

ASCI 126: MEAT SCIENCE

Proposer:

Name:

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Effective Term:

Spring 2021

Credit Status:

Credit - Degree Applicable

Subject:

ASCI - Animal Science

Course Number:

126

Catalog Title

Meat Science

Catalog Description

This course is an introduction to the meat industry with a special emphasis on meat products and value added meat processing techniques. It includes concepts of food safety and sanitation, grading and inspection along with preservation and marketing strategies to meet current consumer demands.

Method of Instruction:

Field Experience

Laboratory

Lecture and/or Discussion

Distance Education (Emergency Addendum)

Course Units/Hours:

Course Units Minimum:

3

Lecture Hours Minimum (week)

3

Lab Hours Minimum (week)

1

Total Contact Hours Minimum (semester)

70

Total Outside Hours Minimum (semester)

105

Total Student Learning Minimum Hours (semester)

175

Repeatability:

No

Open Entry/Exit:

No

Field Trips:

Not Required

Grade Mode:

Standard Letter

TOP Code:

010200 - * Animal Science

SAM Code:

C - Clearly Occupational

Course Content

Methods of Assessment:

Essay quizzes or exams
 Problem solving assignments or activities
 Short answer quizzes or exams
 Skill demonstrations
 Written essays or extended papers

Course Topics:

Course Topics	
1	Historical Perspective of the Meats Industry and importance of meat consumption to human history
2	Meat Inspection, HAACP and Meats Labeling
3	Principles of Livestock Slaughter; Necessary Safety Equipment; Properly Sharpening. Knives
4	Conversion of Muscle to Meat
5	Muscle Structure and Muscle Contraction
6	Meat Tenderness
7	Properties of Fresh Meat
8	Use of Animal Byproducts
9	Meat Color
10	Meat Packaging
11	Meat Curing
12	Bacon and Ham Processing
13	Sausage Manufacturing and Processed Meat Products
14	Pork Slaughter, Fabrication and grading
15	Beef Slaughter, Fabrication and grading
16	Lamb Slaughter, Fabrication and grading

Course Objectives:

Course Objectives	
1	Identify the wholesale and retail cuts of beef, sheep, and swine carcasses.
2	Evaluate career opportunities and requirements for successful employment in the meats industry.
3	Determine the quality and yield grades for beef, sheep, and pork carcasses utilizing the current USDA grading standards.
4	Use proper sanitation techniques for meat processing tools, equipment and facilities.
5	Identify tools and equipment commonly used in the meats industry.
6	Discuss current trends, challenges and issues impacting the meats industry.

Course Outcomes:

Course Outcomes	
1	The student will obtain knowledge of general history, food safety, inspection, harvest, fabrication, quality and processing of meat products.
2	The student will be able to determine yield and quality grades of beef, pork, and lamb.
3	The student will demonstrate safe and sanitary techniques for processing beef, sheep and pork carcasses into wholesale cuts and retail products.
4	The student will understand the role of livestock and meat industry in producing and providing safe and wholesome protein to the world.

Assignments:

Assignment Type:	Details
Reading	Students can read from the textbooks listed above to supplement material discussed in class. These textbooks will assist with further knowledge and understanding.
Writing	Students will have to write 2 papers during the semester at 1-2 pages each. One paper will be on an animal byproduct of their choice. The other one will be on a topic concerning Meat Science on a product they find at the World Ag Expo, which is held in February every year in Tulare.
Homework	Students will have to answer review questions from the PowerPoint presentations or review questions from the book chapters when assigned. These assignments will check for knowledge and understanding.
Lab	Students will have assignments to check for knowledge ascertained during the scheduled labs for this course. The labs are listed above and are critical for complete understanding of Meat Science. Laboratory assignments will be given at an end of a lab and will be due the next class period when class starts.

Textbooks or other support materials

Resource Type:	Details
Books	Meat Science - Lab Manual Savell and Smith American Press 8th 2009 0896414701
Books	Principles of Meat Science Aberle, Forrest, Gerrard & Mills Kendall/Hunt 5th 2012 0757599958
Books	The Meat Buyers Guide North American Meat Institute North American Meat Institute 8th 2014 0692302026
Books	Lawrie's Meat Science Fidel Toldra. Woodhead Publishing. 8th edition. 2017. 9780081006948.

Transferable to CSU

Yes - Proposed

Transferable to CSU Justification

CSUF, ASCI 71, 2019-20 (GK)

Other Degree Attributes

Degree Applicable
Not a Basic Skills Course

Materials Fee:

30

Additional Attachment

ASCI 126 DLA Form.pdf

Banner Title:

Meat Science

Curriculum Committee Approval Date:

06/18/2020



Academic Senate Approval Date:

08/26/2020

District Governing Board Approval Date:

09/14/2020

Course Control Number:

CCC000585748