Agriculture, Food, and Natural Resources  
Potosi High School Career Cluster Program of Study

This Program of Study Template can serve as a guide, along with other career planning materials, as you continue your career path. Courses listed within this plan are only recommended coursework and should be individualized to meet each learner’s educational and career goals. **Ask your high school counselor to help you fill in the required courses you need to graduate.**

<table>
<thead>
<tr>
<th>Grade</th>
<th>English 8 semesters</th>
<th>Math 6 semesters</th>
<th>Science 6 semesters</th>
<th>Social Studies 6 semesters</th>
<th>Other Required Courses, Recommended Electives</th>
<th>Career &amp; Technical Courses and/or Degree Major Courses @ Unitec</th>
<th>SAMPLE Occupations Relating to this Pathway</th>
</tr>
</thead>
</table>
| 9     | Comm Arts I         | High School Math | High School Science Course | High School S.S. Course | Personal Finance Computer Science Ag electives | See high school counselor for course offerings | **Occupations Requiring Postsecondary Education**  
► Agricultural Communications Specialist  
► Agricultural Salesperson  
► Food & Drug Inspector  
► Food Meal Supervisor  
► Food Processor  
► Meat Cutter-Meat Grader  
► Meat Processor  
► Produce Buyer
| 10    | Comm Arts II        | High School Math | High School Science Course | High School S.S. Course | Personal Finance Computer Science Ag electives | See high school counselor for course offerings | **Occupations Requiring Baccalaureate Degree & Beyond**  
► Agricultural Educator  
► Bacteriologist  
► Biochemist-Nutritionist  
► Bioengineer  
► Dietician  
► Food & Fiber Engineer  
► Food Scientist  
► Meat Science Researcher  
► Microbiologist  
► Quality Control Specialist
| 11    | Comm Arts III & Comm Arts elective  
*English Comp I  
*Public Speaking  
*College Algebra, *College Trig.  
*General Biology  
*American  
*History I & II,  
*Western Civ I & II  
*Spanish  
*Gen Psyche and Socio | Pre-College Algebra or high school math course  
*General Biology | High School Science Course  
*History & Government  
*American  
*History I & II,  
*Western Civ I & II  
*Spanish  
*Gen Psyche and Socio | *Ag electives  
*Zoology  
*Anatomy & Physiology  
*General Chemistry  
*Botany  
*(Available for Dual Enrollment) | See high school counselor for course offerings | **Potosi CTE Dual Credit Class Available**  
-HRT 1010 Intro To Horticulture  
*(Check with school counselor for dual enrollment classes available on the web or on one of the MAC campuses
| 12    | Senior Comm Arts & Comm Arts elective  
*English Comp II  
*Intro to Literature  
*College Algebra,  
*College Trig.  
*Microbiology | Pre-College Algebra high school courses  
*General Biology  
*American  
*History I & II,  
*Western Civ I & II  
*Spanish  
*Gen Psyche and Socio | High School Science Course  
*MFH - Intro to Chemistry  
*American History I & II,  
*Western Civ I & II  
*Spanish  
*Gen Psyche and Socio | *Ag electives  
*Zoology  
*Anatomy & Physiology  
*General Chemistry  
*Botany  
*(Available for Dual Enrollment) | See high school counselor for course offerings | **Potosi CTE Dual Credit Class Available**  
-HRT 1010 Intro To Horticulture  
*(Check with school counselor for dual enrollment classes available on the web or on one of the MAC campuses

The production, processing, marketing, distribution, financing, and development of agricultural commodities and resources including food, fuel, fiber, wood products, natural resources, horticulture, and other plant and animal products/resources.

### Sample Career Specialties / Occupations

<table>
<thead>
<tr>
<th>Agriculture &amp; Food Technology</th>
<th>Agribusiness Systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural Communication Specialists</td>
<td>Ag Lenders Agricultural Chemical Dealer</td>
</tr>
<tr>
<td>Agricultural Educators</td>
<td>Field Service Representative</td>
</tr>
<tr>
<td>Agricultural Educators-Aquaculturalists</td>
<td>Chemical Sales</td>
</tr>
<tr>
<td>Animal Caretakers</td>
<td>Representative</td>
</tr>
<tr>
<td>Livestock Managers</td>
<td>Agricultural Commodity</td>
</tr>
<tr>
<td>Animal Health Salespersons</td>
<td>Broker</td>
</tr>
<tr>
<td>Animal Nutritionists</td>
<td>Agricultural Economist</td>
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<tr>
<td>Animal Scientists</td>
<td>Agricultural Educator</td>
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<tr>
<td>Dairy Producers</td>
<td>Agricultural Educator</td>
</tr>
<tr>
<td>Embryo Technologists</td>
<td>Ag Products Buyer</td>
</tr>
<tr>
<td>Marecare Technicians</td>
<td>Animal Health Products</td>
</tr>
<tr>
<td>Equine Managers</td>
<td>Distributor</td>
</tr>
<tr>
<td>Feed Sales Representatives</td>
<td>Banker/Loan Officer</td>
</tr>
<tr>
<td>Feed Sales Specialists</td>
<td>Farm Investment Manager</td>
</tr>
<tr>
<td>Feedlot Specialists</td>
<td>Farm Manager</td>
</tr>
<tr>
<td>Livestock Buyers</td>
<td>Farmer /Rancher/Feedlot</td>
</tr>
<tr>
<td>Livestock Geneticists</td>
<td>Operator</td>
</tr>
<tr>
<td>Grain Operations</td>
<td>Feed and Supply Store</td>
</tr>
<tr>
<td>Superintendents</td>
<td>Manager</td>
</tr>
<tr>
<td>Greenhouse Mangers</td>
<td>Field Representative for</td>
</tr>
<tr>
<td>Growers</td>
<td>Bank, Insurance Company or</td>
</tr>
<tr>
<td>Plant Breeders</td>
<td>Government Program</td>
</tr>
<tr>
<td>Plant Pathologists</td>
<td>Livestock Rancher / Breeder</td>
</tr>
<tr>
<td>Ranchers</td>
<td>Dairy Herd Supervisor</td>
</tr>
<tr>
<td>Sales Representatives</td>
<td>(DHIA)</td>
</tr>
<tr>
<td>Soil &amp; Water Specialists</td>
<td>Livestock Seller</td>
</tr>
<tr>
<td>Tree Surgeons</td>
<td>Produce Commission Agent</td>
</tr>
<tr>
<td>Wildlife Biologists</td>
<td>Sales Manager</td>
</tr>
</tbody>
</table>

### Pathways

- **Agricultural Communication**
  - Specializing in communication and marketing for agricultural goods
- **Agricultural Educators**
  - Teaching and advising students in agricultural sciences
- **Agricultural Educators-Aquaculturalists**
  - Educating students in aquatic science and aquatic animal management
- **Animal Caretakers**
  - Caring for and maintaining the health and well-being of farm animals
- **Livestock Managers**
  - Managing and overseeing livestock operations
- **Animal Health Salespersons**
  - Selling animal health products and services
- **Animal Nutritionists**
  - Studying and improving animal nutrition
- **Animal Scientists**
  - Researching and developing innovative solutions for animal health and nutrition
- **Dairy Producers**
  - Producing dairy products like milk and cheese
- **Embryo Technologists**
  - Performing embryo transfer procedures
- **Marecare Technicians**
  - Providing specialized care for pregnant females
- **Equine Managers**
  - Managing horse stables and facilities
- **Feed Sales Representatives**
  - Selling feed to farmers and ranchers
- **Feed Sales Specialists**
  - Specializing in feed product sales
- **Feedlot Specialists**
  - Managing feedlots and livestock feed
- **Livestock Geneticists**
  - Studying and improving livestock genetics
- **Livestock Inspectors**
  - Ensuring livestock quality and compliance
- **Livestock Producers**
  - Producing livestock products
- **Meat Science Researchers**
  - Conducting research in meat science
- **Pet Shop Operators**
  - Managing and running pet supply stores
- **Plant Breeders**
  - Breeding and developing new plant species
- **Plant Pathologists**
  - Studying and controlling plant diseases
- **Veterinary Assistants**
  - Assisting veterinarians in animal health care
- **Vivarian Technicians**
  - Working with living subjects in research
- **Welders**
  - Working with welding equipment and processes

### Natural Resources Systems

- **Habitat Conservation, Forest Products, Parks and Recreation, Mining, Environmental Services, Fisheries, Soil Conservation**
  - Managing and conserving natural resources
- **Forest Technicians**
  - Working with forest resources and ecosystem management
- **Fishing Vessel Operators**
  - Operating vessels for fishing activities

### Environmental Service Systems

- **Pollution Prevention and Control**
  - Ensuring compliance with environmental regulations
- **Managers/Technicians**
  - Managing environmental projects
- **Solid Waste Disposers/Recyclers**
  - Collecting and managing solid waste

### Cluster Knowledge and Skills

- **Premier Leadership**
- **Personal Growth**
- **Career Success**
- **Organizations and Associations**
- **Organizational Structures and Processes**
- **Safety, Health, and Environmental Management**
- **Health and Safety Procedures**
- **Tools, Equipment, Machinery and Technology**
- **Issues**
- **Technology and Globalization**
- **Scientific Inquiry**