

COURSE APPROVAL DOCUMENT
Southeast Missouri State University

Department: Human Environmental Studies

Course No. FN240

Title of Course: Introduction to Food Science

Date: Fall 2015

Please check: New
 Revision

I. Catalog Description (Credit Hours of Course):

- a. An introduction to the science and preparation of food in the context of diverse human and environmental conditions. Three (3) credit hours (2 cr. lecture; 1 cr. lab).

II. Co- or Prerequisite(s):

- a. None

III. Purposes or Objectives of the Course:

- 1) Demonstrate the basic techniques of food preparation.
- 2) Identify elementary principles of food science.
- 3) Identify nutrients provided by specific foods and the changes in nutrient content through food preparation.
- 4) Describe sustainable practices used to procure and prepare foods.
- 5) Discuss popular trends related to selection and preparation of foods.
- 6) Identify various types of food preservation.

IV. Student Learning Outcomes:

- 1) Demonstrate the basic techniques of food preparation.
- 2) Identify nutrients provided by specific foods and the changes in nutrient content through food preparation.
- 3) Identify elementary principles of food science.

V. Optional departmental/college requirements:

- A. None

VI. Course Content or Outline:

Lecture Content

- | | | |
|----|--------------------------------------|-------|
| A. | Food Laboratory Tools and Equipment | 3 hrs |
| | a. Application | |
| | b. Safety | |
| B. | Food Safety and Sanitation | 3 hrs |
| | a. HACCP | |
| | b. Food waste management and control | |
| C. | Recipe Utilization | 2 hrs |
| | a. Measurements and conversions | |
| D. | Principles of Food Preparation | 8 hrs |
| | a. Selection | |
| | b. Functional properties | |
| | c. Preparation methods | |

E.	Composition of Foods	8 hrs
	a. Nutrients and phytochemicals	
	b. Chemistry and structure	
F.	Food Preservation Techniques	2 hrs
	a. Heating, Cooling	
	b. Water Activity	
	c. Packaging	
G.	Popular Food Trends	2 hrs
H.	Sustainable Procurement and Preparation	2 hrs
	Total Lecture Hours	30 hrs

Lab content

I.	Lab Orientation	4 hrs
J.	Basic Food Preparation	2 hrs
K.	Recipes: Standardization, Measuring, Weighing	2 hrs
L.	Marinating, Breading, Dredging, Batters	2 hrs
M.	Meats, Fish, Poultry, Meat Alternatives	2 hrs
N.	Eggs, Milk and Dairy	2 hrs
O.	Vegetables and Fruits	2 hrs
P.	Sauces, Soups, Stocks, and Salads	2 hrs
Q.	Grains, Flours, and Cereals	2 hrs
R.	Baking and Pastries	4 hrs
S.	Food Preservation	2 hrs
T.	Food Innovations and Trends	2 hrs
U.	Sustainable Procurement and Preparation	2 hrs
	Total Laboratory Hours	30 hrs
	Total Course Hours	60 hrs

Please Attach copy of class syllabus and schedule as an example

Signature: _____
Chair

Date: _____

Signature: _____
Dean

Date: _____

Southeast Missouri State University
Course Syllabus
FN240 Introduction to Food Science
Spring 2016

GENERAL COURSE INFORMATION

Course Number: FN240

Course Title: Introduction to Food Science

Course Description: An introduction to the science and preparation of food in the context of diverse human and environmental conditions.

Prerequisites: None

Credit Hours: Three (3) credit hours (2 cr. lecture; 1 cr. lab).

Semester: Spring 2015-2016

Class Meeting Times and Locations: This is a blended course with online content, weekly face to face lectures, and weekly face to face laboratory activities.

Face to face lecture meeting time and location: Monday 9:00 – 9:50 am, Dearmont Food Lab

Laboratory meeting time and location: Monday 10:00 – 11:50 am, Dearmont Food Lab

Online content can be accessed through the class Moodle page and will account for one hour of instruction per week.

Contact hours with the instructor: Three hours per week (1 hour lecture, 2 hours lab).

INSTRUCTOR INFORMATION

Instructor: Joel Ramdial, MA RD LD

Contact Info:

Email: jramdial@semo.edu

Office Phone: (573) 651-2109

Office Location: Scully building, room 116

Office Hours:

Monday: 12:30 – 2:30 pm

Tuesday: 9:30 – 10:30 am, 12:30 – 2:30 pm

Wednesday: 9:00 – 11:00 am

Thursday: 9:30 – 10:30 am, 12:30 – 2:30 pm

WHOM TO CONTACT WITH CONCERNS

Questions, comments or requests regarding this course or program should be taken to your instructor. Unanswered questions or unresolved issues involving this class may be taken to Dr. Shelba Branscum.

STUDENT LEARNING OUTCOMES

Student Learning Outcomes:

1. Demonstrate the basic techniques of food preparation.
2. Identify nutrients provided by specific foods and the changes in nutrient content through food preparation.
3. Identify elementary principles of food science.

Course Objectives:

1. Demonstrate the basic techniques of food preparation.
2. Identify elementary principles of food science.
3. Identify nutrients provided by specific foods and the changes in nutrient content through food preparation.
4. Describe sustainable practices used to procure and prepare foods.
5. Discuss popular trends related to selection and preparation of foods.
6. Identify various types of food preservation.

ACCESSIBILITY STATEMENT

SOUTHEAST MISSOURI STATE UNIVERSITY'S ACCESSIBILITY PLAN

Southeast Missouri State University will take such means as are necessary to insure that no qualified disabled person is denied the benefits of, excluded from participation in, or otherwise subject to discrimination because Southeast Missouri State University's facilities are physically inaccessible to, or unusable by disabled persons. The accessibility standard required by Federal law for 'existing facilities' is that the recipient's program or activities when viewed in its entirety, must be readily accessible to disabled persons.

Southeast Missouri State University may meet this standard through such means as reassignment of classes, or other services to accessible locations, redesign equipment, assignment of aides, alterations of existing facilities, and construction of new accessible facilities. Southeast Missouri State University is not required to make structural changes in existing facilities where other methods are sufficient to comply with the accessibility standard described above.

Because scheduling classes, coordinating accommodations, and arranging housing in accessible facilities may require reasonable advance planning, students with disabilities accepted for admission should identify themselves and their disability within five days of the start of the semester of enrollment and indicate the nature of accommodation needed for their disability.

For more information, see the [Disability Support Services](#) page or contact Disability Support Services, room 302, University Center, One University Plaza ms1300, Cape Girardeau, MO 63701; (573)651-2273.

ACADEMIC HONESTY

Policy. Academic honesty is one of the most important qualities influencing the character and vitality of an educational institution. Academic misconduct or dishonesty is inconsistent with membership in an academic community and cannot be accepted. Violations of academic honesty represent a serious breach of discipline and may be considered grounds for disciplinary action, including dismissal from the University.

Academic dishonesty is defined to include those acts which would deceive, cheat, or defraud so as to promote or enhance one's scholastic record. Knowingly or actively assisting any person in the commission of an above-mentioned act is also academic dishonesty.

Students are responsible for upholding the principles of academic honesty in accordance with the "University Statement of Student Rights" found in the Undergraduate or Graduate Bulletin. The University requires that all assignments submitted to faculty members by students be the work of the individual student submitting the work. An exception would be group projects assigned by the instructor. In this situation, the work must be that of the group. Academic dishonesty includes: **Plagiarism**. In speaking or writing, plagiarism is the act of passing someone else's work off as one's own. In addition, plagiarism is defined as using the essential style and manner of expression of a source as if it were one's own. If there is any doubt, the student should consult his/her instructor or any manual of term paper or report writing. Violations of academic honesty include:

1. Presenting the exact words of a source without quotation marks;
2. Using another student's computer source code or algorithm or copying a laboratory report;
or
3. Presenting information, judgments, ideas, or facts summarized from a source without giving credit.

Cheating. Cheating includes using or relying on the work of someone else in an inappropriate manner. It includes, but is not limited to, those activities where a student:

1. Obtains or attempts to obtain unauthorized knowledge of an examination's contents prior to the time of that examination;
2. Copies another student's work or intentionally allows others to copy assignments, examinations, source codes or designs;
3. Works in a group when she/he has been told to work individually;
4. Uses unauthorized reference material during an examination; or
5. Have someone else take an examination or takes the examination for another.

General Responsibilities for Academic Honesty. It is the University's responsibility to inform both students and faculty of their rights and responsibilities regarding such important matters as cheating and plagiarism. Most of what is considered unethical or dishonest behavior can be avoided if faculty and students clearly understand what constitutes such practices and their consequences. The University community should also be aware of the procedures to be followed should a breach of academic honesty occur.

The faculty member is responsible for clarification to his/her class of those standards of honesty for class assignments or functions where such standards may be unclear or when such standards vary from the accepted norm. Further, some faculty may choose to utilize preventive measures (multiple exams, alternate seating, etc.) to help insure the maintenance of academic honesty. However, the use of such measures is the prerogative of the individual faculty member and is not a responsibility or requirement of faculty in general.

The fundamental responsibility for the maintenance of honesty standards rests upon the student. It is the student's responsibility to be familiar with the University policy on academic honesty and to uphold standards of academic honesty at all times in all situations.

Protocol for Adjudicating Alleged Violations of Academic Honesty. Faculty members who discover evidence of academic dishonesty should contact the student within five business days of discovering the alleged dishonesty to arrange to meet and discuss the allegation. Prior to this

meeting the faculty member may consult with the Department Chairperson, the appropriate Dean, and the Office of Judicial Affairs. The following sections describe the procedures to be adhered to in each of the listed instances: the student acknowledges the violation, the student denies the violation, and the appeals process. If the faculty member is the Department Chairperson, a departmental designee will assume the Department Chairperson's role in this protocol and references to the Department Chairperson should be read as departmental designee. The procedures below should be followed with online, ITV or face-to-face classes.

From Faculty Senate Bill 11-A-16 <http://www.semo.edu/facultysenate/handbook/5d.html>

CIVILITY AND HARASSMENT

A major determinant of a successful educational experience is a shared sense of respect among and between the students and their instructor. Some of the texts and issues we will discuss may cause disagreements among members of the class. Multiple viewpoints are an essential component of any college course, and disagreeing with someone is fine. However, rude, disrespectful, aggressive, offensive, harassing, or demeaning behavior —either face-to-face or in an online discussion—toward anyone in the class will not be tolerated; students are expected to abide by the Code of Student Conduct (<http://www6.semo.edu/stuconduct/code.html>). Should a student feel someone has acted inappropriately toward them in class, please speak with the instructor at once so the situation can be addressed. The instructor for the course reserves the right to ask a student to leave the classroom or the online discussion for any inappropriate behavior, and if the situation warrants, may call campus security to remove the offending student from class.

GRADING SCALE AND POLICIES

Grading Scale:

100-90%	=	A
89-80%	=	B
79-70%	=	C
69-60%	=	D
Below 60%	=	F

Point Distribution:

Exams: 3 at 50 points each	150 points
Final Exam	100 points
Quizzes and class activities	120 points
Laboratory activity: 14 at 20 points each	280 points
Total	650 points

*Laboratory activity may include preparatory lessons, in-class activities, and post-lab reflections

Late work policy:

Missed quizzes and exams cannot be made up without a valid excuse.

In-class activities and labs cannot be made up without a valid excuse.

Late pre-lab and post-lab activities will be deducted 5 points.

Grading policy:

Written assignments will be graded and feedback will be provided within one week of the deadline for submission.

Most online assessments will provide immediate feedback (multiple choice, matching, true/false, drag and drop, select missing word formatted questions)

COURSE-SPECIFIC REQUIRED MATERIALS

Textbook:

Brown, A. (2015). *Understanding Food: Principles and Preparation* (5th ed.)
Belmont, CA: Cengage Learning.

Headwear:

A clean beanie (culinary), hair net, or chef's hat must be worn at all times during food lab activities. The Southeast Bookstore carries beanies in stock (\$5.50).

Chef's coat:

A clean chef's coat must be worn at all times during food lab activities. The Southeast Bookstore carries chef's coats in stock (\$16.00).

FINAL EXAM SCHEDULE

The final exam will be an online exam, which will be accessible through the class moodle page. The final exam will open on Monday, May 9th at 8:00 am CST and close on Wednesday, May 11th at 11:00 pm CST.

COURSE CONTENT

FN240 Class Calendar	
Week 1: 1/19 – 1/23	
Face to face lecture <ul style="list-style-type: none">• Course introduction and overview	
Online instructional materials and activities <ul style="list-style-type: none">• Food selection: Online lecture and video	
Laboratory activities <ul style="list-style-type: none">• Lab orientation: Introduction, policies, and procedures	
Additional assignments due this week <ul style="list-style-type: none">• None	
Week 2: 1/24 – 1/30	
Face to face lecture <ul style="list-style-type: none">• Introduction to nutrition and food chemistry	
Online instructional materials and activities <ul style="list-style-type: none">• Equipment and safety: Online lecture and video• Pre-lab lesson 1: Equipment and safety	
Laboratory activities <ul style="list-style-type: none">• Lab orientation: Equipment and safety, basic food preparation techniques	
Additional assignments due this week <ul style="list-style-type: none">• Post-lab reflection 1	
Week 3: 1/31 – 2/6	
Face to face lecture <ul style="list-style-type: none">• Guest speaker – Food safety and sanitation	
Online instructional materials and activities <ul style="list-style-type: none">• Food safety and HACCP: Online lecture and video demonstration• Equipment and safety: Online lecture and video demonstration• Pre-lab lesson 2: Food safety	
Laboratory activities <ul style="list-style-type: none">• Lab orientation:<ul style="list-style-type: none">○ Equipment and safety○ Food safety○ Basic food preparation techniques	
Additional assignments due this week <ul style="list-style-type: none">• Post-lab reflection 2	
Week 4: 2/7 – 2/13	
Face to face lecture <ul style="list-style-type: none">• Following recipes and basic food preparation techniques• Nutrient analysis	
Online instructional materials and activities <ul style="list-style-type: none">• Basic food preparation techniques: Online lecture and video• Measurements and conversions: Online lecture and video• Pre-lab lesson 3: Recipes, measurements, and conversions	
Laboratory activities <ul style="list-style-type: none">• Measurements, conversions, and basic food preparation techniques	
Additional assignments due this week <ul style="list-style-type: none">• Post-lab reflection 3• Exam 1 (online) DUE 2/13 before 11:00 pm CST	
Week 5: 2/14 – 2/20	

Face to face lecture

- Principles of food preparation
 - Meat, meat alternatives, marinades, spices and seasonings

Online instructional materials and activities

- Composition of foods: Online lecture and video
 - Meat, meat alternatives, marinades, spices, and seasonings
- Pre-lab lesson 4: Meat, meat alternatives, and marinades

Laboratory activities

- Application of the principles of food preparation
 - Meat, meat alternatives, and marinades

Additional assignments due this week

- Post-lab reflection 4

Week 6: 2/21 – 2/27**Face to face lecture**

- Principles of food preparation
 - Poultry, fish, and shellfish
 - Dredging, breading, and batters

Online instructional materials and activities

- Composition of foods: Online lecture and video
 - Poultry, fish, and shellfish
- Pre-lab lesson 5: Poultry, fish, and shellfish

Laboratory activities

- Application of the principles of food preparation
 - Poultry, fish, and shellfish
 - Dredging, breading, and batters

Additional assignments due this week

- Post-lab reflection 5

Week 7: 2/28 – 3/5**Face to face lecture**

- Principles of food preparation
 - Eggs, milk, and dairy

Online instructional materials and activities

- Composition of foods: Online lecture and video
 - Eggs, milk, and dairy
- Pre-lab lesson 6: Eggs, milk, and dairy

Laboratory activities

- Application of the principles of food preparation
 - Eggs, milk, and dairy

Additional assignments due this week

- Post-lab reflection 6

Week 8: 3/6 – 3/12**Face to face lecture**

- Principles of food preparation
 - Vegetables and fruits

Online instructional materials and activities

- Composition of foods: Online lecture and video
 - Vegetables and fruits
 - Pre-lab lesson 7: Vegetables and fruits

Laboratory activities

- Application of the principles of food preparation
 - Vegetables and fruits

Additional assignments due this week

- Post-lab reflection 7

<ul style="list-style-type: none"> • Midterm exam (Online) DUE 3/12 before 11:00 pm CST
Week 9: 3/13 – 3/19 Spring Break – No class or assignments this week
Week 10: 3/20 – 3/26
<p>Face to face lecture</p> <ul style="list-style-type: none"> • Principles of food preparation <ul style="list-style-type: none"> ○ Sauces, soups, and salads <p>Online instructional materials and activities</p> <ul style="list-style-type: none"> • Composition of foods: Online lecture and video <ul style="list-style-type: none"> ○ Sauces, soups, and salads • Pre-lab lesson 8: Sauces, soups, and salads <p>Laboratory activities</p> <ul style="list-style-type: none"> • Application of the principles of food preparation <ul style="list-style-type: none"> ○ Sauces, soups, and salads <p>Additional assignments due this week</p> <ul style="list-style-type: none"> • Post-lab reflection 8
Week 11: 3/27 – 4/2
<p>Face to face lecture</p> <ul style="list-style-type: none"> • Principles of food preparation <ul style="list-style-type: none"> ○ Cereal grains and pastas, flours, and starches <p>Online instructional materials and activities</p> <ul style="list-style-type: none"> • Composition of foods: Online lecture and video <ul style="list-style-type: none"> ○ Cereal grains and pastas, flours, and starches • Pre-lab lesson 9: Grains and starches <p>Laboratory activities</p> <ul style="list-style-type: none"> • Application of the principles of food preparation <ul style="list-style-type: none"> ○ Grains and starches <p>Additional assignments due this week</p> <ul style="list-style-type: none"> • Post-lab reflection 9
Week 12: 4/3 – 4/9
<p>Face to face lecture</p> <ul style="list-style-type: none"> • Principles of food preparation <ul style="list-style-type: none"> ○ Breads <p>Online instructional materials and activities</p> <ul style="list-style-type: none"> • Principles of food preparation <ul style="list-style-type: none"> ○ Use of alternative sweeteners ○ Fat replacers and lower-fat preparation techniques • Composition of foods: Online lecture and video <ul style="list-style-type: none"> ○ Breads, sweeteners, fats and oils • Pre-lab lesson 10: Breads <p>Laboratory activities</p> <ul style="list-style-type: none"> • Application of the principles of food preparation <ul style="list-style-type: none"> ○ Breads <p>Additional assignments due this week</p> <ul style="list-style-type: none"> • Post-lab reflection 10
Week 13: 4/10 – 4/16

Face to face lecture

- Principles of food preparation
 - Desserts and pastries

Online instructional materials and activities

- Composition of foods: Online lecture and video
 - Desserts and pastries
- Pre-lab lesson 11: Desserts and pastries

Laboratory activities

- Application of the principles of food preparation
 - Desserts and pastries

Additional assignments due this week

- Post-lab reflection 11
- Exam 3 (online) DUE 4/16 before 11:00 pm CST

Week 14: 4/17 – 4/23**Face to face lecture**

- Food preservation methods

Online instructional materials and activities

- Cold and heat preservation methods: Online lecture and video
- Pre-lab lesson 12: Canning, pickling, curing

Laboratory activities

- Application of the principles of food preparation
 - Canning, pickling, curing

Additional assignments due this week

- Post-lab reflection 12

Week 15: 4/24 – 4/30**Face to face lecture**

- Principles of food preparation
 - Food innovations and popular food trends

Online instructional materials and activities

- Composition of foods: Online lecture and video
 - Popular food trends
- Pre-lab lesson 13: Food innovations

Laboratory activities

- Application of the principles of food preparation
 - Food innovations

Additional assignments due this week

- Post-lab reflection 13

Week 16: 5/1 – 5/7**Face to face lecture**

- Sustainability in food procurement and preparation

Online instructional materials and activities

- Pre-lab lesson 14: Sustainable practices

Laboratory activities

- Field trip

Additional assignments due this week

- Post-lab reflection 14

Week 17: 5/8 – 5/14

Face to face lecture

- None: Finals week

Online instructional materials and activities

- None: Final week

Laboratory activities

- None: Finals week

Additional assignments due this week

- Final exam (Online) DUE 5/11 before 11:00 pm CST