# 2012-2013 AGRONOMY MAJOR checklist - 125 CREDITS (see the on-line SDSU Catalog for course descriptions)

### AGRONOMY CORE (28 CREDITS)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Description</th>
<th>Grade/Sem/Yr</th>
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<tbody>
<tr>
<td>PS 109</td>
<td>First Year Experience</td>
<td>2(F)</td>
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<tr>
<td>PS 103-103L</td>
<td>Crop Production and Lab, 3(FS)</td>
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<tr>
<td>PS 213-213L</td>
<td>Soils and Lab, 3(FS)</td>
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<tr>
<td>PS 223-223L</td>
<td>Principles of Plant Pathology and Lab, 3(F)</td>
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<tr>
<td>PS 305-305L</td>
<td>Insect Biology and Lab, 3(F) or</td>
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<tr>
<td>PS 307-307L</td>
<td>Insect Pest Management and Lab, 3(S)</td>
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<td>PS 323</td>
<td>Soil Fertility and Plant Nutrient Management, 3(S)</td>
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<td>PS 343-343L</td>
<td>Weed Science and Lab, 3(F)</td>
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<td>PS 390</td>
<td>Seminar, 1(FS)</td>
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<tr>
<td>PS 494</td>
<td>Internship, 0.5 X 2=1(FSSu)</td>
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<tr>
<td>ABS 475-475L</td>
<td>Integrated Natural Resource Management and Lab, 3(F)</td>
<td>(Advanced Writing Requirement)</td>
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**Natural Resources Stewardship Elective (3 cr, one course from the following list)**

1. PS 243 - Principles of Geology, 3(S) or
2. PS 307-307L - Insect Pest Management and Lab, 3(S) or
3. PS 310-310L - Soil Geo/Land Use Interpret + Studio, 3(F, 08, 10) or
4. PS 362-362L - Environmental Soil Management and Lab, 3(S) or
5. PS 446 - Agroecology, 3(S) or
6. ABS 203 - Global Food Systems, 3(F) or
7. ABS 482 - International Experience, 3(FSSu) (Must be 3 credits) or
8. BIOL/PHIL 383 - Bioethics, 3(F) |

### AGRONOMY Core (Minimum C grade in each course and Agronomy core GPA MUST BE ≥ 2.50)

### SOILS/ENVIRONMENTAL PROTECTION (Grade/Sem/Yr)

1. **PS 243** - Principles of Geology, 3(S) |
2. **PS 244** - Geological Resources of South Dakota Lab, 1(F) |
3. **PS 310-310L** - Soil Geography and Land Use Interpretation and Studio, 3(F) |
4. **PS 321** - Soil Judging, 1-3(FS) may be repeated up to 3 cr |
5. **PS 362-362L** - Environmental Soil Management and Lab, 3(S) |
6. **PS 412** - Environmental Soil Chemistry, 3(S) - 11, 13 |
7. **PS 421-421L** - Soil Microbiology and Lab, 3(S) - 11, 13 |
8. **PS 446** - Agroecology, 3(S) |
9. **PS 473-473L** - Rural Real Estate Appraisal + Lab, 3(S) - 11, 13 |
10. **PS 483** - Irrigation - Crop and Soil Practices, 3(S) - 12, 14 |

### BIOLOGICAL SCIENCES (18-20 CREDITS)

1. **BIO 151-151L** - General Biology I and Lab, 4(F) |
2. **BOT 201-201L** - General Botany and Lab, 3(S) or |
3. **BIO 153-153L** - General Biology II and Lab, 4(S) |
4. **PS 383-383L** - Principles of Crop Improvement and Lab, 3(F) or |
5. **BIO 202-202L** - Genetics/Organismal Biology and Lab, 4(F) or |
6. **BIO 371** - Genetics, 3(FS) |
7. **BOT 327-327L** - Plant Physiology and Lab, 4(S) |
8. **PS 421-421L** - Soil Micro/Microlab, 3(S, 09, 11) and |
9. **PS 490 Sp.Topics, 1(S) or**
10. **MICR 231-231L** - General Microbiology and Lab, 4(FS) |

### PHYSICAL SCIENCES (18-21 CREDITS)

1. **CHEM 106-106L** - Chemistry Survey and Lab, 4(FSSu) or |
2. **CHEM 112-112L** - General Chemistry I and Lab, 4(FSSu) or |
3. **CHEM 120-120L** - Elementary Organic Chemistry and Lab, 4(FSSu) or |
4. **CHEM 108-108L** - Organic and Biochemistry, 5(FSSu) |
5. **PHYS 101-101L** - Survey of Physics and Lab, 4(FS) or |
6. **PHYS 111-111L** - Introduction to Physics I and Lab, 4(FSSu) |
7. **MATH 102** - College Algebra, 3(FSSu) or |
8. **MATH 115 - Precalculus, 5(FS) or**
9. **MATH 120 - Trigonometry, 3(FSSu) > SGR - 5 (3cr) < |
10. **STAT 281** - Introduction to Statistics, 3(FSSu) |

### COMMUNICATION SKILLS (12 CREDITS)

1. **ENGL 101 - Composition I, 3(FSSu) > SGR - 1 (3cr) < |
2. **SPCM 101** - Fundamentals of Speech, 3(FSSu) or |
3. **SPCM 215** - Public Speaking, 3(FS) or |
4. **SPCM 222** - Argumentation and Debate, 3(S) or |
5. **ENGL 201** - Composition II, 3(FSSu) > SGR - 1 (3cr) < |
6. **ENGL 379** - Technical Communication, 3(FSSu) |

### MARKETING/SELLING (3-4 CREDITS)

1. **AGEC 354** - Agricultural Marketing and Prices, 3(FS) or |
2. **AS 285-285L** - Livestock Evaluation and Marketing and Lab, 4(FS) or |
3. **BADM 474** - Personal Selling, 3(F) |

### SOCIAL SCIENCES (6 CREDITS)

1. **ECON 201** - Principles of Microeconomics, 3(FSSu) or |
2. **ECON 202** - Principles of Macroecon, 3(FSSu) > SGR - 3 (3cr) < |
3. **SOC 100** - Introduction to Sociology, 3(FSSu) or |
4. **SOC 150** - Social Problems, 3(FS) or |
5. **SOC 240** - Soc of Rural America, 3(FS) > SGR - 3 (3cr) < |

### Footnotes:

1. Cannot be used solely to meet area requirements. Can be used as part of 13 credit PS electives requirement.
2. Not to include courses used to fulfill Plant Science or Biological Sciences Core or Natural Resources Stewardship Elective.
4. Must involve collaboration with pest management faculty (Pathology, Entomology, or Weeds area).

More on Other Side of This Sheet
### Minimum C grade required in each course, and Minor GPA must be ≥ 2.50 in order to graduate with a Pest Management or Soil Science Minor.

### Suggested sequence of course selections for Agronomy majors

#### Freshman Year:

**Fall**
- **PS and Elective Courses** ................................................................. 0-5
- **BIOL 151-151L, General Biology I and Lab** .................................. 4
- **PS 109**, First Year Experience ..................................................... 2
- **PS 103-103L, Crop Production and lab** ........................................ 3

**Fall or Spring**
- **ENGL 101, Composition I** .............................................................. 3
- **SGR Goal 5**: Mathematics
  - **MATH 102**, College Algebra* or ................................................ 3
  - **MATH 115**, Precalculus* or ......................................................... 5
  - **MATH 120**, Trigonometry* ........................................................... 3
- **CHEM 106-106L or 112-112L, Chemistry and Lab** ......................... 4
- **SGR Goal 2**: Oral Communication
  - **SPCM 101**, Fundamentals of Speech or ...................................... 3
  - **SPCM 215**, Public Speaking or ................................................... 3
  - **SPCM 222**, Argumentation and Debate ........................................ 3
- **SGR Goal 3**: Social Science/ Diversity
  - **SOC 100**, Introduction to Sociology* (G) or ............................... 3
  - **SOC 150**, Social Problems* (G) or ............................................. 3
  - **SOC 240**, The Sociology of Rural America* ** (G) ........................ 3

**Spring**
- **PS and Elective Courses** ............................................................. 0-6
- **SGR Goal 6**: Natural Sciences.
  - **BIOL 153-153L, General Biology II and Lab** or .......................... 4
  - **BOT 201-201L, General Botany and Lab** .................................. 3

#### Sophomore Year:

**Fall**
- **SGR Goal 4**: Humanities and Arts/Diversity* (G) ......................... 6
- **PS and Elective Courses** ............................................................. 6
- **PS 223-223L, Principles of Plant Pathology and Lab** .................... 3

**Fall or Spring**
- **ENGL 201, Composition II** ........................................................... 3
- **PS 213-213L, Soils and Lab** ** ....................................................... 3
- **ECON 201, Principles of Microeconomics** or ................................ 3
- **ECON 202, Principles of Macroeconomics** (G) ............................ 3
- **CHEM 108-108L or 120-120L, Organic Chemistry & Lab** .............. 4-5

**Spring**
- **SGR Goal 4: Humanities and Arts/Diversity* (G) ........................... 6
- **PS and Elective Courses** ............................................................. 10

#### Junior Year:

**Fall**
- **PS and Elective Courses** ............................................................ 2-13
- **PS 305-305L, Insect Biology and Lab** ......................................... 3
- **PS 343-343L, Weed Science and Lab** ........................................... 3
- **(or in the Fall of the SENIOR year)** ........................................... 3

**Fall or Spring**
- **Natural Resources Stewardship Elective (see list)** .......................... 3
- **PS 390, Seminar (AW)** .............................................................. 1
- **PS 494, Internship** ................................................................. 0.5-2
- **MICR 231-231L, General Microbiology and Lab** or .................... 4
- **PS 421-421L, Soil Microbiology & Lab, and PS 490** ....................... 4
- **PS and Elective Courses** ............................................................. 0-9
- **BOT 327-327L, Plant Physiology and Lab** .................................. 4
- **PS 323, Soil Fertility and Plant Nutrient Management** .................. 3

#### Senior Year:

**Fall**
- **PS 343-343L, Weed Science and Lab** ........................................... 3

**Fall or Spring**
- **PS and Elective Courses** ............................................................ 6-13
- **ENGL 379, Technical Communication (AW)** .............................. 3
- **STAT 281, Introduction to Statistics** ........................................... 3

* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student’s first 64 credits. (see the on-line 2011-12 Catalog for details.)

** **SDSU has an 5-credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement. (see the on-line 2011-12 Catalog for details.)

(AW) Advanced Writing Requirement. (see the on-line 2011-12 Catalog for details.)

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.
**Prerequisites:**

PS 213-213L - Soils and Lab
Prerequisites: CHEM 106-106L or CHEM 112-112L. Corequisites: PS 213L-PS 213

PS/HO 222 Fundamentals of Turf Management and Lab
Prerequisites: HO 111-111L or PS 103-103L or permission of instructor. Corequisites: HO/PS 222-212L

PS 223-223L - Principles of Plant Pathology and Lab
Prerequisites: BIOL 103-103L or BIOL 153-153L or BOT 201-201L. Corequisites: PS 223L-PS 223.

PS 243 - Principles of Geology
Prerequisites: PS 106 or CHEM 112 or equivalent.

PS 244 - Geological Resources of South Dakota Lab
Prerequisites: PS 243.

PS 303-303L - Seed Technology and Lab
Prerequisites: PS 103-103L or HO 111-111L. Corequisites: PS 303L-PS 303.

PS 305-305L - Insect Biology and Lab
Prerequisites: MATH 102 or higher, and one of following: BIOL 103-103L, BOT 201-201L, or BIOL 153-153L. Corequisites: PS 305L-PS 305. Cross-Listed: ZOOL 305.

PS 307-307L - Insect Pest Management and Lab

PS 308-308L - Grain Grading and Lab
Prerequisites: PS 103-103L. Corequisites: PS 308L-PS 308.

PS 310-310L - Soil Geography and Land Use Interpretation and Lab

PS 311 - Grain and Seed Production and Processing
Prerequisites: PS 103-103L or HO 111-111L.

PS 313 - Forage Crop and Pasture Management
Prerequisites: BIOL 101 or BIOL 151. Field trips required.

PS 320 - Crop Judging.
Preferred prior courses: PS 103-103L, PS 308-308L.

PS 321 - Soil Judging
Prerequisites: PS 213-213L.

PS/HO 322-322L - Turfgrass Pests and Lab
Prerequisites: HO/PS 222-222L & PS 223-223L. Corequisites: HO/PS 322-322L

PS 323 - Soil Fertility and Plant Nutrient Management
Prerequisites: PS 213-213L.

PS 333-333L - Diseases of Field Crops and Lab
Prerequisites: PS 223-223L. Corequisites: PS 333L-PS 333.

PS 334-334L - Diseases of Horticultural Crops and Lab
Prerequisites: PS 223-223L. Corequisites: PS 334L-PS 334.

PS 343-343L - Weed Science and Lab
Prerequisites: Take PS 103/103L or HO 111/HO111L; and take CHEM 108/108L or CHEM 120/120L or CHEM 326/326L. Corequisites: PS 343L-PS 343.

PS 362-362L - Environmental Soil Management and Lab
Prerequisites: PS 213-213L. Corequisites: PS 362L-PS 362.

PS 383-383L - Principles of Crop Improvement and Lab
Prerequisites: Take PS 103/103L or HO 111/HO111L; and take BIOL 103/103L or BIOL 153/153L or BOT 201/201L. Corequisites: PS 383L-PS 383. Cross-Listed: HO 383.

PS 390 – Seminar
Prerequisite: Junior standing

PS 412-512 - Environmental Soil Chemistry
Prerequisites: PS 213-213L and CHEM 108-108L, or CHEM 120-120L.

PS 415-415L/515-515L - Mycology and Lab

PS 421-421L/521-521L - Soil Microbiology and Lab

PS/HO 423/523 - Turfgrass Stress Physiology.
Prerequisites: Senior or graduate student status or permission of instructor

PS 431-531 - Insect Ecology and Biological Control

PS 440-440L - Crop Management with Precision Farming and Lab.
Prerequisites: PS 223-223L; PS 305-305L, or PS 307-307L; PS 323; PS 343-343L; and STAT 281. Corequisites: PS 440L-PS 440L/540L.

PS 446-546 – Agroecology

PS 450-450L/550-550L - Field Study of Plant Disease Diagnosis and Lab.

PS 453-553 - Advanced Genetics
Prerequisites: BIOL 202, 204, 371 or equivalent. Cross-Listed: BIOL 453-553.

PS 473-473L/573-573L - Rural Real Estate Appraisal and Lab

PS 483 - Irrigation – Crop and Soil Practices
Prerequisites: PS 213-213L and MATH 102, or MATH 115, or MATH 123.

PS 491 - Independent Study
PS 492-592 – Topics
PS 494 – Internship.
Prerequisites: Meet with Agronomy Internship Coordinator (Dr. Howard Woodard) prior to registering.

PS 498 - Undergraduate Research/Scholarship

Agronomy Major Revised: May 2012 (EBT)