

Curriculum Map

AS

CERTB Food Science: Meat Production

Animal Science

Program Outcomes: Upon completion of the program, graduates will be able to...	Essential Skills	demonstrate knowledge of the history of agriculture and animal industries in the United States	describe the role of nutrition in animal performance and well-being	extrapolate the role of anatomy, physiology and hormonal influence that affects reproduction in farm animal livestock.	explain the difference between a ruminant and non-ruminant digestive system.	differentiate the differences and roles of genetics and heritability in livestock performance.	describe desirable and undesirable traits of meat animal carcasses used to fabricate into retail cuts.	describe the differences in origin and species background to characterize different breeds of livestock used in animal production.	explain the impact that animal handling has on performance and yield of livestock.	discuss the importance of the broiler and egg industries into American Agriculture.	note the value of exported food animal products to countries around the world.	demonstrate effective oral and written communication skills
Courses												
AGRI 100 - Agriculture in our Society	1, 2	IRMA										IR
PCDE 109- Career Success												IRMA
ANSI 102 - Principles of Animal Science	1345	IRA	IRMA	IRMA	IRA	IRMA	IR	IRMA	IRMA	IRMA	IR	
ANSI 103 - Animal Science & Industry Lab	12345	IR	IR	IR	IRMA	IR	IRMA	IR	IR	IR	IRMA	
BIOL 105 - Principles of Biology				I		I	I					IR
ENGL 101 - English I												IR
ENGL 102 - English II												RMA
SPCH 111 - Public Speaking												IRMA
ANSI 101 -Animal Diseases & Health	12345	IRMA	IR	IRMA	RMA	IR		RMA	RMA			
ANSI 104 - Commercial Feedlot Operations	12345	IRMA	IRMA	IR	IR	IR	IR	IR	IR		IR	
ANSI 105 - Beef Production	1235	IRMA	IRMA	IRMA	IRMA	IRMA	IRMA	IRMA	IR		IRMA	
ANSI 106 - Dairy & Poultry Production	12345	IRMA	IRMA	IRMA	IRMA	IRMA	I	IRMA	IR	IRMA	IR	
ANSI 107 - Animal Nutrition	1234	IRMA	IRMA	IR	IRMA	IR	IRMA	I	I		I	
ANSI 108 - Livestock Selection	1235	I	IR	IRMA	IR	IRMA	IRMA	IRMA	I		IR	
ANSI 109 - Livestock Evaluation	1235	I	IR	IRMA	IR	IRMA	IRMA	IRMA	I		IR	
ANSI 110 - Farm Animal Reproduction Lab	123	I	IR	IRMA	I	IR	I	IR	I		I	
ANSI 120 - Special Topics in Livestock Management	123	IRMA	IRMA	I	I	I	I	I	IRMA		IR	
ANSI 111 - Farm Animal Reproduction	123	I	IR	IRMA	I	IR	I	IR	I		I	
ANSI 135- ServSafe	13	IRMA	I		I							IRMA
ANSI 140 - Horse Science	1235	IRMA	IRMA	IRMA	IR	I		IR	IR		I	
ANSI 250 - Animal Genetics	12345	IRMA	I	IR	I	IRMA	IR	IRMA			IR	
ANSI 129 - Meat & Carcass Evaluation	12345	IR	I	IR	I	IRMA	IRIRMA				I	
ANSI 130 - Classification, Grading & Selection of Meats	12345	RMA	RMA	I	I	RMA	IRMA	IR	IRMA		I	RMA
ANSI 131 - Introduction to Food Science	13	IRMA					IRMA	IRMA		IR	IRMA	
ANSI 206 - Principles of Meat Evaluation	12345	RMA	IR	I	I	I	IRMA	IR	IRMA		I	RMA

Mapping	
I	Introduced
R	Reinforced
M	Mastered
A	Assessed/Artifact

Essential Skills	
1	written communication
2	oral communication
3	critical thinking
4	cultural diversity
5	social responsibility

ANSI 207 - Principles of Meat Science	12345	IRMA	IR	IRMA	I	RMA	IRMA	IRMA	IRMA	IR	IRMA	IR
ANSI 208 - Basic Food Chemistry	1345	IR	IRMA				IRMA				IRMA	IR
ANSI 209 - Food Sanitation Management	1345	IRMA					IR			IR	IRMA	IR
ANSI 212 - Food Safety	1345	IRMA									IR	IR
ANSI 214 - International Animal Agriculture	12345	IRMA	IR			IR	IRMA	IR				RMA
ANSI 251 - Basic Food Microbiology	1345	IRMA					IRMA				IR	IR
ANSI 252 - Hazard Analysis Critical Control Points (HACCP)	1345	IRMA			IR			IR				IR
ANSI 2701, 2702, 2703, 2704, 2705, 2706 - Food Science	1345	IRMA										RMA
ANSI 141- Horsemanship	134	IRMA	IRMA						IRMA			IR
ANSI 213- Animal Welfare & Handling	12345	IRMA	IRMA						IRMA			RMA
ANSI 110- Swine Production	12345	IRMA	IRMA	IRMA	IRMA	IRMA	IRMA	IRMA				RMA

Curriculum Map

AAS

CERTB Food Science: Meat Production

Animal Science

Program Outcomes: Upon completion of the program, graduates will be able to...	Essential Skills	demonstrate knowledge of the history of agriculture and animal industries in the United States	describe the role of nutrition in animal performance and well-being	extrapolate the role of anatomy, physiology and hormonal influence that affects reproduction in farm animal livestock.	explain the difference between a ruminant and non ruminant digestive system.	differentiate the differences and roles of genetics and heritability in livestock performance.	describe desirable and undesirable traits of meat animal carcasses used to fabricate into retail cuts.	describe the differences in origin and species background to characterize different breeds of livestock used in animal production.	explain the impact that animal handling has on performance and yield of livestock.	discuss the importance of the broiler and egg industries into American Agriculture.	note the value of exported food animal products to countries around the world.	evaluate concepts required for work-place skills and expectations.
		Courses										
AGRI 100 - Agriculture in our Society	1,2	IRMA										
PCDE 109- Career Success												IRMA
ANSI 102 - Principles of Animal Science	1345	IRA	IRMA	IRMA	IRA	IRMA	IR	IRMA	IRMA	IRMA	IR	IR
ANSI 103 - Animal Science & Industry Lab	12345	IR	IR	IR	IRMA	IR	IRMA	IR	IR	IR	IRMA	IR
CSCI 110- Computer Concepts												IRMA
ANSI 131 - Introduction to Food Science	13	IRMA					IRMA	IRMA		IR	IRMA	RMA
ENGL 100- Applied Communications	1, 3											IRMA
ANSI 101 -Animal Diseases & Health	12345	IRMA	IR	IRMA	RMA	IR		RMA	RMA			
ANSI 104 - Commercial Feedlot Operations	12345	IRMA	IRMA	IR	IR	IR	IR	IR	IR		IR	
ANSI 105 - Beef Production	1235	IRMA	IRMA	IRMA	IRMA	IRMA	IRMA	IRMA	IR		IRMA	
ANSI 106 - Dairy & Poultry Production	12345	IRMA	IRMA	IRMA	IRMA	IRMA	I	IRMA	IR	IRMA	IR	
ANSI 107 - Animal Nutrition	1234	IRMA	IRMA	IR	IRMA	IR	IRMA	I	I		I	
ANSI 108 - Livestock Selection	1235	I	IR	IRMA	IR	IRMA	IRMA	IRMA	I		IR	
ANSI 109 - Livestock Evaluation	1235	I	IR	IRMA	IR	IRMA	IRMA	IRMA	I		IR	
ANSI 1110 - Farm Animal Reproduction Lab	123	I	IR	IRMA	I	IR	I	IR	I		I	
ANSI 120 - Special Topics in Livestock Management	123	IRMA	IRMA	I	I	I	I	I	IRMA		IR	
ANSI 111 - Farm Animal Reproduction	123	I	IR	IRMA	I	IR	I	IR	I		I	
ANSI 135- ServSafe	13	IRMA	I		I							IRMA
ANSI 140 - Horse Science	1235	IRMA	IRMA	IRMA	IR	I		IR	IR		I	
ANSI 250 - Animal Genetics	12345	IRMA	I	IR	I	IRMA	IR	IRMA			IR	
ANSI 129 - Meat & Carcass Evaluation	12345	IR	I	IR	I	IRMA	IRMA				I	
ANSI 130 - Classification, Grading & Selection of Meats	12345	RMA	RMA	I	I	RMA	IRMA	IR	IRMA		I	RMA
ANSI 206 - Principles of Meat Evaluation	12345	RMA	IR	I	I	I	IRMA	IR	IRMA		I	RMA
ANSI 207 - Principles of Meat Science	12345	IRMA	IR	IRMA	I	RMA	IRMA	IRMA	IRMA	IR	IRMA	IR
ANSI 208 - Basic Food Chemistry	1345	IR	IRMA				IRMA				IRMA	IR
ANSI 209 - Food Sanitation Management	1345	IRMA					IR			IR	IRMA	IR
ANSI 212 - Food Safety	1345	IRMA									IR	IR

Mapping	
I	Introduced
R	Reinforced
M	Mastered
A	Assessed/Artifact

Essential Skills	
1	written communication
2	oral communication
3	critical thinking
4	cultural diversity
5	social responsibility

ANSI 214 - International Animal Agriculture	12345	IRMA	IR			IR	IRMA	IR				RMA
ANSI 251 - Basic Food Microbiology	1345	IRMA					IRMA				IR	IR
ANSI 252 - Hazard Analysis Critical Control Points (HACCP)	1345	IRMA			IR			IR				IR
ANSI 2701, 2702, 2703, 2704, 2705, 2706 - Food Science	1345	IRMA										RMA
ANSI 141- Horsemanship	134	IRMA	IRMA						IRMA			IR
ANSI 213- Animal Welfare & Handling	12345	IRMA	IRMA						IRMA			RMA
ANSI 110- Swine Production	12345	IRMA	IRMA	IRMA	IRMA	IRMA	IRMA	IRMA				RMA

AGRI 100: Agriculture in our Society		CERTB									AAS	AS
Program Outcomes		<i>Curriculum Map</i>										
demonstrate knowledge of the history of agriculture and animal industries in the United States												
describe the role of nutrition in animal performance and well-being												
extrapolate the role of anatomy, physiology and hormonal influence that affects reproduction in farm animal livestock.												
explain the difference between a ruminant and non-ruminant digestive system.												
differentiate the differences and roles of genetics and heritability in livestock performance.												
describe desirable and undesirable traits of meat animal carcasses used to fabricate into retail cuts.												
describe the differences in origin and species background to characterize different breeds of livestock used in animal production.												
explain the impact that animal handling has on performance and yield of livestock.												
discuss the importance of the broiler and egg industries into American Agriculture.												
note the value of exported food animal products to countries around the world.												
evaluate concepts required for work-place skills and expectations.												
demonstrate effective oral and written communication skills												
Course SLO: Students will be able to												
discover college planning	IR											IR
observe industry challenges and opportunities	IR											IR
prepare career orientation research and exploration	IR											IR
structure career development skills	IRMA											IR

Mapping	
I	Introduced
R	Reinforced
M	Mastered
A	Assessed/Artifact

PDCE 109: Career Success		CERTB										AAS	AS	
		Curriculum Map												
Program Outcomes	demonstrate knowledge of the history of agriculture and animal industries in the United States	describe the role of nutrition in animal performance and well-being	extrapolate the role of anatomy, physiology and hormonal influence that affects reproduction in farm animal livestock.	explain the difference between a ruminant and non-ruminant digestive system.	differentiate the differences and roles of genetics and heritability in livestock performance.	describe desirable and undesirable traits of meat animal carcasses used to fabricate into retail cuts.	describe the differences in origin and species background to characterize different breeds of livestock used in animal production.	explain the impact that animal handling has on performance and yield of livestock.	discuss the importance of the broiler and egg industries into American Agriculture.	note the value of exported food animal products to countries around the world.	evaluate concepts required for work-place skills and expectations.	demonstrate effective oral and written communication skills		
Course SLO: Students will be able to														
describe the significance of enthusiasm and passion in the workplace.														
demonstrate reliability.														
illustrate professionalism.												IRMA		
identify acts of initiative.														
describe the significance of honesty and integrity in the workplace.												IRMA		
critique interactions with managers and co-workers.														
develop strategies that show gratitude toward others.														

Mapping	
I	Introduced
R	Reinforced
M	Mastered
A	Assessed/Artifact

		CERTB										AAS	AS
ANSI 102: Principles of Animal Science		Curriculum Map											
Program Outcomes	demonstrate knowledge of the history of agriculture and animal industries in the United States	describe the role of nutrition in animal performance and well-being	extrapolate the role of anatomy, physiology and hormonal influence that affects reproduction in farm animal livestock.	explain the difference between a ruminant and non-ruminant digestive system.	differentiate the differences and roles of genetics and heritability in livestock performance.	describe desirable and undesirable traits of meat animal carcasses used to fabricate into retail cuts.	describe the differences in origin and species background to characterize different breeds of livestock used in animal production.	explain the impact that animal handling has on performance and yield of livestock.	discuss the importance of the broiler and egg industries into American Agriculture.	note the value of exported food animal products to countries around the world.	evaluate concepts required for work-place skills and expectations.	demonstrate effective oral and written communication skills	
Course SLO: Students will be able to													
identify contributions that domesticated animals have made to civilization.	IRA	IR	IRA	IRA	IR	IR	IR	IR	IR	IR	IR		
describe the differences in structure and function between monogastric and polygastric farm animals.	IR	IRMA	IR	IRA	IR	IR	IR	IR	IR	IR	IR		
identify the sources, functions and utilization of each of the classes of nutrients.	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR		
identify and describe the function of each part of the male and female reproductive system.	IR	IR	IRA	IR	IR	IR	IR	IR	IR	IR	IR		
describe the sequence of events in the estrous cycle, the fertilization of the female egg and the implantation of the fertilized embryo.	IR	IR	IRMA	IR	IR	IR	IR	IR	IR	IR	IR		
describe the appropriate husbandry practices which enhance reproductive efficiency.	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR		
describe how heritability influences production traits.	IR	IR	IR	IR	IRMA	IR	IR	IR	IR	IR	IR		
describe the parts and functions of a terminal market.	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR		
compare the various methods of marketing livestock.	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR		
describe the characteristics of wool and the methods of grading wool.	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR		
identify important characteristics of the major breeds of livestock.	IR	IR	IR	IR	IR	IR	IRMA	IR	IR	IR	IR		
compare economically traits ways of measuring productivity in farm animals.	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR		
compare economically important factors for the product of cattle, sheep and pigs.	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR		
compare the differences between animals with normal and abnormal health.	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR		
identify methods for creating immunity in livestock.	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR		
evaluate differences between and amongst slaughter animals and methods of slaughter for each species.	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR		

Mapping	
I	Introduced
R	Reinforced
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A	Assessed/Artifact

CERTB												AAS	AS
ANSI 103: Animal Science & Industry Lab												Curriculum Map	
Program Outcomes	demonstrate knowledge of the history of agriculture and animal industries in the United States	describe the role of nutrition in animal performance and well-being	extrapolate the role of anatomy, physiology and hormonal influence that affects reproduction in farm animal livestock.	explain the difference between a ruminant and non-ruminant digestive system.	differentiate the differences and roles of genetics and heritability in livestock performance.	describe desirable and undesirable traits of meat animal carcasses used to fabricate into retail cuts.	describe the differences in origin and species background to characterize different breeds of livestock used in animal production.	explain the impact that animal handling has on performance and yield of livestock.	discuss the importance of the broiler and egg industries into American Agriculture.	note the value of exported food animal products to countries around the world.	evaluate concepts required for work-place skills and expectations.	demonstrate effective oral and written communication skills	
Course SLO: Students will be able to													
recognize the impact of the feedlot industry on the southwest Kansas economy.	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR		
realize the opportunities for careers in the animal feeding industry.	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR		
extrapolate the importance of technology in cattle feeding.	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR		
relate the importance of marketing systems in cattle, sheep and pig feeding and slaughter.	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR		
recognize the importance of the harvest industry for southwest Kansas.	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR		
relay the importance of new technology in beef, pork and lamb harvest.	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR		
describe and calculate the factors that determine the value of a carcass.	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR		
identify the parts of a polygastric (ruminant) digestive system and explain the functions of each part.	IR	IR	IR	IRMA	IR	IR	IR	IR	IR	IR	IR		
identify the parts of a female bovine/porcine reproductive system and explain the functions of each part.	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR		
explain the relationship between alcohol production, cattle feeding, farming and fish production in southwest Kansas.	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR		
explain the difference in economics and consumer value between various grades of whole muscle meat and ground beef available in supermarkets.	IR	IR	IR	IR	IR	IRMA	IR	IR	IR	IRMA	IR		
understand the role of the commercial cow producer in southwest Kansas.	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR		
understand the role of commercial sheep and swine production in southwest Kansas.	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR		

Mapping	
I	Introduced
R	Reinforced
M	Mastered
A	Assessed/Artifact

BIOL 105: Principles of Biology		CERTB										AAS	AS	
		Curriculum Map												
Program Outcomes	demonstrate knowledge of the history of agriculture and animal industries in the United States	describe the role of nutrition in animal performance and well-being	extrapolate the role of anatomy, physiology and hormonal influence that affects reproduction in farm animal livestock.	explain the difference between a ruminant and non-ruminant digestive system.	differentiate the differences and roles of genetics and heritability in livestock performance.	describe desirable and undesirable traits of meat animal carcasses used to fabricate into retail cuts.	describe the differences in origin and species background to characterize different breeds of livestock used in animal production.	explain the impact that animal handling has on performance and yield of livestock.	discuss the importance of the broiler and egg industries into American Agriculture.	note the value of exported food animal products to countries around the world.	evaluate concepts required for work-place skills and expectations.	demonstrate effective oral and written communication skills		
Course SLO: Students will be able to														
demonstrate an understanding of the nature of science: scientific processes, <u>scientific methods</u>														
demonstrate an understanding of the levels of organization and emergent properties of life: chemical, cellular, organ/organ system, organismal, <u>ecological</u>														
demonstrate an understanding of bioenergetics: enzyme activity, metabolism, cellular <u>respiration/photosynthesis</u>														
demonstrate an understanding of the importance of reproduction in maintaining the continuity of life: mitosis, meiosis, differentiation/development, diversity of <u>reproductive strategies</u>			I											
demonstrate an understanding of applying the principles of genetics to unity and diversity of life: classical genetics, <u>molecular genetics</u> .					I									
demonstrate an understanding of discussing evolution as the mechanism of change in biology: natural selection, <u>speciation, diversity of life/classification</u>							I							
demonstrate an understanding of the principles of ecology: ecosystem organization, ecological interactions, environmental issues														

Mapping	
I	Introduced
R	Reinforced
M	Mastered
A	Assessed/Artifact

ENGL 101: English I		CERTB										AAS	AS	
		Curriculum Map												
Program Outcomes	demonstrate knowledge of the history of agriculture and animal industries in the United States	describe the role of nutrition in animal performance and well-being	extrapolate the role of anatomy, physiology and hormonal influence that affects reproduction in farm animal livestock.	explain the difference between a ruminant and non-ruminant digestive system.	differentiate the differences and roles of genetics and heritability in livestock performance.	describe desirable and undesirable traits of meat animal carcasses used to fabricate into retail cuts.	describe the differences in origin and species background to characterize different breeds of livestock used in animal production.	explain the impact that animal handling has on performance and yield of livestock.	discuss the importance of the broiler and egg industries into American Agriculture.	note the value of exported food animal products to countries around the world.	evaluate concepts required for work-place skills and expectations.	demonstrate effective oral and written communication skills		
Course SLO: Students will be able to														
employ conventions of format, structure, voice, tone, and level of formality to produce writing for specific purposes and audiences as required by various writing situations													IR	
practice ethical means of creating their work while integrating their own ideas with those of others.													IR	
demonstrate an ability to fulfill standards of syntax, grammar, punctuation, and spelling for various rhetorical contexts.													IR	
apply flexible strategies for prewriting, developing, drafting, revising, editing, and proofreading.													IR	
critique their own and others' work.													IR	

Mapping	
I	Introduced
R	Reinforced
M	Mastered
A	Assessed/Artifact

ENGL 102: English II		CERTB										AAS	AS	
Program Outcomes		Curriculum Map												
Course SLO: Students will be able to	demonstrate knowledge of the history of agriculture and animal industries in the United States	describe the role of nutrition in animal performance and well-being	extrapolate the role of anatomy, physiology and hormonal influence that affects reproduction in farm animal livestock.	explain the difference between a ruminant and non-ruminant digestive system.	differentiate the differences and roles of genetics and heritability in livestock performance.	describe desirable and undesirable traits of meat animal carcasses used to fabricate into retail cuts.	describe the differences in origin and species background to characterize different breeds of livestock used in animal production.	explain the impact that animal handling has on performance and yield of livestock.	discuss the importance of the broiler and egg industries into American Agriculture.	note the value of exported food animal products to countries around the world.	evaluate concepts required for work-place skills and expectations.	demonstrate effective oral and written communication skills		
compose persuasive or informative texts acknowledging the expectations of <u>specific audiences</u> .													RMA	
apply research strategies including finding, evaluating, analyzing, and <u>synthesizing sources</u> .													RMA	
employ an appropriate style for citing and <u>listing sources</u> .													RMA	
demonstrate the ability to read and think critically about texts.													RMA	

Mapping	
I	Introduced
R	Reinforced
M	Mastered
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		CERTB									AAS	AS
SPCH 111: Public Speaking		Curriculum Map										
Program Outcomes	demonstrate knowledge of the history of agriculture and animal industries in the United States	describe the role of nutrition in animal performance and well-being	extrapolate the role of anatomy, physiology and hormonal influence that affects reproduction in farm animal livestock.	explain the difference between a ruminant and non-ruminant digestive system.	differentiate the differences and roles of genetics and heritability in livestock performance.	describe desirable and undesirable traits of meat animal carcasses used to fabricate into retail cuts.	describe the differences in origin and species background to characterize different breeds of livestock used in animal production.	explain the impact that animal handling has on performance and yield of livestock.	discuss the importance of the broiler and egg industries into American Agriculture.	note the value of exported food animal products to countries around the world.	evaluate concepts required for work-place skills and expectations.	demonstrate effective oral and written communication skills
Course SLO: Students will be able to												
I. The Competent Speaker must complete a minimum of four speeches that include a written assignment, peer review and requires increasingly rigorous research and must be delivered in front of a live synchronous audience. A. Faculty are asked to consider, when evaluating student speakers, that an audience should include five appropriate persons												
II. The Competent Speaker must be able to compose a message and provide ideas and information suitable to the topic, purpose, and audience.												
1. Determine the Purpose of Oral Discourse											IRMA	
2. Choose a Topic and Restrict It According to the Purpose and the Audience											IRMA	
a. Formulate a thesis statement.											IRMA	
b. Provide adequate support material.											IRMA	
c. Select a suitable organizational pattern.											IRMA	
1. Demonstrate careful choice of words.											IRMA	
1. Provide effective transitions.											IRMA	
III. The Competent Speaker must also be able to transmit the message by using delivery skills suitable to the topic, purpose, and audience.												
Column 1												
1. Employ Vocal Variety in Rate, Pitch, and Intensity											IRMA	
2. Articulate Clearly											IRMA	
3. Employ Language Appropriate to the Designated Audience											IRMA	
4. Demonstrate Nonverbal Behavior that Supports the Verbal Message											IRMA	
Listener Competencies												
I. The Competent Listener must be able to demonstrate literal comprehension.											IR	
1. Recognize Main Ideas											IR	

Mapping	
I	Introduced
R	Reinforced
M	Mastered
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CSCI 110: Computer Concepts		CERTB									AAS	AS
Program Outcomes		Curriculum Map										
Course SLO: Students will be able to	demonstrate knowledge of the history of agriculture and animal industries in the United States	describe the role of nutrition in animal performance and well-being	extrapolate the role of anatomy, physiology and hormonal influence that affects reproduction in farm animal livestock.	explain the difference between a ruminant and non-ruminant digestive system.	differentiate the differences and roles of genetics and heritability in livestock performance.	describe desirable and undesirable traits of meat animal carcasses used to fabricate into retail cuts.	describe the differences in origin and species background to characterize different breeds of livestock used in animal production.	explain the impact that animal handling has on performance and yield of livestock.	discuss the importance of the broiler and egg industries into American Agriculture.	note the value of exported food animal products to countries around the world.	evaluate concepts required for work-place skills and expectations.	demonstrate effective oral and written communication skills
identify the specifications and configurations of computer hardware												
identify the role of an operating system												
use the Internet to find information and determine its credibility										IRMA		
use word processing software to create, edit and produce professional documents										IRMA		
create spreadsheets and charts for problem-solving												
utilize a database										IRMA		
use presentation software to create, edit and produce professional presentations										IRMA		
identify the ethical and social standards of conduct regarding the use of information and technology										IRMA		
identify security threats and solutions										IRMA		

Mapping	
I	Introduced
R	Reinforced
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ANSI 131: Introduction to Food Science		CERTB									AAS	AS
Program Outcomes		Curriculum Map										
Course SLO: Students will be able to	demonstrate knowledge of the history of agriculture and the animal industries in the United States	describe the role of nutrition in animal performance and well-being	extrapolate the role of anatomy, physiology and hormonal influence that affects reproduction in farm animal livestock.	explain the difference between a ruminant and non-ruminant digestive system.	differentiate the differences and roles of genetics and heritability in livestock performance.	describe desirable and undesirable traits of meat animal carcasses used to fabricate into retail cuts.	describe the differences in origin and species background to characterize different breeds of livestock used in animal production.	explain the impact that animal handling has on performance and yield of livestock.	discuss the importance of the broiler and egg industries into American Agriculture.	note the value of exported food animal products to countries around the world.	evaluate concepts required for work-place skills and expectations.	demonstrate effective oral and written communication skills
define the new opportunities in the food service industry from present challenges.	IRMA					IRMA	IRMA		IR	I, R, M, A	MA	
list the various types of food establishments in the US.	IRMA					IRMA	IRMA		IR	IRMA	RMA	
describe and define the terms foodborne illness and foodborne outbreak.	IRMA					IRMA	IRMA		IR	IRMA	RMA	
describe susceptible people to foodborne illness infections.	IRMA					IRMA	IRMA		IR	IRMA	RMA	
define the different food sensory characteristics.	IRMA					IRMA	IRMA		IR	IRMA	RMA	
compare and contrast different economics that influence food consumption and production.	IRMA					IRMA	IRMA		IR	IRMA	MA	
define differences in heat transfer and microwave cooking.	IRMA					IRMA	IRMA		IR	IRMA	RMA	
illustrate the differences in composition of food items.	IRMA					IRMA	IRMA		IR	IRMA	RMA	
note types of food ingredients found in desserts, frozen foods, pastry, breads and quick breads.	IRMA					IRMA	IRMA		IR	IRMA	RMA	
describe components and nutritional values of fruits and vegetables.	IRMA					IRMA	IRMA		IR	IRMA	RMA	
compare, contrast and describe the nutritional values and components of milk, eggs, meat and seafood in a healthy diet	IRMA					IRMA	IRMA		IR	IRMA	RMA	
describe the role of beverages noting the most consumed in the US	IRMA					IRMA	IRMA		IR	IRMA	RMA	
describe methods of food packaging and preservation.	IRMA					IRMA	IRMA		IR	IRMA	MA	
define methods of freezing and canning foods as well as nutritional changes in these forms of storage.	IRMA					IRMA	IRMA		IR	IRMA	MA	

Mapping	
I	Introduced
R	Reinforced
M	Mastered
A	Assessed/Artifact

		CERTB									AAS	AS
Course: ENGL 100: Applied Communicati		Curriculum Map										
Program Outcomes	demonstrate knowledge of the history of agriculture and animal industries in the United States	describe the role of nutrition in animal performance and well-being	extrapolate the role of anatomy, physiology and hormonal influence that affects reproduction in farm animal livestock.	explain the difference between a ruminant and non-ruminant digestive system.	differentiate the differences and roles of genetics and heritability in livestock performance.	describe desirable and undesirable traits of meat animal carcasses used to fabricate into retail cuts.	describe the differences in origin and species background to characterize different breeds of livestock used in animal production.	explain the impact that animal handling has on performance and yield of livestock.	discuss the importance of the broiler and egg industries into American Agriculture.	note the value of exported food animal products to countries around the world.	evaluate concepts required for work-place skills and expectations.	demonstrate effective oral and written communication skills
Course SLO: Students will be able to												
analyze audience & purpose to determine appropriate form of <u>workplace communication</u>											IRMA	
describe technical procedures in logical and accurate manner in written and/or <u>oral communication</u>											IRMA	
compose effective written and/or oral communication											IRMA	
critique own writing for logic, professional tone, and use of standard English											IRMA	

Mapping	
I	Introduced
R	Reinforced
M	Mastered
A	Assessed/Artifact

ANSI 101: Animal Diseases & Health		CERTB										AAS	AS
Program Outcomes		Curriculum Map											
Course SLO: Students will be able to	demonstrate knowledge of the history of agriculture and the animal industries in the United States	describe the role of nutrition in animal performance and well-being	extrapolate the role of anatomy, physiology and hormonal influence that affects reproduction in farm animal livestock.	explain the difference between a ruminant and non-ruminant digestive system.	differentiate the differences and roles of genetics and heritability in livestock performance.	describe desirable and undesirable traits of meat animal carcasses used to fabricate into retail cuts.	describe the differences in origin and species background to characterize different breeds of livestock used in animal production.	explain the impact that animal handling has on performance and yield of livestock.	discuss the importance of the broiler and egg industries into American Agriculture.	note the value of exported food animal products to countries around the world.	evaluate concepts required for work-place skills and expectations.	demonstrate effective oral and written communication skills	
define the term disease and list the most common diseases.	IRMA	IR	RMA	RMA	IR		RMA	RMA					
list and describe conditions that are non-infections diseases.	IRMA	IR	RMA	RMA	IR		RMA	RMA					
define the term infectious disease and describe symptoms.	IRMA	IR	RMA	RMA	IR		RMA	RMA					
analyze the body's reaction to infections.	IRMA	IR	RMA	RMA	IR		RMA	RMA					
summarize the relationship between the host and the invading organism.	IRMA	IR	RMA	RMA	IR		RMA	RMA					
examine the characteristics of microorganisms that cause disease.	IRMA	IR	RMA	RMA	IR		RMA	RMA					
discuss factors involved in disease prevention.	IRMA	IR	RMA	RMA	IR		RMA	RMA					
appraise the role of nutrition in fighting disease.	IRMA	IR	RMA	RMA	IR		RMA	RMA					
list and describe the function in disease resistance of the six classes of nutrients.	IRMA	IR	RMA	RMA	IR		RMA	RMA					
explain the function of sanitation for disease control and how water/feeds are vital in being sanitized or pathogen free.	IRMA	IR	RMA	RMA	IR		RMA	RMA					
describe the effects of manure storage, water pollution, pasture rotation and disposal of carcasses on disease prevention	IRMA	IR	RMA	RMA	IR		RMA	RMA					
analyze the role of disinfectants in preventing disease.	IRMA	IR	RMA	RMA	IR		RMA	RMA					
discuss biological agents and immunizing agents used in animal health.	IRMA	IR	RMA	RMA	IR		RMA	RMA					
create a vaccination program to decrease the occurrence of disease.	IRMA	IR	RMA	RMA	IR		RMA	RMA					
explain principles associated with legal quarantine and type of facilities.	IRMA	IR	RMA	RMA	IR		RMA	RMA					
relate the importance of animal housing, pens, bedding, and space on health.	IRMA	IR	RMA	RMA	IR		RMA	RMA					

Mapping	
I	Introduced
R	Reinforced
M	Mastered
A	Assessed/Artifact

examine the importance of hereditary factors and abnormalities on health.	IRMA	IR	RMA	RMA	IR		RMA	RMA			
describe basic husbandry practices to decrease disease.	IRMA	IR	RMA	RMA	IR		RMA	RMA			
discuss methods of administering vaccinations and medications.	IRMA	IR	RMA	RMA	IR		RMA	RMA			
describe principles of management during parturition.	IRMA	IR	RMA	RMA	IR		RMA	RMA			
summarize methods used to treat sick cattle, sheep, swine and horses.	IRMA	IR	RMA	RMA	IR		RMA	RMA			
list and discuss diseases associated with the digestive system.	IRMA	IR	RMA	RMA	IR		RMA	RMA			
list and discuss diseases associated with the genitourinary system.	IRMA	IR	RMA	RMA	IR		RMA	RMA			
list and discuss diseases associated with the respiratory system.	IRMA	IR	RMA	RMA	IR		RMA	RMA			
list and discuss diseases associated with the circulatory system.	IRMA	IR	RMA	RMA	IR		RMA	RMA			
list and discuss diseases associated with the nervous system.	IRMA	IR	RMA	RMA	IR		RMA	RMA			
list and discuss generalized diseases.	IRMA	IR	RMA	RMA	IR		RMA	RMA			
describe metabolic and deficiency diseases	IRMA	IR	RMA	RMA	IR		RMA	RMA			
explain diseases that are localized and affect the skin and extremities.	IRMA	IR	RMA	RMA	IR		RMA	RMA			
analyze the effects of plant and chemical poisonings.	IRMA	IR	RMA	RMA	IR		RMA	RMA			
summarize the role of parasitology in animal health.	IRMA	IR	RMA	RMA	IR		RMA	RMA			
create a control and prevention method for parasites.	IRMA	IR	RMA	RMA	IR		RMA	RMA			

CERTB										AAS	AS	
ANSI 104: Commercial Feedlot Operations												
Curriculum Map												
Program Outcomes	demonstrate knowledge of the history of agriculture and animal industries in the United States	describe the role of nutrition in animal performance and well-being	extrapolate the role of anatomy, physiology and hormonal influence that affects reproduction in farm animal livestock.	explain the difference between a ruminant and non-ruminant digestive system.	differentiate the differences and roles of genetics and heritability in livestock performance.	describe desirable and undesirable traits of meat animal carcasses used to fabricate into retail cuts.	describe the differences in origin and species background to characterize different breeds of livestock used in animal production.	explain the impact that animal handling has on performance and yield of livestock.	discuss the importance of the broiler and egg industries into American Agriculture.	note the value of exported food animal products to countries around the world.	evaluate concepts required for work-place skills and expectations.	demonstrate effective oral and written communication skills
Course SLO: Students will be able to												
explain the purpose, business aspects, trends, and history of commercial cattle feeding.	IRMA	IRMA	IR	IR	IR	IR	IR	IR		IR	R	
discuss the role of the railroads, markets, cattle drives and new practices in the history of cattle feeding.	IRMA	IRMA	IR	IR	IR	IR	IR	IR		IR	R	
discuss the role of management and programs for successful programs including economic packages, safety and procurement	IRMA	IRMA	IR	IR	IR	IR	IR	IR		IR	R	
describe and extrapolate on the various practices in the feedlot industry: feeding schedules, profiting schedules, milling, feed delivery, marketing, processing, handling and procurement	IRMA	IRMA	IR	IR	IR	IR	IR	IR		IR	R	
explain the practices of pen size adjustments, first feeding, inspection, weighing, and inventory control.	IRMA	IRMA	IR	IR	IR	IR	IR	IR		IR	R	
contrast and compare the uses of feedlot equipment and technology.	IRMA	IRMA	IR	IR	IR	IR	IR	IR		IR	R	
describe and relate the importance of environmental problems and solutions in the feedlot industry.	IRMA	IRMA	IR	IR	IR	IR	IR	IR		IR	R	
examine the importance of nutrition and energy feeds and their cost efficiency.	IRMA	IRMA	IR	IR	IR	IR	IR	IR		IR	R	
discuss the feed-mill operations and the use of feed additives and their regulatory agency.	IRMA	IRMA	IR	IR	IR	IR	IR	IR		IR	R	
discuss popular and unpopular trends in the feedlot industry.	IRMA	IRMA	IR	IR	IR	IR	IR	IR		IR	R	

Mapping	
I	Introduced
R	Reinforced
M	Mastered
A	Assessed/Artifact

		CERTB										AAS	AS
ANSI 105: Beef Production		Curriculum Map											
Program Outcomes	demonstrate knowledge of the history of agriculture and animal industries in the United States	describe the role of nutrition in animal performance and well-being	extrapolate the role of anatomy, physiology and hormonal influence that affects reproduction in farm animal livestock.	explain the difference between a ruminant and non-ruminant digestive system.	differentiate the differences and roles of genetics and heritability in livestock performance.	describe desirable and undesirable traits of meat animal carcasses used to fabricate into retail cuts.	describe the differences in origin and species background to characterize different breeds of livestock used in animal production.	explain the impact that animal handling has on performance and yield of livestock.	discuss the importance of the broiler and egg industries into American Agriculture.	note the value of exported food animal products to countries around the world.	evaluate concepts required for work-place skills and expectations.	demonstrate effective oral and written communication skills	
Course SLO: Students will be able to													
explain the purpose, business aspects and trends in Beef Production.	IRMA	I	IR	I	I	IRMA	IRMA	IR		IRMA	R		
discuss the role of computers in Beef herds.	I	I	IR	I	I	I	I	I		IRMA	R		
describe the characteristics in selecting breeding stock and appraise these qualities on cows, bulls and heifers.	IR	I	IR	I	IRMA	IRMA	IRMA	IR		IRMA	R		
analyze the role of genetics in EPD's and efficiency of stock.	IR	I	IR	I	IRMA	IR	IRMA	IR		IRMA	R		
explain heterosis and differentiate between the different breeding systems that are used in beef production.	IR	I	IR	I	IRMA	IR	IRMA	IR		IRMA	R		
give examples of different factors in reproductive performance.	IR	I	IR	I	IRMA	IR	IRMA	IR		IRMA	R		
discriminate between biological and economic efficiency.	IR	I	IR	I	IRMA	IR	IRMA	IR		IRMA	R		
explain and examine the purebred breeding program.	IR	I	IR	I	I	IR	IRMA	IR		IRMA	R		
compare the financial aspects of various methods of raising purebred cattle and calculate depreciation, operating costs and receipts.	IR	I	IR	I	I	IR	IRMA	IR		IRMA	R		
describe the different methods for improving beef breeding, including AI and ET.	IR	I	IRMA	I	I	IR	IRMA	IR		IRMA	R		
contrast the different types of sales, advertising and presentation techniques for merchandizing beef cattle.	IR	I	IR	I	I	IR	IRMA	IR		IRMA	R		
examine the concepts of pregnancy, parturition and care of the calf.	IR	I	IRMA	I	I	IR	IRMA	IR		IRMA	R		
diagram different types of fetal membranes, the placenty, umbilical cord and the uterus.	IR	I	IRMA	I	I	IR	IRMA	IR		IRMA	R		
list and describe different signs of pregnancy.	IR	I	IRMA	I	I	IR	IRMA	IR		IRMA	R		
outline and predict embryonal mortality and detect signs of parturition and labor in cows.	IR	I	IRMA	I	I	IR	IRMA	IR		IRMA	R		

Mapping	
I	Introduced
R	Reinforced
M	Mastered
A	Assessed/Artifact

list and describe the care of the newborn calf.	IR	I	IR	I	I	IR	IRMA	IR		IRMA	R	
examine the principles of beef cattle feeding citing the significance of the feature of the ruminant digestive system.	IR	IRMA	IR	IRMA	I	IR	IRMA	IR		IRMA	R	
summarize the nutrient requirements of the cow, bull and calf.	IR	IRMA	IR	IRMA	I	IR	IRMA	IR		IRMA	R	
list and define the terms associated with feeding requirements.	IR	IRMA	IR	IRMA	I	IR	IRMA	IR		IRMA	R	
analyze the importance of forage quality for breeding cattle.	IR	IRMA	IR	IRMA	I	IR	IRMA	IR		IRMA	R	
list the reasons for feeding and how to choose the correct supplement.	IR	IRMA	IR	IRMA	I	IR	IRMA	IR		IRMA	R	
discuss the role of using non-protein nitrogen sources	IR	IRMA	IR	IRMA	I	IR	IRMA	IR		IRMA	R	
explain and formulate a creep feeding ration for calves.	IR	IRMA	IR	IRMA	I	IR	IRMA	IR		IRMA	R	
describe how to improve low quality forages.	IR	IRMA	IR	IRMA	I	IR	IRMA	IR		IRMA	R	
summarize the aspects of raising replacement heifers, including growth, factors affecting puberty and age at calving	IR	I, R	IR	I	I	IR	IRMA	IR		IRMA	R	
discuss rebreeding of the herd cows and heifers.	IR	IRMA	IR	I	I	IR	IRMA	IR		IRMA	R	
explain about proper conditioning of livestock prior, during and after breeding season.	IR	IRMA	IR	I	I	IR	IRMA	IR		IRMA	R	
discuss management practices of nursing calves: dehoring, vaccination, weaning, implanting and identification.	IR	IRMA	IR	I	I	IR	IRMA	IR		IRMA	R	

ANSI 106: Dairy & Poultry Production		CERTB Curriculum Map										AAS	AS
Program Outcomes	demonstrate knowledge of the history of agriculture and animal industries in the United States	describe the role of nutrition in animal performance and well-being	extrapolate the role of anatomy, physiology and hormonal influence that affects reproduction in farm animal livestock.	explain the difference between a ruminant and non-ruminant digestive system.	differentiate the differences and roles of genetics and heritability in livestock performance.	describe desirable and undesirable traits of meat animal carcasses used to fabricate into retail cuts.	describe the differences in origin and species background to characterize different breeds of livestock used in animal production.	explain the impact that animal handling has on performance and yield of livestock.	discuss the importance of the broiler and egg industries into American Agriculture.	note the value of exported food animal products to countries around the world.	evaluate concepts required for work-place skills and expectations.	demonstrate effective oral and written communication skills	
Course SLO: Students will be able to													
become familiar with the history, current state and impact of the dairy industry.	IRMA	IRMA	IR	IR	I, R	I	IRMA	IR	I	IR	I		
identify the breeds of dairy utilized in today's industry.	IRMA	IRMA	IR	IR	IRMA	I	IRMA	IR	I	IR	I		
understand factors to consider in establishing and maintaining dairy herds.	IRMA	IRMA	IR	IR	IR	I	IRMA	IR	I	IR	I		
determine factors necessary for a successful dairy breeding operation.	IRMA	IRMA	IRMA	IR	IR	I	IRMA	IR	I	IR	I		
relate the importance of understanding dairy cattle nutrition to the effect on profitable production.	IRMA	IRMA	IR	IRMA	IR	I	IRMA	IR	I	IR	I		
understand dairy cattle behavior and why it is important and how this information can be utilized.	IRMA	IRMA	IR	IR	IR	I	IRMA	IR	I	IR	I		
understand the importance of good records in order to have a successful operation.	IRMA	IRMA	IR	IR	IR	I	IRMA	IR	I	IR	I		
identify common health problems and what managerial efforts can be done to prevent or treat these ailments.	IRMA	IRMA	IR	IR	IR	I	IRMA	IR	I	IR	I		
appraise dairy cattle facility requirements and develop a mock facility that will be conducive to a successful operation while meeting governmental requirements.	IRMA	IRMA	IR	IR	IR	I	IRMA	IR	I	IR	I		
address the impact of the poultry industry.	IRMA	IRMA	IR	IR	IR	I	IRMA	IR	IRMA	IR	I		
develop an understanding of the biology of poultry.	IRMA	IRMA	IR	IR	IR	I	IRMA	IR	IRMA	IR	I		
identify factors associated with successful incubation.	IRMA	IRMA	IR	IR	IR	I	IRMA	IR	IRMA	IR	I		
apply knowledge of poultry genetics with appropriate breeding systems.	IRMA	IRMA	IRMA	IR	IRMA	I	IRMA	IR	IRMA	IR	I		
develop knowledge associated with proper poultry nutrition.	IRMA	IRMA	IR	IRMA	IR	I	IRMA	IR	IRMA	IR	I		
analyze various aspects related to proper poultry management.	IRMA	IRMA	IR	IR	IR	I	IRMA	IR	IRMA	IR	I		
understand issues related to poultry waste and impact on the environment.	IRMA	IRMA	IR	IR	IR	I	IRMA	IR	IRMA	IR	I		

Mapping	
I	Introduced
R	Reinforced
M	Mastered
A	Assessed/Artifact

address factors related to successful management of the flock in relation to behavior, stress and welfare.	IRMA	IRMA	IR	IR	IR	I	IRMA	IR	IRMA	IR	I	
identify common health problems and what can be done to prevent or treat these ailments.	IRMA	IRMA	IR	IR	IR	I	IRMA	IR	IRMA	IR	I	
appraise poultry facility requirements and develop a mock facility that will be successful while meeting all governmental requirements.	IRMA	IRMA	IR	IR	IR	I	IRMA	IR	IRMA	IR	I	

ANSI 107: Animal Nutrition		CERTB Curriculum Map										AAS	AS
Program Outcomes	demonstrate knowledge of the history of agriculture and animal industries in the United States	describe the role of nutrition in animal performance and well-being	extrapolate the role of anatomy, physiology and hormonal influence that affects reproduction in farm animal livestock.	explain the difference between a ruminant and non-ruminant digestive system.	differentiate the differences and roles of genetics and heritability in livestock performance.	describe desirable and undesirable traits of meat animal carcasses used to fabricate into retail cuts.	describe the differences in origin and species background to characterize different breeds of livestock used in animal production.	explain the impact that animal handling has on performance and yield of livestock.	discuss the importance of the broiler and egg industries into American Agriculture.	note the value of exported food animal products to countries around the world.	evaluate concepts required for work-place skills and expectations.	demonstrate effective oral and written communication skills	
Course SLO: Students will be able to													
list and describe the six classes of nutrients and what is required for normal <u>body processes.</u>	IRMA	IRMA	IR	IRMA	IR	IRMA	I	I		I	I		
describe the parts and functions of the ruminant and non-ruminant digestive system while listing absorption sites for <u>certain nutrients</u>	IRMA	IRMA	IR	IRMA	IR	IRMA	I	I		I	I		
determine and analyze a feed source by using laboratory techniques to determine composition of a feed using proximate <u>analysis.</u>	IRMA	IRMA	IR	IRMA	IR	IRMA	I	I		I	I		
list and discuss the classification of <u>feedstuffs.</u>	IRMA	IRMA	IR	IRMA	IR	IRMA	I	I		I	I		
define the role of energy feed sources and <u>list feeds high in energy.</u>	IRMA	IRMA	IR	IRMA	IR	IRMA	I	I		I	I		
describe feeds that are concentrate feeds and contact them with energy feed <u>sources.</u>	IRMA	IRMA	IR	IRMA	IR	IRMA	I	I		I	I		
summarize the role of proteins in feeds and list sources, animal requirements and <u>un-conventional sources of proteins.</u>	IRMA	IRMA	IR	IRMA	IR	IRMA	I	I		I	I		
determine the role of synthetic amino <u>acids and non-proteins nitrogen sources.</u>	IRMA	IRMA	IR	IRMA	IR	IRMA	I	I		I	I		
discuss the role of roughages and define what is a <u>roughage.</u>	IRMA	IRMA	IR	IRMA	IR	IRMA	I	I		I	I		
discuss the role of micro-nutrients (vitamins and minerals) and the <u>requirements for livestock species.</u>	IRMA	IRMA	IR	IRMA	IR	IRMA	I	I		I	I		
extrapolate the use of feed additives in a ration as well as flavorings, growth promotants, drugs and digestion <u>modifiers in a ration</u>	IRMA	IRMA	IR	IRMA	IR	IRMA	I	I		I	I		
discuss the importance and uses for water in the ration and in the animal <u>body.</u>	IRMA	IRMA	IR	IRMA	IR	IRMA	I	I		I	I		
discuss formulation, manufacturing and processing of feed in a ration.	IRMA	IRMA	IR	IRMA	IR	IRMA	I	I		I	I		

Mapping	
I	Introduced
R	Reinforced
M	Mastered
A	Assessed/Artifact

compare, contrast and list the nutrient requirements for swine, avian, beef cattle, sheep, goats, dairy cattle and horses

IRMA	IRMA	IR	IRMA	IR	IRMA	I	I		I	I	
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ANSI 108: Livestock Selection	CERTB										AAS	AS
	Curriculum Map											
Program Outcomes	demonstrate knowledge of the history of agriculture and animal industries in the United States	describe the role of nutrition in animal performance and well-being	extrapolate the role of anatomy, physiology and hormonal influence that affects reproduction in farm animal livestock.	explain the difference between a ruminant and non-ruminant digestive system.	differentiate the differences and roles of genetics and heritability in livestock performance.	describe desirable and undesirable traits of meat animal carcasses used to fabricate into retail cuts.	describe the differences in origin and species background to characterize different breeds of livestock used in animal production.	explain the impact that animal handling has on performance and yield of livestock.	discuss the importance of the broiler and egg industries into American Agriculture.	note the value of exported food animal products to countries around the world.	evaluate concepts required for work-place skills and expectations.	demonstrate effective oral and written communication skills
Course SLO: Students will be able to												
evaluate the differences in fat thickness, muscling and weight in live market animals.	I	IR	IRMA	IR	IR	IRMA	IRMA	I		IR	I	
estimate dressing percentage and USDA Quality/Yield Grades for market animals.	I	IR	IRMA	IR	IR	IRMA	IRMA	I		IR	I	
evaluate classes for details and select animals that should be culled from the group.	I	IR	IRMA	IR	IR	IRMA	IRMA	I		IR	I	
analyze the difference in dressing percentage by species and determine what effects the changes.	I	IR	IRMA	IR	IR	IRMA	IRMA	I		IR	I	
rank a market class of livestock.	I	IR	IRMA	IR	IR	IRMA	IRMA	I		IR	I	
determine whether to keep or cull a breeding animal for reproductive soundness or structure OR by using EPD's of what is expected from breeding.	I	IR	IRMA	IR	IRMA	IRMA	IRMA	I		IR	I	
calculate carcass value on swine, lamb and beef carcasses.	I	IR	IRMA	IR	IR	IRMA	IRMA	I		IR	I	
estimate quality and yield grade for beef and lamb carcasses.	I	IR	IRMA	IR	IR	IRMA	IRMA	I		IR	I	
determine percent yield on wholesale cuts of beef, pork and lamb.	I	IR	IRMA	IR	IR	IRMA	IRMA	I		IR	I	
rank breeding bulls, cows and replacement heifers on structure, soundness and EPD's according to production data.	I	IR	IRMA	IR	IRMA	IRMA	IRMA	I		IR	I	
examine the properties that affect growth, composition and maturity on pigs, cattle and lambs.	I	IR	IRMA	IR	IR	IRMA	IRMA	I		IR	I	

Mapping	
I	Introduced
R	Reinforced
M	Mastered
A	Assessed/Artifact

ANSI 109: Livestock Evaluation		CERT										AAS	AS
Program Outcomes		Curriculum Map											
Course SLO: Students will be able to													
demonstrate knowledge of the history of agriculture and animal industries in the United States													
describe the role of nutrition in animal performance and well-being													
extrapolate the role of anatomy, physiology and hormonal influence that affects reproduction in farm animal livestock.													
explain the difference between a ruminant and non-ruminant digestive system.													
differentiate the differences and roles of genetics and heritability in livestock performance.													
describe desirable and undesirable traits of meat animal carcasses used to fabricate into retail cuts.													
describe the differences in origin and species background to characterize different breeds of livestock used in animal production.													
explain the impact that animal handling has on performance and yield of livestock.													
discuss the importance of the broiler and egg industries into American Agriculture.													
note the value of exported food animal products to countries around the world.													
evaluate concepts required for work-place skills and expectations.													
demonstrate effective oral and written communication skills													
evaluate the differences in fat thickness, muscling and weight in live market animals.	I	IR	IRMA	IR	IR	IRMA	IRMA	I		IR	I		
estimate dressing percentage and USDA Quality/Yield Grades for market animals.	I	IR	IRMA	IR	IR	IRMA	IRMA	I		IR	I		
evaluate classes for details and select animals that should be culled from the group.	I	IR	IRMA	IR	IR	IRMA	IRMA	I		IR	I		
analyze the difference in dressing percentage by species and determine what effects the changes.	I	IR	IRMA	IR	IR	IRMA	IRMA	I		IR	I		
rank a market class of livestock.	I	IR	IRMA	IR	IR	IRMA	IRMA	I		IR	I		
determine whether to keep or cull a breeding animal for reproductive soundness or structure OR by using EPD's of what is expected from breeding	I	IR	IRMA	IR	IRMA	IRMA	IRMA	I		IR	I		
calculate carcass value on swine, lamb and beef carcasses.	I	IR	IRMA	IR	IR	IRMA	IRMA	I		IR	I		
estimate quality and yield grade for beef and lamb carcasses.	I	IR	IRMA	IR	IR	IRMA	IRMA	I		IR	I		
determine percent yield on wholesale cuts of beef, pork and lamb.	I	IR	IRMA	IR	IR	IRMA	IRMA	I		IR	I		
rank breeding bulls, cows and replacement heifers on structure, soundsnes and EPD's according to production data	I	IR	IRMA	IR	IRMA	IRMA	IRMA	I		IR	I		
examine the properties that affect growth, composition and maturity on pigs, cattle and lambs.	I	IR	IRMA	IR	IR	IRMA	IRMA	I		IR	I		

Mapping	
I	Introduced
R	Reinforced
M	Mastered
A	Assessed/Artifact

ANSI 111: Farm Animal Reproduction		CERTB Curriculum Map										AAS	AS
Program Outcomes	demonstrate knowledge of the history of agriculture and animal industries in the United States	describe the role of nutrition in animal performance and well-being	extrapolate the role of anatomy, physiology and hormonal influence that affects reproduction in farm animal livestock.	explain the difference between a ruminant and non-ruminant digestive system.	differentiate the differences and roles of genetics and heritability in livestock performance.	describe desirable and undesirable traits of meat animal carcasses used to fabricate into retail cuts.	describe the differences in origin and species background to characterize different breeds of livestock used in animal production.	explain the impact that animal handling has on performance and yield of livestock.	discuss the importance of the broiler and egg industries into American Agriculture.	note the value of exported food animal products to countries around the world.	evaluate concepts required for work-place skills and expectations.	demonstrate effective oral and written communication skills	
Course SLO: Students will be able to													
describe, define, differentiate and locate the different anatomy, functions and regulatoin of the male and female reproductive tracts.	I	IR	IRMA	I	IR	I	IR	I		I			
describe and define natural synchronization processes in females.	I	IR	IRMA	I	IR	I	IR	I		I			
illustrate the estrous cycle in females and spermatogenesis in males.	I	IR	IRMA	I	IR	I	IR	I		I			
discuss gestation length and give descriptive analysis on the formation of an embryo, fetus and young during gestation.	I	IR	IRMA	I	IR	I	IR	I		I			
describe the steps leading to parturition and what hormones are required for the process.	I	IR	IRMA	I	IR	I	IR	I		I			
discuss the process of lactation and how it is regulated in the female body.	I	IR	IRMA	I	IR	I	IR	I		I			
elaborate on the history of artifical insemination, including who, what, when, where and why it was first used.	I	IR	IRMA	I	IR	I	IR	I		I			
discuss the changes in modern years in artificial insemination.	I	IR	IRMA	I	IR	I	IR	I		I			
grade the vitality, viability and motility of semen from bulls, boars, rams or stallions.	I	IR	IRMA	I	IR	I	IR	I		I			
contrast the differences in pregnancy between different farm animals.	I	IR	IRMA	I	IR	I	IR	I		I			
summarize the different genetic and infectious disease/causes of reproductive failure and problems associated with gestation.	I	IR	IRMA	I	IR	I	IR	I		I			

Mapping	
I	Introduced
R	Reinforced
M	Mastered
A	Assessed/Artifact

		CERTB									AAS	AS
ANSI 1110: Farm Animal Reproduction Lab		Curriculum Map										
Program Outcomes	demonstrate knowledge of the history of agriculture and animal industries in the United States	describe the role of nutrition in animal performance and well-being	extrapolate the role of anatomy, physiology and hormonal influence that affects reproduction in farm animal livestock.	explain the difference between a ruminant and non-ruminant digestive system.	differentiate the differences and roles of genetics and heritability in livestock performance.	describe desirable and undesirable traits of meat animal carcasses used to fabricate into retail cuts.	describe the differences in origin and species background to characterize different breeds of livestock used in animal production.	explain the impact that animal handling has on performance and yield of livestock.	discuss the importance of the broiler and egg industries into American Agriculture.	note the value of exported food animal products to countries around the world.	evaluate concepts required for work-place skills and expectations.	demonstrate effective oral and written communication skills
Course SLO: Students will be able to												
describe, define and differentiate the different anatomical structures and know the function, regulation mechanism in the male and female reproductive tracts.	I	IR	IRMA	I	IR	I	IR	I		I		
describe and define natural synchronization processes in females.	I	IR	IRMA	I	IR	I	IR	I		I		
illustrate the estrous cycle in females and spermatogenesis in males.	I	IR	IRMA	I	IR	I	IR	I		I		
discuss gestation length and give descriptive analysis on the formation of an embryo, fetus and young during gestation.	I	IR	IRMA	I	IR	I	IR	I		I		
describe the steps leading to parturition and what hormones are required for the process.	I	IR	IRMA	I	IR	I	IR	I		I		
discuss the process of lactation and how it is regulated in the female body.	I	IR	IRMA	I	IR	I	IR	I		I		
elaborate on the history of artificial insemination, including who, what, when, where and why it was first used.	I	IR	IRMA	I	IR	I	IR	I		I		
discuss the changes in modern years in artificial insemination.	I	IR	IRMA	I	IR	I	IR	I		I		
grade the vitality, viability and motility of semen from bulls, boars, rams or stallions.	I	IR	IRMA	I	IR	I	IR	I		I		
contrast the differences in pregnancy between different farm animals.	I	IR	IRMA	I	IR	I	IR	I		I		
summarize the different genetic and infectious disease/causes of reproductive failure and problems associated with gestation.	I	IR	IRMA	I	IR	I	IR	I		I		

Mapping	
I	Introduced
R	Reinforced
M	Mastered
A	Assessed/Artifact

ANSI 120: Special Topics in Livestock		CERTB Curriculum Map										AAS	AS
Program Outcomes	demonstrate knowledge of the history of agriculture and animal industries in the United States	describe the role of nutrition in animal performance and well-being	extrapolate the role of anatomy, physiology and hormonal influence that affects reproduction in farm animal livestock.	explain the difference between a ruminant and non-ruminant digestive system.	differentiate the differences and roles of genetics and heritability in livestock performance.	describe desirable and undesirable traits of meat animal carcasses used to fabricate into retail cuts.	describe the differences in origin and species background to characterize different breeds of livestock used in animal production.	explain the impact that animal handling has on performance and yield of livestock.	discuss the importance of the broiler and egg industries into American Agriculture.	note the value of exported food animal products to countries around the world.	evaluate concepts required for work-place skills and expectations.	demonstrate effective oral and written communication skills	
Course SLO: Students will be able to													
thoroughly research a given topic, citing both sides of an issue.	IRMA	IR	I	I	I	I	I	I		IR	I		
write and understand a scientific paper with at least 5-10 sources for your topic.	IRMA	IR	I	I	I	I	I	I		IR			
calculate daily prices for carcass cattle based on grid pricing from USDA and live pricing available from USDA-AMS.	IRMA	IRMA	I	I	I	I	I	IRMA		IR			
present a topic for discussion and participate in classroom rhetoric.	IRMA	IR	I	I	I	I	I	I		IR			
describe current research topics in Animal Science.	IRMA	IR	I	I	I	I	I	I		IR			
discuss current biotechnology situation and relate the importance it has on animal agriculture.	IRMA	IR	I	I	I	I	I	I		IR			
discuss the local water and environmental laws and how they might influence industries from coming or leaving an area.	IRMA	IR	I	I	I	I	I	I		IR	I		
utilize USDA grid pricing schemes to determine cough of rough treatment and handling in feedlot cattle and slaughter hogs	IRMA	IR	I	I	I	I	I	IRMA		IR	I		
find information about USDA Food recalls for food safety and microbiological reasons and determine how they affect wholesalers, retailers and consumers.	IRMA	IR	I	I	I	I	I	I		IR	I		

Mapping	
I	Introduced
R	Reinforced
M	Mastered
A	Assessed/Artifact

		CERTB								AAS	AS	
ANSI 135: ServSafe		Curriculum Map										
Program Outcomes	demonstrate knowledge of the history of agriculture and animal industries in the United States	describe the role of nutrition in animal performance and well-being	extrapolate the role of anatomy, physiology and hormonal influence that affects reproduction in farm animal livestock.	explain the difference between a ruminant and non-ruminant digestive system.	differentiate the differences and roles of genetics and heritability in livestock performance.	describe desirable and undesirable traits of meat animal carcasses used to fabricate into retail cuts.	describe the differences in origin and species background to characterize different breeds of livestock used in animal production.	explain the impact that animal handling has on performance and yield of livestock.	discuss the importance of the broiler and egg industries into American Agriculture.	note the value of exported food animal products to countries around the world.	evaluate concepts required for work-place skills and expectations.	demonstrate effective oral and written communication skills
Course SLO: Students will be able to												
define and describe the various types of foodborne illness.	IRMA	I		I					IRMA			
understand concepts to prevent foodborne illness outbreaks.	IRMA	I		I					IRMA			
list and describe various practices to ensure food safety.	IRMA	I		I					IRMA			
describe and define the term pathogen.	IRMA	I		I					IRMA			
list the disease, symptoms, onset, duration, illness and other specifics about viruses, bacteria, parasites, fungi, biological toxins and emerging pathogens in foods	IRMA	I		I					IRMA			
compare and contrast the varying chemical, biological and physical contaminants in foods.	IRMA	I		I					IRMA			
list and describe various food handling techniques for safety and note the importance of good personal hygiene.	IRMA	I		I					IRMA			
extrapolate on the topics of the flow of food from preventing cross-contamination, general storage guidelines, preparing food (thawing, cooking requirement temperatures and reheating food) to food service.	IRMA	I		I					IRMA			
define various prerequisite food safety programs included in HACCP.	IRMA	I		I					IRMA			
design a sanitation regime for a food service facility in regards to cleaning, sanitation and equipment standards for installation and maintenance of equipment and facilities.	IRMA	I		I					IRMA			
Compare, contrast and define the differences between cleaning and sanitizing noting various tools for each.	IRMA	I		I					IRMA			
Describe and develop an integrated pest management system with treatment, control measures, identification of pests and procedures for using and storing chemicals	IRMA	I		I					IRMA			

Mapping	
I	Introduced
R	Reinforced
M	Mastered
A	Assessed/Artifact

Define the objectives of a food service inspection program as well as the governmental regulatory system for foods.	IRMA	I		I					IRMA			
Briefly describe the FDA Food Code; how and why it was established and what it does for the industry.	IRMA	I		I					IRMA			

ANSI 140: Horse Science		CERTB Curriculum Map										AAS	AS
Program Outcomes	demonstrate knowledge of the history of agriculture and animal industries in the United States	describe the role of nutrition in animal performance and well-being	extrapolate the role of anatomy, physiology and hormonal influence that affects reproduction in farm animal livestock.	explain the difference between a ruminant and non-ruminant digestive system.	differentiate the differences and roles of genetics and heritability in livestock performance.	describe desirable and undesirable traits of meat animal carcasses used to fabricate into retail cuts.	describe the differences in origin and species background to characterize different breeds of livestock used in animal production.	explain the impact that animal handling has on performance and yield of livestock.	discuss the importance of the broiler and egg industries into American Agriculture.	note the value of exported food animal products to countries around the world.	evaluate concepts required for work-place skills and expectations.	demonstrate effective oral and written communication skills	
Course SLO: Students will be able to													
identify major historical steps in the development of the horse industry.	IRMA	IRMA	IR	IR	I		IR	IR		I			
identify the role of horse in society.	IRMA	IRMA	IR	IR	I		IR	IR		I			
describe the responsibilities associated with horse ownership.	IRMA	IRMA	IR	IR	I		IR	IR		I			
list the major breeds of horses and their characteristics.	IRMA	IRMA	IR	IR	I		IR	IR		I			
identify the major parts of the horse body.	IRMA	IRMA	IR	IR	I		IR	IR		I			
describe the correct conformation of a horse.	IRMA	IRMA	IR	IR	I		IR	IR		I			
identify major unsoundness of horses.	IRMA	IRMA	IR	IR	I		IR	IR		I			
describe proper foot care of horses.	IRMA	IRMA	IR	IR	I		IR	IR		I			
describe major diseases and parasites that affect horses.	IRMA	IRMA	IR	IR	I		IR	IR		I			
describe the nutritional requirements in various stages of production.	IRMA	IRMA	IR	IRMA	I		IR	IR		I			
describe the proper methods of creating horse rations.	IRMA	IRMA	IR	IRMA	I		IR	IR		I			
describe the proper timing and methods of feeding horses.	IRMA	IRMA	IR	IRMA	I		IR	IR		I			
identify parts and functions of the reproductive tract.	IRMA	IRMA	IRMA	IR	I		IR	IR		I			
describe the process of breeding a female horse.	IRMA	IRMA	IRMA	IR	I		IR	IR		I			
describe proper method of controlling a stallion.	IRMA	IRMA	IR	IR	I		IR	IR		I			
describe the use of AI and breeding soundness evaluation.	IRMA	IRMA	IRMA	IR	I		IR	IR		I			
describe the proper care for the foal and dam at foaling time.	IRMA	IRMA	IRMA	IR	I		IR	IR		I			
describe the proper materials and arrangement for horse facilities.	IRMA	IRMA	IR	IR	I		IR	IR		I			
describe the proper methods of restraint.	IRMA	IRMA	IR	IR	I		IR	IR		I			
outline proper methods of grooming.	IRMA	IRMA	IR	IR	I		IR	IR		I			
list equipment necessary for riding, grooming and care.	IRMA	IRMA	IR	IR	I		IR	IR		I			

Mapping	
I	Introduced
R	Reinforced
M	Mastered
A	Assessed/Artifact

describe the importance of racing,
showing and other horse events.

IRMA

IRMA

IR

IR

I

IR

IR

I

ANSI 250: Animal Genetics		CERTB Curriculum Map										AAS	AS
Program Outcomes	demonstrate knowledge of the history of agriculture and animal industries in the United States	describe the role of nutrition in animal performance and well-being	extrapolate the role of anatomy, physiology and hormonal influence that affects reproduction in farm animal livestock.	explain the difference between a ruminant and non-ruminant digestive system.	differentiate the differences and roles of genetics and heritability in livestock performance.	describe desirable and undesirable traits of meat animal carcasses used to fabricate into retail cuts.	describe the differences in origin and species background to characterize different breeds of livestock used in animal production.	explain the impact that animal handling has on performance and yield of livestock.	discuss the importance of the broiler and egg industries into American Agriculture.	note the value of exported food animal products to countries around the world.	evaluate concepts required for work-place skills and expectations.	demonstrate effective oral and written communication skills	
Course SLO: Students will be able to													
describe and define the role of genetics in the biology of animals.	IRMA	I	IR	I	IRMA	IR	IRMA			IR			
describe and differentiate among population, quantitative, evolutionary and molecular genetics of animals.	IRMA	I	IR	I	IRMA	IR	IRMA			IR			
illustrate the inheritance of genes relative to Mendelian Genetics and genetic terminology.	IRMA	I	IR	I	IRMA	IR	IRMA			IR			
discuss DNA replication and recombination as well as RNA molecules and RNA processing.	IRMA	I	IR	I	IRMA	IR	IRMA			IR			
describe developmental genetics, cancer genetics, genomics, proteomics and immunogenetics.	IRMA	I	IR	I	IRMA	IR	IRMA			IR			
discuss chromosome variation, bacterial and viral genetics schemes.	IRMA	I	IR	I	IRMA	IR	IRMA			IR			
elaborate on linkage, recombination and eukaryotic gene mapping.	IRMA	I	IR	I	IRMA	IR	IRMA			IR			
discuss the history of genetics, genetic diversity, the rise of science in genetics, the early use and understanding of heredity and changes in modern years	IRMA	I	IR	I	IRMA	IR	IRMA			IR			
compare genetic expected progeny differences among different breeds of farm animals and understand the terminology presented in sire summaries	IRMA	I	IR	I	IRMA	IR	IRMA			IR			
contrast the difference in types of heritability and phenotypic variance.	IRMA	I	IR	I	IRMA	IR	IRMA			IR			
calculate genetic and allelic frequencies used to describe a gene pool of a population.	IRMA	I	IR	I	IRMA	IR	IRMA			IR			

Mapping	
I	Introduced
R	Reinforced
M	Mastered
A	Assessed/Artifact

		CERTB										AAS	AS
ANSI 129: Meat & Carcass Evaluation		Curriculum Map											
Program Outcomes	demonstrate knowledge of the history of agriculture and the animal industries in the United States	describe the role of nutrition in animal performance and well-being	extrapolate the role of anatomy, physiology and hormonal influence that affects reproduction in farm animal livestock.	explain the difference between a ruminant and non-ruminant digestive system.	differentiate the differences and roles of genetics and heritability in livestock performance.	describe desirable and undesirable traits of meat animal carcasses used to fabricate into retail cuts.	describe the differences in origin and species background to characterize different breeds of livestock used in animal production.	explain the impact that animal handling has on performance and yield of livestock.	discuss the importance of the broiler and egg industries into American Agriculture.	note the value of exported food animal products to countries around the world.	evaluate concepts required for work-place skills and expectations.	demonstrate effective oral and written communication skills	
Course SLO: Students will be able to													
reconstruct the yield grade equation from base numbers to numerical terms.	IR	IR	I	I	I	IR	IR	IR		I	IR		
measure a beef ribeye within 2 tenths of an inch.	IR	IR	I	I	I	IR	IR	IR		I	IR		
calculate the weight and ribeye adjustment for the yield grade equation.	IR	IR	I	I	I	IR	IR	IR		I	IR		
compare and contrast USDA Yield Grade 1 with a USDA Yield Grade 5.	IR	IR	I	I	I	IR	IR	IR		I	IR		
evaluate the difference between fath thicknesses in beef carcasses.	IR	IR	I	I	I	IR	IR	IR		I	IR		
reconstruct the maturity and marbling relation chart to determine USDA Quality Grades.	IR	IR	I	I	I	IR	IR	IR		I	IR		
conduct a grading rail with a minimum of 250 points combined score.	IR	IR	I	I	I	IR	IR	IR		I	IR		
compare bone maturity between mature and youthful carcasses.	IR	IR	I	I	I	IR	IR	IR		I	IR		
rank a class of beef carcasses based on quality and yield grades.	IR	IR	I	I	I	IR	IR	IR		I	IR		
arrange notes to answer questions on beef quality classes.	IR	IR	I	I	I	IR	IR	IR		I	IR		
determine the cutability and quality limits for unacceptable beef.	IR	IR	I	I	I	IR	IR	IR		I	IR		
evaluate classes of pork carcasses, hams, and loins on quality attributes.	IR	IR	I	I	I	IR	IR	IR		I	IR		
determine final ranking of a lamb carcass class.	IR	IR	I	I	I	IR	IR	IR		I	IR		
analyze a class on note cards for written questions.	IR	IR	I	I	I	IR	IR	IR		I	IR		
rank a class to 90% accuracy.	IR	IR	I	I	I	IR	IR	IR		I	IR		
compare the PYG of the USDA Yield Grading system to tenths of inches.	IR	IR	I	I	I	IR	IR	IR		I	IR		
determine the difference in 1 square inch of ribeye in beef, pork and lamb.	IR	IR	I	I	I	IR	IR	IR		I	IR		
organize note cards for efficiency studying and review of notes.	IR	IR	I	I	I	IR	IR	IR		I	IR		
arrange a class with a learning topic for students with questions.	IR	IR	I	I	I	IR	IR	IR		I	IR		
defend a placing of a class in a contest.	IR	IR	I	I	I	IR	IR	IR		I	IR		

Mapping	
I	Introduced
R	Reinforced
M	Mastered
A	Assessed/Artifact

calculate the US grading scheme for pork carcasses.	IR	IR	I	I	I	IR	IR	IR		I	IR	
calculate percent muscle on a pork carcass.	IR	IR	I	I	I	IR	IR	IR		I	IR	
differentiate between PSE, RFN and DFD pork.	IR	IR	I	I	I	IR	IR	IR		I	IR	
relate the value of placing beef carcasses using a grid pricing system.	IR	IR	I	I	I	IR	IR	IR		I	IR	
list and differentiate between various cut locations in beef: ribeye, lower rib, round, inside round, sirloin, loin, rib, chuck, brisket, cod/udder, and KPH.	IR	IR	I	I	I	IR	IR	IR		I	IR	
list and differentiate between various cut locations of a pork carcass: loineye, lower rib, ham, sirloin, loin, center loin, first rib, last rib, last lumbar, collar, clear plate, belly pocket, navel edge, sternum, Boston and picnic shoulder and exposed lumbar lean.	IR	IR	I	I	I	IR	IR	IR		I	IR	
list and differentiate between various cuts/regions on a lamb carcass: leg, sirloin, dock, rack, loin, shoulder, crotch, kidney, pelvic, flank, cod/udder, stifle joint, breast, neck, break joints, spool joints, primary and secondary flanks.	IR	IR	I	I	I	IR	IR	IR		I	IR	
describe the basic quality factors for beef, pork and lamb.	IR	IR	I	I	I	IR	IR	IR		I	IR	
design an effective method for taking notes on questions classes.	IR	IR	I	I	I	IR	IR	IR		I	IR	
discriminate between acceptable and unacceptable quality and cutability.	IR	IR	I	I	I	IR	IR	IR		I	IR	

		CERTB									AAS	AS
ANSI 130: Classification, Grading & Selection of Meats		Curriculum Map										
Program Outcomes	demonstrate knowledge of the history of agriculture and animal industries in the United States	describe the role of nutrition in animal performance and well-being	extrapolate the role of anatomy, physiology and hormonal influence that affects reproduction in farm animal livestock.	explain the difference between a ruminant and non-ruminant digestive system.	differentiate the differences and roles of genetics and heritability in livestock performance.	describe desirable and undesirable traits of meat animal carcasses used to fabricate into retail cuts.	describe the differences in origin and species background to characterize different breeds of livestock used in animal production.	explain the impact that animal handling has on performance and yield of livestock.	discuss the importance of the broiler and egg industries into American Agriculture.	note the value of exported food animal products to countries around the world.	evaluate concepts required for work-place skills and expectations.	demonstrate effective oral and written communication skills
Course SLO: Students will be able to												
reconstruct the yield grade equation from base numbers to numerical terms.	RMA	RMA	I	I	RMA	IRMA	I, R	IRMA		I	RMA	RMA
measure a beef ribeye within 2 tenths of an inch.	RMA	RMA	I	I	RMA	IRMA	I, R	IRMA		I	RMA	RMA
calculate the weight and ribeye adjustment for the yield grade equation.	RMA	RMA	I	I	RMA	IRMA	I, R	IRMA		I	RMA	RMA
compare and contrast USDA Yield Grade 1 with a USDA Yield Grade 5.	RMA	RMA	I	I	RMA	IRMA	I, R	IRMA		I	RMA	RMA
evaluate the difference between fath thicknesses in beef carcasses.	RMA	RMA	I	I	RMA	IRMA	I, R	IRMA		I	RMA	RMA
reconstruct the maturity and marbling relation chart to determine USDA Quality Grades.	RMA	RMA	I	I	RMA	IRMA	I, R	IRMA		I	RMA	RMA
conduct a grading rail with a minimum of 250 points combined score.	RMA	RMA	I	I	RMA	IRMA	I, R	IRMA		I	RMA	RMA
compare bone maturity between mature and youthful carcasses.	RMA	RMA	I	I	RMA	IRMA	I, R	IRMA		I	RMA	RMA
rank a class of beef carcasses based on quality and yield grades.	RMA	RMA	I	I	RMA	IRMA	I, R	IRMA		I	RMA	RMA
arrange notes to answer questions on beef quality classes.	RMA	RMA	I	I	RMA	IRMA	I, R	IRMA		I	RMA	RMA
determine the cutability and quality limits for unacceptable beef.	RMA	RMA	I	I	RMA	IRMA	I, R	IRMA		I	RMA	RMA
evaluate classes of pork carcasses, hams, and loins on quality attributes.	RMA	RMA	I	I	RMA	IRMA	I, R	IRMA		I	RMA	RMA
determine final ranking of a lamb carcass class.	RMA	RMA	I	I	RMA	IRMA	I, R	IRMA		I	RMA	RMA
analyze a class on note cards for written questions.	RMA	RMA	I	I	RMA	IRMA	I, R	IRMA		I	RMA	RMA
rank a class to 90% accuracy.	RMA	RMA	I	I	RMA	IRMA	I, R	IRMA		I	RMA	RMA
compare the PYG of the USDA Yield Grading system to tenths of inches.	RMA	RMA	I	I	RMA	IRMA	I, R	IRMA		I	RMA	RMA
determin the difference in 1 square inch of ribeye in beef, pork and lamb.	RMA	RMA	I	I	RMA	IRMA	I, R	IRMA		I	RMA	RMA
organize note cards for efficiency studying and review of notes.	RMA	RMA	I	I	RMA	IRMA	I, R	IRMA		I	RMA	RMA

Mapping	
I	Introduced
R	Reinforced
M	Mastered
A	Assessed/Artifact

arrange a class with a learning topic for students with questions.	RMA	RMA	I	I	RMA	IRMA	I, R	IRMA		I	RMA	RMA
defend a placing of a class in a contest.	RMA	RMA	I	I	RMA	IRMA	I, R	IRMA		I	RMA	RMA
calculate the US grading scheme for pork carcasses.	RMA	RMA	I	I	RMA	IRMA	I, R	IRMA		I	RMA	RMA
calculate percent muscle on a pork carcass.	RMA	RMA	I	I	RMA	IRMA	I, R	IRMA		I	RMA	RMA
differentiate between PSE, RFN and DFD pork.	RMA	RMA	I	I	RMA	IRMA	I, R	IRMA		I	RMA	RMA
relate the value of placing beef carcasses using a grid pricing system.	RMA	RMA	I	I	RMA	IRMA	I, R	IRMA		I	RMA	RMA
list and differentiate between various cut locations in beef: ribeye, lower rib, round, inside round, sirloin, loin, rib, chuck brisket cod/udder and KPH	RMA	RMA	I	I	RMA	IRMA	I, R	IRMA		I	RMA	RMA
list and differentiate between various cut locations of a pork carcass: loineye, lower rib, ham, sirloin, loin, center loin, first rib, last rib, last lumbar, collar, clear plate, belly pocket, navel edge, sternum, Boston and picnic shoulder and exposed lumberloins	RMA	RMA	I	I	RMA	IRMA	I, R	IRMA		I	RMA	RMA
list and differentiate between various cuts/regions on a lamb carcass: leg, sirloin, dock, rack, loin, shoulder, crotch, kidney, pelvic, flank, cod/udder, stifle joint, breast, neck, break joints, spool joints, primary and secondary flanks	RMA	RMA	I	I	RMA	IRMA	I, R	IRMA		I	RMA	RMA
describe the basic quality factors for beef, pork and lamb.	RMA	RMA	I	I	RMA	IRMA	I, R	IRMA		I	RMA	RMA
design an effective method for taking notes on questions classes.	RMA	RMA	I	I	RMA	IRMA	I, R	IRMA		I	RMA	RMA
discriminate between acceptable and unacceptable quality and cutability.	RMA	RMA	I	I	RMA	IRMA	I, R	IRMA		I	RMA	RMA

ANSI 206: Principles of Meat Evaluation		CERTB									AAS	AS
Program Outcomes		Curriculum Map										
Course SLO: Students will be able to	demonstrate knowledge of the history of agriculture and animal industries in the United States	describe the role of nutrition in animal performance and well-being	extrapolate the role of anatomy, physiology and hormonal influence that affects reproduction in farm animal livestock.	explain the difference between a ruminant and non-ruminant digestive system.	differentiate the differences and roles of genetics and heritability in livestock performance.	describe desirable and undesirable traits of meat animal carcasses used to fabricate into retail cuts.	describe the differences in origin and species background to characterize different breeds of livestock used in animal production.	explain the impact that animal handling has on performance and yield of livestock.	discuss the importance of the broiler and egg industries into American Agriculture.	note the value of exported food animal products to countries around the world.	evaluate concepts required for work-place skills and expectations.	demonstrate effective oral and written communication skills
reconstruct the yield grade equation from base numbers to numerical terms.	RMA	IR	I	I	I	IRMA	IR	IRMA		I	MA	RMA
measure a beef ribeye within 2 tenths of an inch.	RMA	IR	I	I	I	IRMA	IR	IRMA		I	MA	RMA
calculate the weight and ribeye adjustment for the yield grade equation.	RMA	IR	I	I	I	IRMA	IR	IRMA		I	MA	RMA
compare and contrast USDA Yield Grade 1 with a USDA Yield Grade 5.	RMA	IR	I	I	I	IRMA	IR	IRMA		I	MA	RMA
evaluate the difference between fath thicknesses in beef carcasses.	RMA	IR	I	I	I	IRMA	IR	IRMA		I	MA	RMA
reconstruct the maturity and marbling relation chart to determine USDA Quality Grades.	RMA	IR	I	I	I	IRMA	IR	IRMA		I	MA	RMA
conduct a grading rail with a minimum of 250 points combined score.	RMA	IR	I	I	I	IRMA	IR	IRMA		I	MA	RMA
compare bone maturity between mature and youthful carcasses.	RMA	IR	I	I	I	IRMA	IR	IRMA		I	MA	RMA
rank a class of beef carcasses based on quality and yield grades.	RMA	IR	I	I	I	IRMA	IR	IRMA		I	MA	RMA
arrange notes to answer questions on beef quality classes.	RMA	IR	I	I	I	IRMA	IR	IRMA		I	MA	RMA
determine the cutability and quality limits for unacceptable beef.	RMA	IR	I	I	I	IRMA	IR	IRMA		I	MA	RMA
evaluate classes of pork carcasses, hams, and loins on quality attributes.	RMA	IR	I	I	I	IRMA	IR	IRMA		I	MA	RMA
determine final ranking of a lamb carcass class.	RMA	IR	I	I	I	IRMA	IR	IRMA		I	MA	RMA
analyze a class on note cards for written questions.	RMA	IR	I	I	I	IRMA	IR	IRMA		I	MA	RMA
rank a class to 90% accuracy.	RMA	IR	I	I	I	IRMA	IR	IRMA		I	MA	RMA
compare the PYG of the USDA Yield Grading system to tenths of inches.	RMA	IR	I	I	I	IRMA	IR	IRMA		I	MA	RMA
determin the difference in 1 square inch of ribeye in beef, pork and lamb.	RMA	IR	I	I	I	IRMA	IR	IRMA		I	MA	RMA
organize note cards for efficiency studying and review of notes.	RMA	IR	I	I	I	IRMA	IR	IRMA		I	MA	RMA
arrange a class with a learning topic for students with questions.	RMA	IR	I	I	I	IRMA	IR	IRMA		I	MA	RMA
defend a placing of a class in a contest.	RMA	IR	I	I	I	IRMA	IR	IRMA		I	MA	RMA

Mapping	
I	Introduced
R	Reinforced
M	Mastered
A	Assessed/Artifact

calculate the US grading scheme for pork carcasses.	RMA	IR	I	I	I	IRMA	IR	IRMA		I	MA	RMA
calculate percent muscle on a pork carcass.	RMA	IR	I	I	I	IRMA	IR	IRMA		I	MA	RMA
differentiate between PSE, RFN and DFD pork.	RMA	IR	I	I	I	IRMA	IR	IRMA		I	MA	RMA
relate the value of placing beef carcasses using a grid pricing system.	RMA	IR	I	I	I	IRMA	IR	IRMA		I	MA	RMA
list and differentiate between various cut locations in beef: ribeye, lower rib, round, inside round, sirloin, loin, rib, chuck, brisket, cod/udder and KPH.	RMA	IR	I	I	I	IRMA	IR	IRMA		I	MA	RMA
list and differentiate between various cut locations of a pork carcass: loineye, lower rib, ham, sirloin, loin, center loin, first rib, last rib, last lumbar, collar, clear plate, belly pocket, navel edge, sternum, Boston and picnic shoulder and exposed lumbar lean.	RMA	IR	I	I	I	IRMA	IR	IRMA		I	MA	RMA
list and differentiate between various cuts/regions on a lamb carcass: leg, sirloin, dock, rack, loin, shoulder, crotch, kidney, pelvic, flank, cod/udder, stifle joint, breast, neck, break joints, spool joints, primary and secondary flanks.	RMA	IR	I	I	I	IRMA	IR	IRMA		I	MA	RMA
describe the basic quality factors for beef, pork and lamb.	RMA	IR	I	I	I	IRMA	IR	IRMA		I	MA	RMA
design an effective method for taking notes on questions classes.	RMA	IR	I	I	I	IRMA	IR	IRMA		I	MA	RMA
discriminate between acceptable and unacceptable quality and cutability.	RMA	IR	I	I	I	IRMA	IR	IRMA		I	MA	RMA

		CERTB										AAS	AS
ANSI 207: Principles of Meat Science		Curriculum Map											
Program Outcomes	demonstrate knowledge of the history of agriculture and animal industries in the United States	describe the role of nutrition in animal performance and well-being	extrapolate the role of anatomy, physiology and hormonal influence that affects reproduction in farm animal livestock.	explain the difference between a ruminant and non-ruminant digestive system.	differentiate the differences and roles of genetics and heritability in livestock performance.	describe desirable and undesirable traits of meat animal carcasses used to fabricate into retail cuts.	describe the differences in origin and species background to characterize different breeds of livestock used in animal production.	explain the impact that animal handling has on performance and yield of livestock.	discuss the importance of the broiler and egg industries into American Agriculture.	note the value of exported food animal products to countries around the world.	evaluate concepts required for work-place skills and expectations.	demonstrate effective oral and written communication skills	
Course SLO: Students will be able to													
explain and analyze the structure and composition of muscle and associated tissues.	IRMA	IR	IRMA	I	RMA	IRMA	IRMA	IR	IR	IRMA	RMA	IR	
outline and diagram the growth and development of carcass tissues.	IRMA	IR	IRMA	I	RMA	IRMA	IRMA	IR	IR	IRMA	RMA	IR	
explain and illustrate the mechanism of muscle contraction and relaxation.	IRMA	IR	IRMA	I	RMA	IRMA	IRMA	IR	IR	IRMA	RMA	IR	
discuss the conversion of muscle to meat.	IRMA	IR	IRMA	I	RMA	IRMA	IRMA	IR	IR	IRMA	RMA	IR	
explain the development of meat quality postmortem.	IRMA	IR	IRMA	I	RMA	IRMA	IRMA	IR	IR	IRMA	RMA	IR	
list and discuss the properties of fresh meat.	IRMA	IR	IRMA	I	RMA	IRMA	IRMA	IR	IR	IRMA	RMA	IR	
define the principles of meat processing.	IRMA	IR	IRMA	I	RMA	IRMA	IRMA	IR	IR	IRMA	RMA	IR	
examine the effects and prevention of microorganisms in meat products.	IRMA	IR	IRMA	I	RMA	IRMA	IRMA	IR	IR	IRMA	RMA	IR	
discuss deterioration and contamination of meat products.	IRMA	IR	IRMA	I	RMA	IRMA	IRMA	IR	IR	IRMA	RMA	IR	
list and discuss proper storage and preservation of meat products.	IRMA	IR	IRMA	I	RMA	IRMA	IRMA	IR	IR	IRMA	RMA	IR	
explain the role of meat merchandizing.	IRMA	IR	IRMA	I	RMA	IRMA	IRMA	IR	IR	IRMA	RMA	IR	
discuss meat in the foodservice setting.	IRMA	IR	IRMA	I	RMA	IRMA	IRMA	IR	IR	IRMA	RMA	IR	
define the factors that contribute the palability of meat.	IRMA	IR	IRMA	I	RMA	IRMA	IRMA	IR	IR	IRMA	RMA	IR	
list and describe the peoper cookery of meat products.	IRMA	IR	IRMA	I	RMA	IRMA	IRMA	IR	IR	IRMA	RMA	IR	
examine the nutritional value of meat products.	IRMA	IR	IRMA	I	RMA	IRMA	IRMA	IR	IR	IRMA	RMA	IR	
compare and contrast meat inspection and meat grading.	IRMA	IR	IRMA	I	RMA	IRMA	IRMA	IR	IR	IRMA	RMA	IR	
analyze meat products through evaluation.	IRMA	IR	IRMA	I	RMA	IRMA	IRMA	IR	IR	IRMA	RMA	IR	
discuss the role of by-products in the meat industry.	IRMA	IR	IRMA	I	RMA	IRMA	IRMA	IR	IR	IRMA	RMA	IR	

Mapping	
I	Introduced
R	Reinforced
M	Mastered
A	Assessed/Artifact

ANSI 208: Basic Food Chemistry		CERTB Curriculum Map									AAS	AS
Program Outcomes	demonstrate knowledge of the history of agriculture and animal industries in the United States	describe the role of nutrition in animal performance and well-being	extrapolate the role of anatomy, physiology and hormonal influence that affects reproduction in farm animal livestock.	explain the difference between a ruminant and non-ruminant digestive system.	differentiate the differences and roles of genetics and heritability in livestock performance.	describe desirable and undesirable traits of meat animal carcasses used to fabricate into retail cuts.	describe the differences in origin and species background to characterize different breeds of livestock used in animal production.	explain the impact that animal handling has on performance and yield of livestock.	discuss the importance of the broiler and egg industries into American Agriculture.	note the value of exported food animal products to countries around the world.	evaluate concepts required for work-place skills and expectations.	demonstrate effective oral and written communication skills
Course SLO: Students will be able to												
define and describe the process of photosynthesis.	IR	IRMA				IR				IRMA		IR
understand concepts of water and variable solutions.	IR	IRMA				IR				IRMA		IR
list and define: colloid, understand the behavior of these products and summarize emulsions, foams, viscosity and imbibition	IR	IRMA				IRMA				IRMA		IR
describe and define the various types of carbohydrates found in foods.	IR	IRMA				IRMA				IRMA		IR
describe and define the use, function and biochemical characteristics of proteins and lipids commonly found in foods.	IR	IRMA				IRMA				IRMA		IR
compare and contrast the role of various enzymes found in food manufacturing and understand their applications.	IR	IRMA				IRMA				IRMA		IR
list and describe the composition of vitamins and minerals as well as their biochemical attributes in food products and as a health food	IR	IRMA				IRMA				IRMA		IR
extrapolate on the basic components and attributes that influence flavor in foods.	IR	IRMA				IRMA				IRMA		IR
define various natural colorings that can be used in foods.	IR	IRMA				IR				IRMA		IR
describe and examine browning reactions, what causes them and proper color properties in foods.	IR	IRMA				IR				IRMA		IR
compare, contrast and define various types of alcoholic fermentation that is used in creation of food and as a negative side-effect of nutrient breakdown.	IR	IRMA				IR				IRMA		IR
describe various baked, milk and milk products as well as their properties and other attributes important to food consumption and usage	IR	IRMA				IR				IRMA		IR

Mapping	
I	Introduced
R	Reinforced
M	Mastered
A	Assessed/Artifact

list and describe biochemical and physiological components of meat and meat products as a food source for energy, essential amino acids and other attributes	IR	IRMA			IR			IRMA	IR
describe ripening, changes, storage, and chemistry involved in the texture and other culinary components of fruits and vegetables	IR	IRMA			IR			IRMA	IR

ANSI 209: Food Sanitation Mangement		CERTB										AAS	AS
		Curriculum Map											
Program Outcomes	demonstrate knowledge of the history of agriculture and the animal industries in the United States	describe the role of nutrition in animal performance and well-being	extrapolate the role of anatomy, physiology and hormonal influence that affects reproduction in farm animal livestock.	explain the difference between a ruminant and non-ruminant digestive system.	differentiate the differences and roles of genetics and heritability in livestock performance.	describe desirable and undesirable traits of meat animal carcasses used to fabricate into retail cuts.	describe the differences in origin and species background to characterize different breeds of livestock used in animal production.	explain the impact that animal handling has on performance and yield of livestock.	discuss the importance of the broiler and egg industries into American Agriculture.	note the value of exported food animal products to countries around the world.	evaluate concepts required for work-place skills and expectations.	demonstrate effective oral and written communication skills	
Course SLO: Students will be able to													
define and describe various types of foodborne illness.	IRMA					IR			IR	IRMA		IR	
understand concepts to prevent foodborne illness outbreaks	IRMA					IR			IR	IRMA		IR	
list and describe various practices to ensure food safety.	IRMA					IR			IR	IRMA		IR	
describe and define the term pathogen.	IRMA					IR			IR	IRMA		IR	
list the disease, symptoms, onset, duration, illness and other specifics about viruses, bacteria, parasites, fungi, biological toxins, and emerging pathogens in foods.	IRMA					IR			IR	IRMA		IR	
compare and contrast the varying chemical, biological and physical contaminants in foods.	IRMA					IR			IR	IRMA		IR	
list and describe various food handling techniques for safety and note the importance of good personal hygiene.	IRMA					IR			IR	IRMA		IR	
extrapolate on the topics of the flow of food from preventing cross-contaminatoin, general storage guidelines, preparing food (thawing, cooking requirement temperatures, cooling and reheating), to food service.	IRMA					IR			IR	IRMA		IR	
define various prerequisite food safety programs including HACCP.	IRMA					IR			IR	IRMA		IR	
design a sanitation regime for a food service facility in regards to cleaning, sanitizing as well as equipment standards and installation/maintenance of equipment and facilities.	IRMA					IR			IR	IRMA		IR	
compare, contrast and define the differences between cleaning and sanitizing and note varying tools for each.	IRMA					IR			IR	IRMA		IR	

Mapping	
I	Introduced
R	Reinforced
M	Mastered
A	Assessed/Artifact

describe and develop an integrated pest management system with treatment, control measures, and identification of pests and procedures for using and storing chemicals.	IRMA				IR			IR	IRMA		IR
define the objectives of a food service inspection program as well as the governmental regulatory system for food	IRMA				IR			IR	IRMA		IR
briefly describe the FDA Food Code; how and why it was established and what it does for the industry.	IRMA				IR			IR	IRMA		IR

		CERTB									AAS	AS
ANSI 212: Food Safety		Curriculum Map										
Program Outcomes	demonstrate knowledge of the history of agriculture and animal industries in the United States	describe the role of nutrition in animal performance and well-being	extrapolate the role of anatomy, physiology and hormonal influence that affects reproduction in farm animal livestock.	explain the difference between a ruminant and non-ruminant digestive system.	differentiate the differences and roles of genetics and heritability in livestock performance.	describe desirable and undesirable traits of meat animal carcasses used to fabricate into retail cuts.	describe the differences in origin and species background to characterize different breeds of livestock used in animal production.	explain the impact that animal handling has on performance and yield of livestock.	discuss the importance of the broiler and egg industries into American Agriculture.	note the value of exported food animal products to countries around the world.	evaluate concepts required for work-place skills and expectations.	demonstrate effective oral and written communication skills
Course SLO: Students will be able to												
understand the importance of food safety from an industry and consumer point of view.	IRMA									IR		IR
understand the current governmental regulations of food.	IRMA									IR		IR
understand the concepts of: Good Manufacturing Practices (GMPs), Sanitation Standard Operating Procedures (SSOPs), Standard Operating Procedures (SOPs) and Hazard Analysis Critical Control Points (HACCP)	IRMA									IR		IR
describe the key concepts in an effective sanitation program.	IRMA									IR		IR
understand the significance of recalls to the food industry.	IRMA									IR		IR

Mapping	
I	Introduced
R	Reinforced
M	Mastered
A	Assessed/Artifact

		CERTB									AAS	AS
ANSI Z14: International Animal Agriculture		Curriculum Map										
Program Outcomes	demonstrate knowledge of the history of agriculture and animal industries in the United States	describe the role of nutrition in animal performance and well-being	extrapolate the role of anatomy, physiology and hormonal influence that affects reproduction in farm animal livestock.	explain the difference between a ruminant and non-ruminant digestive system.	differentiate the differences and roles of genetics and heritability in livestock performance.	describe desirable and undesirable traits of meat animal carcasses used to fabricate into retail cuts.	describe the differences in origin and species background to characterize different breeds of livestock used in animal production.	explain the impact that animal handling has on performance and yield of livestock.	discuss the importance of the broiler and egg industries into American Agriculture.	note the value of exported food animal products to countries around the world.	evaluate concepts required for work-place skills and expectations.	demonstrate effective oral and written communication skills
Course SLO: Students will be able to												
define and describe the various international food systems.	IRMA	IR			IR	IRMA	IR				IR	RMA
compare the difference between various production methods of cattle.	IRMA	IR			IR	IRMA	IR				IR	RMA
relate the importance of federal trade laws for importing and exporting of agricultural goods.	IRMA						IR				IR	RMA
define the procedures involved with live export trade in other countries.	IRMA						IR				IR	RMA
describe the processes that are different for marketing of meat from international countries.	IRMA						IR				IR	RMA
outline differences between beef that are grass-fed compared to grain fed beef in the US.	IRMA				IR	IRMA	IR				IR	RMA
extrapolate the differences between other countries grading methods for beef and lamb products.	IRMA				IR		IR				IR	RMA

Mapping	
I	Introduced
R	Reinforced
M	Mastered
A	Assessed/Artifact

ANSI 251: Basic Food Microbiology		CERTB									AAS	AS
Program Outcomes		Curriculum Map										
Course SLO: Students will be able to	demonstrate knowledge of the history of agriculture and animal industries in the United States	describe the role of nutrition in animal performance and well-being	extrapolate the role of anatomy, physiology and hormonal influence that affects reproduction in farm animal livestock.	explain the difference between a ruminant and non-ruminant digestive system.	differentiate the differences and roles of genetics and heritability in livestock performance.	describe desirable and undesirable traits of meat animal carcasses used to fabricate into retail cuts.	describe the differences in origin and species background to characterize different breeds of livestock used in animal production.	explain the impact that animal handling has on performance and yield of livestock.	discuss the importance of the broiler and egg industries into American Agriculture.	note the value of exported food animal products to countries around the world.	evaluate concepts required for work-place skills and expectations.	demonstrate effective oral and written communication skills
understand the importance of studying food microbiology and the interactions of microorganisms in foods.	IRMA					IRMA				IR		IR
understand the behavior, control and physiology of food-borne pathogens.	IRMA					IRMA				IR		IR
understand the control of food-borne pathogens in food systems.	IRMA					IRMA				IR		IR
understand and describe current and emerging issues in food microbiology and food safety.	IRMA					IRMA				IR		IR
describe the pathogen, symptoms, onset time and food safety related issues for the following microorganisms: Yeasts, Molds, Listeria, Spore Forming Pathogens, Salmonella, Escherichia coli, Shigella, Campylobacter, Vibrio, Yesenina entercolitica, Staphylococcus aureus as	IRMA					IRMA				IR		IR

Mapping	
I	Introduced
R	Reinforced
M	Mastered
A	Assessed/Artifact

		CERTB										AAS	AS	
ANSI Z52: Hazard Analysis Critical Control Points (HACCP)		Curriculum Map												
Program Outcomes	demonstrate knowledge of the history of agriculture and animal industries in the United States	describe the role of nutrition in animal performance and well-being	extrapolate the role of anatomy, physiology and hormonal influence that affects reproduction in farm animal livestock.	explain the difference between a ruminant and non-ruminant digestive system.	differentiate the differences and roles of genetics and heritability in livestock performance.	describe desirable and undesirable traits of meat animal carcasses used to fabricate into retail cuts.	describe the differences in origin and species background to characterize different breeds of livestock used in animal production.	explain the impact that animal handling has on performance and yield of livestock.	discuss the importance of the broiler and egg industries into American Agriculture.	note the value of exported food animal products to countries around the world.	evaluate concepts required for work-place skills and expectations.	demonstrate effective oral and written communication skills		
Course SLO: Students will be able to														
note the creatin, origin and usage of HACCP in food systems.	IRMA			IR			IR						IR	
describe the benefits of using HACCP in a food company.	IRMA			IR			IR						IR	
define prerequisite programs utilized by HACCP and understand that HACCP is not a stand alone program.	IR			IR			IR						IR	
define GMP's, SOP's and SSOP's.	IR			IR			IR						IR	
list and describe the seven principles of HACCP.	IR			IR			IR						IR	
conduct a Hazard Analysis on a food product.	IR			IR			IR						IR	
develop a decision making tree for identifying Critical Control Points.	IR			IR			IR						IR	
establish a critical limit using an industry or literature review/accepted method.	IR			IR			IR						IR	
establish a monitoring procedure to adequately survey the disposition of a food or the environment surrounding the food product.	IR			IR			IR						IR	
develop a corrective action plan when monitoring shows that a critical limit has not been met.	IR			IR			IR						IR	
establish a record keeping and documentation procedure to accurately describe the working conditions in a food establishment	IR			IR			IR						IR	
establish verification procedures that the HACCP system is not working.	IR			IR			IR						IR	

Mapping	
I	Introduced
R	Reinforced
M	Mastered
A	Assessed/Artifact

ANSI 2701 to 2706: Food Science Internship		CERTB										AAS	AS	
Program Outcomes		Curriculum Map												
Course SLO: Students will be able to	Demonstrate knowledge of the history of agriculture and animal industries in the United States	Describe the role of nutrition in animal performance and well-being	extrapolate the role of anatomy, physiology and hormonal influence that affects reproduction in farm animal livestock.	explain the difference between a ruminant and non-ruminant digestive system.	differentiate the differences and roles of genetics and heritability in livestock performance.	describe desirable and undesirable traits of meat animal carcasses used to fabricate into retail cuts.	describe the differences in origin and species background to characterize different breeds of livestock used in animal production.	explain the impact that animal handling has on performance and yield of livestock.	discuss the importance of the broiler and egg industries into American Agriculture.	note the value of exported food animal products to countries around the world.	evaluate concepts required for work-place skills and expectations.	demonstrate effective oral and written communication skills		
display personal skills that will relate to job preparedness.	IRMA												RMA	
develop and increase interpersonal skills within the food industry by addressing responsibility, working as a team, leadership and negotiating skills.	IRMA												RMA	
enhance problem solving skills by learning to identify problems and applying learned concepts for solutions.	IRMA												RMA	
increase communication skills by learning to follow directions, writing clearly on documentation forms, and giving accurate details of events performed	IRMA												RMA	
use technology and equipment available in the course as well as in the food position including safety rules, operation of equipment and environmental regulations	IRMA												RMA	

Mapping	
I	Introduced
R	Reinforced
M	Mastered
A	Assessed/Artifact

ANSI 141: Horsemanship		CERTB									AAS	AS
Program Outcomes		Curriculum Map										
demonstrate knowledge of the history of agriculture and animal industries in the United States		describe the role of nutrition in animal performance and well-being	extrapolate the role of anatomy, physiology and hormonal influence that affects reproduction in farm animal livestock.	explain the difference between a ruminant and non-ruminant digestive system.	differentiate the differences and roles of genetics and heritability in livestock performance.	describe desirable and undesirable traits of meat animal carcasses used to fabricate into retail cuts.	describe the differences in origin and species background to characterize different breeds of livestock used in animal production.	explain the impact that animal handling has on performance and yield of livestock.	discuss the importance of the broiler and egg industries into American Agriculture.	note the value of exported food animal products to countries around the world.	evaluate concepts required for work-place skills and expectations.	demonstrate effective oral and written communication skills
Course SLO: Students will be able to												
explain and understand the significance of horsemanship from a historical and <u>modern day viewpoint</u> .	IRMA							IRMA				IR
distinguish the different philosophies of riding cowboy style versus show arena style.	IRMA											IR
determine the characteristics needed in a horse for each individual rider.	IRMA	IRMA						IRMA				IR
calculate the cost of owning different types of horses.	IRMA	IRMA									IR	IR
compare different types of tack for each individual purpose.	IRMA											IR
demonstrate proper means of storing and caring for tack.	IRMA											IR
discuss the many tools involved in grooming of horses.	IRMA											IR
practice essential grooming techniques.	IRMA											IR
discuss safe handling of horses.	IRMA							IRMA				IR
explain different techniques of maintaining soundness.	IRMA							IRMA				IR
describe proper riding attire.	IRMA											IR
demonstrate the proper method of saddling a horse.	IRMA							IRMA				IR
discuss the ramifications of a poor fitting saddle and pad combination.	IRMA											IR
apply riding techniques to various riding disciplines.	IRMA							IRMA				IR
demonstrate an assortment of basic training principles.	IRMA							IRMA				IR

Mapping	
I	Introduced
R	Reinforced
M	Mastered
A	Assessed/Artifact

		CERTB									AAS	AS
ANSI 213: Animal Welfare & Handling		Curriculum Map										
Program Outcomes	demonstrate knowledge of the history of agriculture and animal industries in the United States	describe the role of nutrition in animal performance and well-being	extrapolate the role of anatomy, physiology and hormonal influence that affects reproduction in farm animal livestock.	explain the difference between a ruminant and non-ruminant digestive system.	differentiate the differences and roles of genetics and heritability in livestock performance.	describe desirable and undesirable traits of meat animal carcasses used to fabricate into retail cuts.	describe the differences in origin and species background to characterize different breeds of livestock used in animal production.	explain the impact that animal handling has on performance and yield of livestock.	discuss the importance of the broiler and egg industries into American Agriculture.	note the value of exported food animal products to countries around the world.	evaluate concepts required for work-place skills and expectations.	demonstrate effective oral and written communication skills
Course SLO: Students will be able to												
identify proper animal handling guidelines for on the farm, ranch or feedlot.	IRMA	IRMA						IRMA				RMA
analyze correct transportation guidelines for animal safety and welfare.	IRMA	IRMA						IRMA				RMA
evaluate steps utilized in proper handling in harvest operations.	IRMA	IRMA						IRMA				RMA
explain different techniques for appropriate usage of antibiotics and animal health products.	IRMA	IRMA						IRMA				RMA

Mapping	
I	Introduced
R	Reinforced
M	Mastered
A	Assessed/Artifact

ANSI 110: Swine Production		CERTB										AAS	AS	
Program Outcomes		Curriculum Map												
Course SLO: Students will be able to	demonstrate knowledge of the history of agriculture and animal industries in the United States	describe the role of nutrition in animal performance and well-being	extrapolate the role of anatomy, physiology and hormonal influence that affects reproduction in farm animal livestock.	explain the difference between a ruminant and non-ruminant digestive system.	differentiate the differences and roles of genetics and heritability in livestock performance.	describe desirable and undesirable traits of meat animal carcasses used to fabricate into retail cuts.	describe the differences in origin and species background to characterize different breeds of livestock used in animal production.	explain the impact that animal handling has on performance and yield of livestock.	discuss the importance of the broiler and egg industries into American Agriculture.	note the value of exported food animal products to countries around the world.	evaluate concepts required for work-place skills and expectations.	demonstrate effective oral and written communication skills		
understand the history of the swine industry.	IRMA					IRMA							RMA	
describe and recognize the different breeds of swine.													RMA	
understand and define terms in swine nutrition as well as requirements for growth and the function of the digestive system.		IRMA		IRMA									RMA	
understand swine reproduction and swine genetics.			IRMA		IRMA								RMA	
define various swine health issues and how to maintain a health program.													RMA	
discuss various swine management programs (free-range, indoors, etc).						IRMA							RMA	

Mapping	
I	Introduced
R	Reinforced
M	Mastered
A	Assessed/Artifact