College of Agricultural and Life Sciences
Proposed Catalog Changes
Effective Term (unless otherwise noted) = Summer 2016

AGRICULTURAL AND EXTENSION EDUCATION

1. Add the following courses

   AgEd 564 Curriculum Development in Agricultural Education (3 cr)
   Short course: CURRICULUM DEVELOPMENT IN AGED
   Design and development of data based curriculum and curriculum evaluation procedures in agricultural and extension education. Critique of curriculum development models, contemporary trends and issues, curriculum resources and accountability tools. Analysis of the use of national and state standards as well as local community needs in curriculum development.

   Available via distance: Yes
   Geographical Area Availability: State-wide
   Rationale: The Department of Agricultural and Extension Education is in the process of reviewing our graduate degree courses. We are planning on offering more courses online using Bb Learn and Adobe Connect technology for place-bound graduate students across Idaho who cannot travel to Moscow or Boise to complete graduate courses.

   Curriculum development is not a topic that is currently taught in our department and courses in the college of education are not fulfilling the needs of our high school agriculture teachers. The state approved curriculum in Idaho is somewhat outdated and in need of revision, however, most teachers require further education to fully understand the process of curriculum development.

   Students will be assessed on the course objectives through a practical project: the development of an 18 week curriculum for their high school agriculture program.

   AgEd 565 Program Planning and Evaluation in Agricultural Education (3 cr)
   Short course: PROG PLANNING & EVAL IN AGED
   This course is designed to develop an understanding of Program Planning and Evaluation relevant to secondary agricultural education. Theories of program planning, evaluation principles, models, and procedures used in developing and analyzing agricultural education programs, conducting needs assessments, and the marketing of outcomes to major stakeholders.

   Available via distance: Yes
   Geographical Area Availability: State-wide
   Rationale: The Department of Agricultural and Extension Education is in the process of reviewing our graduate degree courses. We are planning on offering more courses online using Bb Learn and Adobe Connect technology for place-bound graduate students across Idaho who cannot travel to Moscow or Boise to complete graduate courses. Our department does not currently offer a course in program planning or evaluation. Practicing teachers are faced with completing the IQPS document- with little or no knowledge of the theories of program evaluation. This content of this course is fairly typical of MS programs in Agricultural Education. Students will be assessed through weekly reflections, research projects and conducting program evaluations.
AgEd 566 Advanced Philosophies of Teaching & Learning in Agricultural Education (3 cr)

Short course: ADV PHIL OF TEACH/LRN IN AGED
Foundations and theories of teaching and learning with emphasis on applications in the secondary agricultural education classroom. Emphasis will be placed upon behavioral, social cognitive, cognitive, information processing, brain-based, constructivist, developmental, motivational, and transformational theories as they apply in contemporary agricultural education settings. Advanced teaching methods and pedagogies based on researched best-practices.

ANIMAL AND VETERINARY SCIENCE

1. Make the following changes to the Animal and Veterinary Science Major (B.S.A.V.S.)

Required course work includes the university requirements (see regulation J-3) and:

AVS 109  The Science of Animals that Serve Humanity (4 cr)
AVS 209  Science of Animal Husbandry (4 cr)
AVS 305  Animal Nutrition (3 cr)
AVS 371, AVS 373  Anatomy and Physiology and Lab (4 cr)
Biol 115  Cells and the Evolution of Life (4 cr)
Comm 101  Fundamentals of Public Speaking (2 cr)
Stat 251  Statistical Methods (3 cr)

One of the following (3 cr):
Engl 313  Business Writing (3 cr)
Engl 317  Technical Writing (3 cr)

One of the following (3 cr):
Math 143  Pre-calculus Algebra and Analytical Geometry (3 cr)
Math 160  Survey of Calculus (4 cr)
Math 170  Analytic Geometry and Calculus I (4 cr)

Complete one of the following four options:

A. Business Option

Acct 201  Introduction to Financial Accounting (3 cr)
Acct 202  Introduction to Managerial Accounting (3 cr)
AgEc 278  Farm and Ranch Management (4 cr)
AgEc 289  Agricultural Markets and Prices (3 cr)
AVS 306  Feeds and Ration Formulation (4 cr)
AVS 363  Animal Products for Human Consumption (4 cr)
AVS 450  Issues in Animal Agriculture (1 cr)
BLaw 265  Legal Environment of Business (3 cr)
Chem 275  Carbon Compounds (3 cr)
Econ 201  Principles of Macroeconomics (3 cr)
Econ 202  Principles of Microeconomics (3 cr)

Business electives (6 cr)
6 crs of Upper Division Ag Econ

One of the following (3 cr):
- AgEc 301: Managerial Economics: Production (3 cr)
- AgEc 302: Managerial Economics: Consumption & Markets (3 cr)

One of the following (3 cr):
- AgEc 301: Managerial Economics: Production (3 cr)
- AgEc 302: Managerial Economics: Consumption & Markets (3 cr)

One of the following (3-4 cr):
- AVS 222: Animal Reproduction and Breeding (3 cr)
- AVS 452: Physiology of Reproduction (4 cr)

One of the following (4 cr):
- Chem 101: Introduction to Chemistry I (4 cr)
- Chem 111: Principles of Chemistry I (4 cr)

One of the following (3 cr):
- AVS 472: Dairy Cattle Management (3 cr)
- AVS 474: Beef Cattle Science (3 cr)

One of the following (3 cr):
- AVS 466: Equine Science and Management (3 cr)
- AVS 468: Companion Animal Biology & Management (3 cr)
- AVS 472: Dairy Cattle Management (3 cr)
- AVS 474: Beef Cattle Science (3 cr)
- **AVS 476**: Sheep Science (3 cr)

Courses to total 120 credits for this degree

B. Dairy Science Option

- AgEc 278: Farm and Ranch Management (4 cr)
- AgEc 289: Agricultural Markets and Prices (3 cr)
- AVS 172: Principles and Practices of Dairy Science (2 cr)
- AVS 306: Feeds and Ration Formulation (4 cr)
- AVS 330: Genetics of Livestock Improvement (3 cr)
- AVS 363: Animal Products for Human Consumption (4 cr)
- AVS 411: Ruminant Nutrition (3 cr)
- AVS 450: Issues in Animal Agriculture (1 cr)
- AVS 463: Growth and Lactation (3 cr)
- AVS 471: Animal Disease Management (3 cr)
- AVS 472: Dairy Cattle Management (3 cr)
AVS 475  Advanced Dairy Cattle Management (3 cr)
Chem 275  Carbon Compounds (3 cr)
Econ 202  Principles of Microeconomics (3 cr)

One of the following (3-4 cr):
AVS 222  Animal Reproduction and Breeding (3 cr)
AVS 452  Physiology of Reproduction (4 cr)

One of the following (4 cr):
Chem 101  Introduction to Chemistry I (4 cr)
Chem 111  Principles of Chemistry I (4 cr)

One of the following (3 cr):
Biol 154  Introductory Microbiology (3 cr)
Biol 250  General Microbiology (3 cr)

One of the following (1-2 cr):
Biol 255  General Microbiology Lab (2 cr)
MMBB-Biol 155  Introductory Microbiology Laboratory (1 cr)

Courses to total 120 credits for this degree

C. Production Option
AgEc 278  Farm and Ranch Management (4 cr)
AgEc 289  Agricultural Markets and Prices (3 cr)
AVS 222  Animal Reproduction and Breeding (3 cr)
AVS 306  Feeds and Ration Formulation (4 cr)
AVS 330  Genetics of Livestock Improvement (3 cr)
AVS 363  Animal Products for Human Consumption (4 cr)
AVS 411  Ruminant Nutrition (3 cr)
AVS 450  Issues in Animal Agriculture (1 cr)
AVS 471  Animal Disease Management (3 cr)
Chem 275  Carbon Compounds (3 cr)
Econ 202  Principles of Microeconomics (3 cr)
REM 221 or For 221  Ecology (3 cr)

300 or 400 level Life science elective (chosen from Biol, Ent, Fish, MMBB, PiSc, REM, Soil, or WLF) (3 cr)

One of the following (3-4 cr):
AVS 222  Animal Reproduction and Breeding (3 cr)
AVS 452  Physiology of Reproduction (4 cr)

One of the following (4 cr):
Chem 101  Introduction to Chemistry I (4 cr)
Chem 111  Principles of Chemistry I (4 cr)

One of the following (3 cr):
Biol 154  Introductory Microbiology (3 cr)
Biol 250  General Microbiology (3 cr)

One of the following (1-2 cr):
Biol 255  General Microbiology Lab (2 cr)
            MMMBB  Biol 155  Introductory Microbiology Laboratory (1 cr)

One of the following (2-3 cr):
REM 151  Rangeland Principles (2 cr)
REM 456  Integrated Rangeland Management (3 cr)

One of the following (3 cr):
AVS 472  Dairy Cattle Management (3 cr)
AVS 474  Beef Cattle Science (3 cr)

One of the following (3 cr):
AVS 466  Equine Science and Management (3 cr)
AVS 468  Companion Animal Biology & Management (3 cr)
AVS 472  Dairy Cattle Management (3 cr)
AVS 474  Beef Cattle Science (3 cr)
            AVS 476  Sheep Science (3 cr)

Courses to total 120 credits for this degree

D. Science/Preveterinary Option
AVS 452  Physiology of Reproduction (4 cr)
Biol 114  Organisms and Environments (4 cr)
Chem 111  Principles of Chemistry I (4 cr)
Chem 112  Principles of Chemistry II (5 cr)
Chem 277, Chem 278  Organic Chemistry I and Lab (4 cr)
Phys 111, Phys 111L  General Physics I and Lab (4 cr)
Phys 112, Phys 112L  General Physics II and Lab (4 cr)

One of the following (3-4 cr):
Biol 310, Biol 315  Genetics and Lab (4 cr)
Gene 314  General Genetics (3 cr)

One of the following (3 cr):
Biol 154  Introductory Microbiology (3 cr)
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<thead>
<tr>
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<th>Credit Hours</th>
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<tbody>
<tr>
<td>Biol 250</td>
<td>General Microbiology (3 cr)</td>
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<td>One of the following (1-2 cr):</td>
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<tr>
<td>Biol 255</td>
<td>General Microbiology Lab (2 cr)</td>
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<tr>
<td>MMBB Biol 155</td>
<td>Introductory Microbiology Laboratory (1 cr)</td>
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<td>One of the following (3-4 cr):</td>
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<tr>
<td>Biol 300</td>
<td>Survey of Biochemistry (3 cr)</td>
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<td>Biol 380</td>
<td>Biochemistry I (4 cr)</td>
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First Year in Veterinary School (32 cr) or the following courses:

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<td>AVS 306</td>
<td>Feeds and Ration Formulation (4 cr)</td>
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<td>AVS 471</td>
<td>Animal Disease Management (3 cr)</td>
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<tr>
<td>Biol or MMBB elective, 300-level or above</td>
<td>(3 cr)</td>
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One of the following (3 cr):

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<tr>
<td>AVS 451</td>
<td>Endocrine Physiology (3 cr)</td>
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<tr>
<td>AVS 463</td>
<td>Growth and Lactation (3 cr)</td>
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<tr>
<td>Biol 423</td>
<td>Comparative Vertebrate Physiology (3 cr)</td>
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<tr>
<td>Biol 432 or MMBB 409</td>
<td>Immunology (3 cr)</td>
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<tr>
<td>Biol 447 or MMBB 432</td>
<td>Virology (3 cr)</td>
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<tr>
<td>Biol 474</td>
<td>Principles of Developmental Biology (3 cr)</td>
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<tr>
<td>Biol 483</td>
<td>Mammalogy (3 cr)</td>
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<tr>
<td>Chem 372</td>
<td>Organic Chemistry II (3 cr)</td>
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<tr>
<td>MMBB 460</td>
<td>Microbial Physiology (3 cr)</td>
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<tr>
<td>AVS 411</td>
<td>Ruminant Nutrition (3 cr)</td>
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<tr>
<td>AVS 475</td>
<td>Advanced Dairy Cattle Management (3 cr)</td>
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<td>AVS 476</td>
<td>Sheep Science (3 cr)</td>
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Courses to total 120 credits for this degree
**Distance Education:** Less than 50% of the requirements can be completed  
**Geographical Area Availability:** Moscow  
**Rationale:** 1. Added two more upper level AVS courses (411 and 475) to provide more options for our pre-vet students as a substitute for Chem 372 to qualify for certain veterinary school applications.  
2. AVS 476, Sheep Science: was removed from the dormant list in 14-15. The course is shown as active in the catalog under Courses; but isn't yet active in our Department curriculum or on the student degree audit. We would like to add the course back to the species specific courses in our Production Option curriculum.  
3. Updating curriculum to reflect dissolution of department - MMBB and courses were replaced with subject -BIOL.  
4. Removing AgEc 301/302 from Business Option -- redundant (added by grm)

**FOOD SCIENCE**

1. Reactivate the following courses

**FS J430/J530 Dairy Products Lab (1 cr)**  
See FS J430/J530.  

*Available via distance:* No  
*Geographical Area Availability:* Moscow  
**Rationale:** Course is part of cooperative program and should not be dormant as it could be taught at UI in any given academic year given instructor and classroom availability. It is joint-listed with 430 so that both graduates and undergraduates can take this course for degree credit.

**FS J465/J565**  
See FS J465/J565.  

*Available via distance:* No  
*Geographical Area Availability:* Moscow  
**Rationale:** Course is part of cooperative program and should not be dormant as it could be taught at UI in any given academic year given instructor and classroom availability. It is joint-listed with 465 so that both graduates and undergraduates can take this course for degree credit.