The Agriculture, Food, and Natural Resources (AFNR) Career Cluster focuses on the essential elements of life food, water, land, and air. This career cluster includes a diverse spectrum of occupations, ranging from farmer, rancher, and veterinarian to geologist, land conservationist, and florist. It also includes non-traditional agricultural occupations like wind energy, solar energy, and oil and gas production.

Animal Science
Statewide Program of Study

The Animal Science program of study focuses on the science, research, and business of animals and other living organisms. It teaches CTE learners how to apply biology and life science to real-world life processes of animals and wildlife, either in laboratories or in the field, which could include a veterinary office, a farm or ranch, or any outdoor area harboring animal life. Students may also research and analyze the growth and destruction of species and research or diagnose diseases and injuries of animals.

Secondary Courses for High School Credit

Level 1
- Principles of Agriculture, Food, and Natural Resources

Level 2
- Small Animal Management
- Equine Science

Level 3
- Livestock Production/Lab

Level 4
- Advanced Animal Science
- Veterinary Medical Applications/Lab
- Practicum in Agriculture, Food, and Natural Resources
- Project-Based Research
- Scientific Research and Design

Postsecondary Opportunities

Associates Degrees
- Food Science and Technology
- Veterinary Studies
- Biotechnology Laboratory Technician
- Biology Technician

Bachelor’s Degrees
- Animal Sciences
- Agriculture
- Biology
- Zoology/Animal Biology

Master’s, Doctoral, and Professional Degrees
- Genetics
- Veterinary Medicine
- Biological and Physical Sciences
- Biological and Biomedical Sciences

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities
- Participate in Texas FFA

Work-Based Learning Activities
- Compete in an Agri-Science Fair 4H
- Volunteer at a local farm or with a veterinarian
- Participate in an FFA supervised agriculture experience

Industry-Based Certifications
- Agricultural Biotechnology
- Agrilife Veterinary Assistant Certificate
- Certified Veterinary Assistant, Level 1
- Elanco Fundamentals of Animal Science Certification
- Elanco Veterinary Medical Applications Certification
- Equine Management & Evaluation Certification
- Feedyard Technician in Cattle Care and Handling
- Licensed Veterinary Technician
- Production Agriculture - Job Ready
- Small Animal Science and Technology

Aligned Occupations

<table>
<thead>
<tr>
<th>Occupations</th>
<th>Median Wage</th>
<th>Annual Openings</th>
<th>% Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animal Breeders</td>
<td>$39,139</td>
<td>28</td>
<td>9%</td>
</tr>
<tr>
<td>Animal Scientists</td>
<td>$57,533</td>
<td>22</td>
<td>12%</td>
</tr>
<tr>
<td>Medical Scientists</td>
<td>$63,898</td>
<td>435</td>
<td>27%</td>
</tr>
<tr>
<td>Veterinarians</td>
<td>$93,496</td>
<td>294</td>
<td>24%</td>
</tr>
<tr>
<td>Zoologists and Wildlife Biologists</td>
<td>$67,309</td>
<td>45</td>
<td>32%</td>
</tr>
</tbody>
</table>

Successful completion of the Animal Science program of study will fulfill requirements of a Business and Industry endorsement or STEM endorsement if the math and science requirements are met. Revised – August 2022
# Animal Science

## Course Information

### Level 1

<table>
<thead>
<tr>
<th>COURSE NAME</th>
<th>SERVICE ID</th>
<th>PREREQUISITES</th>
<th>COREQUISITES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principles of Agriculture, Food, and Natural Resources</td>
<td>13000200 (1 credit)</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

### Level 2

<table>
<thead>
<tr>
<th>COURSE NAME</th>
<th>SERVICE ID</th>
<th>PREREQUISITES</th>
<th>COREQUISITES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small Animal Management</td>
<td>13000400 (0.5 credit)</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Equine Science</td>
<td>13000500 (0.5 credit)</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

### Level 3

<table>
<thead>
<tr>
<th>COURSE NAME</th>
<th>SERVICE ID</th>
<th>PREREQUISITES</th>
<th>COREQUISITES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Livestock Production/Lab</td>
<td>13000300 (1 credit) 13000310 (2 credits)</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

See next page for Level 4 courses
## Course Information

### Level 4

<table>
<thead>
<tr>
<th>COURSE NAME</th>
<th>SERVICE ID</th>
<th>PREREQUISITES</th>
<th>COREQUISITES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Animal Science</td>
<td>13000700 (1 credit)</td>
<td>Biology and Chemistry or Integrated Physics and Chemistry (IPC); Algebra I and Geometry; and either Small Animal Management, Equine Science, or Livestock Production</td>
<td>None</td>
</tr>
<tr>
<td>Veterinary Medical Applications/Lab</td>
<td>13000600 (1 credit) 13000610 (2 credits)</td>
<td>Equine Science, Small Animal Management, or Livestock Production</td>
<td>None</td>
</tr>
<tr>
<td>Practicum in Agriculture, Food, and Natural Resources</td>
<td>13002500 (2 credits) 13002505 (3 credits) 13002510 (2 credits) 13002515 (3 credits)</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Project-Based Research</td>
<td>12701500 (1 credit)</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Scientific Research and Design</td>
<td>13037200 (1 credit)</td>
<td>Biology, Chemistry, Integrated Physics, and Chemistry (IPC), or Physics</td>
<td>None</td>
</tr>
</tbody>
</table>

FOR ADDITIONAL INFORMATION ON THE AGRICULTURE, FOOD, AND NATURAL RESOURCE CAREER CLUSTER, PLEASE CONTACT: [CTE@tea.texas.gov](mailto:CTE@tea.texas.gov)

https://tea.texas.gov/cte

[LEA name] does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs or activities and provides equal access to the Boy Scouts and other designated youth groups. The following person has been designated to handle inquiries regarding the nondiscrimination policies: [title, address, telephone number, email.]

Further nondiscrimination information can be found at Notification of Nondiscrimination in Career and Technical Education Programs.