

PROGRAM PLAN SHEET:
BACHELOR OF SCIENCE Concentration in Biotechnology

University of Wisconsin-Stout 2008-2009

CONCENTRATION REQUIREMENTS			GENERAL AND OTHER REQUIREMENTS		
I. Biotechnology Courses			A. Communication Skills (8 cr.)		
APSC-101 Applied Science Professional I	1		ENGL-101 Freshman English Composition, OR ENGL-111 Freshman English Honors I	3	
APSC-311 Issues for Scientific Professionals, P: PHIL-235	3		ENGL-102 Freshman English Reading, P: ENGL-101 or ENGL-111 OR ENGL-112 Freshman English Honors II, P: ENGL-101 or ENGL-111.	3	
APSC-349 Co-op OR APSC-398 Field Experience	1-6		SPCOM-100 Fundamentals of Speech	2	
APSC-401 Applied Science Profession II	1				
ENGL-415 Technical Writing, P: ENGL-102, ENGL-112 or ENGL-113	3				
			B. Analytical Reasoning (7-8 cr.)		
BIO-135 Organismal Biology	4		MATH-153 Calculus I OR MATH-156 Calculus and Analytical Geometry I Course admission based on Math Placement Level 4.	4-5	
BIO-136 College Molecular Cell Biology I	5				
BIO-235 Molecular Cell Biology II, P: BIO-136	4		STAT-320 Statistical Methods, OR STAT-330 Probability and Statistics Engineering and the Sciences	3	
BIO-370 Biotechnology, P: CHEM-201	3				
BIO-400 Special Topics in Biotechnology	1-2				
BIO-470 Advanced Biotechnology, P: BIO-235 and BIO-370	5				
BIO-489 Advanced Biology Experience	1-4				
			C. Health and Physical Education (2 cr.)		
CHEM-136 College Chemistry II, P: CHEM 135, or MATH-120 and CHEM-125	5			2	
CHEM-201 Organic Chemistry I, P: CHEM-135, or CHEM-125	4				
CHEM-204 Organic Chemistry II, P: CHEM-201	3				
CHEM-206 Organic Chemistry II Lab	1		D. Humanities and the Arts (9 cr.)		
CHEM-311 Biochemistry, P: CHEM-201	4		PHIL-235 General Ethics	3	
CHEM-331 Quantitative Analysis, P: CHEM-136 or CHEM-201	3		From the approved list, choose 6 credits from two or more areas.	6	
CHEM-412 Advanced Biochemistry, P: CHEM-311	3				
			E. Social and Behavioral Sciences (9 cr.)		
PHYS-281 University Physics I OR PHYS-241 College Physics I	5		From the approved list, choose 9 credits from three or More areas.	9	
PHYS-282 University Physics II OR PHYS-242 College Physics II	5				
			F. Natural Sciences (with lab) (5 cr.)		
			CHEM-135 College Chemistry I, P: MATH-120	5	
II. Elective Courses			G. Technology (2 cr.)		
Any 200 level or higher Biotechnology-related Course as approved by advisor, possibly including MATH-154 Calculus II OR MATH-157 Calculus and Analytical Geometry II	14			2	
			Total General and Other Requirements		
				42-43	
			Elective credits as need to fulfill 120-credit graduation requirement.		
			TOTAL CREDITS FOR GRADUATION		
				120-125	

Ethnic and diversity requirements are to be met through appropriate selection of course work leading to the degree.

Foreign Language requirements are encouraged for all students in the program.

Field Studies and/or Cooperative Education experiences are recommended for all students in the program.

P: Prerequisite

Approved General Education course list can be found here: <http://www.uwstout.edu/provost/geescorslist.pdf>

Bachelor of Science in Applied Science: Biotechnology Concentration

Total Program Credits 121-129

Freshman Year

<i>1st Semester</i>			<i>2nd Semester</i>		
ENG-101/111	Freshman English Composition/Honors I	3	ENG-102/112	Freshman English Reading/Honors II	3
BIO -135	Organismal Biology	4	CHEM-135	College Chemistry I	5
APSC-101	Applied Science Profession I	1	SPCOM-100	Fundamentals of Speech	2
MATH-153/156	Calculus I	4 or 5		<i>Gen. Ed. Health Elective</i>	0 to 2
	<i>Humanities/Soc. Science Elec.</i>	3		<i>Humanities/Soc. Science Elec.</i>	3
		<i>Total</i>			<i>Total</i>
		15 or 16			13 to 15

Sophomore Year

<i>1st Semester</i>			<i>2nd Semester</i>		
BIO-136	College Molecular Cell Biology I	5	PHIL-235	General Ethics	3
CHEM-136	College Chemistry II	5	BIO-235	Molecular Cell Biology II	4
	<i>Gen. Ed. Health Elective</i>	0 to 2	CHEM-201	Organic Chemistry I	4
	<i>Humanities/Soc. Science Elec.</i>	3	PHYS-281 or 241	University or College Physics I	5
		<i>Total</i>			<i>Total</i>
		13 to 15			16

Junior Year

<i>1st Semester</i>			<i>2nd Semester</i>		
PHYS-282 or 242	University or College Physics II	5	BIO-370	Biotechnology	3
CHEM-331	Quantitative Analysis	3	CHEM-311	Biochemistry	4
APSC-311	Issues for Science Professionals	3	BIO-400	Special Topics in Biotechnology	1 to 2
CHEM-204	Organic Chemistry II Lecture	3	STAT-320 or 330	Statistical Methods or Probability and Statistics	3
CHEM-206	Organic Chemistry II Laboratory	1		<i>Concentration Elective</i>	3
		<i>Total</i>			<i>Gen. Ed. Technology elective if not already taken</i>
		15			2
					<i>Total</i>
					16 to 17

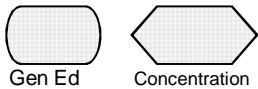
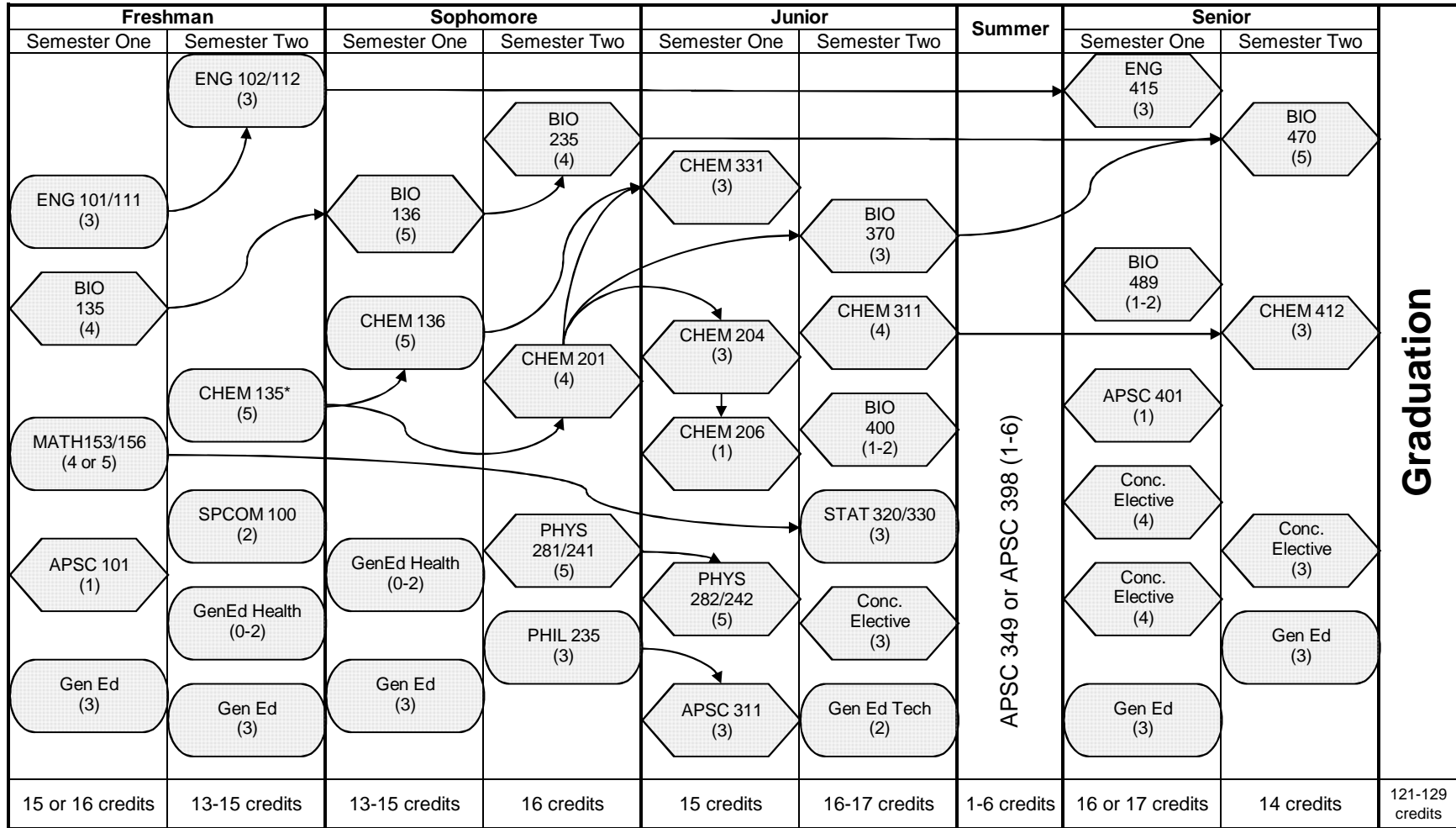
Summer

APSC 349 or APSC 398 1 to 6

Senior Year

<i>1st Semester</i>			<i>2nd Semester</i>		
APSC-401	Applied Science Profession II	1	BIO-470	Advanced Biotechnology	5
ENG-415	Technical Writing	3	CHEM-412	Advanced Biochemistry	3
BIO-489	Advanced Biology Experience	1 to 2		<i>Concentration Elective</i>	3
	<i>Concentration Elective</i>	4		<i>Humanities/Soc. Science Elec.</i>	3
	<i>Concentration Elective</i>	4			<i>Total</i>
	<i>Humanities/Soc. Science Elec.</i>	3			14
		<i>Total</i>			
		16 to 17			

Applied Science - Biotechnology Concentration Flow Chart



* CHEM 135 has a prerequisite of MATH 120 or above
 ** Professional Schools and Graduate Schools may require CALC II