Department of
Animal and Food Science

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Department Description

The Department of Animal and Food Science prepares students to understand and contribute to key requirements of human existence: domesticated animal production, food processing and preservation, and human nutrition. Three conditions in the world create a critical need for study in these related fields: an increasing world population, a decreasing amount of agricultural lands, and a need to improve human health and nutrition. These realities present a great variety of opportunities for well-trained workers to serve mankind.

Students in these majors are focused on the scientific principles of animal care, production of food animals, and the development, processing, and analysis of food. Learning occurs in these areas of study through close interaction between faculty and students, numerous opportunities for hands-on experiences, and related work experiences or internships.

Employment opportunities for students with a background in animal and food science are excellent and always in demand. Examples of careers include ag science center operation managers, ag science center consultants, food product developers, food safety workers, food scientists, pharmaceutical company representatives, animal health workers, meat and dairy processing workers, genetics specialists, government agency workers, etc.

Animal and Food Science majors may choose from the following degrees:

Associate of Science in Animal Science (377)

The Associate Degree in Animal Science is designed for those students who are not seeking a Bachelor's Degree or are planning on transferring to another institution before completing a Bachelor's Degree. It will fulfill the general education requirements for most other universities to enable transferring easier and will provide a basic foundation in Animal Science that can be enlarged and built on, if desired.

Bachelor of Science in Animal Science (645)

Animal Science (645) is designed to prepare students to work in animal production agriculture, associated animal agribusiness, or to competitively compete for entrance into veterinary school or other related Animal Science graduate programs. Students will learn animal anatomy and physiology, nutrition, reproduction, animal health, genetics, meat science, animal and land interactions, and the fundamentals of animal production systems. Graduates will be prepared to enter the workforce or continue in graduate programs.

Bachelor of Science in Food Science (648)

Food science is the use of science and engineering principles to study food, its preservation, and processing. The Food Science degree (648) prepares students to work in food product development, food processing, quality assurance, and regulatory agencies in food safety, or to enter graduate school. Students in this program will study food chemistry and microbiology, food processing and safety, and the analysis of food using chemical, physical, and sensory techniques.

Minor in Animal Science (140)

The animal science minor is for those students NOT majoring in a current animal science degree but wishing to receive concentrated training which can be coupled with a complementary major.

Minor in Nutrition (242)

The nutrition minor is designed to enhance the employability and success of students planning on pursuing jobs that require a basic background in nutrition. Those that would benefit professionally from complimenting their education with a nutrition minor might include those entering the healthcare field, education and others. The course selection is designed to provide a foundation in the physiology and chemistry of nutrition, but also the practical skills that are needed to plan and implement healthy dietary practices.

AS in Animal Science (377)

Core Courses
Take these courses:

AS 125	1
AS 150	3
AS 247	3
CHEM 105	4
	11

Take these courses:

AS 215	3
AS 215L	1
AS 220	3
AS 336	3
AS 398R	1
AS 490R	1-3
	12

Take 1 course:

AS 340	4
AS 350	4
AS 360	4
AS 380	3
	3

Program Notes:

- *No Double Counting of Major Courses*
- *No Grade Less Than C- for Major Courses*

Credit Requirements:

Foundations	34
Major	26
Total	60

Tracks Available:

Fall-Winter	Yes
Winter-Spring	Yes
Spring-Fall	Yes

BS in Animal Science (645)

Core Courses
Take these courses:

AS 125	1
AS 150	3
AS 215	3
AS 215L	1
AS 220	3
AS 247	3
AS 300	2
AS 336	3
AS 398R	1
AS 495	3
	23

Take these courses:

CHEM 105	4
CHEM 106	4
MATH 221B	3
	11

Complete 1 module

Food Animal Production Module*
Take these courses:

AS 315	4
AS 333	3
AS 355	4
AS 425	4

Take 1 course:

AS 350	4
AS 360	4

Take 1 course:

BIO 225	3
AS 234	2
AS 330	2
	21

Animal Breeding/Genetics Module
Take these courses:

AS 330	2
AS 333	3
AS 430	4
BIO 180	4
BIO 181	4
BIO 375	3
	20

Nutrition Module
Take these courses:

BIO 225	3
AGRON 330	3
AS 234	2
AS 355	4
AS 425	4

Take 1 course:

AS 340	4
AS 350	4
AS 360	4
	20

Meats Module
Take these courses:

FS 120	3
AS 355	4
AS 465	3
AS 490R	2-3
BIO 221	3
BIO 222	1

Take 1 course:

AS 350	4
AS 360	4
	20

Pre Vet Module
Take these courses:

BIO 180	4
BIO 181	4
BIO 375	3
CHEM 351	4
CHEM 481	3
PH 105	4
	22

Animal Health Module
Take these courses:

AS 234	2
AS 315	4
AS 333	3
AS 355	4
AS 425	4

Take 1 course:

AS 340	4
AS 350	4
AS 360	4
AS 380	3
	20

Program Notes:

- *No Double Counting of Major Courses*
- *No Grade Less Than C- in Major Courses*
- *Agribusiness Cluster 2307 is strongly recommended with the food animal production module.*

Credit Requirements:

Foundations	40
Major	54
Elective	26
Total	120

Tracks Available:

Fall-Winter	Yes
Winter-Spring	Yes
Spring-Fall	Yes

BS in Food Science (648)

Core Courses
Take these courses during your first 2 semesters:

BIO 221	3
BIO 222	1
CHEM 105	4
FS 120	3
NUTR 150	3
	14

Food Science Courses
Take these courses:

FS 180	1
FS 220	2
FS 330	3
FS 340	2
FS 350	3
FS 360	3
FS 435	4
FS 440	3
FS 450	3
FS 490	4
	28

Take 3 credits:

FS 498R	3
FS 499R	1-3
	3

Chemistry Module
Take these courses:

CHEM 106	4
CHEM 351	4
CHEM 481	3
	11

Math & Physics Module
Take 1 course:

PH 105	4
PH 121	3
	3

Take this course:

MATH 221B	3
	3

Take 1 course:

FDMAT 112	4
MATH 119	4
	4

Program Notes:

- *No Double Counting of Major Courses*
- *No Grade Less Than C- for Major Courses*

Credit Requirements:

Foundations	40
Major	66
Elective	14
Total	120

Tracks Available:

Fall-Winter	Yes
Winter-Spring	Yes
Spring-Fall	Yes

Minor in Animal Science (140)

Core Courses
Take these courses:

AS 125	1
AS 150	3
AS 220	3
AS 247	3
AS 336	3
CHEM 105	4
	17

Take 1 course:

AS 340	4
AS 350	4
AS 360	4
AS 380	3
	3

Supplemental Courses
Take 5 or more credits:

AS 215	3
AS 215L	1
AS 234	2
AS 315	4

cont. in next column

cont. from previous column

AS 330	2
AS 333	3
AS 340	4
AS 350	4
AS 355	4
AS 360	4
AS 380	3
	5

Program Notes:

- *No Double Counting of Minor Courses*
- *No Grade Less Than C- for Minor Courses*

Credit Requirements:

Total	25

Tracks Available:

Fall-Winter	Yes
Winter-Spring	Yes
Spring-Fall	Yes

Minor in Nutrition (242)

Core Courses
Take these courses:

NUTR 150	3
NUTR 200	3
NUTR 330	3
NUTR 350	3
NUTR 400	3
	15

Select 1 option:

CHEM 101	3
CHEM 101L	1
or	
CHEM 105	4
	4

Elective Course
Take 6 or more credits:

BIO 180	4
CHEM 150	5
CHEM 153	1
FS 120	3
FS 220	2
FCS 240	2
FCS 364	4
FCS 351	3
	6

Program Notes:

- *No Double Counting of Minor Courses*
- *No Grade Less Than C- for Minor Courses*

Credit Requirements:

Total	25

Tracks Available:

Fall-Winter	Yes
Winter-Spring	Yes
Spring-Fall	Yes

Animal Science Concentration (D 111)

Core Courses
Take these courses:

AS 125	1
AS 150	3
AS 215	3
AS 215L	1
AS 220	3
AS 300	2
AS 315	4
AS 333	3
AS 336	3
CHEM 105	4
	27

Supplemental Courses
Take 1 course:

AS 340	4
AS 350	4
AS 360	4
AS 380	3
	3

Interdisciplinary Courses
Take these courses:

IDS 398R	1-3
IDS 499	2
	3

Program Notes:

- *No Double Counting of Concentration Courses*
- *No Grade Less Than C- for Concentration Courses*

Credit Requirements:

Total 33

Tracks Available:

Fall-Winter	Yes
Winter-Spring	Yes
Spring-Fall	Yes

Animal and Food Science Predefined Clusters

Animal Health **1002**
Take these courses:

AS 125	Career Exploration in Animal Science	1
AS 215	Animal Anatomy/Physiology	3
AS 215L	Animal Anatomy/Physiology Lab	1
AS 234	Veterinary Parasitology	2
AS 315	Animal Health and Diseases	4
Take 1 course:		
AS 340	Horse Production	4
AS 350	Small Animal Production	4
AS 360	Beef Production	4
AS 380	Companion Animal Management	3
	Total Credits	14

Animal Reproduction **1003**
Take these courses:

AS 125	Career Exploration in Animal Science	1
AS 330	Artificial Insemination	2
AS 333	Livestock Genetics	3
AS 336	Animal Reproduction	3
AS 430	Advanced Reproduction	4
	Total Credits	13

Animal Nutrition **1011**
Take these courses:

AS 125	Career Exploration in Animal Science	1
AGRON 330	Forage Crops	3
AS 220	Feeds and Nutrition	3
AS 425	Advanced Animal Nutrition	4
CHEM 105	General Chemistry I	4
	Total Credits	15

Beef Production **1012**
Take these courses:

AS 220	Feeds and Nutrition	3
AS 336	Animal Reproduction	3
AS 360	Beef Production	4
CHEM 105	General Chemistry I	4
	Total Credits	14

Human Nutrition **1020**
Take these courses:

CHEM 101	Introductory General Chemistry	3
NUTR 150	Essentials of Human Nutrition	3
NUTR 200	Nutrient Metabolism	3
Take 6 credits:		
CHEM 150	Introduction to Organic and Biochemistry	5
NUTR 330	Nutrition in the Life Cycle	3
NUTR 350	Sports Nutrition	3
NUTR 400	Nutritional Biochemistry	3
	Total Credits	15

Food and Nutrition **1021**
Take these courses:

NUTR 150	Essentials of Human Nutrition	3
FS 120	Introduction to Food Science	3
FCS 240	Food Preparation	2
Take 7 credits:		
FS 220	Food Laws, Regulations, and Additives	2
FCS 364	Science of Meal Management	4
NUTR 200*	Nutrient Metabolism	3
NUTR 330	Nutrition in the Life Cycle	3
	Total Credits	15

***Course requires a prerequisite that is not in the Core Courses. See course description for more information**

Course Descriptions — Credits*

AS 125 Career Exploration in Animal Science (1:1:0:0)
This course provides career perspective for entry level Animal Science students. Students will learn about various careers within the Animal Science Industry which will aide them in curriculum decision and will allow them to tailor their individual curriculum to meet career based goals.
(Fall, Winter, Spring)

AS 150 Introduction to Animal Science (3:3:0:0)
This course is an overview of various livestock enterprises, including beef, dairy, sheep, swine and horse industries. Basic principles used in the various industries are presented. Emphasis given to current and future trends in animal science.
(Fall, Winter, Spring)

AS 215 Animal Anatomy and Physiology (3:3:0:0)
Concurrent Requisite: AS 215L
This course is a systems approach to the study of animal anatomy and physiology. Students will study the structure and functions of the cell, skeletal, muscular, nervous, digestive and reproductive systems. Practical applications of anatomy and physiology and their relation to diseases and disorders will also be studied.
(Fall, Winter, Spring)

AS 215L Animal Anatomy and Physiology Lab (1:0:2:0)
Total Course Fees: $10.00
Concurrent Requisite: AS 215
This course involves a laboratory experience covering microscopic cellular anatomy, cadaver dissection, and live animal palpation. This course is two hours per week with hands on study of animal systems that pair to the lecture portion of the course.
(Fall, Winter, Spring)

AS 220 Feeds and Nutrition (3:3:0:0)
Prerequisite: CHEM 105
This course covers the study of the principles of animal nutrition as applied to nutrient digestion and metabolism, feed stuff characteristics, and principles for formulating nutritionally balanced diets.
(Fall, Winter, Spring)

AS 234 Veterinary Parasitology (2:2:1:0)
This course is an introduction to common veterinary parasites. It will cover the life cycles, parthenogenesis, identification, and treatment of the common parasites of most domestic animals. This course will also discuss the relationship between parasites and the overall health of the host animal. In addition, the zoophytic potential of disease transmission by parasites will be explored.
(Fall, Winter Even Years)
(Spring Odd Years)

AS 247 Animal Handling and Behavior (3:3:1:0)
Total Course Fees: $30.00
Animal handling and behavior is an introductory approach to the technique of pressure and release for low stress livestock handling. Students who complete this course develop a higher level of communication with all species of animals including cattle, sheep, horses, and humans. Students will discuss theory in a classroom setting while gaining hands on experience in laboratory.
(Fall, Winter, Spring)

AS 300 Animal Science Seminar (2:2:0:0)
This course provides instruction and insight into issues in food animal production. Students will receive instruction on how to interpret food animal research, along with how to summarize and present research data.
(Fall, Winter Odd Years)
(Spring Even Years)

AS 315 Animal Health and Diseases (4:3:3:0)
Total Course Fees: $25.00
Prerequisite: AS 215
This course provides instruction in the areas of animal health evaluation, livestock disease prevention, and treatment; leading to the development of the basic skills required to evaluate animal health status and programs.
(Fall, Winter Even Years)
(Spring Odd Years)

AS 330 Artificial Insemination (2:1:2:0)
This course will help students develop the manual skills required for cattle insemination using frozen semen. Subject matter also includes principles related to selection criteria for sires, semen storage, estrus detection and synchronization. Class time is combined with practice time using live cattle.
(Fall, Spring)

AS 333 Livestock Genetics (3:3:0:0)
This course covers the study of animal breeding principles involved in improving livestock through genetic selection methods. Students will explore the genetic theories and mating systems currently used in animal agriculture.
(Fall, Winter)

AS 336 Animal Reproduction (3:3:1:0)
This course involves the study of reproduction of cattle, sheep, horses, and pigs. Students will receive instruction in basic reproductive anatomy, and the processes involved in prenatal development, puberty, conception, and parturition. Application of reproductive principles as used in estrus synchronization, insemination, ultrasonically and embryo transfer will be taught.
(Fall, Winter, Spring)

AS 340 Horse Production (4:3:2:0)
Total Course Fees: $15.00
Prerequisite: AS 215
This course will discuss production practices in the selection, care, and evaluation of horses. This course is designed to provide students with better understanding of the modern equine industry. Students will learn principles of horse health, breeds of horses, their characteristics, and their uses, as well as equine behavior, anatomy and physiology, nutrition, and reproduction. Students will also be able to create a business plan that involves the equine field that they are interested in.
(Fall, Winter Even Years)
(Spring Odd Years)

AS 350 Small Animal Production (4:3:2:0)
Prerequisites: AS 150 and AS 220 and AS 336
This course provides a hands-on, in-depth study of how to economically and efficiently produce swine, sheep, goats, and poultry. The goal of this course is for the students to learn how to transform their investment of dollars and time into profitable and rewarding farm enterprise. The course will be centered on production traits of swine, sheep, goats, as well as poultry.
(Spring Even Years)
(Fall, Winter Odd Years)

AS 355 Principles of Meat Science (4:3:3:0)
Total Course Fees: $25.00
This course incorporates everything from growth and development of beef, swine and sheep, to case ready beef products. This class is designed to expose students to every aspect of meat science. Emphasis will be placed on carcass merits and value and will include grading, evaluation and appraisal of meat. This course includes techniques of slaughter, fabrication, labeling, food safety and finished retail product.
(Fall, Winter, Spring)

AS 360 Beef Production (4:3:2:0)
Prerequisites: AS 220 and AS 336
In this course, students will apply techniques and principles of beef production and management. Lectures will be designed to help students better understand the demands, trends, and management tools of the beef industry. Students will receive hands on training concerning health care, reproduction, nutrition, cattle selection, breeds, best management practices, and economical tools used in management decisions.
(Fall, Winter Odd Years)
(Spring Even Years)

* Credit Description (Credit Hours : Lecture Hours per week : Lab Hours per week : Guided Instruction Hours per week)

AS 380 Companion Animal Management (3:3:0:0)
Prerequisites: AS 215 and AS 215L
Introduction to care and management of companion animals. Topics will include an understanding of common varieties of pets, the human-animal bond, behavior, nutrition, reproduction, health, husbandry, human interactions, and social issues.
(Fall, Winter Even Years)
(Spring Odd Years)

AS 398R Internship (1:0:0:0)
Grading Method: Pass/Fail
Repeatable Course: May earn maximum of 3 credits
Internship Fees: $81.50 (LDS) $163 (non-LDS) per credit
Exempt from tuition, but charged this independent course fee
An internship is a cooperative program between BYU-Idaho Department of Animal and Food Science and approved Experience Providers (employers). Internships provide actual work experience that will add to or enhance the career preparation and learning of individual students. Internships approved by the department or college internships coordinator provide students with knowledge of career opportunities and actual work experience in preparation for employment after graduation. The ideal internship would take place during the students off track semester; however allowances can be made to adjust schedules to meet specific internships. Students will not be allowed to start and finish their internships during the 7 week summer break. Required internships should generally be a stepping stone into your future career. Internships are typically 40-hour a week positions that last for a length of a semester (14 weeks). A maximum of one credit hour will be available for a single approved internship.
(Fall, Winter, Spring)

AS 425 Advanced Animal Nutrition (4:3:2:0)
Prerequisites: AS 220
This course provides instruction in the area of advanced animal nutrition with an emphasis on nutrient digestion mechanics, absorption, and cellular metabolism.
(Fall, Winter Odd Years)
(Spring Even Years)

AS 430 Applied Reproduction (4:3:3:0)
Total Course Fees: $20.00
Prerequisites: AS 336 and AS 330
This course helps students develop the skills involved in livestock reproduction technologies such as estrus synchronization, pregnancy detection, ultrasonography, and embryo transfer. Cattle are the focus species.
(Fall, Spring Even Years)
(Spring Odd Years)

AS 465 Processed Meats (3:2:3:0)
Total Course Fees: $25.00
This course includes techniques of the modern meat processing industry and its use of science and technology. It will include fabrication, processing, preservation, sanitation, Hazard Analysis and Critical Control Point (HACCP), and utilization of manufactured and processed meat. This course will provide actual laboratory preparation of processed meats and by-products produced in today's meat packing industry. Students will be familiarized with several key and general concepts relating to the safe production and marketing of processed meats.
(Fall, Winter Even Years)
(Spring Odd Years)

AS 490R Research Practicum (1-3:0:0:0)
Repeatable Course: May earn maximum of 9 credits or maximum of 3 enrollments
Course Requirements: Instructor Approval Required
This course is designed to reinforce and improve upon selected occupational competencies. This course focuses on independent study, student mentored research, special assignment, and/or advanced inquiry in an area of special interest. Registration is approved after consultation with instructor in charge upon request.
(Fall, Winter, Spring)

AS 495 Animal Science Capstone (3:3:0:0)
Prerequisite: AS 336
Co-requisite: AS 425
In this course, students will be challenged to integrate their accumulated knowledge and technical and social skills in order to identify and solve a problem relevant to issues encountered by professionals in their chosen discipline, and to communicate the results of their efforts to their peers. In doing so, students will have the opportunity to demonstrate their ability to adapt to professional situations. It is hoped that this experience will stimulate students appreciation of the need for lifelong learning and initiate professional and personal liaisons.
(Fall, Winter Odd Years)
(Spring Even Years)

FS 120 Introduction to Food Science (3:2:3:0)
Total Course Fees: $40.00
This course introduces the principles of food preparation and uses science to explain what happens as food is prepared. Principles of food safety, processing, and evaluation are introduced. This course also provides an overview of the food industry and its related disciplines.
(Fall, Winter, Spring)

FS 180 Survey of Food Science (1:1:0:0)
This course explores the field of food science, including professional roles of food scientists and food science career paths, through a series of weekly seminars provided by food science professionals working in the industry, academia, and government.
(Winter, Spring)

FS 220 Food Laws, Regulations, Additives (2:2:0:0)
Prerequisite: FS 120
This course explores the history, development, and enforcement of laws and regulations that affect the food processing industry and food consumers. Emphasis for the course will be placed on the impact of legal and regulatory issues relating to food quality, safety, formulation, labeling, marketing, grading, product and process development and international trade.
(Fall, Spring)

FS 330 Food Processing (3:1:6:0)
Total Course Fees: $50.00
Prerequisites: FDMAT 110 or FDMAT 112 or MATH 109 or MATH 119
Co-requisites: (FS 120 or FS 220) and (PH 105 or PH 121)
In this course, students will study the theory and application of food processing and preservation. Topics include GMPs, raw materials, extrusion, high pressure canning, freezing, drying, and freeze drying.
(Fall, Spring)

FS 340 Applied Sensory Science (2:1:3:0)
Total Course Fees: $25.00
Prerequisite: MATH 221B
Co-requisite: FS 120
Applied Sensory Science covers the principles of sensory evaluation including theory, sensory physiology and psychology, experimental methods, applications, and statistical analysis.
(Fall, Spring)

FS 350 Food Chemistry (3:2:3:0)
Total Course Fees: $30.00
Prerequisite: CHEM 351
Co-requisite: FS 120
This course explains how water, carbohydrates, lipids, proteins, vitamins, and minerals react and interact in foods. Further emphasis will be placed on biochemical functional properties, enzymes, and food additives.
(Winter, Spring)

FS 360 Food Microbiology (3:2:3:0)
Total Course Fees: $20.00
Prerequisites: BIO 221 and BIO 222
Co-requisite: FS 120
This course is the study of the interactions of microorganisms in food in the following areas: fermentation of food, principles of food preservation, food-borne diseases, and food spoilage.
(Winter, Spring)

* Credit Description (Credit Hours : Lecture Hours per week : Lab Hours per week : Guided Instruction Hours per week)

FS 435 Dairy Processing (4:1:8:0)
Total Course Fees: $60.00
Prerequisites: FS 330 and FS 360 and CHEM 351
Students in this course will develop an understanding of the basic principles of dairy chemistry and processing as well as put theory into practice by successfully making a variety of common dairy products.
(Fall, Winter)

FS 440 Food Engineering (3:2:3:0)
Total Course Fees: $20.00
Prerequisites: FS 330 and (FDMAT 112 or Math 119)
Students in this course will learn how basic engineering principles such as mass and energy balances, fluid flow, and unit operations apply to food processing. Packaging materials and waste management will also be studied.
(Fall, Winter)

FS 450 Food Analysis (3:1:6:0)
Total Course Fees: $20.00
Prerequisites: CHEM 351 and FS 350
The purpose of this course is to prepare students in all the principles, methods and techniques necessary for quantitative physical and chemical analysis of food products and ingredients essential for success in the food industry.
(Fall, Winter)

FS 490 Product Development (4:1:9:0)
Total Course Fees: $60.00
Prerequisites: FS 330 and FS 340 and FS 350 and Senior Standing
Co-requisites: FS 440
This course is designed to provide the opportunity and challenge for students to integrate the theory and training of various food science and technology courses to develop viable food products. This is the IFT-required senior level capstone course that incorporates and unifies principles from the total undergraduate curriculum.
(Winter, Spring)

FS 498R Food Science Internship (3:0:0:0)
Repeatable Course: May earn maximum of 6 credits
Internship Fees: $81.50 (LDS) $163 (non-LDS) per credit
Exempt from tuition, but charged this independent course fee
Course Requirement: Instructor Permission and approval of the Internship arrangement; Junior standing recommended
An internship is a cooperative program between BYU-Idaho Department of Animal and Food Science and approved Experience providers (employers). Internships provide actual work experience that will add to or enhance the career preparation and learning of individual students. Internships approved by the department or college internship coordinator provide students with knowledge of career opportunities and actual work experience in preparation for employment after graduation. The ideal internship would take place during the students off track semester, however, allowances can be made to adjust schedules to meet specific internships. Students will not be allowed to start and finish their internship during the 7 week summer break. Required internships should generally be a stepping stone into your future career. Internships are typically 40-hour a week positions that last for the length of a semester (14 weeks).
(Fall, Winter, Spring)

FS 499R Food Science Research (1-3:0:3:0)
Requirement: Instructor Approval
Repeatable Course: May earn maximum of 6 credits
Students participate in a mentored research experience in food science under the direction of a faculty member. Projects provide students with hands-on opportunities to read/study/analyze/apply the scientific literature; design/conduct experiments; become proficient in analytical techniques/assays; and organize, analyze, interpret, and effectively communicate research findings (i.e., project final report, poster presentation, research seminar, etc.). A primary objective of this course is for students to become confident in the research process and become capable of independently conducting a research project in a future professional or graduate school setting.
(Fall, Winter, Spring)

NUTR 112 Nutrition and Young Children (2:2:0:0)
This course is designed to teach students the concepts of human nutrition, nutrition education, menu planning, sanitation and food safety with emphasis on preschool children.
(Fall, Winter, Spring)

NUTR 120 Introduction to Dietetics (1:1:0:0)
Introduction to the fields of nutrition, dietetics, and food service administration. History of the profession, academic pathway options and requirements, career opportunities, role of the dietitian in a variety of settings, and professionalism.
(Fall, Winter on a rotating scheduling)

NUTR 150 Essentials of Human Nutrition (3:3:0:0)
This course consists of the food oriented study of nutrition facts and principles as a basis for dietary choices; consequences of food choices; scientific examination of controversial topics.
(Fall, Winter, Spring)

NUTR 200 Nutrient Metabolism (3:3:0:0)
Prerequisites: NUTR 150 and (CHEM 101 or CHEM 105 or CHEM 106)
This course consists of the nutrient oriented study of nutrition facts and principles; metabolic consequences of nutrient intakes; techniques of communicating valid nutrition concepts.
(Fall, Winter, Spring -- online only)

NUTR 330 Nutrition in the Life Cycle (3:3:0:0)
Prerequisites: NUTR 150
This course reviews the nutritional requirements during pregnancy, lactation, infancy, childhood, adolescence, adulthood and the aging process.
(Fall, Winter, Spring)

NUTR 350 Sports Nutrition (3:3:0:0)
Total Course Fees: $12.00
Prerequisites: NUTR 150 and (ESS 375 or NUTR 200)
In this course students will explore and apply the nutritional recommendation associated with rigorous physical activity as well as guidelines to help athletes lose or gain weight. An emphasis is also placed on techniques to successfully locate and identify quality research.
(Fall, Winter, Spring)

NUTR 400 Nutritional Biochemistry (3:3:0:0)
Prerequisites: NUTR 150 and (BIO 180 or CHEM 150 or NUTR 200)
This course is an advanced study of nutrition science including, carbohydrate, protein and lipid digestion, absorption and metabolism as well as an investigation of the factors that influence the regulation of body weight and compositions. Emphasis will be placed on the relevance of these principles in overall wellness.
(Fall)

* Credit Description (Credit Hours : Lecture Hours per week : Lab Hours per week : Guided Instruction Hours per week)