

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

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

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

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

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

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