

<b>Fiscal Unit/Academic Org</b>	Food Science & Technology - D1156
<b>Administering College/Academic Group</b>	Food, Agric & Environ Science
<b>Co-administering College/Academic Group</b>	
<b>Semester Conversion Designation</b>	Converted with minimal changes to program goals and/or curricular requirements (e.g., sub-plan/specialization name changes, changes in electives and/or prerequisites, minimal changes in overall structure of program, minimal or no changes in program goals or content)
<b>Current Program/Plan Name</b>	Food Safety Minor
<b>Proposed Program/Plan Name</b>	Food Safety Minor
<b>Program/Plan Code Abbreviation</b>	FDSAFET-MN
<b>Current Degree Title</b>	

## Credit Hour Explanation

Program credit hour requirements		A) Number of credit hours in current program (Quarter credit hours)	B) Calculated result for 2/3rds of current (Semester credit hours)	C) Number of credit hours required for proposed program (Semester credit hours)	D) Change in credit hours
Total minimum credit hours required for completion of program		20	13.3	15	1.7
Required credit hours offered by the unit	Minimum	11	7.3	8	0.7
	Maximum	15	10.0	11	1.0
Required credit hours offered outside of the unit	Minimum	5	3.3	4	0.7
	Maximum	5	3.3	4	0.7
Required prerequisite credit hours not included above	Minimum	0	0.0	0	0.0
	Maximum	10	6.7	9	2.3

## Program Learning Goals

Note: these are required for all undergraduate degree programs and majors now, and will be required for all graduate and professional degree programs in 2012. Nonetheless, all programs are encouraged to complete these now.

<b>Program Learning Goals</b>	<ul style="list-style-type: none"> <li>• Will understand the microbiology of pathogenic, spoilage and beneficial microorganisms in food systems</li> <li>• Will be able to apply principles of food preservation and processing including cleaning, sanitation and water management</li> </ul>
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## Assessment

Assessment plan includes student learning goals, how those goals are evaluated, and how the information collected is used to improve student learning. An assessment plan is required for undergraduate majors and degrees. Graduate and professional degree programs are encouraged to complete this now, but will not be required to do so until 2012.

Is this a degree program (undergraduate, graduate, or professional) or major proposal? No

## Program Specializations/Sub-Plans

If you do not specify a program specialization/sub-plan it will be assumed you are submitting this program for all program specializations/sub-plans.

**Pre-Major**

Does this Program have a Pre-Major? No

**Attachments**

- Letter food safety.pdf

*(Letter from Program-offering Unit. Owner: Mangino,Michael E)*

**Comments**

**Workflow Information**

Status	User(s)	Date/Time	Step
Submitted	Mangino,Michael E	09/30/2010 10:54 AM	Submitted for Approval
Revision Requested	Barringer,Sheryl Ann	09/30/2010 11:58 AM	Unit Approval
Submitted	Barringer,Sheryl Ann	09/30/2010 04:37 PM	Submitted for Approval
Approved	Barringer,Sheryl Ann	09/30/2010 04:37 PM	Unit Approval
Revision Requested	Stokoe,Laurie Anne	10/07/2010 01:03 PM	College Approval
Submitted	Mangino,Michael E	11/29/2010 07:40 AM	Submitted for Approval
Approved	Barringer,Sheryl Ann	11/29/2010 08:10 AM	Unit Approval
Revision Requested	Stokoe,Laurie Anne	11/29/2010 03:24 PM	College Approval
Submitted	Mangino,Michael E	11/30/2010 09:40 AM	Submitted for Approval
Revision Requested	Barringer,Sheryl Ann	11/30/2010 09:41 AM	Unit Approval
Submitted	Mangino,Michael E	11/30/2010 10:10 AM	Submitted for Approval
Approved	Barringer,Sheryl Ann	11/30/2010 12:46 PM	Unit Approval
Approved	Stokoe,Laurie Anne	01/14/2011 04:23 PM	College Approval
Pending Approval	Hanlin,Deborah Kay Vankeerbergen,Bernadette Chantal Meyers,Catherine Anne Jenkins,Mary Ellen Bigler Nolen,Dawn	01/14/2011 04:23 PM	ASCCAO Approval

## **Letter from the Program-offering Unit**

The Department of Food Science & Technology is submitting the following

BS in Food Science	Converted
BS in Ag – Food Business	Converted
BS in Culinary Science	New
Minor in Food Processing	Converted
Minor in Food Safety	Converted
MS in Food Science	Converted
PhD in Food Science	Converted

The faculty held numerous meetings as a whole and in subgroups during this process. A faculty member attended the UCAT session on semester conversion and chaired a conversion committee.

The committee started by examining the results of two recent reviews by two external groups, The National Institute of Food and Agriculture (NIFA) formerly Cooperative State Research, Education, and Extension Service (CSREES) and The Institute of Food Technologists. The later review required that we map learning outcomes with courses.

Using the material generated for and by these reviews the committee considered what outcomes were still appropriate for our programs and how to best insure that students achieve these outcomes. A set of learning outcomes were generated and discussed with faculty. The committee also examined the curricula of 15 other food science programs to examine their learning outcomes and the course work that was utilized to achieve them. A grid was developed to show courses that were required by all or nearly all programs and others that were unique.

This information was shared with the entire faculty and a list of ten courses were devised would serve as the basis for our programs. Committees of faculty who taught quarter equivalent courses, related courses or courses that were being combined were formed and charged with developing syllabi and learning outcomes for each of the ten courses. They were also asked to consider at what level the learning outcomes for the degree were being met by these courses.

All course committees presented their material to the semester committee in groups of related courses. This was so that all were aware of what others were accomplishing, so that expectations of related courses were known by those concerned and to allow discussion and suggestions for modification.

Modified syllabi were posted to a web site to allow all faculty easy access and the chance to provide feedback. After the original ten courses were redesigned the remaining support courses were also examined and converted to a semester format. A similar process was followed for our graduate degree programs

A new program is also proposed as a result of work of collaboration between our department and the Central Ohio Technical College (COTC). It proposes a two plus two program combining an Associate Degree in Culinary Science with two years of work in the Department of Food Science and Technology to yield a BS in Culinary Science. Graduates of two-year culinary programs not from COTC but with a two year culinary degree from a program approved the American Culinary Association would also be eligible to participate. They would probably have to complete an additional three or four science courses to meet all degree requirements.

The faculty of the department is excited about the revised programs and is confident that the better packaging of learning objectives and alignment of prerequisite courses that has resulted will make our degree offerings stronger.

### **Program Rationale Statement**

This minor will make use of the revised courses on a semester basis. While we feel the content of the courses will be improved there were no changes made to the minor. It is a simple conversion of a minor on quarters to one on semesters.

### **List of Semester Courses**

#### **Required: 13 hours**

Fd Sc&Te 5310 Food Quality Assurance	3
Fd Sc&Te 5536 Food Microbiology Lecture	3
Fd Sc&Te 5546 Food Microbiology Laboratory	3
One from:	4
Microbiology 4090 Basic and Practical Microbiology	
Microbiology 5000 General Microbiology I	

#### **Electives: Select a minimum of 2 hours from the following classes**

(required and elective courses in the minor must total 15 - 16 credit hours)

Fd Sc&Te 2400 Introduction to Food Processing	3
Fd Sc&Te 5420 Dairy Processing	3
Fd Sc&Te 5430 Cheese & Fermented Foods	3
Fd Sc&Te 5410 Fruit & Vegetable Processing	3
Fd Sc&Te 5400 Principles of Food Processing	3
Fd Sc&Te 5330 Food Plant Operations	2
Anim Sci 4500 Meat Processing	3

### **Semester Advising Sheet(s)**

#### **Food Safety Minor (FdSafety, 024)**

**College of Food, Agricultural,  
and Environmental Sciences  
The Ohio State University**

**Mike Mangino  
313 Parker Bldg.  
2015 Fyffe Ct.  
292-7769  
[mangino.2@osu.edu](mailto:mangino.2@osu.edu)**

A minor in food safety is for students interested in the principles underlying keeping food safe and will be especially helpful for those students interested in working in this aspect of the food industry. Topics covered

focus upon microbiology and safety of food as it is manufactured and distributed.

The minor in Food Safety consists of 15 – 16 hours including 13 hours of required courses. **If Microbiology 509 or 520 is taken for major or GEC, then 4 additional elective credits must be taken.**

**Required: 13 hours**

Fd Sc&Te 5310 Food Quality Assurance 3

Fd Sc&Te 5536 Food Microbiology Lecture 3

Fd Sc&Te 5546 Food Microbiology Laboratory 3

One from: 4

Microbiology 4090 Basic and Practical Microbiology

Microbiology 5000 General Microbiology I

**Electives: Select a minimum of 2 hours from the following classes**

(required and elective courses in the minor must total 15 - 16 credit hours)

Fd Sc&Te 2400 Introduction to Food Processing 3

Fd Sc&Te 5420 Dairy Processing 3

Fd Sc&Te 5430 Cheese & Fermented Foods 3

Fd Sc&Te 5410 Fruit & Vegetable Processing 3

Fd Sc&Te 5400 Principles of Food Processing 3

Fd Sc&Te 5330 Food Plant Operations 2

Anim Sci 4500 Meat Processing 3

## **Quarter Advising Sheet(s)** *(required for re-envisioned or converted programs only)*

### **Food Safety Minor (FdSafety, 024)**

**College of Food, Agricultural,  
and Environmental Sciences  
The Ohio State University**

**Jeff Culbertson, Coordinating Adviser**  
**233 Parker Bldg.**  
**2015 Fyffe Ct.**  
**688-4219**  
[culbertson.34@osu.edu](mailto:culbertson.34@osu.edu)

A minor in food safety is for students interested in the principles underlying keeping food safe and will be especially helpful for those students interested in working in this aspect of the food industry. Topics covered focus upon microbiology and safety of food as it is manufactured and distributed.

The minor in Food Safety consists of 20 hours including 13 hours of required courses. **If Microbiology 509 or 520 is taken for major or GEC, then 4 additional elective credits must be taken.**

**Required: 14 hours**

Fd Sc&Te 410 HAACP 3

Fd Sc&Te 636.01 Food Microbiology Lecture 3

Fd Sc&Te 5636.02 Food Microbiology Laboratory 3

One from: 5

Microbiology 4509 Basic and Practical Microbiology

Microbiology 520 General Microbiology I

**Electives: Select a minimum of 6 hours from the following classes**

(required and elective courses in the minor must total 15 - 16 credit hours)

Fd Sc&Te 401 Introduction to Food Processing 3

Fd Sc&Te 610 Dairy Processing 4

Fd Sc&Te 611 Cheese & Fermented Foods 4

Fd Sc&Te 613 Fruit & Vegetable Processing 4

Fd Sc&Te 630 Principles of Food Processing 3

Fd Sc&Te 648 Food Plant Operations 3

Anim Sci 555.02 Meat Processing 4

**Restrictions and General Information**

- 1. This minor is not available to students majoring in Food Science.**
- 2. A minimum overall GPA for courses comprising the minor shall be 2.0.**

3. A minor should be declared at the time a student accumulates 60 hours.
4. A maximum of one course may overlap between the minor and the GEC (foundations, natural sciences, arts and humanities and social sciences).
5. Courses taken on a pass/non pass basis may not be applied to the minor.

### **Transition Policy**

Transition will not be difficult and can in most cases be handled by a course for course substitutions.

I recommend this program for approval and I am willing to provide additional information or answer question as needed.

Thanks

A handwritten signature in black ink, appearing to read "Mike Mangino". The signature is written in a cursive, flowing style.

Mike Mangino Professor Emeritus & Interim Chair