MANUFACTURING SYSTEMS ENGINEERING

MANAGE MANUFACTURING OPERATIONS

DESIGN

DEVELOP

IMPLEMENT

broad knowledge
social awareness
industrial practice
plastics & composites
production operations & control

IMPORTANT EWEBER PORTAL APPS

Wildcat Mail
Cattracks
Find My Advisor
Grad Maps
Financial Aid and Scholarships
University Catalog
## CORE GENERAL EDUCATION REQUIREMENTS

### COMPOSITION (EN) **Placement Exam: Accuplacer**

Complete ENGL 2010 Intermediate College Writing (3) and earn a “C” grade or better.  
See the WSU Catalog or weber.edu/placement for prerequisite information.

### AMERICAN INSTITUTIONS (AI)

Select one of the following options and earn a “C” grade or better:  
- **POLS 1100**  
  American National Government (3)  
- **HIST 1700**  
  American Civilization (3)  
- **ECON 1740**  
  Economic History of the U.S. (3)  
- **HIST 2700 & 2710**  
  History of the U.S. to 1877 (3) AND History of the U.S. since 1877 (3) for History majors

- MSE majors should pick **ONE** of these three classes

### QUANTITATIVE LITERACY (QL) **Placement Exam: ALEKS**

Select one of the following options and earn a “C” grade or better:  
- **MATH 1030**  
  Contemporary Mathematics (3)  
- **MATH 1040**  
  Introduction to Statistics (3)  
- **MATH 1050**  
  College Algebra (4)  
- **MATH 1080**  
  Pre-calculus (5)  
- **MATH 2020**  
  Geometry for Elementary Teachers (3)  

Any WSU Math class for which either MATH 1050 or 1080 is a prerequisite  
A score of 26 or higher on the Math portion of the ACT  
A score of 65 or higher on ALEKS

MSE majors must take either  
MATH 1050 or MATH 1080

1 If you choose MATH 1050, you will also need to take  
MATH 1060 (prerequisite to MATH 1210)

### INFORMATION LITERACY (IL) **Recommended to take with ENGL 2010**

Complete an exam or course option (see table below) and earn a “C” grade or better for a course or a passing exam score.

<table>
<thead>
<tr>
<th>Competency Exam</th>
<th>LIBS 1504 (1)</th>
</tr>
</thead>
</table>
| **Courses**      | LIBS 1704  
  Information Navigator (1)  
  LIBS 2504  
  Info. Resources in History (1)  
  LIBS/EDUC 2604  
  Info. Resources in Education (1)  
  LIBS/BSAD 2704  
  Info. Resources in Business Disciplines (1)  
  LIBS 2804  
  Info. Resources in Social Sciences (1)  
  LIBS/HTHS 2904  
  Info. Resources in Health Professions (1) |

### DIVERSITY (DV)

Select 3 credits from the list of approved courses and earn a passing grade.  Breadth general education courses marked with “ ” fulfill the Diversity requirement as well as the specified Breadth requirement.

**Key**  
1 = number of classes you will need to select in that section  
Highlighted courses = required or recommended class  
HU = Humanities Credit  
CA = Creative Arts Credit  
DV or ☑ = Diversity Credit  
SS = Social Sciences Credit  
PS = Physical Sciences Credit  
LS = Life Sciences Credit
**BREADTH GENERAL EDUCATION REQUIREMENTS**  
**DO NOT DUPLICATE DEPARTMENTS**: Courses selected to fulfill breadth requirements must each be from a different program, with the exception of Honors.

**HUMANITIES (HU) & CREATIVE ARTS (CA)** Select 9 credits (with at least 3 credits from Humanities and at least 3 credits from Creative Arts) and earn a passing grade.

### HUMANITIES (HU)

- **Anthropology**  
  - ANTH 1040 Language and Culture (3)  
- **Communication**  
  - COMM 2110 Interpersonal and Small Group Communication (3)  
  - COMM 2110 Principles of Public Speaking (3)  
  - COMM 2010 Mass Media and Society (3)  
- **Foreign Language**  
  - FL 2851 Study Abroad (3)  
  - FL 2020 Fourth Semester (3)  
  - FL 2600 Introduction to Cultural and Literary Studies in Translation (3)  
- **Honors**  
  - HNRS 1110 Introduction to Honors: The Construction of Knowledge (3)  
  - HNRS 1540 Perspectives in the Humanities (3)  
  - HNRS 2110 Exploring Key Concepts in the Disciplines: Humanities (3)  
  - HNRS 2110 Intellectual Traditions: Great Ideas of the West in Classical and Medieval Eras (3)  
  - HNRS 2120 Intellectual Traditions: Great Ideas of the West in the Modern Era (3)  
  - HNRS 2130 Intellectual Traditions: Great Ideas of the East (3)  
- **English**  
  - ENGL 2200 Introduction to Literature (3)  
  - ENGL 2220 Introduction to Fiction (3)  
  - ENGL 2230 Introduction to Drama (3)  
  - ENGL 2240 Introduction to Poetry (3)  
  - ENGL 2510 Masterpieces of Literature (3)  
  - ENGL 2710 Perspectives on Women's Literature (3)  
  - ENGL 3500 Introduction to Shakespeare (3)  
  - ENGL 3510 World Literature (3)  
  - ENGL 3520 Literature of the Natural World (3)  
  - ENGL 3750 Topics and Ideas in Literature (3)  
- **Music**  
  - MUSC 1043 Music, the Arts & Civilizations (3)  
- **Philosophy**  
  - PHIL 1000 Introduction to Philosophy (3)  
  - PHIL 1120 Contemporary Moral Problems (3)  
  - PHIL 1250 Critical Thinking (3)  
- **Theatre**  
  - THEA 2821 Period Styles in Design  
  - THEA 3323 History and Literature of Contemporary Theatre

### SOCIAL SCIENCES (SS)

Select 6 credits and earn a passing grade.

- **Anthropology**  
  - ANTH 1000 Introduction to Anthropology (3)  
  - ANTH 2010 Peoples and Cultures of the World (3)  
  - ANTH 2030 Principles of Archaeology (3)  
- **Child and Family Studies**  
  - CHF 1500 Human Development (3)  
  - CHF 2400 Family Relations (3)  
- **Criminal Justice**  
  - CJ 1010 Introduction to Criminal Justice (3)  
- **Economics**  
  - ECON 1010 Economics as a Social Science (3)  
  - ECON 1100 Environmental Issues and Economic Policy (3)  
  - ECON 2010 Principles of Microeconomics (3)  
  - ECON 2020 Principles of Macroeconomics (3)  
- **Geography**  
  - GEOG 1300 Places and Peoples of the World (3)  
  - GEOG 1520 Geography of the United States and Canada (3)  
- **Gerontology**  
  - GERT 1010 Introduction to Gerontology (3)  
- **Health Education**  
  - HLTH 1030 Healthy Lifestyles (3)  
- **History**  
  - HIST 1500 World History to 1500 C.E. (3)  
  - HIST 1510 World History from 1500 C.E. to the Present (3)  

### CREATIVE ARTS (CA)

- **Art**  
  - ART 1010 Introduction to the Visual Arts (3)  
  - ART 1030 Studio Art for the Non-Art Major (3)  
  - ARTH 1090 Art and Architecture of the World: Paleolithic to AD 1000 (4)  
  - ARTH 1110 Art and Architecture of the World: AD 1000 to Present (4)  
- **Computer Science**  
  - CS 1010 Introduction to Interactive Entertainment (3)  
- **Dance**  
  - DAN 1010 Introduction to Dance (3)  
- **English**  
  - ENGL 2250 Creative Writing (3)  
  - ENGL 2260 Introduction to Writing Short Fiction (3)  
  - ENGL 2270 Introduction to Writing Poetry (3)  
- **Honors**  
  - HNRS 1530 Perspectives in the Creative Arts (3)  
  - HNRS 2020 Exploring Key Concepts in the Disciplines: Creative Arts (3)  
- **Interior Design**  
  - IDT 1010 Introduction to Interior Design (3)  
- **Music**  
  - MUSC 1010 Introduction to Music (3)  
  - MUSC 1030 Introduction to Jazz (3)  
  - MUSC 1033 Introduction to American Music (3)  
  - MUSC 1035 History of Rock and Roll (3)  
  - MUSC 1040 Music of World Cultures (3)  
  - MUSC 1063 Music in Religion (3)  
- **Theatre**  
  - THEA 1013 Introduction to Theatre (3)  
  - THEA 1023 Introduction to Film (3)  
  - THEA 1033 Introduction to Acting (3)  
  - THEA 1043 Introduction to American Musical Theatre (3)  
  - THEA 1053 Introduction to Technical Production (3)  
- **Women & Gender Studies**  
  - WGS 1010 Introduction to Women & Gender Studies (3)  
  - WGS 2500 Human Rights in the World (3)  

### Notes

- **COMM 2110 is required for MSE majors**
- **ECON 2010 is required for MSE majors**
- **Only one course from either ART or ARTH may be used to fulfill Creative Arts**

*Only one Human Rights in the World (POLI/WGS 2500) may be used to fulfill Social Sciences.
## PHYSICAL SCIENCES (PS) & LIFE SCIENCES (LS)

Select 9 credits (with at least 3 credits from Physical Sciences and at least 3 credits from Life Sciences) and earn a passing grade.

### PHYSICAL SCIENCES (PS)

<table>
<thead>
<tr>
<th>Subject</th>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry</td>
<td>CHEM 110</td>
<td>Introduction to General, Organic &amp; Biochemistry</td>
</tr>
<tr>
<td></td>
<td>CHEM 1110</td>
<td>General Chemistry</td>
</tr>
<tr>
<td></td>
<td>CHEM 1210</td>
<td>Principles of Chemistry (3)</td>
</tr>
<tr>
<td>Geography</td>
<td>GEO 1000</td>
<td>Natural Environments of the Earth (3)</td>
</tr>
<tr>
<td></td>
<td>GEO 1500</td>
<td>The Science of Global Warming: Myths, Realities and Solutions (3)</td>
</tr>
<tr>
<td>Geosciences</td>
<td>GEO 1030</td>
<td>Earthquakes and Volcanoes (3)</td>
</tr>
<tr>
<td></td>
<td>GEO 1060</td>
<td>Environmental Geosciences (3)</td>
</tr>
<tr>
<td></td>
<td>GEO 1110</td>
<td>Dynamic Earth: Physical Geology (3)</td>
</tr>
<tr>
<td></td>
<td>GEO 1130</td>
<td>Introduction to Meteorology (3)</td>
</tr>
<tr>
<td></td>
<td>GEO 1150</td>
<td>Principles of Earth Science (3)</td>
</tr>
<tr>
<td>Honors</td>
<td>HNRS 1500</td>
<td>Perspectives in the Physical Sciences (3)</td>
</tr>
<tr>
<td></td>
<td>HNRS 2030</td>
<td>Exploring Key Concepts in the Disciplines: Physical Sciences (3)</td>
</tr>
<tr>
<td>Physics</td>
<td>PHYS 1010</td>
<td>Elementary Physics (3)</td>
</tr>
<tr>
<td></td>
<td>PHYS/ASTR 1040</td>
<td>Elementary Astronomy (3)</td>
</tr>
<tr>
<td></td>
<td>PHYS 1360</td>
<td>Principles of Physical Science (3)***</td>
</tr>
<tr>
<td></td>
<td>PHYS/ASTR 2040</td>
<td>Principles of Observational Astronomy (3)*</td>
</tr>
<tr>
<td></td>
<td>PHYS 2090</td>
<td>Environmental Physics: Energy and Power (3)</td>
</tr>
<tr>
<td></td>
<td>PHYS 2210</td>
<td>Physics for Scientists and Engineers (3)</td>
</tr>
</tbody>
</table>

* Only one course from either GEOG or GEO may be used to fulfill Physical Sciences.
** Only one course from either PHYS or ASTR may be used to fulfill Physical Sciences.
*** Only one Principles of Physical Science (CHEM/PHYS 1360) may be used to fulfill Physical Sciences.

### LIFE SCIENCES (LS)

<table>
<thead>
<tr>
<th>Subject</th>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthropology</td>
<td>ANTH 1020</td>
<td>Biological Anthropology (3)</td>
</tr>
<tr>
<td>Botany</td>
<td>BTNY 1203</td>
<td>Plant Biology (3)</td>
</tr>
<tr>
<td></td>
<td>BTNY 1303</td>
<td>Plants in Human Affairs (3)</td>
</tr>
<tr>
<td></td>
<td>BTNY 1370</td>
<td>Principles of Life Science (3)</td>
</tr>
<tr>
<td></td>
<td>BTNY 1403</td>
<td>Environment Appreciation (3-4)</td>
</tr>
<tr>
<td>Health Sciences</td>
<td>HTHS 1110</td>
<td>Integrated Human Anatomy &amp; Physiology I (4)</td>
</tr>
<tr>
<td>Honors</td>
<td>HNRS 1510</td>
<td>Perspectives in the Life Sciences (3)</td>
</tr>
<tr>
<td></td>
<td>HNRS 2040</td>
<td>Exploring Key Concepts in the Disciplines: Life Sciences (3)</td>
</tr>
<tr>
<td>Microbiology</td>
<td>MICR 1113</td>
<td>Introductory Microbiology (3)</td>
</tr>
<tr>
<td></td>
<td>MICR 1153</td>
<td>Elementary Public Health (3)</td>
</tr>
<tr>
<td></td>
<td>MICR 1370</td>
<td>Principles of Life Science (3)*</td>
</tr>
<tr>
<td></td>
<td>MICR 2054</td>
<td>Principles of Microbiology (4)</td>
</tr>
<tr>
<td>Nutrition</td>
<td>NUTR 1020</td>
<td>Science and Application of Human Nutrition (3)</td>
</tr>
<tr>
<td>Zoology</td>
<td>ZOOL 1010</td>
<td>Animal Biology (3)</td>
</tr>
<tr>
<td></td>
<td>ZOOL 1020</td>
<td>Human Biology (3)</td>
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<tr>
<td></td>
<td>ZOOL 1030</td>
<td>The Nature of Sex (3)</td>
</tr>
<tr>
<td></td>
<td>ZOOL 1110</td>
<td>Principles of Zoology I (4)</td>
</tr>
<tr>
<td></td>
<td>ZOOL 1370</td>
<td>Principles of Life Science (3)*</td>
</tr>
<tr>
<td></td>
<td>ZOOL 2200</td>
<td>Human Physiology (4)</td>
</tr>
</tbody>
</table>

* Only one Principles of Life Science (BTNY/MICR/ZOOL 1370) may be used to fulfill Life Sciences.

### WSU COURSES

**Earn credit for TWO General Education areas by taking ONE course.**

WSU courses are interdisciplinary, variable credit (3-5), team taught, and limited enrollment courses that satisfy requirements in two General Education areas (Core or Breadth). Must earn a passing grade.

**Students may take as many WSU Courses as they wish, but only the non-overlapping General Education attributes from subsequent WSU Courses will count toward General Education requirements.**

<table>
<thead>
<tr>
<th>WSU Course</th>
<th>Title</th>
<th>Counts towards these two General Education areas:</th>
</tr>
</thead>
<tbody>
<tr>
<td>WSU 1450</td>
<td>Intersections of Art and Communication</td>
<td>Humanities (HU) and Creative Arts (CA)</td>
</tr>
<tr>
<td>WSU 1560</td>
<td>The Story and the Brain: Neuroscience &amp; Literature</td>
<td>Humanities (HU) and Social Science (SS)</td>
</tr>
<tr>
<td>WSU 1560</td>
<td>Identity in the Digital Age</td>
<td>Humanities (HU) and Social Science (SS)</td>
</tr>
<tr>
<td>WSU 1560</td>
<td>Sustainability in Thought &amp; Practice</td>
<td>Humanities (HU) and Social Science (SS)</td>
</tr>
<tr>
<td>WSU 1560</td>
<td>Research, Creativity, and Exploration Among Disciplines</td>
<td>Humanities (HU) and Social Science (SS)</td>
</tr>
<tr>
<td>WSU 1580</td>
<td>The Story and the Cell</td>
<td>Humanities (HU) and Life Science (LS)</td>
</tr>
<tr>
<td>WSU 1680</td>
<td>Microbes Rule: Impact of Disease on History</td>
<td>Social Science (SS) and Life Science (LS)</td>
</tr>
<tr>
<td>WSU 1680</td>
<td>The Sciences of Human Variation: From Sex to Gender &amp; Race to Ethnicity</td>
<td>Social Science (SS) and Life Science (LS)</td>
</tr>
<tr>
<td>WSU 2340</td>
<td>Pattern Play: Movement and Mathematics</td>
<td>Quantitative Literacy* (QL) and Creative Arts (CA)</td>
</tr>
<tr>
<td>WSU 2350</td>
<td>Writing With Numbers</td>
<td>Quantitative Literacy* (QL) and Humanities (HU)</td>
</tr>
<tr>
<td>WSU 2420</td>
<td>Evil chemicals, drug scares, and big business</td>
<td>Social Science (SS) and Physical Science (PS)</td>
</tr>
</tbody>
</table>

*Check with your academic advisor for QL placement and requirement for your major

See course descriptions at https://www.weber.edu/GenEd/WSU_Courses.html

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**Avoid misadvising Yourself!**

Consult your academic advisor (EASTAdvising@weber.edu), the WSU Catalog (weber.edu/catalog), and your CatTracks degree evaluation (log in to your eWeber Student Portal).

June 2019