

VoCats

Course Blueprints

Agricultural Education

business
technical

6822 Animal Science II

North Carolina State University
College of Agriculture & Life Sciences
Department of Agricultural & Extension Education
Public Schools of North Carolina
State Board of Education • Department of Public Instruction
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VoCATS Course Blueprint

A course blueprint is a document laying out the framework of the curriculum for a given course. Shown on the blueprint are the units of instruction, the core competencies in each unit, and the specific objectives for each competency. The blueprint illustrates the recommended sequence of units and competencies and the cognitive and performance weight or relative importance of the objective within the course.

The blueprint is intended to be used by teachers in planning the course of work for the year preparing daily lesson plans, and constructing instructionally valid assessments.

For additional information about this blueprint, contact program area staff. For additional information about the VoCATS, contact program area staff or VoCATS, Career-Technical Education, Division of Instructional Services, North Carolina Department of Public Instruction, 6358 Mail Service Center, Raleigh, North Carolina 27699-5358, 919|807-3876, email: rwelfare@dpi.state.nc.us.

Interpretation of Columns on VoCATS Course Blueprints

No.	Heading	Column information
1	Comp# Obj.#	Comp=Competency number (three digits); Obj.=Objective number (competency number plus two-digit objective number).
2	Unit Titles/Competency and Objective Statements	Statements of unit titles, competencies per unit, and specific objectives per competency. Each competency statement or specific objective begins with an action verb and makes a complete sentence when combined with the stem "The student will be able to. . ." (The stem appears once in Column 2.) Outcome behavior in each competency/objective statement is denoted by the verb plus its object.
3	Time Hrs	Space for teachers to calculate time to be spent on each objective based on their individual school schedule and the students' performance on preassessments.
4	COURSE % Cognitive	A percentage indicates the relative importance or weight of each unit within the total course or program, each competency within the total course or program, or each objective within the total course or program. Information in Column 5 is used to plan the yearly calendar of work and as a Test Blueprint for preassessments and postassessments.
5	COURSE % Perform	A percentage indicates the relative importance or weight of each competency within a specific unit or each objective within a specific unit. Information in Column 4 is used to plan the yearly calendar of work and as a Test Blueprint for interim assessments.
6	Type Behavior	Classification of outcome behavior in competency and objective statements. (C=Cognitive; P=Psychomotor; A=Affective)
7	Integrated Skill Area	Integrate Skills codes: A=Arts; C=Communications; H=Health/Safety; M=Math; SC=Science; SS=Social Studies.
8	Core Supp	Designation of the competencies and objectives as Core or Supplemental. Competencies and objectives designated Core must be included in the yearly calendar of work.

AGRICULTURAL EDUCATION
COURSE BLUEPRINT for 6822: ANIMAL SCIENCE II
(Range in Hours: 135-180)

Comp # Obj #	Unit Titles/Competency and Objective Statements (the learner will be able to:)	Time	Cognitive %	Performance %	Type Behavior	Integrated Skill Area	Core
1	2		4	5	6	7	8
			100%				
	Total Course Weight		70%	30%			
A.	LEADERSHIP		6%	3%			
001.00	Demonstrate the major components of leadership involved in successful employment.		2%	1%	C3	C	Core
001.01	Identify leadership qualities desired by the animal science industry.		2%		C1	C	Core
001.02	Develop leadership qualities through participation in the animal science instructional program.			1%	C3P	C	Core
002.00	Adapt public speaking techniques to the audience and purpose of the communication taking place.		2%	1%	C3P	C	Core
002.01	Describe the major types of speeches and the variables to be considered when presenting the speeches.		2%		C1	C	Core
002.02	Deliver a speech to an animal science industry organization.			1%	C3P	C	Core
003.00	Apply Robert's Rules of Order to conduct business meetings needed by agricultural organizations.		2%	1%	C3P	C	Core
003.01	Analyze the role that Robert's Rules of Order plays in the orderly conduct of business.		2%		C3	C	Core
003.02	Conduct an orderly transaction of business utilizing Robert's Rules of Order			1%	C3P	C	Core
B.	SUPERVISED AGRICULTURAL EXPERIENCE PROGRAM		4%	3%			
004.00	Design an individual written school-to-work employment plan based upon career objectives.		2%	1%	C3P	C	Core
004.01	Describe the procedures to follow in planning and implementing a school-to-work employment plan.		2%		C1	C	Core
004.02	Create an individual written school-to-work employment plan based upon career objectives.			1%	C3P	C	Core
005.00	Develop a financial record system for use in the animal science industry.		2%	2%	C3P	C	M
005.01	Describe the elements in a financial statement.		2%		C1	C	M
005.02	Compose a financial statement.			2%	C3P	C	M

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1	2		4	5	6	7	8
C.	ANATOMY AND PHYSIOLOGY OF ANIMALS		6%				
006.00	Describe the anatomy of domesticated animals.		3%		C1	H/SC	Core
006.01	Identify the major bones, muscles, and internal organs of livestock.		2%		C1	H/SC	Core
006.02	Label the major bones, muscles, and internal organs of livestock.		1%		C1	H/SC	Core
007.00	DESCRIBE THE PHYSIOLOGY OF DOMESTICATED ANIMALS.		3%		C1	H/SC	Core
007.01	DESCRIBE THE FUNCTIONS OF THE CIRCULATORY, RESPIRATORY, NERVOUS, AND ENDOCRINE SYSTEMS OF LIVESTOCK.		2%		C1	H/SC	Core
007.02	Label the major parts of the circulatory, respiratory, nervous, and endocrine systems of livestock.		1%		C1	H/SC	Core
D.	MANAGING LIVESTOCK AND POULTRY.		8%	2%			
008.00	Identify housing and equipment systems used in beef, swine and the poultry science industry.		6%		C1	H/SC	Core
008.01	Describe housing and equipment systems used in the beef cattle industry.		2%		C1	H/SC	Core
008.02	Describe housing and equipment systems used for different swine operations.		2%		C1	H/SC	Core
008.03	Describe the housing and equipment needs for different types of poultry operations.		2%		C1	H/SC	Core
009.00	Apply preventive maintenance for beef, swine, and poultry.		2%	2%	C3P	H/SC	Core
009.01	Discuss the use of vaccination and immunization in the animal science industry.		1%		C2	H/SC	Core
009.02	Discuss surgical procedures used in the animal science industry.		1%		C2	H/SC	Core
009.03	Perform preventive maintenance procedures on beef, swine and poultry.			2%	C3P	H/SC	Core
E.	ISSUES IN ANIMAL SCIENCE PRODUCTION		10%	2%			
010.00	Analyze waste management systems used in the livestock and poultry industry.		4%		C3	H/SC	Core
010.01	Describe laws and practices that regulate animal waste management.		2%		C1	H/SC	Core
010.02	Describe waste management practices used in the livestock and poultry industry.		2%		C1	H/SC	Core
010.03	Develop a waste management plan for livestock and poultry operations.			2%	C3P	H/SC	Core

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1	2		4	5	6	7	8
011.00	Discuss the humane treatment of animals for slaughter and processing.		3%		C2	H/SC	Core
011.01	Explain the slaughter process for livestock and poultry.		2%		C2	H/SC	Core
011.02	Describe the USDA inspection process for livestock and poultry products.		1%		C1	H/SC	Core
012.00	Discuss ethical issues in the use of biotechnology.		3%		C2	H/SC	Core
012.01	Describe the use of biotechnology to improve animal health, productivity , and reproduction.		2%		C1	H/SC	Core
012.02	Summarize ethical issues in the use of biotechnology to improve animal health, productivity, and reproduction.		1%		C2	H/SC	Core
F.	PRINCIPLES OF ANIMAL NUTRITION		13%	8%			
013.00	Describe the role of rations in animal health and productivity.		3%		C1	H/SC	Core
013.01	Identify the six functions of a good ration.		1%		C1	H/SC	Core
013.02	Define roughages and concentrates in relation to an animal's ration.		1%		C1	H/SC	Core
013.03	Recognize the characteristics of a good ration.		1%		C1	H/SC	Core
014.00	Examine the role of feed additives and hormone implants in animal nutrition.		5%	4%	C3	SC	Core
014.01	Define feed additives and hormone implants used in animal rations.		1%		C1	H/SC	Core
014.02	Discuss the use of feed additives and hormone implants for various kinds of animals.		2%		C2	H/SC	Core
014.03	Explain how to properly mix additives in complete rations.		1%		C2	H/SC	Core
014.04	Describe the proper method of hormone implantation.		1%		C1	H/SC	Core
014.05	Demonstrate the proper method of hormone implantation.			2%	C3P	H/SC	Core
014.06	Select the appropriate feed additive for the given outcome.			2%	C3P	H/SC	Core
015.00	Balance rations for livestock and poultry.		5%	4%	C3P	H/M/SC	Core
015.01	Discuss the general principles involved in balancing a ration.		2%		C1	H/SC	Core
015.02	Interpret the relationship between 100 percent dry matter basis and as-fed basis for rations.		2%		C2	H/M/SC	Core
015.03	Identify rules of thumb for balancing rations for various kinds of livestock.		1%		C1	H/SC	Core

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1	2		4	5	6	7	8
015.04	Determine the nutrient requirements from the appropriate tables using the Pearson Square method.			1%	C3P	H/M/SC	
015.05	Calculate the amount of feeds required to mix a given quantity of a blended feed for a specified ration.			1%	C3P	M	Core
015.06	Balance a ration for three different kinds of livestock or poultry.			2%	C3P	H/M/SC	Core
G.	ANIMAL REPRODUCTION AND GENETICS		12%	3%			
016.00	Discuss animal science reproduction.		5%		C2	H/SC	Core
016.01	Explain the role of the estrus cycle, ovulation, heat detection and fertilization in animal reproduction management.		2%		C2	H/SC	Core
016.02	Discuss artificial insemination, embryo transfer and cloning bovine embryos using nuclear transfer.		2%		C1	H/SC	Core
016.03	Describe the parturition process for livestock.		1%		C1	H/SC	Core
017.00	Compare management practices used in animal science reproduction.		3%	1%	C3P	H/SC	Core
017.01	Describe reproduction practices and problems in managing cattle such as body condition, timing, synchronization of estrus, etc.		1%		C1	H/SC	Core
017.02	Discuss reproduction practices and problems in managing swine such as multiple farrowing.		1%		C2	H/SC	Core
017.03	Describe reproduction practices and problems in managing poultry.		1%		C1	H/SC	Core
017.04	Examine the process of palpation.			1%	C3P	H/SC	Core
018.00	Use principles of genetics to predict the genotype of the offspring.		4%	2%	C3P	H/SC	Core
018.01	Describe how dominant and recessive genes as well as homozygous and heterozygous gene pairs affect genotype.		2%		C1	H/SC	Core
018.02	Discuss how sex determination and sex linked characteristics are related to genetics.		1%		C2	H/SC	Core
018.03	Relate incomplete dominance, linkage, crossover and mutations to genetics.		1%		C2	H/SC	Core
018.04	Use the Punnett Square to predict the results of the crossing of animals with various kinds of genotype.			2%	C3P	H/SC	Core
H.	PRINCIPLES OF ANIMAL DISEASES		8%				
019.00	Characterize the major diseases affecting livestock.		4%		C2	H/SC	Core
019.01	Discuss the major diseases of cattle, swine and poultry.		2%		C2	H/SC	Core

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019.02	Describe treatments for the major diseases of cattle, swine and poultry.		2%		C1	H/SC	Core
020.00	Explain the problem of parasites associated with livestock and poultry.		4%		C2	H/SC	Core
020.01	Describe the major internal and external parasites of livestock and poultry.		2%		C1	H/SC	Core
020.02	Discuss methods of controlling parasites of livestock and poultry.		2%		C2	H/SC	Core
I.	PRINCIPLES OF LIVESTOCK AND POULTRY EVALUATION		3%	9%			
021.00	Analyze the use of production records for livestock and poultry production.		3%	3%	C3P	H/SC	Core
021.01	Describe the elements included in performance data for livestock and poultry.		3%		C1	H/SC	Core
021.02	Demonstrate the proper use of production records to improve the livestock herd.			2%	C3P	H/SC	Core
021.03	Demonstrate the proper use of production records to improve the poultry flock.			1%	C3P	H/SC	Core
022.00	Judge selected livestock using a given criteria.			6%	C3P	SC	Core
022.01	Select livestock on the basis of physical characteristics and performance records.			2%	C3P	SC	Core
022.02	Select live birds on the basis of physical characteristics.			2%	C3P	SC	Core
022.03	Evaluate poultry products using established grading procedures.			2%	C3P	SC	Core
J.	FITTING AND SHOWING LIVESTOCK				C3P	C/H/SC	Supp.
023.00	Demonstrate how to prepare animals for a livestock show.				C3P	C/H/SC	Supp.
023.01	Compare the age and weight classes in shows for livestock.				C3P	C/H/SC	Supp.
023.02	Summarize five recommended grooming procedures for show animals.				C3P	C/H/SC	Supp.
023.03	Demonstrate techniques for preparing and showing animals.				C3P	C/H/SC	Supp.