



# MINNESOTA STATE UNIVERSITY MANKATO

## Academic Map Proposal

Proposal Number	13407
Create Date	4/7/16
Modified Date	4/29/16
Author	Penny Knoblich, <a href="mailto:penny.knoblich@mnsu.edu">penny.knoblich@mnsu.edu</a>
Are you the contact for this proposal?	Yes
Does this proposal require approval from multiple Colleges or Departments?	No
College	Science, Engineering and Technology, Dean: Brian Martensen
Department	Biological Sciences, Chair: Penny Knoblich
Proposal Type	Academic Map
Full Program Name	Food Science Technology BS
Award	BS
Emphasis	
Option	
Version Number	1
Version	Food Science Technology versio
Version Explanation	Individual begins the program in an odd numbered year
programType	Broad Major
Minor Required	No
Minor Specific	
Minor Specific	
Program Description	Recent outbreaks of food borne disease and concern for safe food products for consumers is driving the market for individuals with a degree in Food Science Technology. Graduates can expect to find employment within the food industry and testing laboratories or government laboratories.
Admission Requirement	32 earned semester hours with a cumulative GPA in Biology courses of 2.0.
Advising	Each student must meet with an advisor each semester. Following the meeting the student will be given an access code which allows the student to register for classes.
Program Notes	
Program Phone Number	( ) -
Program Website(URL)	

### Fall Year 1

Designator	Course Number	Course Name	Credits	Milestones
BIOL	105	General Biology I	4	
FCS	150	Food Culture and You	3	

ENG	101	Composition	4	
MATH	112	College Algebra	4	

## Fall Year 1 Notes

General Education Categories 1A, 2, 3, and 4, will be filled by the major's required courses.

**Spring Year 1**

Designator	Course Number	Course Name	Credits	Milestones
BIOL	106	General Biology II	4	
BIOL	220	Human Anatomy	4	
MATH	154	Elementary Statistics	3	
CHEM	201	General Chemistry I	5	

## Spring Year 1 Notes

**Fall Year 2**

Designator	Course Number	Course Name	Credits	Milestones
FCS	242	Nutrition of Health Professionals	3	
CHEM	202	General Chemistry II	5	
ENG	271W	Technical Communication	4	
		General Education Course	2	

## Fall Year 2 Notes

You may apply to the major at the end of this term if you have completed 32 semester credits and have a GPA of 2.0 or better.

**Spring Year 2**

Designator	Course Number	Course Name	Credits	Milestones
BIOL	270	General Microbiology	4	
BIOL	330	Human Physiology	4	
CHEM	305	Analytical Chemistry	4	
		General Education Course	3	

## Spring Year 2 Notes

**Fall Year 3**

Designator	Course Number	Course Name	Credits	Milestones
CHEM	322	Organic Chemistry I	4	
CHEM	323	Supplemental Organic Chemistry	1	
FCS	340	Food Science	4	
		Writing Intensive Course	3	
		General Education Course	3	

## Fall Year 3 Notes

Two writing intensive courses (in addition to ENG 101) are required for graduation.

**Spring Year 3**

Designator	Course Number	Course Name	Credits	Milestones
BIOL	478	Food Microbiology	4	
FCS	444	Experimental Food Science	3	
CHEM	360	Principles of Biochemistry	4	
		Purple or Gold Course	4	

#### Spring Year 3 Notes

Apply for graduation one year prior to your expected graduation date. 40 credits of upper division courses (including biology courses) are needed for graduation.

#### Fall Year 4

Designator	Course Number	Course Name	Credits	Milestones
BIOL	453	Biological Engineering Analysis I	4	
---	---	Choose one course	---	
BIOL	497	Internship I OR	2-4	
BIOL	499	Independent Study	2-4	
---	---	Choose one course:	---	
BIOL	467	Industrial Hygiene OR In Spring: BIOL 452 (Biological Instrumentation)	3	
		Upper Division General Elective Course	3	
		General Education Course	1-4	
		General Elective	0-2	

#### Fall Year 4 Notes

Be sure all General Education, Diversity, and Writing Intensive Course requirements have been met.

#### Spring Year 4

Designator	Course Number	Course Name	Credits	Milestones
		Purple Course	3	
		General Education Course	3	
		General Education Course	3	
		General Elective Course	3	
		If needed: General Elective Course	0-3	
---	---	If needed:	---	
BIOL	452	Biological Instrumentation	0-3	

#### Spring Year 4 Notes

Academic Map CheckList  
Graduation Requirement

Minimum of 15 credits per semester
General Education = 44 credits
Writing Intensive = 2 courses (6 credits minimum)
Diverse Cultures = 2 course (6 credits minimum) from two disciplines
Major = 86 Credits
Upper-Division Requirements = 40 credits minimum

## Total credits required for degree 120 Credits

<u>Date</u>	<u>Action</u>	<u>Role</u>	<u>User</u>	<u>Comments</u>
4/29/16			Knoblich, Penny	Created
4/29/16	Recommended	Chair of Biological Sciences	Knoblich, Penny	
4/29/16	Recommended	Dean of Science Engineering and Technology	Martensen, Brian	
5/22/16	Approved	Academic Affairs VP	Wells, Marilyn	

 **DARS Encoder** **AgileGrad**