically offered Fall.	8-24
PHARMACY	551	Revise	<b>Applied Patient Care IV: Advanced Medication Therapy Management 2 (1-3)</b> Medication therapy management for complex patients; case-based discussions and human patient simulation. Typically offered Fall. H, S, F grading.	<b>Applied Patient Care IV: Advanced Medication Therapy Management 2 (1-3)</b> <u>Course Prerequisite: PHARMACY 554 or concurrent enrollment.</u> Medication therapy management for complex patients; case-based discussions and human patient simulation. Typically offered Fall. H, S, F grading.	8-24
PHARMACY	553	Revise	<b>Institutional Introductory Pharmacy Practice Experience 3</b> Provides student pharmacists with a 120-hour Institutional Pharmacy Practice Experience with additional patient care activity assignments. Typically offered Fall. S, F grading.	<b>Institutional Introductory Pharmacy Practice Experience 3 Course</b> <u>Prerequisite: Pharm. D. year 2 didactic coursework completed, including PHARDSCI 542; PHARMACY 541; 543; 544; 545; 558.</u> Provides student pharmacists with a 120-hour Institutional Pharmacy Practice Experience with additional patient care activity assignments. Typically offered Fall. S, F grading.	8-24
PHARMACY	554	Revise	<b>Pharmacotherapy IV 4</b> Fourth in a sequence of courses that	<b>Pharmacotherapy IV 4 Course</b> <u>Prerequisite: PHARMACY 544.</u>	8-24

			focuses on the clinical use of medications in the prevention, mitigation, or cure of disease. Typically offered Fall. H, S, F grading.	Fourth in a sequence of courses that focuses on the clinical use of medications in the prevention, mitigation, or cure of disease. Typically offered Fall. H, S, F grading.	
PHARMACY	555	Revise	<b>Drug Information and Literature Evaluation 4</b> Evaluation of drug information in pharmaceutical and biomedical literature to provide better patient care. Typically offered Fall. H, S, F grading.	<b>Drug Information and Literature Evaluation 4</b> <u>Course Prerequisite: Admission to the Pharmacy program.</u> Evaluation of drug information in pharmaceutical and biomedical literature to provide better patient care. Typically offered Fall. H, S, F grading.	8-24
PHARMACY	556	Revise	<b>Pharmacy Practice and Professional Development V 1</b> Enhanced development of the essential skills, attitudes, and values for practicing health care professionals. Typically offered Fall. S, F grading.	<b>Pharmacy Practice and Professional Development V 1</b> <u>Course Prerequisite: PHARMACY 543.</u> Enhanced development of the essential skills, attitudes, and values for practicing health care professionals. Typically offered Fall. S, F grading.	8-24
PHARMACY	557	Revise	<b>Pharmacotherapy V 4</b> Fifth in a sequence of courses that focuses on the clinical use of medications in the prevention, mitigation, or cure of disease. Typically offered Spring. H, S, F grading.	<b>Pharmacotherapy V 4</b> <u>Course Prerequisite: PHARMACY 554.</u> Fifth in a sequence of courses that focuses on the clinical use of medications in the prevention, mitigation, or cure of disease. Typically offered Spring. H, S, F grading.	8-24
PHARMACY	558	Revise	<b>Applied Clinical Pharmacokinetics 2</b> Clinical applications of pharmacokinetics including theoretical background and application to patient care. Typically offered Spring. H, S, F grading.	<b>Applied Clinical Pharmacokinetics 2</b> <u>Course Prerequisite: PHARDSCI 528.</u> Clinical applications of pharmacokinetics including theoretical background and application to patient care. Typically offered Spring. H, S, F grading.	8-24
PHARMACY	559	Revise	<b>Quality Assurance and Patient Safety 2</b> Patient safety issues including quality assurance, medication error avoidance and risk management in healthcare systems. Typically offered Spring. H, S, F grading.	<b>Quality Assurance and Patient Safety 2</b> <u>Course Prerequisite: PHARMACY 545.</u> Patient safety issues including quality assurance, medication error avoidance and risk management	8-24

				in healthcare systems. Typically offered Spring. H, S, F grading.	
PHARMACY	561	Revise	<b>Applied Patient Care V: Integrated Patient Care 2</b> (1-3) Integration of pharmaceutical care with an interdisciplinary emphasis using patient cases and human patient simulation. Typically offered Spring. H, S, F grading.	<b>Applied Patient Care V: Integrated Patient Care 2</b> (1-3) <u>Course Prerequisite: Concurrent enrollment in PHARMACY 557.</u> Integration of pharmaceutical care with an interdisciplinary emphasis using patient cases and human patient simulation. Typically offered Spring. H, S, F grading.	8-24
PHARMACY	563	Revise	<b>Pharmacy Practice and Professional Development VI 2</b> Provides student pharmacists with continuing patient care and professional development activities in preparation for the Advanced Pharmacy Practice Experience rotations. Typically offered Spring. S, F grading.	<b>Pharmacy Practice and Professional Development VI 2</b> <u>Course Prerequisite: PHARMACY 556.</u> Provides student pharmacists with continuing patient care and professional development activities in preparation for the Advanced Pharmacy Practice Experience rotations. Typically offered Spring. S, F grading.	8-24
PHARMACY	564	Revise	<b>Pharmacy Law and Regulatory Affairs 3</b> Legal and ethical pharmacy practice including licensing, patient privacy protection, order fulfillment and contracts. Typically offered Spring. H, S, F grading.	<b>Pharmacy Law and Regulatory Affairs 3</b> <u>Course Prerequisite: Admission to the Pharmacy program.</u> Legal and ethical pharmacy practice including licensing, patient privacy protection, order fulfillment and contracts. Typically offered Spring. H, S, F grading.	8-24
PHARMACY	566	Revise	<b>Therapeutics of Special Populations 3</b> Special therapeutic needs of unique populations including pediatrics, chronic neurologic disorders, hospice care and immunocompromised patients. Typically offered Spring. H, S, F grading.	<b>Therapeutics of Special Populations 3</b> <u>Course Prerequisite: Admission to the Pharmacy program.</u> Special therapeutic needs of unique populations including pediatrics, chronic neurologic disorders, hospice care and immunocompromised patients. Typically offered Spring. H, S, F grading.	8-24
PHARMACY	581	Revise	<b>Acute Care Advanced Practice Experience 5</b> (0-15) <u>Course Prerequisite: Admission to Pharmacy program.</u>	<b>Acute Care Advanced Practice Experience 5</b> (0-15) <u>Course Prerequisite: Successful completion of all didactic</u>	8-24



			Advanced practice experience in acute care settings. Typically offered Fall and Spring. H, S, F grading.	<u>coursework (required and elective), including PHARMACY 557; 561; 563; 564; 566.</u> Advanced practice experience in acute care settings. Typically offered Fall and Spring. H, S, F grading.	
PHARMACY	582	Revise	<b>Ambulatory Care Advanced Practice Experience 5 (0-15)</b> <del>Course Prerequisite: Admission to Pharmacy program.</del> Advanced practice experience in ambulatory care settings. Typically offered Fall and Spring. H, S, F grading.	<b>Ambulatory Care Advanced Practice Experience 5 (0-15)</b> <u>Course Prerequisite: Successful completion of all didactic coursework (required and elective), including PHARMACY 557; 561; 563; 564; 566.</u> Advanced practice experience in ambulatory care settings. Typically offered Fall and Spring. H, S, F grading.	8-24
PHARMACY	583	Revise	<b>Community Advanced Practice Experience 5 (0-15)</b> <del>Course Prerequisite: Admission to Pharmacy program.</del> Advanced practice experience in a community pharmacy setting. Typically offered Fall and Spring. H, S, F grading.	<b>Community Advanced Practice Experience 5 (0-15)</b> <u>Course Prerequisite: Successful completion of all didactic coursework (required and elective), including PHARMACY 557; 561; 563; 564; 566.</u> Advanced practice experience in a community pharmacy setting. Typically offered Fall and Spring. H, S, F grading.	8-24
PHARMACY	584	Revise	<b>Institutional Advanced Practice Experience 5 (0-15)</b> May be repeated for credit; cumulative maximum 5 credits. <del>Course Prerequisite: Admission to Pharmacy program.</del> Advanced practice experience in an institutional pharmacy setting. Typically offered Fall, Spring, and Summer. H, S, F grading.	<b>Institutional Advanced Practice Experience 5 (0-15)</b> May be repeated for credit; cumulative maximum 5 credits. <u>Course Prerequisite: Successful completion of all didactic coursework (required and elective), including PHARMACY 557; 561; 563; 564; 566.</u> Advanced practice experience in an institutional pharmacy setting. Typically offered Fall, Spring, and Summer. H, S, F grading.	8-24
PHARMACY	585	Revise	<b>Elective I Advanced Practice Experience 5 (0-15)</b> <del>Course Prerequisite: Admission to Pharmacy program.</del> Advanced	<b>Elective I Advanced Practice Experience 5 (0-15)</b> <u>Course Prerequisite: Successful completion of all didactic</u>	8-24

			practice experience in acute or ambulatory patient care settings. Typically offered Fall and Spring. H, S, F grading.	<u>coursework (required and elective), including PHARMACY 557; 561; 563; 564; 566.</u> Advanced practice experience in acute or ambulatory patient care settings. Typically offered Fall and Spring. H, S, F grading.	
PHARMACY	586	Revise	<b>Elective II Advanced Practice Experience 5 (0-15) Course</b> <del>Prerequisite: Admission to Pharmacy program.</del> Advanced practice experience in acute, ambulatory, or non-traditional patient care. Typically offered Fall, Spring, and Summer. H, S, F grading.	<b>Elective II Advanced Practice Experience 5 (0-15) Course</b> <u>Prerequisite: Successful completion of all didactic coursework (required and elective), including PHARMACY 557; 561; 563; 564; 566.</u> Advanced practice experience in acute, ambulatory, or non-traditional patient care. Typically offered Fall, Spring, and Summer. H, S, F grading.	8-24
PHARMACY	587	Revise	<b>Elective III Advanced Practice Experience 5 (0-15) Course</b> <del>Prerequisite: Admission to Pharmacy program.</del> Advanced practice experience in various health care settings. Typically offered Fall and Spring. H, S, F grading.	<b>Elective III Advanced Practice Experience 5 (0-15) Course</b> <u>Prerequisite: Successful completion of all didactic coursework (required and elective), including PHARMACY 557; 561; 563; 564; 566.</u> Advanced practice experience in various health care settings. Typically offered Fall and Spring. H, S, F grading.	8-24
POL S	301	Revise	<del><b>Political Simulations</b></del> 3 May be repeated for credit; cumulative maximum 9 credits. Preparation for and participation in political simulations. Typically offered Fall.	<b>Mock Trial</b> 3 May be repeated for credit; cumulative maximum 9 credits. Preparation for and participation in political simulations. Typically offered Fall.	8-24
SOE	408	Revise	<del>[M] <b>Field Geology</b></del> 3 (0-9) Course Prerequisite: SOE 207; SOE 340; SOE 350; senior standing. Advanced field problems and methods; data interpretation and report preparation. Typically offered Summer Session. Cooperative: Open to UI degree-seeking students.	<b>[M] <u>Advanced Earth Science Field Methods</u></b> 3 (0-9) Course Prerequisite: SOE 207; SOE 340; SOE 350; senior standing. Advanced field problems and methods; data interpretation and report preparation. Typically offered Summer Session. Cooperative: Open to UI degree-seeking students.	1-25

SOE	597	Revise	<b>Advanced Topics in Geology V 1-4</b> May be repeated for credit; cumulative maximum 6 credits. Topics of current interest in geology. Typically offered Fall, Spring, and Summer.	<b>Advanced Topics in Geology V 1-4</b> May be repeated for credit; cumulative maximum 6 credits. Topics of current interest in geology. Typically offered Fall, Spring, and Summer. <u>Cooperative: Open to UI degree-seeking students.</u>	8-24
VET MED	510		<b>Veterinary Microscopic Anatomy 4</b> <del>(3-3)</del> Course Prerequisite: Veterinary Medicine student. Microscopic functional morphology of the cell, tissues, and selected organ systems of domestic animals. Typically offered Fall. S, M, F grading.	<b>Veterinary Microscopic Anatomy 3</b> Course Prerequisite: Veterinary Medicine student. Microscopic functional morphology of the cell, tissues, and selected organ systems of domestic animals. Typically offered Fall. S, M, F grading.	8-25
VET MED	598	Revise	<del><b>Introduction to Clinics 1</b> (0-3) Course Prerequisite: Veterinary Medicine student. Introduction to the practice of clinical veterinary medicine and surgery within the Veterinary Teaching Hospital including records, presentation and protocol. Typically offered Fall and Spring. S, M, F grading.</del>	<b>Clinical and Professional Skills 1</b> (0-3) Course Prerequisite: Veterinary Medicine student. Introduction to the practice of clinical veterinary medicine and surgery within the Veterinary Teaching Hospital including records, presentation and protocol. Typically offered Fall and Spring. S, M, F grading.	1-25
VET MICR	541	Revise	<b>Advanced Diagnostic Microbiology 1</b> (0-3) May be repeated for credit; cumulative maximum 8 credits. <del>Course Prerequisite: Admission to Veterinary Science Immunology and Infectious Diseases Ph.D. program.</del> Microbiology laboratory for performing and interpreting virologic, serologic, and related tests for the diagnosis of animal diseases. Typically offered Fall, Spring, and Summer.	<b>Advanced Diagnostic Microbiology 1</b> (0-3) May be repeated for credit; cumulative maximum 8 credits. Microbiology laboratory for performing and interpreting virologic, serologic, and related tests for the diagnosis of animal diseases. Typically offered Fall, Spring, and Summer.	8-24
VET PATH	542	Revise	<b>Advanced Diagnostic Pathology 3</b> (0-9) May be repeated for credit; cumulative maximum 18 credits. <del>Course Prerequisite: Enrollment in the Veterinary Science Ph.D.</del>	<b>Advanced Diagnostic Pathology 3</b> (0-9) May be repeated for credit; cumulative maximum 18 credits. Necropsy laboratory for techniques and skills in performing and	8-24

			<del>program.</del> Necropsy laboratory for techniques and skills in performing and interpreting necropsy material. Typically offered Fall and Spring.	interpreting necropsy material. Typically offered Fall and Spring.	
<b>VET PATH</b>	<b>544</b>	<b>Drop</b>	<b>Immunopathology 4</b> Course Prerequisite: VET PATH 545; enrollment in Immunology and Infectious Disease Ph.D. program. The role of immune processes in the pathogenesis of disease. Typically offered Fall.	--N/A--	<b>8-24</b>
<b>VIT ENOL</b>	<b>440</b>	<b>Drop</b>	<b>Winery Operations and Equipment 3</b> Course Prerequisite: CHEM 345. Major equipment and unit operations in the winemaking process, with primary focus on operations from receipt of grapes through bottling process. (Crosslisted course offered as VIT ENOL 440, HORT 440). Typically offered Spring.	--N/A--	<b>8-24</b>
<b>VIT ENOL / HORT</b>	<b>441</b>	<b>Drop</b>	<b>Winery Operations and Equipment Lab Field Trip 1 (0-3)</b> Course Prerequisite: VIT ENOL 113; VIT ENOL/HORT 440 or concurrent enrollment. Lab companion course for VIT ENOL/HORT 440; offered only as a week-long field trip over spring break to visit wineries and wine industry suppliers; specific visits will vary by year, but will include visits to two or three wineries, at least one cooperage and several equipment and packaging suppliers; requires participation for all 5 days of spring break. (Crosslisted course offered as VIT ENOL 441, HORT 441). Typically offered Spring.	--N/A--	<b>8-24</b>
<b>WGSS</b>	<b>385</b>	<b>Revise</b>	<del>EQJS] Introduction to Lesbian, Gay, Bisexual, and Transgender Studies</del> 3 Course Prerequisite: Junior standing. Interdisciplinary exploration of	<b>[EQJS] <u>Lesbian, Gay, Bisexual, Transgender, and Queer Studies</u></b> 3 Course Prerequisite: Junior standing. Interdisciplinary exploration of	<b>1-25</b>

		<p>issues related to gender and sexuality, explored transhistorically and cross-culturally, including race, class and age differences. (Crosslisted course offered as WGSS 385, SOC 385.) Typically offered Spring.</p>	<p>issues related to gender and sexuality, explored transhistorically and cross-culturally, including race, class and age differences. (Crosslisted course offered as WGSS 385, SOC 385.) Typically offered Spring.</p>	
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