

**UNDERGRADUATE AND PROFESSIONAL MAJOR CHANGE BULLETIN NO. 12, addendum 1**

**Spring 2023**

**Faculty Senate approved April 6, 2023**

**--REQUIREMENTS--**

The requirements listed below reflect the undergraduate major curricular changes approved by the Catalog Subcommittee since approval of the last Undergraduate Major Change Bulletin. All changes are underlined. Deletions are crossed out. The column to the far right indicates the date each change becomes effective. Note: Items marked {S} have been streamlined and do not require Catalog Subcommittee review.

Department	Proposed	Effective Date
<p><b>Agricultural and Food Systems</b> Revise graduation requirements for BS in Agricultural and Food Systems, major in Agriculture and Food Security; change name of major to Human Nutrition and Food Systems</p>	<p><del><b>Agriculture and Food Security</b></del> <b><u>Human Nutrition and Food Systems (120 Credits)</u></b></p> <p>Students in this major are <del>protectors of the world's plant-based food supply</del> <u>the next generation of population health scientists, plant breeders, and researchers.</u> <del>The Agriculture and Food Security major prepares students to manage plant pests and diseases from a holistic perspective.</del> <u>This major focuses on understanding our obligation to meet the nutritional needs of a growing population by producing sustainable, nutrient-rich foods, that benefit the health of people and the planet.</u></p> <p>Students learn to understand the complexity of relationships within agricultural ecosystems, how external factors influence these systems, and how <del>to effectively manage pests and diseases without incurring</del> <u>research advances our ability to provide nutrient-rich food without incurring</u> undue risks to human or environmental health. Course offerings begin with a strong scientific base in biology, <del>and chemistry, and human biochemistry;</del> and expand to focus on crop science, soil science, <del>integrated pest management, and plant pathology;</del> <u>nutrition and health.</u></p> <p>The major is an exciting blend of classroom instruction and field experience that is tailored to the eventual employment goals of the student. <del>Graduates who can evaluate and diagnose pest and plant disease problems and recommend economically and ecologically sound ways to correct them are in great demand.</del> Excellent employment opportunities exist <u>within research and development programs</u> for state, federal, and international agricultural, environmental, and regulatory agencies, <del>agrichemical companies,</del> <u>health,</u> agricultural and environmental consulting firms, <u>local health departments, nutritionists,</u> food processing, <del>forest product, and vegetable and seed companies,</del> and a wide range of other agribusiness enterprises.</p> <p>A student may be admitted to the <del>Agriculture and Food Security</del> <u>Human Nutrition and Food Systems</u> major upon making their intention known to the department.</p>	<p><b>8-23</b></p>

<b>First Year</b>		
<b><i>First Term</i></b>		<b><i>Credits</i></b>
ANIM SCI 101		3
CHEM 101 [PSCI] <del>or 105 [PSCI]</del>		4
ECONS 101 [SSCI]		3
HISTORY 105 [ROOT]		3
HORT / CROP SCI 102		3
<b><i>Second Term</i></b>		<b><i>Credits</i></b>
[COMM] Course (COM 102 [COMM] or H D 205 [COMM] recommended)		3 or 4
CHEM 102 <del>or 106</del>		4
ENGLISH 101 [WRTG]		3
HORT / CROP SCI 202		4
<b>Second Year</b>		
<b><i>First Term</i></b>		<b><i>Credits</i></b>
<u>AFS 201</u>		<u>3</u>
BIOLOGY 107 [BSCI] <del>or 120 [BSCI]</del>		4
SOIL SCI 201		3
UCORE Inquiry <sup>1</sup>		6
Electives		3
<b><i>Second Term</i></b>		<b><i>Credits</i></b>
<del>AFS 201</del>		<del>3</del>
<u>AFS Core Elective<sup>2</sup></u>		<u>3</u>
BIOLOGY 106		4
<u>FS 220</u>		<u>3</u>
<del>ENTOM 351</del>		<del>3</del>
STAT 212 [QUAN]		4
UCORE Inquiry <sup>1</sup>		3
Complete Writing Portfolio		
<b>Third Year</b>		
<b><i>First Term</i></b>		<b><i>Credits</i></b>
<u>BIOLOGY 333</u>		<u>3</u>
CROP SCI 305		3
CROP SCI 360		3
ECONS 350 <sup>3</sup>		3
<del>ENTOM 343 [M]</del>		<del>3</del>

	<p>Electives 3</p> <p><b>Second Term</b> <b>Credits</b></p> <p><del>AFS Core Systems Elective<sup>2</sup></del> 3</p> <p>IPM 452 3</p> <p><u>NEP 330</u> 3</p> <p>SOIL SCI/AFS 302 [M]<sup>4</sup> 3</p> <p>Electives 6</p> <p><b>Fourth Year</b></p> <p><b>First Term</b> <b>Credits</b></p> <p>AFS 336 3</p> <p>CROP SCI 403 3</p> <p><u>FS 436</u> 3</p> <p><u>NEP 400</u> 3</p> <p><del>PLP 300</del> 2</p> <p><del>PLP 429</del> 3</p> <p>Electives 3</p> <p><b>Second Term</b> <b>Credits</b></p> <p>400-500-level Seminar in CAHNRS<sup>5</sup> 1</p> <p>AFS 401 [CAPS] [M] 3</p> <p><u>NEP 402</u> 3</p> <p><u>NEP 431</u> 3</p> <p><del>SOIL SCI 441</del> 3</p> <p>Electives 63</p>	
	<p><b>Footnotes</b></p> <p><sup>4</sup> <del>ECONS 352, which is only offered in the spring, may be used as an alternative for ECONS 350.</del></p> <p><sup>1</sup> Must complete 3 of these 4 UCORE categories: ARTS, DIVR, EQJS, HUM.</p> <p><sup>2</sup> AFS Core Systems Electives: AGTM 310, ANIM SCI 464 [M], 472 [M], 474 [M], BIOLOGY 372 [M], CROP SCI 302, ECONS 351, HORT 320, SOE 300, SOIL SCI 368, or other systems courses approved by your advisor. Coursework must include a total of two [M] courses.</p> <p><sup>3</sup> <del>ECONS 352, which is only offered in the spring, may be used as an alternative for ECONS 350.</del></p> <p><sup>4</sup> SOIL SCI 414 and 415 can be taken as an alternative to SOIL SCI 302 [M]. However, another [M] course will be required.</p> <p><sup>5</sup> 400-500-level Seminar: AGTM 451, CROP SCI/SOIL SCI 412, HORT/VIT ENOL 409, or as approved by advisor.</p>	
<p><b>Mechanical and Materials Engineering</b> Revise graduation requirements for BS in Mechanical Engineering</p>	<p><b>Mechanical Engineering (124 Credits)</b></p> <p><b>Admission Requirements</b></p> <p>To be admitted into the Mechanical Engineering major, students must have earned an 83% or higher ALEKS placement score (MATH), or completed</p>	<p><b>8-23</b></p>

MATH 106 and 108, 171 or higher calculus course with “C” or better, or Calc AP score of 2.

Transferring students must satisfy all of the above admission requirements. Students must earn a 2.6 GPA in transferred major courses and have earned a “C” or better in all transferred courses required for the ME degree.

Students transferring to degree-completion programs in Bremerton and Everett branches must have 2.6 average GPA in the following or equivalent courses, each completed with grade “C” or better: CE 211, CE 215, CHEM 105, CPT S 121 or 131, E E 221, ENGLISH 101, MATH 171, MATH 172, MATH 220, MATH 273, MATH 315, ME 116, ME 212, ME 241, PHYSICS 201 and 211, PHYSICS 202 and 212.

### **Benchmarks to Maintain Major in ME Status**

To keep their status as Mechanical Engineering majors, students must: (1) maintain a 2.6 average GPA in major courses required for ME degree, (2) obtain a grade of C or better in all courses required for the ME degree. No more than one repeat per course is allowed in all ME and MSE courses required for the ME degree.

Major courses required for the ME degree include all engineering and computer science courses, in addition to ME, MSE, physics, chemistry, and math courses listed in the schedule of studies.

### **Graduation Requirement**

Maintain a minimum 2.6 average GPA in major courses required for the ME degree. Receive a letter grade of C or better in all major courses.

### **Concentrations for BS in Mechanical Engineering**

Students follow a General Path, or seek a concentration in Thermo-fluids, Manufacturing, or Autonomous Systems.

Students are encouraged to consult with their advisor at their campus of residence for approved alternative course sequences as well as allowed substitutions to the schedule studies.

### **First Year**

#### ***First Term***

	<b><i>Credits</i></b>
CHEM 105 [PSCI]	4
ENGR 120	2
HISTORY 105 [ROOT]	3
MATH 171 [QUAN]	4
UCORE Inquiry <sup>1</sup>	3

#### ***Second Term***

	<b><i>Credits</i></b>
ECONS 102 [SSCI]	3
ENGLISH 101 [WRTG]	3

MATH 172	4
ME 116	2
UCORE Inquiry <sup>1</sup>	3
<b>Second Year</b>	
<i>First Term</i>	<i>Credits</i>
CE 211	3
CPT S 121, 131, or ME 241	3 or 4
MATH 220	2
MATH 273	2
PHYSICS 201	3
PHYSICS 211	1
STAT 370	3
<i>Second Term</i>	<i>Credits</i>
CE 215	3
MATH 315	3
ME 212	3
ME 216	2
ME 220	1
PHYSICS 202	3
PHYSICS 212	1
Complete Writing Portfolio	
<b>Third Year</b>	
<i>First Term</i>	<i>Credits</i>
E E 261	3
E E 262	1
ME 301	3
ME 303	3
ME 313	3
MSE 201	3
<i>Second Term</i>	<i>Credits</i>
ENGLISH 402 [WRTG]	3
ME 304	3
ME 306	2
ME 316	3
ME 348	3
Restricted Elective <sup>2</sup>	3
<b>Fourth Year</b>	

<b><i>First Term</i></b>	<b><i>Credits</i></b>
ME 415 [M]	3
Concentration Courses <sup>3,4</sup>	6
Restricted Elective <sup>2</sup>	3
UCORE Inquiry <sup>1</sup>	3
<b><i>Second Term</i></b>	<b><i>Credits</i></b>
ME 406 [M]	3
ME 416 [CAPS]	3
Concentration Course <sup>2,3</sup>	3
UCORE Inquiry <sup>1</sup>	3
Complete Exit Survey	
Complete Fundamentals of Engineering Exam	
<b>Footnotes</b>	
<sup>1</sup> Must complete 4 of these 5 UCORE designations: ARTS, BSCI, DIVR, EQJS, HUM.	
<sup>2</sup> Restricted Electives (at least 6 credits): Choose from ME 310 and 311 or ME 312, ME 401, ME 405.	
<sup>3</sup> Concentration Paths (9 credits): General Concentration: Three technical electives which may include the remaining restricted elective. Thermo Fluids Concentration: Must take ME 405, and either ME 312 or 401 from the restrictive electives; two courses from ME 419, 431, 436, and 439; and one additional technical elective. Manufacturing Concentration: Must take ME 312, and either ME 401 or 405 from the restrictive electives; ME 474 and 475; and one more technical elective. Autonomous Systems Concentration (must complete CPT S 121, 131, or ME 241 prior to beginning this concentration): Must take ME 401, and either ME 312 or 405 from the restrictive electives; two courses from CPT S 122 or 132, and ME 481; and one technical elective.	
<sup>4</sup> Technical Electives for concentrations: Any 400-500-level ME, MSE, <u>E.E., CPT S.</u> <del>or EECS</del> course not listed as a major requirement, <u>MSE 318, 331, 332, and 333,</u> and BIO ENGR 425.	