



MINNESOTA STATE UNIVERSITY MANKATO

Academic Map Proposal

Proposal Number	13405
Create Date	4/7/16
Modified Date	4/29/16
Author	Penny Knoblich, penny.knoblich@mnsu.edu
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	Biology BS
Award	BS
Emphasis	Cytotechnology/Cytogenetics
Option	
Version Number	1
Version	Cytotechnology/Cytogenetics
Version Explanation	
programType	Broad Major
Minor Required	No
Minor Specific	
Minor Specific	
Program Description	Cytotechnology is an allied health professional and is involved in the microscopic study of cells for evidence of disease and cancer. Cytotechnologists are employed in hospital laboratories, universities, and private laboratories.
Admission Requirement	32 earned semester hours including BIOL 105, BIOL 106, BIOL 211, and CHEM 201 with a grade of "C" or better; completed General Education Goal Area 4 (Mathematics); completed General Education Goal Area 1, Part A (English Composition); and a minimum cumulative GPA of 2.2, 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
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BIOL	220	Human Anatomy	4	
MATH	112	College Algebra	4	
ENG	101	Composition	4	
BIOL	105	General Biology I	4	C or better is required

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	C or better is required
CHEM	201	General Chemistry I	5	C or better is required
		General Education Course	3	
		General Education Course	2	

Spring Year 1 Notes

Fall Year 2

Designator	Course Number	Course Name	Credits	Milestones
BIOL	330	Principles of Human Physiology	4	
CHEM	202	General Chemistry II	5	
ENG	271W	Technical Communication	4	
		General Education Course	2	

Fall Year 2 Notes

Spring Year 2

Designator	Course Number	Course Name	Credits	Milestones
BIOL	270	General Microbiology	4	
BIOL	211	Genetics	4	C or better is required
		General Education Course	3	
		General Education Writing Intensive Course	3	

Spring Year 2 Notes

May apply to the major at the end of this term if overall GPA is 2.2 or better, and Biology GPA is 2.0 or better.

Fall Year 3

Designator	Course Number	Course Name	Credits	Milestones
BIOL	320	Cell Biology	4	
CHEM	322	Organic Chemistry I	4	
CHEM	323	Supplemental Organic Chemistry	1	
		General Education Course	3	
		General Education Course	2	

Fall Year 3 Notes

Chemistry 323 is required if taking Chem 360 in the spring.

Spring Year 3

Designator	Course Number	Course Name	Credits	Milestones

---	---	Choose 1 course:	----	
BIOL	430	Hematology/Intro to	4	
BIOL	434	Immunology	3	
BIOL	435	Developmental Biology	4	
BIOL	479	Histology	4	
		Molecular Biology		
---	---	Choose 4 credits :	---	
CHEM	360	Principles of	4	
CHEM	305	Biochemistry OR	4	
CHEM	324	Analytical Chemistry OR	3	
CHEM	325	Organic Chemistry II	1	
		AND		
		Organic Chemistry II Lab		
		General Education	4	
		Course , Gold or Purple		
		General Education	3-4	
		Course, Purple		

Spring Year 3 Notes

Fall Year 4

Designator	Course Number	Course Name	Credits	Milestones
BIOL	493	Internship I	1-12	
BIOL	494	Internship II	1-12	

Fall Year 4 Notes

Total internship credits this term must equal 16.

Spring Year 4

Designator	Course Number	Course Name	Credits	Milestones
BIOL	495	Internship III	1-12	
BIOL	496	Internship IV	1-12	

Spring Year 4 Notes

Total Internship credits this term must equal 16

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 = 94 Credits
Total credits required for degree 120 Credits

Date	Action	Role	User	Comments
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