

## Foundation Knowledge and Skills

Academics • Communications  
 Problem Solving • Information Technology  
 Systems • Safety, Health and Environment  
 Teamwork • Ethics  
 Employability and Career Development  
 Technical Skills



# Agriculture, Food, and Natural Resources Individual Graduation Plan

## ANIMAL SYSTEMS\*



**Boise SD**

This career cluster plan of study is a source of information as you develop your own personal learning plan. This plan lists EXAMPLES of suggested coursework. Courses will vary according to the availability in each school district. Plans of study should meet high school graduation requirements as well as entrance requirements for a variety of postsecondary options within this career cluster.

### Coursework

Subject	9 <sup>th</sup> Grade	10 <sup>th</sup> Grade	11 <sup>th</sup> Grade	12 <sup>th</sup> Grade	Advanced Coursework for Postsecondary Credit
<b>Language Arts</b> (9 credits)	<u>English 9</u>	<u>English 10</u>	<u>English 11</u> <b>Speech</b>	<u>English 12</u>	Honors Courses
<b>Mathematics</b> (6 credits)	<u>Algebra I</u>	<u>Geometry</u> <u>Algebra II</u>	<u>Algebra II</u> <u>Pre-Calculus</u>	<u>Pre-Calculus</u> <u>Calculus</u>	Honors Courses Advanced Placement
<b>Science</b> (6 credits)	<u>Earth Science</u>	<u>Biology</u>	<u>Chemistry</u> <u>Anatomy/Physiology</u>		Honors Courses Tech Prep Advanced Placement
<b>Social Studies</b> (5 credits)			<u>US History 11</u>	<u>American Government</u> <b>Economics</b>	Honors Courses Tech Prep Advanced Placement
<b>Idaho Professional-Technical Education Classes</b>	Ag 110 Intro to Ag Education Ag 120 Intro to Ag Industry •Ag 130 Intro to Ag Mechanics Ag 140 Intro to Livestock	Ag 140 Intro to Livestock Ag 310 Applied Livestock Mgmt Ag 350 Forestry/Wildlife Mgmt <b>Ag 410 Personal Skills</b> •Ag 532 Animal Nutrition •Ag 540 Animal Reproduction Ag Biotechnology <b>•Ag 660 Ag Business/Economics</b>	•Ag 460 Ag Business Mgmt/Mktng Ag 470 Ag Sales •Ag 530 Zoology/Animal Science •Ag 532 Animal Nutrition •Ag 534 Animal Reproduction •Ag 536 Fish & Wildlife Science	•Ag 536 Fish & Wildlife Science Ag 540 Ag Biotechnology •Aquaculture Science •Equine Science Ag 9800 Occ/Career Exploration Ag 9900 Cooperative Education <b>Ag 520 Natural Resource Science</b>	Tech Prep We had a dual credit option with CSI with their aquaculture program. They have discontinued this class so we are now looking at a dual credit option with their biology classes for students who take Fish and Wildlife Science and Ecology – Natural Resources as PTE classes and Environmental Science as a standard academic class. We hope to have this in place for the 2008-2009 school year. We are also exploring the option of an articulation with the U of I in their college of Natural Resources. The coordinator is Mike Whiteman.
<b>Additional Requirements or Electives</b>	<u>World History</u> <u>Physical Education</u> Computer Technology Physical Education	<u>US History 10</u> Physical Education <u>Health</u> <u>Foreign Language</u> Computer Technology	Physical Education <u>Health</u> <u>Foreign Language</u> Computer Technology	Physics <u>Computer Technology</u>	

Extended Learning

<p><b>School-Based</b></p>	<p>FFA Career Research</p>	<p>Supervised Ag Experience Career Interviews</p>	<p>Career Days Job Shadowing</p>	<p>Service Learning Project Internships Ecology – Natural Resources Internships for 2007-2008 year: MK Nature Center Zoo Boise Pet Doctor Veterinary Clinic Wildtouch Taxidermy Idaho Humane Society Barber Sewer Company United Water (Xeric Garden)</p> <p>Envirothon: Students participate in the Envirothon . This is the largest environmental science competition in North America. As 5 member teams with an elected captain, students work together on tests and environmental problems. This is a great way to get my students involved in the FFA organization. Last year, we won the Idaho Envirothon and competed at the national competition in New York.</p>	<p>Senior Project: Many advanced students interested in wildlife research as a career take on individual wildlife research projects. Although not yet required in our programs, I encourage all college bound students to look into a project.</p>
<p><b>Community-Based</b></p>	<p>4-H</p>	<p>Mentorships</p>	<p>Volunteer Students volunteer for various projects with the Idaho Department of Fish and Game – examples include: Idaho Salmon and Steelhead Days, Creatures of the Night, and Bitterbrush Planting</p>	<p>Part-Time Employment</p>	

\*540 course hours and/or six (6) course credits qualify as meeting a program sequence.

*Italicized* courses represent repeat offering (Take once); ■ Either course satisfies economics requirement; ■ Either course satisfies speech requirement; ■ Satisfies Biological Science/Lab Credit if teacher is science certified; • Often qualify for dual credit/tech prep college credits; Underlined courses are highly recommended for this pathway

■ Coursework

Major	Year 13	Year 14	Year 15	Year 16	Occupations Relating to This Pathway
<b>Animal Science Production Option</b>	AVS101 Orientation AVS109 Science of Animals Math143 Pre-Calculus Algebra Engl101 College Writing Core 103-149 Core Discovery AVS209 Sci of Animal Husbandry AVS210 Sci of Animal Lab Biol115 Cells and Evolution Chem111 Principles of Chemistry I Eng102 College Writing Core 153-199 Core Discovery	AVS221 Molecular Cell Biology Rnge211 Ecology AgEcon278 Farm & Ag Mgmt Econ202 Principles of Econ <i>(Elective—Core)</i> AVS222 Animal Repro & Breed Stats251 Statistical Methods Chem275 Carbon Compounds MMBB154 Intro to Microbiology <i>(Elective—Core)</i>	AVS305 Animal Nutrition AVS371 Anatomy & Physiology Eng317 Technical Writing Rnge251 Prin of Range Res <i>(Elective—International)</i> AVS306 Feeds and Rations AVS363 Animal Products AgEcon289 Ag Mkts & Prices <i>(Cluster Elective)</i> Comm101 Public Speaking <i>(Elective)</i>	AVS330 Genetics of Livestock AVS452 Physics of Reproduction AVS471 Animal Diseases AVS472 Dairy Cattle Mgmt AVS474 Beef Cattle Mgmt <i>(Elective)</i> AVS411 Ruminant Nutrition AVS450 Issues in Animal Ag AVS476 Sheep Science <i>(Life Science Elective)</i> <i>(Elective)</i>	<p><b>Occupations Requiring Less than Baccalaureate Degree</b></p> <ul style="list-style-type: none"> <li>■ Animal Caretaker/Poultry Manager</li> <li>■ Aquaculturist</li> <li>■ Artificial Insemination Technologist</li> <li>■ Dairy Producer</li> <li>■ Equine Manager</li> <li>■ Feed Sales Representative</li> </ul>
<b>Animal Science Business Option</b>	AVS101 Orientation AVS109 Science of Animals Math143 Pre-Calculus Algebra Eng101 College Writing Core 103-149 Core Discovery AVS209 Sci of Animal Husbandry AVS210 Sci of Animal Lab Biol115 Cells and Evolution Chem111 Principles of Chemistry I Eng102 College Writing Core 153-199 Core Discovery	AVS221 Molecular Cell Biology Acct205 Fund of Accounting AgEcon278 Farm & Ag Mgmt Econ201 Principles of Econ <i>(Elective—Core)</i> AVS222 Animal Repro & Breed Econ 202 Principles of Econ Chem275 Carbon Compound AgEcon289 Ag Markets & Prices <i>(Elective—Core)</i>	AVS305 Animal Nutrition AVS371 Anatomy & Physiology Stat251 Statistical Methods Comm101 Public Speaking BLaw265 Legal Env of Business <i>(Elective—Core)</i> AVS306 Feeds and Rations AVS363 Animal Products AgEcon301 Ag Economics I AgEcon302 Ag Economics II Eng313 Business Writing <i>(General Elective)</i>	AVS452 Physics of Reproduction AVS472 Dairy Cattle Mgmt AVS474 Beef Cattle Mgmt <i>(Elective—AgEcon Upper Div)</i> <i>(Elective—International)</i> <i>(Elective—Business)</i> AVS450 Issues in Animal Ag AVS476 Sheep Science <i>(AgEcon Upper Div Elective)</i> <i>(Elective—Business)</i> <i>(Elective)</i>	<p>■ Livestock Buyer</p> <p>■ Livestock Inspector</p> <p>■ Livestock Producer</p> <p>■ Veterinary Assistant</p> <p><b>Occupations Requiring Baccalaureate Degree</b></p> <ul style="list-style-type: none"> <li>■ Agricultural Educator</li> <li>■ Animal Nutritionist</li> <li>■ Livestock Geneticist</li> <li>■ Meat Science Researcher</li> <li>■ Physiologist</li> <li>■ Wildlife Biologist</li> <li>■ USDA Inspector</li> <li>■ Veterinarian</li> <li>■ Allied Industry Technician</li> <li>■ Sales Representative</li> <li>■ Public Service Agency Officer</li> <li>■ Self-Employed Owner/Operator</li> <li>■ Breed Association Representative</li> </ul>