

Introduction to Animal Systems (8008/36 weeks)

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A Demonstrating Personal Qualities and Abilities ISA.1

- 1 Demonstrate creativity and innovation. ISA.1.1
 - 2 Demonstrate critical thinking and problem solving. ISA.1.2
 - 3 Demonstrate initiative and self-direction. ISA.1.3
 - 4 Demonstrate integrity. ISA.1.4
 - 5 Demonstrate work ethic. ISA.1.5
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B Demonstrating Interpersonal Skills ISA.2

- 6 Demonstrate conflict-resolution skills. ISA.2.6
 - 7 Demonstrate listening and speaking skills. ISA.2.7
 - 8 Demonstrate respect for diversity. ISA.2.8
 - 9 Demonstrate customer service skills. ISA.2.9
 - 10 Collaborate with team members. ISA.2.10
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C Demonstrating Professional Competencies ISA.3

- 11 Demonstrate big-picture thinking. ISA.3.11
- 12 Demonstrate career- and life-management skills. ISA.3.12
- 13 Demonstrate continuous learning and adaptability. ISA.3.13
- 14 Manage time and resources. ISA.3.14
- 15 Demonstrate information-literacy skills. ISA.3.15
- 16 Demonstrate an understanding of information security. ISA.3.16
- 17 Maintain working knowledge of current information-technology (IT) systems. ISA.3.17
- 18 Demonstrate proficiency with technologies, tools, and machines common to a specific occupation. ISA.3.18
- 19 Apply mathematical skills to job-specific tasks. ISA.3.19
- 20 Demonstrate professionalism. ISA.3.20
- 21 Demonstrate reading and writing skills. ISA.3.21
- 22 Demonstrate workplace safety. ISA.3.22

D Examining All Aspects of an Industry ISA.4

- 23 Examine aspects of planning within an industry/organization. ISA.4.23
- 24 Examine aspects of management within an industry/organization. ISA.4.24
- 25 Examine aspects of financial responsibility within an industry/organization. ISA.4.25
- 26 Examine technical and production skills required of workers within an industry/organization. ISA.4.26
- 27 Examine principles of technology that underlie an industry/organization. ISA.4.27
- 28 Examine labor issues related to an industry/organization. ISA.4.28
- 29 Examine community issues related to an industry/organization. ISA.4.29
- 30 Examine health, safety, and environmental issues related to an industry/organization. ISA.4.30

E Addressing Elements of Student Life ISA.5

- 31 Identify the purposes and goals of the student organization. ISA.5.31
- 32 Explain the benefits and responsibilities of membership in the student organization as a student and in professional/civic organizations as an adult. ISA.5.32
- 33 Demonstrate leadership skills through participation in student organization activities, such as meetings, programs, and projects. ISA.5.33
- 34 Identify Internet safety issues and procedures for complying with acceptable use standards. ISA.5.34

F Exploring Work-Based Learning ISA.6

- 35 Identify the types of work-based learning (WBL) opportunities. ISA.6.35
- 36 Reflect on lessons learned during the WBL experience. ISA.6.36
- 37 Explore career opportunities related to the WBL experience. ISA.6.37
- 38 Participate in a WBL experience, when appropriate. ISA.6.38
- 39 Identify the role of supervised agricultural experiences (SAEs) in agricultural education. ISA.6.39
- 40 Participate in an SAE. ISA.6.40
- 41 Identify the benefits and responsibilities of FFA membership. ISA.6.41
- 42 Describe leadership characteristics and opportunities as they relate to agriculture and FFA. ISA.6.42
- 43 Apply for an FFA degree and/or an agricultural proficiency award. ISA.6.43

G Applying Safety Practices in the Agricultural Mechanics Lab/Workshop as it Relates to the Animal Systems Pathway ISA.7

- 44 Demonstrate the safe use of personal protective equipment (PPE). ISA.7.44
- 45 Demonstrate safe practices in handling livestock. ISA.7.45

- 46 Identify marked safety areas. [ISA.7.46](#)
 - 47 Identify the location and use of eye wash stations. [ISA.7.47](#)
 - 48 Identify the location of the posted evacuation routes. [ISA.7.48](#)
 - 49 Demonstrate knowledge of safety data sheets (SDS). [ISA.7.49](#)
 - 50 Demonstrate the safe use of chemicals. [ISA.7.50](#)
 - 51 Demonstrate the safe use of hand tools. [ISA.7.51](#)
 - 52 Demonstrate the safe use of power tools. [ISA.7.52](#)
 - 53 Demonstrate the safe use of precision measuring tools. [ISA.7.53](#)
 - 54 Explain the use of fire protection equipment. [ISA.7.54](#)
 - 55 Demonstrate the safe use of equipment. [ISA.7.55](#)
 - 56 Demonstrate safe practices in the agricultural lab/workshop [ISA.7.56](#)
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H Exploring the Animal Industry [ISA.8](#)

- 57 Research career opportunities in the animal industry. [ISA.8.57](#)
 - 58 Describe the economic importance of the animal industry and how animals are used in society. [ISA.8.58](#)
 - 59 Identify basic livestock industry terminology. [ISA.8.59](#)
 - 60 Describe the companion and research animal industries. [ISA.8.60](#)
 - 61 Differentiate between animal welfare and animal rights. [ISA.8.61](#)
 - 62 Evaluate livestock, poultry, dairy, and equine. [ISA.8.62](#)
 - 63 Identify products, byproducts, and coproducts. [ISA.8.63](#)
 - 64 Outline procedures for fitting and showing livestock. [ISA.8.64](#)
 - 65 Assess county, state, and federal agencies that support the animal industry. [ISA.8.65](#)
 - 66 Interpret state and national rules, policies, and regulations affecting the livestock industry. [ISA.8.66](#)
 - 67 Identify organizations that govern and influence the animal industry. [ISA.8.67](#)
 - 68 Identify environmental issues and regulations pertaining to the animal industry. [ISA.8.68](#)
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I Using Basic Scientific Skills in Animal Nutrition [ISA.9](#)

- 69 Identify the parts and functions of the digestive system of a ruminant, a non-ruminant, and a pseudo-ruminant. [ISA.9.69](#)
 - 70 Identify the nutritional requirements of selected species. [ISA.9.70](#)
 - 71 Balance a ration for a selected animal. [ISA.9.71](#)
 - 72 Evaluate feedstuff for quality. [ISA.9.72](#)
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J Describing Basic Scientific Skills in Animal Reproduction and Breeding [ISA.10](#)

- 73 Identify the parts and functions of the reproductive systems of a male and female animal of a selected species. [ISA.10.73](#)
 - 74 Explain reproduction management systems. [ISA.10.74](#)
 - 75 Explain the importance of breeding systems in the animal industry. [ISA.10.75](#)
 - 76 Evaluate the possible outcomes of genetic (monohybrid and dihybrid) crosses of animals. [ISA.10.76](#)
 - 77 Explain the importance of keeping health and breeding records. [ISA.10.77](#)
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K Managing Animal Health [ISA.11](#)

- 78 Explain an animal's immune response. [ISA.11.78](#)
 - 79 Identify common diseases and disorders found in livestock and companion animals, their causes, and methods for prevention and treatment. [ISA.11.79](#)
 - 80 Describe internal and external parasites and methods of control. [ISA.11.80](#)
 - 81 Describe the importance of biosecurity measures. [ISA.11.81](#)
 - 82 Explain animal health practices. [ISA.11.82](#)
 - 83 Describe how to perform emergency first aid on animals. [ISA.11.83](#)
 - 84 Identify livestock tools and their uses. [ISA.11.84](#)
 - 85 Describe maintenance of equipment and facilities. [ISA.11.85](#)
 - 86 Discuss animal marketing methods and techniques. [ISA.11.86](#)
 - 87 Analyze farm income and expense record forms. [ISA.11.87](#)
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R Incorporating Mechanical Skills as Related to the Animal Systems Pathway [ISA.12](#)

- 88 Demonstrate measurement techniques in animal systems. [ISA.12.88](#)
- 89 Demonstrate drawing for agriculture as it relates to the animal systems pathway. [ISA.12.89](#)
- 90 Demonstrate metalworking operations. [ISA.12.90](#)
- 91 Demonstrate woodworking operations. [ISA.12.91](#)
- 92 Demonstrate electrical operations. [ISA.12.92](#)
- 93 Demonstrate small-engine operations. [ISA.12.93](#)
- 94 Demonstrate plumbing operations. [ISA.12.94](#)