**B.S. Food, Agricultural and Biological Engineering**  
**Agricultural Engineering Specialization**

### Student Information

Name: ________________________  OSU ID: ________________________  OSU Admit Term: ____________  
Phone: ________________________  Email (name.number@osu.edu): ________________________

### Suggested Curriculum

This should be used as a **guide** only. Semester offerings are subject to change. (**BOLD** courses offered only indicated indicated semesters.)

<table>
<thead>
<tr>
<th>Year</th>
<th>Autumn</th>
<th>Spring</th>
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<tbody>
<tr>
<td>1</td>
<td></td>
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<tr>
<td></td>
<td><strong>ENGR 1110.10 (Engineering Survey 1)</strong>, 0.5 hr</td>
<td><strong>ENGR 1120.10 (Engineering Survey 2)</strong>, 0.5 hr</td>
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<td></td>
<td><strong>ENGR 1181 (Fundamentals of ENGR 1)</strong>, 2 hr</td>
<td><strong>PHYSICS 1251 (E&amp;M, Optics, Modern Phys)</strong>, 5 hr</td>
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<td></td>
<td><strong>MATH 1151 (Calculus 1)</strong>, 5 hr</td>
<td><strong>ENGR 1221 (Programming in Matlab)</strong>, 2 hr</td>
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<td></td>
<td><strong>PHYSICS 1250 (Mechanics, Thermal, Waves)</strong>, 5 hr</td>
<td><strong>ENGR 1182 (Fundamentals of ENGR 2)</strong>, 2 hr</td>
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<td></td>
<td>General Education, 3 hr</td>
<td><strong>MATH 1172 (Calculus 2)</strong>, 5 hr</td>
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<td>* Honors alternative course options available</td>
<td>General Education (English 1110), 3 hr</td>
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<tr>
<td>2</td>
<td><strong>FABE 2100 (Introduction to FABE)</strong>, 1 hr</td>
<td><strong>FABE 2110 (Fluid Mechanics in FABE)</strong>, 3 hr</td>
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<td></td>
<td><strong>FABE 2710 (Surveying)</strong>, 2 hr</td>
<td><strong>FABE 2720 (Principles of Soil &amp; Water Eng)</strong>, 2 hr</td>
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<td><strong>FABE 2717 (Math Topics for Engineers)</strong>, 4 hr</td>
<td><strong>ISE 2040 (Engineering Economics)</strong>, 2 hr</td>
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<td><strong>MECHENG 2010 (Statics)</strong>, 2 hr</td>
<td><strong>MECHENG 2020 (Mechanics of Materials)</strong>, 3 hr</td>
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<td></td>
<td><strong>CHEM 1250 (Chem for Engrs)</strong>, 4 hr</td>
<td><strong>Applied Biol or Ag Science Elective</strong>, 3 hr</td>
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<td>General Education (2nd Writing), 3 hr</td>
<td>General Education, 3 hr</td>
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<td></td>
<td>or <strong>FABE 3170 (Solid Works)</strong> in SP</td>
<td><strong>FABE 3130 (Heat &amp; Mass Transfer in FABE)</strong>, 4 hr</td>
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<td><strong>FABE 3120 (Thermodynamics in FABE)</strong>, 4 hr</td>
<td><strong>FABE 3140 (Professional Dev in FABE)</strong>, 1 hr</td>
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<td><strong>FABE 3810 (Ag Structures)</strong>, 3 hr</td>
<td><strong>FABE 3150 (System Dynamics &amp; Electricity)</strong>, 4 hr</td>
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<td><strong>MECHENG 2030 (Dynamics)</strong>, 3 hr</td>
<td><strong>FABE 3610 (Utilization of Energy in Ag)</strong>, 3 hr</td>
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<td>Technical Elective, 3 hr</td>
<td><strong>Technical Elective</strong>, 3 hr</td>
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<td>2 <strong>FABE 3171 (Computer Graphics-AutoCad)</strong>, 2 hr</td>
<td>General Education, 3 hr</td>
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<td></td>
<td>or <strong>FABE 3170 (Solid Works)</strong> in SP</td>
<td><strong>FABE 3170 (Solid Works)</strong> in SP</td>
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<tr>
<td>3</td>
<td><strong>FABE 4900 (Capstone Design 1)</strong>, 3 hr</td>
<td><strong>Required</strong> Senior Exit Survey via E-mail for FABE</td>
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<td><strong>FABE 5160 (Elec, Msmts, &amp; Instrumentation)</strong>, 4 hr</td>
<td><strong>FABE 4910 (Capstone Design 2)</strong>, 3 hr</td>
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<td><strong>FABE 5820 (Environmental Controls &amp; Air Quality)</strong>, 3 hr</td>
<td><strong>FABE 5730 (Design of Ag Water Mgmt Systems)</strong>, 3 hr</td>
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<tr>
<td></td>
<td>Technical Elective, 3 hr</td>
<td>Technical Electives, 3 hr</td>
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<tr>
<td></td>
<td>General Education, 3 hr</td>
<td>Technical Electives, 3 hr</td>
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<td>General Education, 3 hr</td>
<td>General Education, 3 hr</td>
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</table>

**Total Hours to complete the degree program = 132**

1. CSE 1222 Programming in C++ which is 3 credit hours is also accepted
2. Power and Machinery specialization students take FABE 3170 (Solid Works) in SP Sem

### Program Options

Agricultural Engineering students may choose from three “tracks” of concentration:

- **Power and Machinery**
- **Soil and Water**
- **Structures and Facilities**

### Acceptance Criteria

Acceptance into the Food, Agricultural and Biological Engineering major will depend upon the cumulative point-hour ratio (CPHR) and the earned point-hour ratio (EPHR) at completion of the following pre-major courses: Math 1151, 1172; Physics 1250; Chemistry 1210 or 1250; Engineering 1181 and 1182. Currently a minimum CPHR and EPHR of 2.0 is required. See the department’s Undergraduate Academic Program Coordinator in 260-B AE for application details.

Revised 5/30/2017
Technical Electives (by Track)

Total 18 hours MINIMUM required between Tech Elecs & Applied Sciences

(Tech Elecs: 14-15 hrs required)

Ag Power & Machinery:
- ASM 2240 (3)
- ISE 2500 (3)
- ISE 4500 (3)
- ISE 5530 (3)
- MSE 2010 (3)
- MSE 5951 (3)
- MECHENG 3360 (3)
- MECHENG 3670 (4)
- MECHENG 3671 (3)
- MECHENG 3680 (4)
- MECHENG 3682 (4)
- MECHENG 5139 (3)
- MECHENG 5144 (3)
- MECHENG 5240 (3)
- MECHENG 5372 (3)
- MECHENG 5427 (3)
- MECHENG 5512 (2)
- MECHENG 5530 (3)
- MECHENG 5531 (2)
- MECHENG 5680 (4)
- MECHENG 5682 (4)
- MSE 2240 (3)
- MSE 3540 (3)
- MSE 4350 (3)
- MSE 5001 (4)
- MSE 5240 (3)
- MSE 5372 (3)
- MSE 5427 (3)
- MSE 5530 (3)
- MSE 5531 (2)
- MSE 5680 (4)
- MSE 5682 (4)
- MSE 5820 (3)
- MSE 5830 (3)
- MSE 5840 (3)
- MECHENG 5139 (3)
- MECHENG 5512 (2)
- MECHENG 5541 (3)
- STAT 3470 (3)

Ag Soil & Water:
- ASM 2240 (3)
- ISE 2500 (3)
- ISE 4500 (3)
- ISE 5530 (3)
- MSE 2010 (3)
- MSE 5951 (3)
- MECHENG 3360 (3)
- MECHENG 3670 (4)
- MECHENG 3671 (3)
- MECHENG 3680 (4)
- MECHENG 3682 (4)
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- MECHENG 5139 (3)
- MECHENG 5512 (2)
- MECHENG 5541 (3)
- STAT 3470 (3)

Applied Biological or Agricultural Sciences Electives (3-4 hrs required)

(Note: These hours plus Tech Elec Hrs above must = 18 hrs minimum)

Animal Sciences 2200.01 (3), 2200.02 (opt.) (1)
Horticulture and Crop Science 2200 (3)
Environmental and Natural Resources 3000 (3), 3001(opt.) (1)

General Education Requirement

Writing and Communication

English 1110.xx 3 hr
Second Writing Course* 3 hr
*Recommend ENGR 2367

Social Science

Only one course per Social Science group may count.

3 hr
3 hr

Literature 3 hr

Visual and Performing Arts 3 hr

Historical Study 3 hr

Second Historical Study or Cultures and Ideas 3 hr

Social Diversity in the United States

Course may overlap with another general education category.

0 / 3 hr

Ethics

Course may overlap with another general education category.

0 / 3 hr

Foreign Language

Pre-approved substitutions

A. Credit (including EM) for a foreign language sequence through 1103, or credit for a foreign language course with a prerequisite of 1103, can be substituted for one Gen Ed course requirement as a Cultures & Ideas.

B. Completion of a foreign language minor can be substituted for two Gen Ed courses: one course as a Social Science, (Individuals & Groups or Organizations & Polities subgroups only) and one course as either a Literature or a Cultures & Ideas.

Parameters: Students must choose either Substitution A OR Substitution B. Both substitutions cannot be applied simultaneously.

University Capstone (Cross-Disciplinary Seminar)

Pre-approved substitutions

Completion of a Social Science 3597 or 4597 can be substituted for a Social Science general education course in any group. Completion of an Arts & Humanities 3597 or 4597 can be substituted for a Visual/Performing Arts general education course.

See the list of approved general education courses for additional details: www.advising.engineering.osu.edu.