## PAG-CurriculumGuide2019.xlsx

**Department of Agricultural and Biosystems Engineering - North Dakota State University**

**FALL 2019**

### Freshman (≤27 crs)

<table>
<thead>
<tr>
<th>Course</th>
<th>Crs</th>
<th>Grade</th>
<th>300/400 Level</th>
<th>Gen Ed</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAG 115 Introduction to Precision Ag</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENGL 110 College Composition I</td>
<td>4</td>
<td>C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 103 College Algebra</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COMM 110 Fund of Public Speaking</td>
<td>3</td>
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</tr>
<tr>
<td>HUM/FINE ARTS</td>
<td>3</td>
<td>A</td>
<td></td>
<td></td>
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</tbody>
</table>

### Sophomore (27-59 crs)

<table>
<thead>
<tr>
<th>Course</th>
<th>Crs</th>
<th>Grade</th>
<th>300/400 Level</th>
<th>Gen Ed</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASM 225 Computer Appl in ASM</td>
<td>3</td>
<td></td>
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<tr>
<td>AGEC 242 Intro to Ag Management</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GEOG 455 Intro to GIS</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PPTH 324 Intro to Plant Pathology</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
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### Junior (60 - 89 crs)

<table>
<thead>
<tr>
<th>Course</th>
<th>Crs</th>
<th>Grade</th>
<th>300/400 Level</th>
<th>Gen Ed</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASM 354 Electricity and Electronic Appl</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WELL 101 Wellness</td>
<td>2</td>
<td>W</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOIL 210 Intro to Soil Science</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elective</td>
<td>6</td>
<td></td>
<td></td>
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</table>

### Senior (90 + crs)

<table>
<thead>
<tr>
<th>Course</th>
<th>Crs</th>
<th>Grade</th>
<th>300/400 Level</th>
<th>Gen Ed</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAG 455 Big Data Mgmt in Prec. Ag</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ASM 378 Machinery Princ &amp; Mgmt</td>
<td>3</td>
<td>A/D</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HUM/FINE ARTS</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elective</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Summer Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Crs</th>
<th>Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAG 115L Intro to Precision Ag Lab</td>
<td>1</td>
<td>Fr.</td>
</tr>
<tr>
<td>PAG 496 Field Exp./Internship</td>
<td>1</td>
<td>So.</td>
</tr>
</tbody>
</table>

### General Education Electives

- See www.ndsu.edu/registrar/gened for approved courses.

### Program Electives

- Select courses in consultation with your advisor.

### Electives - 24 credits required

(May select any courses listed on page 2, or in consultation with your advisor)

### Total Credits

120

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*120 minimum total credits required. The last 30 credits must be earned in residence at NDSU.

*A minor may require more than 16 credits, therefore, select electives apply. Check with the minor department for current requirements/changes and assignment of a minor advisor.

*PAG students must maintain a 2.5 CGPA in required PAG courses.

*Students must register for an internship in PAG the semester it is being taken.

1 Use this column to tally grades; use "T" for transfer courses and "IP" for courses currently in progress.

2 Use this column to tally 36 credits of 300/400 level courses required for graduation.

3 First year students with a composite ACT score ≥ 21 should register for ENGL 120 (unless transfer credit for ENGL 120 is received). If ENGL 120 is completed with a grade of "C" or better, credits will be awarded for ENGL 110 with a passing grade (P). For more details on NDSU's English Placement process, go to http://english.ndsu.edu/placement_guidelines_writing_courses/.

4 Completion of Composition I is required for graduation, whether you earn 4 credits at NDSU or 3 credits with a transfer course. If you transfer in a 3 cr. ENGL 110, you will need to add an add'l 1 credit to maintain the 120 total credits required.

5 May not be required - based on math placement test scores. Work with advisor to substitute an appropriate replacement for Math course(s).

6 MATH 105 or higher.

*As a student at NDSU, it is your responsibility to know the requirements of your degree. To ensure all degree requirements are met, meet with your academic advisor regularly and follow your Academic Requirements Report found on Campus Connection. Required PAG courses are typically offered only once per year and all course offerings are subject to change.

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Last Updated 03/11/2019
### Approved Course List for Program Electives

Additional courses may be acceptable. Please discuss with your advisor.

<table>
<thead>
<tr>
<th>Agricultural Systems Management Minor (16 credits)</th>
<th>Economics Minor (18 -19 credits)</th>
<th>Crop &amp; Weed Science Minor (18 credits)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASM 264-3</td>
<td>ECON 201-3</td>
<td>PLSC 110-3</td>
</tr>
<tr>
<td>ASM 354-3</td>
<td>ECON 202-3</td>
<td>PLSC 225-3</td>
</tr>
<tr>
<td>ASM 373 or ASM 378 - 3</td>
<td>ECON 341-3 or BUSN 487-4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ECON 343-3</td>
<td></td>
</tr>
<tr>
<td>Select 7 credits from the following:</td>
<td>3 credits of 300/400 level ECON</td>
<td>6-7 cr. (2 courses required):</td>
</tr>
<tr>
<td>ASM 225-3</td>
<td>AND</td>
<td>5-6 cr. of the following:</td>
</tr>
<tr>
<td>ASM 323-3</td>
<td>3 credits of 400 level ECON</td>
<td>PLSC 315/L - 3/1</td>
</tr>
<tr>
<td>ASM 374-3</td>
<td></td>
<td>PLSC 300/400 level cr.</td>
</tr>
<tr>
<td>ASM 491-1</td>
<td></td>
<td>PLSC 215-1</td>
</tr>
<tr>
<td>ASM 429-3</td>
<td></td>
<td>PLSC 323-3</td>
</tr>
<tr>
<td>ASM 496-1 (Ag Tech Expo)</td>
<td></td>
<td>SOIL 210-3</td>
</tr>
<tr>
<td>ASM 496-1 (Field Experience)</td>
<td></td>
<td>ENT 350-3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PPTH 324-3</td>
</tr>
</tbody>
</table>

### Potential Minors

Check with the minor department for current requirements/changes and assignment of a minor advisor. Miniors in other disciplines are available. Check minor requirements with the minor department no later than the beginning of the junior year. The minor department must certify completion of requirements before a minor will be recorded on the transcript.

#### Agricultural Systems Management Minor (16 credits)
- ASM 264-3
- ASM 354-3
- ASM 373 or ASM 378 - 3
- Select 7 credits from the following:
  - ASM 225-3
  - ASM 323-3
  - ASM 374-3
  - ASM 429-3
  - ASM 491-1
  - ASM 496-1 (Ag Tech Expo)
  - ASM 496-1 (Field Experience)

#### Business Administration Minor (24 credits)
- ACCT 102-3 or ACCT 200 & 201 - 6
- ECON 105-3 or ECON 201 & ECON 202 - 6
- 2 of the following (6 credits)
  - FIN 320-3
  - MGMT 320-3
  - MRKT 320-3
  - AND
  - 12 credits of 300/400 BUSN, FIN, MGMT, MRKT courses, including MIS 370, ENTR 366 & 385, LEAD 305 & 325

#### Animal Science Minor (16 credits)
- ANSC 114-3
- ANSC 220-3
- ANSC 223-2
- ANSC 240-3
- Must include 1 of the following courses:
  - ANSC 300-3
  - ANSC 314-3
  - ANSC 323-3
  - ANSC 324-3
  - ANSC 340-3
  - ANSC 357-3
- Remaining credits may come from those listed or the following:
  - ANSC 370-3
  - ANSC 444-3
  - ANSC 463-3
  - ANSC 487-3
  - ANSC 342-2
  - ANSC 230-2
  - ANSC 231-2
  - ANSC 232-2
  - At least 9 add'l cr.

#### Economics Minor (18 -19 credits)
- ECON 201-3
- ECON 202-3
- ECON 341-3 or BUSN 487-4
- ECON 343-3
- 3 credits of 300/400 level ECON
- AND
- 3 credits of 400 level ECON
- 6-7 cr. (2 courses required):
  - PLSC 315/L - 3/1
  - PLSC 320-3
  - PLSC 323-3
- 5-6 cr. of the following:
  - PLSC 300/400 level cr.
  - SOIL 210-3
  - ENT 350-3
  - PPTH 324-3

#### Crop & Weed Science Minor (18 credits)
- PLSC 110-3
- PLSC 225-3
- 6-7 cr. (2 courses required):
  - PLSC 300/400 level cr.
- 5-6 cr. of the following:
  - PLSC 215-1
  - SOIL 210-3
  - ENT 350-3
  - PPTH 324-3

#### Agribusiness Minor (18 credits)
- ECON 201-3
- 2 of the following (6 credits)
  - AGEC 242-3
  - AGEC 244-3
  - AGEC 246-3
- At least 9 add'l cr.
  - ECON 341 or from any 300/400 level AGEC course
  - (excluding AGEC 397 & AGEC 496)