ANIMAL SCIENCE CURRICULUM – 2003-2005

Advisor Approved Career Elective Areas (20 - 28 units)

**Note:**
A minimum of 60 units of 300/400 level must be taken to graduate.

### Pre-Veterinary Medicine

<table>
<thead>
<tr>
<th>RECOMMENDED CORE:</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology of Animals</td>
<td>5 BIO 153</td>
</tr>
<tr>
<td>General Chemistry</td>
<td>4 CHEM 128</td>
</tr>
<tr>
<td>General Chemistry</td>
<td>4 CHEM 129</td>
</tr>
<tr>
<td>Organic Chemistry II</td>
<td>5 CHEM 317</td>
</tr>
<tr>
<td>Survey of Biochemistry &amp; Biotechnology</td>
<td></td>
</tr>
<tr>
<td>Biochemical Principles</td>
<td>5 *CHEM 313 OR *CHEM 371</td>
</tr>
<tr>
<td>Metabolism</td>
<td>3 CHEM 372</td>
</tr>
<tr>
<td>Microbiology</td>
<td>5/5 MICRO 221 OR MICRO 224 &amp; 225</td>
</tr>
<tr>
<td>College Physics</td>
<td>4 PHYS 121</td>
</tr>
<tr>
<td>College Physics</td>
<td>4 PHYS 122</td>
</tr>
<tr>
<td>Systemic Animal Physiology</td>
<td>4 VS 438</td>
</tr>
<tr>
<td>Vertebrate Development</td>
<td>5 ZOO 405</td>
</tr>
</tbody>
</table>

**Directed Electives:**
- Equine Reproduction                    | 5 ASCI 333 |
- Internship in Animal Science           | 6 ASCI 339 |
- Animal Nutrition                       | 3 ASCI 420 |
- Biology of Plants and Fungi            | 5 BIO 152 |
- Biochemistry Laboratory                | 2 CHEM 374 |
- Artificial Insanation & Embryo Biotech | 4 DSCI 330 |
- Poultry Immunology and Diseases        | 4 PM X340 |
- Applied Statistics for the Life Sciences | 4 STAT 218 |
- Animal Parasitology                    | 3 VS 203 |
- Production Medicine                    | 3 VS 312 |
- Zoonoses and Veterinary Public Health Concerns | 4 VS 320 |

*These classes may be used to satisfy courses in GE & B or major categories. They cannot be double-counted.

### Graduate School

<table>
<thead>
<tr>
<th>RECOMMENDED CORE:</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Biotechnology in Animal Science</td>
<td>5 ASCI 403</td>
</tr>
<tr>
<td>Domestic Livestock Endocrinology</td>
<td>4 *ASCI 405</td>
</tr>
<tr>
<td>Biology of Animals</td>
<td>5 BIO 153</td>
</tr>
<tr>
<td>Principles of Genetics</td>
<td>5 *BIO 351</td>
</tr>
<tr>
<td>General Chemistry</td>
<td>4 CHEM 128</td>
</tr>
<tr>
<td>General Chemistry</td>
<td>4 CHEM 129</td>
</tr>
<tr>
<td>Organic Chemistry II</td>
<td>5 CHEM 317</td>
</tr>
<tr>
<td>Biochemical Principles</td>
<td>5 *CHEM 371</td>
</tr>
<tr>
<td>Applied Exper. Design &amp; Regression Models</td>
<td>4 STAT 313</td>
</tr>
<tr>
<td>Systemic Animal Physiology</td>
<td>4 VS 438</td>
</tr>
</tbody>
</table>

**Directed Electives:**
- Applied Animal Embryology             | 5 ASCI 406 |
- Animal Nutrition                       | 3 *ASCI 420 |
- Organic Chemistry III                  | 3 CHEM 313 |
- Metabolism                             | 3 CHEM 372 |
- Calculus for the Life Sciences I       | 4 MATH 161 |
- Microbiology                           | 4/5 MICRO 221 OR MICRO 224 & 225 |
- College Physics                        | 4 PHYS 121 |
- College Physics                        | 4 PHYS 122 |
- College Physics                        | 4 PHYS 123 |

*These classes may be used to satisfy courses in GE & B or major categories. They cannot be double-counted.

### Biotechnology

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<tr>
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<td>5 *ASCI 403</td>
</tr>
<tr>
<td>Domestic Livestock Endocrinology</td>
<td>4 *ASCI 405</td>
</tr>
<tr>
<td>Applied Animal Embryology</td>
<td>5 *ASCI 406</td>
</tr>
<tr>
<td>Principles of Genetics</td>
<td>5 *BIO 351</td>
</tr>
<tr>
<td>Molecular Biology Laboratory</td>
<td>2 CHEM 375</td>
</tr>
<tr>
<td>Protein Techniques Laboratory</td>
<td>2 CHEM 474</td>
</tr>
<tr>
<td>Microbiology</td>
<td>4 MICRO 221</td>
</tr>
<tr>
<td>Orientation to Biotechnology</td>
<td>1 SCM 201</td>
</tr>
</tbody>
</table>

**Directed Electives:**
- Internship in Animal Science           | 6 ASCI 339 |
- Animal Nutrition                       | 3 *ASCI 420 |
- Bioinformatics Applications            | 4 BIO 447 |
- General Chemistry                      | 4 CHEM 128 |
- General Chemistry                      | 4 CHEM 129 |
- Survey of Biochemistry & Biotechnology |       |
- Biochemical Principles                 | 5 *CHEM 313 OR *CHEM 371 |
- Organic Chemistry II                   | 5 CHEM 317 |
- Bioinformatics Algorithms              | 4 CSC 448 |
- Industrial Microbiology and Biotech    | 5 MICRO 433 |

*These classes may be used to satisfy courses in GE & B or major categories. They cannot be double-counted.

### Livestock Production

<table>
<thead>
<tr>
<th>RECOMMENDED CORE:</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Farm Records/Fin Actg for Nonbus Maj</td>
<td>4 AGB 321/BUS 212</td>
</tr>
<tr>
<td>Livestock Evaluation</td>
<td>3 ASCI 226</td>
</tr>
<tr>
<td>Principles of Range Management</td>
<td>3 ASCI 329</td>
</tr>
<tr>
<td>ASCI 290/490 (Enterprise) or ASCI 339 (Internship)</td>
<td>6</td>
</tr>
<tr>
<td>Introductory Soil Science</td>
<td>4 SS 121</td>
</tr>
<tr>
<td>Production Medicine</td>
<td>3 VS 312</td>
</tr>
</tbody>
</table>

**Directed Electives:**
- Introduction to Agribusiness           | 4 AGB 101 |
- Principles of Farm Management           | 4 AGB 322 |
- Meat Grading and Evaluation             | 2 ASCI 216 |
- Advanced Livestock Evaluation           | 2 ASCI 326 |
- Equine Reproduction                     | 5 ASCI 333 |
- Equine and Human Communication          | 3 ASCI 344 |
- Equine Behavior Modification            | 5 ASCI 345 |
- Processed Meat Products                 | 4 ASCI 384 |
- Survey of Biochemistry and Biotech      | 5 CHEM 313 |
- Forage Crops                           | 4 CRSC 123 |
- General Dairy Husbandry                 | 4 DSCI 230 |
- Artificial Insanation and Embryo Biotech | 4 DSCI 330 |
- Environmental Management                | 2 FNR 202 |
- Natural Resource Ecology and Habitat Mgmt | 4 FNR 306 |
- Resource Recreation Management          | 4 FNR 410 |
- Watershed Management and Restoration    | 4 FNR 419 |
- Agricultural Entomology                 | 4 PPSC 311 |
- Foreign Language (4 units - option with advisor approval) | 4 |
### Equine Science Minor

**REQUIRED COURSES:**
- Principles of Animal Science (ASCI 102) 4 units
- Introductory Animal Nutrition and Feeding (ASCI 220) 4 units
- Equine Science (ASCI 224) 4 units
- Equine Biomechanics OR Equine Exercise Physiology (ASCI 315 OR 347) 4/3 units
- Equine Nutrition (ASCI 346) 3 units
- Equine Reproduction Physiology (ASCI 333) 5 units

Selected Courses (6-9 units)
- Select 6-9 units from the following:
  - Related Soil Science Area
  - Related Resource Management Area
  - Related Plant Area
  - Related Agricultural Business Area
  - Related Animal Area
  - Range Resource Area: Select two

**Must enroll in minor with the Animal Science Department.**

### Meat Science and Processing Minor

**REQUIRED COURSES:**
- Meats (ASCI 211) 3 units
- Processed Meat Products OR Egg and Poultry Meat Processing (ASCI 384 OR PM 320) 4 units
- HACCP for Meat and Poultry Operations (ASCI 415) 3 units
- Microbiology (MCRO 221) 4 units

Selected Courses (13 – 16 units)
- 6 units must be at upper-division level:
  - ASCI 102/231, 226, 290/490, 339, 450, 476;
  - FSN 125/230, 278, 364, MCRO 421, 444;
  - AG 360; any upper-division AGB course

**Must enroll in minor with the Animal Science Department.**

### Rangeland Resources Minor

**Required Courses:**
- Principles of Range Management (ASCI 329) 3 units
- Holistic Management (AG 360) 4 units

**Related Animal Area: Select one:**
- Introduction to Beef Production (ASCI 221) 4 units
- Systems of Sheep Management (ASCI 223) 4 units
- Advanced Beef Cattle System Management (ASCI 311) 4 units

**Related Agricultural Business Area: Select one:**
- Agricultural Economics (AGB 212) 4 units
- Farm Records (AGB 321) 4 units
- Farm Appraisal (AGB 326) 4 units
- Livestock Management Problems (AGB 457) 4 units

**Related Plant Area: Select one:**
- Plant Physiology (BIO 435) 4 units
- Taxonomy of Vascular Plants (BOT 313) 4 units
- Plant Ecology (BOT 326) 4 units
- Field Botany (BOT 333) 4 units
- Advanced Forage Crop Production (CRSC 330) 4 units
- Weed Ecology (PPSC 321) 4 units

**Related Resource Management Area: Select one:**
- General Ecology (BIO 325) 4 units
- Ecological Methodology (BIO 419) 4 units
- Wildlife Management (BIO 427) 4 units
- Natural Resource Ecology & Habitat Management (FNR 306) 4 units
- Water Resource Law and Policy (FNR 408) 3 units
- Applications in GIS (FNR/GEOG/LA 318) 3 units

**Related Soil Science Area: Select one:**
- Soil Erosion and Water Conservation (SS 202) 4 units
- Soil Morphology (SS 321) 4 units
- Land Use Planning (SS 433) 3 units
- Forest and Range Soils (SS 440) 4 units

(See page 104 of the 2003/2005 Cal Poly Catalog.)

**Must enroll in minor with the Animal Science Department OR the Earth and Soil Sciences Department.**

### Agricultural Communication Minor

**REQUIRED COURSES:**
- Agricultural Leadership (AGED 404) 3 units
- News Writing and Reporting (JOUR 203) 4 units
- Agricultural Communications (JOUR 205) 4 units
- Business and Professional Communication (SCOM 301) 4 units

**Elective Area (15 units):**
- College of Agriculture Majors:
  - Selected from advisor approved list. Minimum of 10 units must be at 300-400 level; two courses must be selected from JOUR, SCOM, ENGL.

(See page 103 of the 2003/2005 Cal Poly Catalog.)

**Must enroll in minor with the Brock Center for Agricultural Communication.**

### Poultry Management Minor

**REQUIRED COURSES:**
- Applied Nonruminant Nutrition (ASCI 350) 4 units
- Introduction to Poultry Management (PM 225) 4 units
- Egg and Poultry Meat Processing (PM 320) 4 units
- Poultry Production Management (PM 330) 4 units
- Poultry Immunology and Diseases (PM X340) 4 units

**Electives (4 units):**
- To be chosen from:
  - AGB 310; ASCI 339, 415; BUS 212, 346; ENGL 310; FSN 275, 278, 323, 334, 335; PM 290/490, 360

**Must enroll in minor with the Animal Science Department.**

### Zoo and Exotic Animal Care

**RECOMMENDED CORE:**
- Biology of Animals (BIO 153) 5 units
- Wildlife Conservation Biology (BIO 227) 4 units
- Microbiology (MCRO 221) 4 units
- Special Problems/Internship (Zoo Experience) (VS 200/ASCI 339) 4-6 units

**Directed Electives:**
- Animal Diversity and Ecology (BIO 113) 4 units
- Wildlife Biology Methods (BIO 327) 5 units
- Principles of Genetics (BIO 351) 5 units
- Production Medicine (VS 312) 3 units
- Mammalogy (ZOO 321) 4 units
- Ornithology (ZOO 323) 4 units
- Herpetology (ZOO 341) 4 units
- Parasitology (ZOO 425) 4 units
- Animal Behavior (ZOO 437) 4 units

### Agribusiness Minor

**REQUIRED COURSES:**
- Agricultural Economics (AGB 212) 4 units
- Food and Fiber Marketing (AGB 301) 4 units
- Agribusiness Credit and Finance (AGB 310) 4 units
- Farm Records/Fin Actg for Nonbus Majors (AGB 321/BUS 212) 4 units
- Managing Cultural Diversity in Ag Labor Relations (AGB 401) 4 units

**Additional Courses:**
- Student will choose 8 additional units of AGB courses (not including AGB 101, 200, 339, 400) with prior approval of AGB Minor Coordinator.

(See page 112 of the 2003/2005 Cal Poly Catalog.)

**Must enroll in minor with the Agribusiness Department.**

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**Revised:** 11/03