Virginia CTE

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

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

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