

## MEMORANDUM

TO: Deans and Chairs  
 FROM: Becky Bitter, Sr. Assistant Registrar  
 DATE: September 23, 2019  
 SUBJECT: Minor Change Bulletin No. 2

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	Revise Drop	Current	Proposed	Effective Date
CE	434	Revise	<b>Masonry Design 3</b> Course Prerequisite: CE 433 with a C or better; CE 414; certified major in Civil Engineering. Behavior and design of masonry structures. Typically offered Spring. Cooperative: Open to UI degree-seeking students.	<b>Masonry Design 3</b> Course Prerequisite: CE 330 with a C or better; CE 414; certified major in Civil Engineering <u>or</u> <u>Construction Engineering</u> . Behavior and design of masonry structures. Typically offered Spring. Cooperative: Open to UI degree-seeking students.	1-20
CE	465	Revise	<b>[CAPS] [M] Integrated Civil Engineering Design 3</b> (1-6) Course Prerequisite: CE 303; certified major in Civil Engineering or Construction Engineering; <del>junior</del> standing. Civil engineering applications to planning and design; problem synthesis, data analysis, decision making and reporting; design of complete projects that include local and world-wide problems through interdisciplinary teams. Typically offered Fall and Spring.	<b>[CAPS] [M] Integrated Civil Engineering Design 3</b> (1-6) Course Prerequisite: CE 303; certified major in Civil Engineering or Construction Engineering; <u>senior</u> standing. Civil engineering applications to planning and design; problem synthesis, data analysis, decision making and reporting; design of complete projects that include local and world-wide problems through interdisciplinary teams. Typically offered Fall and Spring.	1-20
CHEM	104	Revise	<b>Problem Solving in General Chemistry 1</b> (0-2) Course Prerequisite: Concurrent enrollment in CHEM 403. A guided inquiry approach for development of problem solving skills necessary for success in CHEM 103 and	<b>Problem Solving in General Chemistry 1</b> (0-2) Course Prerequisite: Concurrent enrollment in CHEM 105. A guided inquiry approach for development of problem solving skills necessary for success in CHEM 103 and CHEM 105.	8-20

			CHEM 105. Typically offered Fall, Spring, and Summer.	Typically offered Fall, Spring, and Summer.	
<b>CPT S</b>	<b>442</b>	<b>Revise</b>	<b>Computer Graphics</b> 3 Course Prerequisite: CPT S 223 with a C or better; CPT S 224 with a C or better; MATH 220 with a C or better; certified major or minor in Computer Science, Computer Engineering, Electrical Engineering, Software Engineering, or Data Analytics. Raster operations; transformations and viewing; geometric modeling; visibility and shading; color. Credit not granted for both CPT S 442 and CPT S 542. Offered at 400 and 500 level. Cooperative: Open to UI degree-seeking students.	<b>Computer Graphics</b> 3 Course Prerequisite: CPT S 223 with a C or better; CPT S 224 with a C or better <u>or CPT S 360 with a C or better</u> ; MATH 220 with a C or better; certified major or minor in Computer Science, Computer Engineering, Electrical Engineering, Software Engineering, or Data Analytics. Raster operations; transformations and viewing; geometric modeling; visibility and shading; color. Credit not granted for both CPT S 442 and CPT S 542. Offered at 400 and 500 level. Cooperative: Open to UI degree-seeking students.	<b>1-20</b>
<b>FS / PL P</b>	<b>301</b>	<b>Revise</b>	<b>Food Mycology</b> 3 (2-3) Course Prerequisite: MBIOS 101, or MBIOS 304 and 305. Survey of the fungi important in food production, storage, and spoilage. (Crosslisted course offered as FS 301, PL P 301). Typically offered Odd Years - Fall. Cooperative: Open to UI degree-seeking students.	<b>Food Mycology</b> 3 (2-3) Course Prerequisite: MBIOS 101 <u>or concurrent enrollment</u> , or MBIOS 304 and 305 <u>or concurrent enrollment</u> . Survey of the fungi important in food production, storage, and spoilage. (Crosslisted course offered as FS 301, PL P 301). Typically offered Odd Years - Fall. Cooperative: Open to UI degree-seeking students.	<b>8-20</b>
<b>FS</b>	<b>303</b>	<b>Revise</b>	<b>Food Processing</b> 3 Course Prerequisite: FS 110; FS 220; MATH 140 or 171; STAT 212 or concurrent enrollment. Specialized techniques, concepts and practices of food processing. Typically offered Fall. Cooperative: Open to UI degree-seeking students.	<b>Food Processing</b> 3 Course Prerequisite: FS 110; FS 220; <u>concurrent enrollment in FS 302</u> ; MATH 140 or 171; STAT 212 or concurrent enrollment. Specialized techniques, concepts and practices of food processing. Typically offered Fall. Cooperative: Open to UI degree-seeking students.	<b>8-20</b>
<b>FS</b>	<b>304</b>	<b>Revise</b>	<b>Cereal Chemistry and Processing</b> 3 Course Prerequisite: <del>BIOLOGY 107</del> ; CHEM 345. Cereal and legume structure, chemistry, and function as it relates to	<b>Cereal Chemistry and Processing</b> 3 Course Prerequisite: CHEM 345. Cereal and legume structure, chemistry, and function as it relates to processing and utilization.	<b>8-20</b>

			processing and utilization. Typically offered Spring. Cooperative: Open to UI degree-seeking students.	Typically offered Spring. Cooperative: Open to UI degree-seeking students.	
FS	406	Revise	<b>Evaluation of Dairy Products 2</b> <del>Course Prerequisite: FS 110.</del> Identifying attributes of different dairy products caused by production, processing, and storage issues; determining probable cause of those attributes and how to reduce their occurrence. Recommended preparation: FS 329; FS 429; FS 430. Typically offered Spring. Cooperative: Open to UI degree-seeking students.	<b>Evaluation of Dairy Products 2</b> Identifying attributes of different dairy products caused by production, processing, and storage issues; determining probable cause of those attributes and how to reduce their occurrence. Recommended preparation: FS 329; FS 429; FS 430. Typically offered Spring. Cooperative: Open to UI degree-seeking students.	8-20
FS	407	Revise	<b>Evaluation of Dairy Products Lab 1 (0-3)</b> <del>May be repeated for credit; cumulative maximum 2 hours.</del> Course Prerequisite: FS 406 or concurrent enrollment. Identifying defects in dairy products and intense training for Collegiate Dairy Products Evaluation Competition. Cooperative: Open to UI degree-seeking students. S, F grading.	<b>Evaluation of Dairy Products Lab 1 (0-3)</b> Course Prerequisite: FS 406 or concurrent enrollment. Identifying defects in dairy products and intense training for Collegiate Dairy Products Evaluation Competition. Cooperative: Open to UI degree-seeking students. S, F grading.	8-20
HORT / VIT ENOL	413 / 513	Revise	<b>Advanced Viticulture 3</b> Course Prerequisite: BIOLOGY 420; HORT 313; SOIL SCI 201. Wine and juice grape production in eastern Washington; wine and fruit physiology, climate and soils, and fruit quality. (Crosslisted course offered as HORT 413, VIT ENOL 413). Offered at 400 and 500 level. Typically offered Spring. Cooperative: Open to UI degree-seeking students.	<b>Advanced Viticulture 3</b> Course Prerequisite: BIOLOGY 420; HORT 313; SOIL SCI 201. Wine and juice grape production in eastern Washington; wine and fruit physiology, climate and soils, and fruit quality. <u>Credit not granted for both HORT/VIT ENOL 413 and HORT 513.</u> (Crosslisted course offered as HORT 413, VIT ENOL 413). Offered at 400 and 500 level. Typically offered Spring. Cooperative: Open to UI degree-seeking students.	8-20
HORT / VIT ENOL	435 / 535	Revise	<b>Chemistry and Biochemistry of Fruit and Wine 3</b> Course	<b>Chemistry and Biochemistry of Fruit and Wine 3</b> Course	8-20

			<p>Prerequisite: BIOLOGY 420; MBIOS 303; MBIOS 305.</p> <p>Study of the chemistry and biochemistry of fruits; biochemistry and physiology of individual fruit compounds, aspects of processing including winemaking. (Crosslisted course offered as HORT 435, VIT ENOL 435).</p> <p>Recommended preparation: Analytical chemistry. Offered at 400 and 500 level. Typically offered Even Years - Spring.</p>	<p>Prerequisite: BIOLOGY 420; MBIOS 101 or 305; MBIOS 303 or CHEM 370. Study of the chemistry and biochemistry of fruits; biochemistry and physiology of individual fruit compounds, aspects of processing including winemaking. <u>Credit not granted for both HORT/VIT ENOL 435 and HORT 535.</u> (Crosslisted course offered as HORT 435, VIT ENOL 435). Recommended preparation: Analytical chemistry. Offered at 400 and 500 level. Typically offered Fall.</p>	
<b>HUMANITY /FOR LANG</b>	<b>101 / 102</b>	<b>Revise</b>	<p><b>[HUM] Humanities in the Ancient World 3</b> Integrated humanities: literature, philosophy, history, and art of the ancient world. (<del>Crosslisted course offered as HUMANITY 101, FOR LANG 102</del>). Typically offered Fall, Spring, and Summer.</p>	<p><b>[HUM] Humanities in the Ancient World 3</b> Integrated humanities: literature, philosophy, history, and art of the ancient world. Typically offered Fall, Spring, and Summer.</p>	<b>8-20</b>
<b>HUMANITY /FOR LANG</b>	<b>302</b>	<b>Revise</b>	<p><b>[HUM] [M] Humanities in the Middle Ages and Renaissance 3</b> Integrated humanities; exploring great works and themes of the European Middle Ages and Renaissance, including art, architecture, music, philosophy, and literature. (<del>Crosslisted course offered as HUMANITY 302, FOR LANG 302</del>). Typically offered Fall and Spring.</p>	<p><b>[HUM] [M] Humanities in the Middle Ages and Renaissance 3</b> Integrated humanities; exploring great works and themes of the European Middle Ages and Renaissance, including art, architecture, music, philosophy, and literature. Typically offered Fall and Spring.</p>	<b>8-20</b>
<b>HUMANITY /FOR LANG</b>	<b>303</b>	<b>Revise</b>	<p><b>[M] Reason, Romanticism, and Revolution 3</b> Integrated humanities; literature, philosophy, music, art, 1700 to World War I; revolutionary changes which led to the 20th century. (<del>Crosslisted course offered as HUMANITY 303, FOR LANG 303</del>). Typically offered Fall.</p>	<p><b>[M] Reason, Romanticism, and Revolution 3</b> Integrated humanities; literature, philosophy, music, art, 1700 to World War I; revolutionary changes which led to the 20th century. Typically offered Fall.</p>	<b>8-20</b>

<b>HUMANITY /FOR LANG</b>	<b>304</b>	<b>Revise</b>	<b>[HUM] Humanities in the Modern World 3</b> Literature, philosophy, art, architecture, film, music since World War I; major works reflecting influential movements and concerns of the modern world. <del>(Crosslisted course offered as HUMANITY 304, FOR LANG 304).</del> Typically offered Spring.	<b>[HUM] Humanities in the Modern World 3</b> Literature, philosophy, art, architecture, film, music since World War I; major works reflecting influential movements and concerns of the modern world. Typically offered Spring.	<b>8-20</b>
<b>MATH / CPT S</b>	<b>544 / 531</b>	<b>Revise</b>	<b>Advanced Matrix Computations 3</b> Advanced topics in the solution of linear systems and eigenvalue problems, including parallel matrix computations. (Crosslisted course offered as MATH 544, CPT S 531). Required preparation must include numerical analysis. Typically offered Spring. Cooperative: Open to UI degree-seeking students.	<b>Advanced Matrix Computations 3</b> Advanced topics in the solution of linear systems, <u>singular value decomposition, and computation of eigenvalues and eigenvectors (Francis's algorithm).</u> (Crosslisted course offered as MATH 544, CPT S 531). Required preparation must include numerical analysis. Typically offered <u>Even Years - Fall</u> . Cooperative: Open to UI degree-seeking students.	<b>8-20</b>
<b>MATH</b>	<b>570</b>	<b>Drop</b>	<b>Mathematical Foundations of Continuum Mechanics I 3</b> The basic mathematical theory of continuum mechanics and its relation to perturbation techniques and stability methods. Required preparation must include differential equations and advanced calculus or real analysis. Cooperative: Open to UI degree-seeking students.	--N/A--	<b>8-20</b>
<b><u>ME / MATH</u></b>	<b><u>501 / 570</u></b>	<b>Revise</b>	<b>Continuum Mechanics 3</b> Unified presentation of principles common to all branches of solid and fluid mechanics; viscous fluids, elasticity, viscoelasticity, and plasticity. Cooperative: Open to UI degree-seeking students.	<b>Continuum Mechanics 3</b> Unified presentation of principles common to all branches of solid and fluid mechanics; viscous fluids, elasticity, viscoelasticity, and plasticity. <u>(Crosslisted course offered as ME 501, MATH 570.)</u> Cooperative: Open to UI degree-seeking students.	<b>8-20</b>
<b>SHS</b>	<b>542</b>	<b>Revise</b>	<del><b>Infant and Toddler Communication and</b></del>	<b><u>Early Language Development</u></b> 2 Developmental progression of	<b>1-20</b>

			<b>Language 2</b> Developmental progression of communication and language in pediatric populations, with an emphasis on assessment and intervention for very young children and families. SHS graduate student; all undergraduate prerequisite courses completed.	communication and language in pediatric populations, with an emphasis on assessment and intervention for very young children and families. SHS graduate student; all undergraduate prerequisite courses completed.	
<b>SOE</b>	<b>102</b>	<b>Revise</b>	<b>Physical Geology 4 (3-3)</b> Course Prerequisite: MATH 103, 106, 140, <del>or</del> 171, or concurrent enrollment in any of these. Modern concepts of earth science; mineral rock, resource, and map study. Field trip required. Credit not granted for both SOE 101 and 102. Typically offered Spring.	<b>Physical Geology 4 (3-3)</b> Course Prerequisite: MATH 103, 106, 140, 171, <u>201, or 202</u> , or concurrent enrollment in any of these, <u>or a minimum ALEKS math placement score of 40%</u> . Modern concepts of earth science; mineral rock, resource, and map study. Field trip required. Credit not granted for both SOE 101 and 102. Typically offered Spring.	<b>1-20</b>
<b>SOE</b>	<b>207</b>	<b>Revise</b>	<b>Geology Field Camp 3 (0-9)</b> Course Prerequisite: SOE 101; SOE 210. Introduction to geologic field methods; basic geologic mapping. Typically offered Summer Session.	<b>Geology Field Camp 3 (0-9)</b> Course Prerequisite: SOE 101 <u>or 102</u> ; SOE 210. Introduction to geologic field methods; basic geologic mapping. Typically offered Summer Session.	<b>1-20</b>
<b>SOE</b>	<b>301</b>	<b>Revise</b>	<b>Forest Plants and Ecosystems 3 (2-3)</b> Course Prerequisite: SOE 300 or concurrent enrollment. Identification and ecology of forest plants with emphasis on trees and the ecosystems in which they occur. Field trips required. Typically offered Fall.	<b>Forest Plants and Ecosystems 3 (2-3)</b> Course Prerequisite: SOE 300 <u>or BIOLOGY 372</u> or concurrent enrollment <u>in either</u> . Identification and ecology of forest plants with emphasis on trees and the ecosystems in which they occur. Field trips required. Typically offered Fall.	<b>1-20</b>
<b>SOE</b>	<b>302</b>	<b>Revise</b>	<b>Arid Land Plants and Ecosystems 3 (2-3)</b> Course Prerequisite: SOE 300; SOE 301. Identification and ecology of arid land plants (trees, shrubs, grasses, forbs) and the ecosystems in which they occur. Field trips required. Typically offered Spring.	<b>Arid Land Plants and Ecosystems 3 (2-3)</b> Course Prerequisite: SOE 300 <u>or BIOLOGY 372</u> ; SOE 301. Identification and ecology of arid land plants (trees, shrubs, grasses, forbs) and the ecosystems in which they occur. Field trips required. Typically offered Spring.	<b>1-20</b>
<b>SOE</b>	<b>304</b>	<b>Revise</b>	<b>Ecosystem Field Measurements 4 (3-3)</b> Course	<b>Ecosystem Field Measurements 4 (3-3)</b> Course	<b>1-20</b>

			Prerequisites: SOE 204; SOE 300 or concurrent enrollment; SOE 301 or concurrent enrollment. Fixed-area sampling and analytical techniques for assessing count and continuous variables are presented; variable radius sampling methods for forests and biomass estimation procedures for grassland and shrub lands are introduced. Typically offered Fall.	Prerequisites: SOE 204; SOE 300 or <u>BIOLOGY 372</u> or concurrent enrollment <u>in either</u> ; SOE 301 or concurrent enrollment. Fixed-area sampling and analytical techniques for assessing count and continuous variables are presented; variable radius sampling methods for forests and biomass estimation procedures for grassland and shrub lands are introduced. Typically offered Fall.	
SOE	305	Revise	<b>Silviculture 3</b> Course Prerequisite: SOE 204; SOE 300; SOE 301. Stand dynamics, natural regeneration methods, intermediate stand treatment, relationships of natural resource management to silvicultural practice. Field trips required. Typically offered Fall.	<b>Silviculture 3</b> Course Prerequisite: SOE 204; SOE 300 or <u>BIOLOGY 372</u> ; SOE 301. Stand dynamics, natural regeneration methods, intermediate stand treatment, relationships of natural resource management to silvicultural practice. Field trips required. Typically offered Fall.	1-20
SOE	310	Revise	<b>Methods in Wildlife Ecology 4</b> (3-3) Course Prerequisite: <del>BIOLOGY 106; BIOLOGY 107</del> . Field and laboratory sampling techniques in wildlife research and management. Typically offered Fall.	<b>Methods in Wildlife Ecology 4</b> (3-3) Course Prerequisite: <u>BIOLOGY 106 with a C or better</u> . Field and laboratory sampling techniques in wildlife research and management. Typically offered Fall.	1-20
SOE	315	Revise	<b>Water and the Earth 3</b> (2-3) Course Prerequisite: CHEM 102 or 106; one of MATH 108, 140, 171, 172, 182, 201, 202, ENGR 107, <del>or a minimum ALEKS math placement score of 70%</del> ; one of SOE 101, SOE 102, PHYSICS 101, or PHYSICS 201. Global hydrologic cycle, including rivers and weathering, groundwater, rainwater and the atmosphere, oceans, human impacts. Field research required. Typically offered Spring.	<b>Water and the Earth 3</b> (2-3) Course Prerequisite: CHEM 102 or 106; one of MATH 108, 140, 171, 172, 182, 201, 202, <u>or</u> ENGR 107; one of SOE 101, SOE 102, PHYSICS 101, or PHYSICS 201. Global hydrologic cycle, including rivers and weathering, groundwater, rainwater and the atmosphere, oceans, human impacts. Field research required. Typically offered Spring.	1-20
SOE	318	Revise	<b>Wildlife Genetics 3</b> Course Prerequisite: BIOLOGY 106;	<b>Wildlife Genetics 3</b> Course Prerequisite: BIOLOGY 106;	1-20

			BIOLOGY 107; MATH 106. Application of genetic tools for wildlife conservation and management, including forensics, detection of rare species, and population estimation. Typically offered Even Years - Fall. Cooperative: Open to UI degree-seeking students.	BIOLOGY 107 <u>with a C or better</u> ; <u>one of MATH 106, 108, 140, 171, or a minimum ALEKS math placement score of 80%</u> . Application of genetic tools for wildlife conservation and management, including forensics, detection of rare species, and population estimation. Typically offered Even Years - Fall. Cooperative: Open to UI degree-seeking students.	
SOE	340	Revise	[M] <b>Structural Geology and Plate Tectonics</b> 4 (3-3) Course Prerequisite: MATH 106; SOE 210. Basic understanding and techniques of working in deformed rocks in mountain belts. Field trip required. Typically offered Spring.	[M] <b>Structural Geology and Plate Tectonics</b> 4 (3-3) Course Prerequisite: <u>One of MATH 106, 108, 140, 171, or a minimum ALEKS math placement score of 80%</u> ; SOE 210. Basic understanding and techniques of working in deformed rocks in mountain belts. Field trip required. Typically offered Spring.	1-20
SOE	430	Revise	<b>Introduction to Wildland Fire</b> 3 Course Prerequisite: SOE 300; SOE 301. Physical nature and behavior of wildland fire; the fire environment; fire ecology; practice of wildland fire management. Field trip required. Typically offered Even Years - Fall.	<b>Introduction to Wildland Fire</b> 3 Course Prerequisite: SOE 300 <u>or BIOLOGY 372</u> ; SOE 301. Physical nature and behavior of wildland fire; the fire environment; fire ecology; practice of wildland fire management. Field trip required. Typically offered Even Years - Fall.	1-20
SOE	431	Revise	<b>Wildlife Nutrition</b> 3 (2-3) Nutritional requirements and interactions of wildlife populations. Typically offered Spring. Cooperative: Open to UI degree-seeking students.	<b>Wildlife Nutrition</b> 3 (2-3) Course Prerequisite: <u>BIOLOGY 106 with a C or better</u> ; <u>BIOLOGY 107 with a C or better</u> ; <u>junior standing</u> . Nutritional requirements and interactions of wildlife populations. Typically offered Spring. Cooperative: Open to UI degree-seeking students.	1-20
SOE	441	Revise	<b>Population Ecology and Conservation</b> 4 (3-3) Course Prerequisite: BIOLOGY 372 or SOE 300; STAT 212 or 412.	<b>Population Ecology and Conservation</b> 4 (3-3) Course Prerequisite: BIOLOGY 372 or SOE 300 <u>with a C or better in</u>	1-20



			Ecology, conservation, management of vertebrate populations, especially threatened and endangered species; designed for wildlife and conservation biology majors. Typically offered Spring.	<u>either</u> ; STAT 212 <u>with a C or better and concurrent enrollment in STAT 412</u> , or STAT 412 <u>with a C or better</u> . Ecology, conservation, management of vertebrate populations, especially threatened and endangered species; designed for wildlife and conservation biology majors. Typically offered Spring.	
SOE	444 / 544	Revise	<b>Environmental Assessment 3</b> <del>Environmental impact statements and their national and state policy frameworks, methods of assessment, and team preparation of an impact statement.</del> Credit not granted for both SOE 444 and SOE 544. Offered at 400 and 500 level. Typically offered Fall and Spring. Cooperative: Open to UI degree-seeking students.	<b>Environmental Assessment 3</b> <u>National and state policy frameworks for environmental assessment that support integration of science and the public into agency decision-making process.</u> Credit not granted for both SOE 444 and SOE 544. Offered at 400 and 500 level. Typically offered Fall and Spring. Cooperative: Open to UI degree-seeking students.	1-20
SOE	446	Revise	<b>[M] Wildlife Habitat Ecology 3</b> (2-3) Course Prerequisite: SOIL SCI 368 or concurrent enrollment. The ecology of how wildlife use, respond to, and affect resources in their environment. Typically offered Spring.	<b>[M] Wildlife Habitat Ecology 3</b> (2-3) Course Prerequisite: SOIL SCI 368 <u>with a C or better</u> or concurrent enrollment; <u>senior standing</u> . The ecology of how wildlife use, respond to, and affect resources in their environment. Typically offered Spring.	1-20