Required and elective courses from departments outside of Biology

Dept	#	Course Title	Cr	Semester offered			Prerequisites	Aquatic Biology	Ecology-Emphasis	Wildlife-Emphasis	General Biology	Biomed Science	Cell Biology	Biotech	BES	Biology Teaching	Medical technology	Nuclear Medicine
Chem	210	General Chemistry 1	4	F	S		Placement	R	R	R	R	R	R	R	R	R	R	R
Chem	211	General Chemistry 2	4	F	S		C210	R	R	R		R	R	R		R	R	R
Chem	240	Intro to Organic Chemistry	4	F			C210	R	R	R	R						R	R
Chem	241	Introduction to Biochemistry	4		S		C240		240 or 350	240 of 350	R						R	R
Chem	350	Quantitative Analysis	3	F	S		C211											
Chem	310	Organic Chemistry 1	5	F			C211					R	R	R			E	
Chem	311	Organic Chemistry 2	4		S		C310					R	R	R			E	
Chem	452	Nuclear Chemistry & Radiochemistry	3				C211											R
Chem	480	Biochemistry 1	4	F			C311					R	R	R			E	
Chem	481	Biochemistry 2	4		S		C480						E	R				
EAS	205	Physical Science for teaching	4		S											R		
ETS	467	Soils	3		S					one of these three								
EASI	220	Physical Geology	4	F	S		C210	one of these 2	one of these two									
Phys	231	General Physics 1	4	F	S	Su	Math Placement					R	R	R		R		
Phys	232	General Physics 2	4	F	S	Su	P231					R	R	R		R		
Stat	319	Biometrics	4	F	S	Su	Placement	R	R	R	R	R	R	R				
Math	112	College Algebra	3	F	S	Su	Placement										R	R
Math	211	Survey of Calculus	3	F	S	Su	Placement	R						R				
Math	212	Survey of Calculus	3		S		M211							R				
MCS	302	Software Pack for Microcomputers 1	3	F	S	Su	MCS169 or POI	R	one of									
Geog	316	Introduction to GIS	3	F	S		G250 or POI		these tow	E								
Geog	402	GIS	3	F	S		G316			E								
Phys	106	Concepts of the Solar System	3	F	S	Su										R		
SCI	321/ 420	Teaching Science in Society	4	F	S		SCI 226									R		
SCI	430	Science Methods and Materials	4	F	S	Admission to teaching										R		
SCI	440	Seminar in Science Teaching	2	F	S		POI									R		
Elective requirements: See advisor for list of approved elective courses											12						3 2	3 2

Notes: Placement indicates that the department will offer an assessment to ensure you begin at the correct course.

In the prerequisites column the Letter designation is for the department: B=Biology, C=Chemistry, M=Math, S=Statistics, P=Physics, G=Geography, and POI=permission of instructor.

R=required course and E=elective course. Were a letter appears before the R this means a group of course have been identified and a specific number of credits must be take from the group.

Specifics:

In Ecology and Field Biology -- Ecology Emphasis --> 28 elective credits with Advisor approval

In Wildlife Biology Emphasis--> Four credits from group A and one course from group B and 7-8 additional elective credits.

In General Biology -- All three Group A courses or all three Group B courses are required, i.e., 3 courses for 12 credits. Group C you must select one of the four capstone courses

In Cell Biology -- In Group A you must select courses that equal at least six credits In Group B you must select courses that equal at least eighteen credits

In Biotechnology -- In the group designated A you must take eight credits

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This handout is designed to provide information on Bachelor's of Science programs offered by the department. Also included are programs we contribute to in the form of advising and academic course work.

The department over the past five years has evaluated our courses and programs to better meet the needs of students; this in an ongoing process, so changes will be made in the future, contact advisors for most current information. This guide is a "snapshot" of our current program requirements. It is very important that you make contact with an academic advisor the first semester you enroll in courses designed for any of the programs listed in this handout. The programs require careful planning to ensure you take courses in a timely fashion and have the correct prerequisites needed to graduate "on-time".

Faculty

J. Arriagada 308-3456	J. Cronn 308-3207
T. Danzl 308-5774	O. Gazal 255-3045
P. Hauslein 308-3005	M. Julius 308-6684
C. Kvaal 308-4138	S. Lewis 308-4282
A. Marcattillio 308-1500	J. Meerschaert 308-2288
L. Miller 308-3009	M. Minger 308-5507
M. Restani 308-4975	H. Schoenfuss 308-3130
G. Schrank 308-3047	T. Schuh 308-5433
P. Simpson 308-3012	M. Tubbiola 308-4137
S. Turner 308-3048	N. Voelz 308-54276
S. Williams 308-4255	J. Woodard 308-3490

Drs. Leenay (308-3948) and Winter (308-2052) are faculty in Chemistry and Dr. Garrity is in Physics (308-3274)

Programs and Advisers

BS	Aquatic Biology	Julius, Williams
BS	General Biology	Cronn, Julius, Turner
BS	Biology-Teaching	Minger, Simpson
BS	Biomedical Sciences	Gazal, Schoenfuss, Woodard, Tubbiola
BS	Biotechnology	Schuh, Kvaal
BS	Cell Biology	Cronn, Meerschaert, Schuh
BS	Ecology: Ecology Emphasis	Arriagada, Turner, Williams
BS	Ecology: Wildlife Emphasis	Turner, Restani
BES	Biology	Schuh
BS	Minor	Lewis
BS	Medical Technology	Meerschaert
BS	Nuclear Medicine Technology	Garrity (Physics)
BS	Nursing	Johnson

Pre-Professional Programs and Advisers

Pre-Agriculture	Gazal
Pre-Chiropractic	Schuh
Pre-Cytotechnology	Danzl
Pre-Dentistry	Schrank
Pre-Forestry	Arriagada
Pre-Horticulture	Arriagada
Pre-Medical Records Ad	Woodard
Pre-Medicine	Winter, Woodard, Leenay
Pre-Mortuary Science	Schuh
Pre-Nursing	Nursing office-308-1749
Pre-Occupational Therapy	Schuh
Pre-Optometry	Gazal
Pre-Physical Therapy	Schuh
Pre-Physician Assistant	Woodard
Pre-Podiatry	Tubbiola
Pre-Veterinary Medicine	Marcattilio, Gazal
Pre-Pharmacy	Leenay, Winter
Transfer Student Advising	Schuh

Contact advisors for information about Medical Technology, Nuclear Medicine Technology and Nursing programs.

Aquatic Biology (86 credits)

Program provides classroom, lab, and field experience in aquatic biology. A flexible elective based program that allows students with the assistance of an adviser to construct a focused Aquatic degree.

General Biology (71-72 credits)

Program will provide flexibility and freedom for students to investigate a number of areas of biology. A broad degree program providing a wide variety of backgrounds in the biological sciences and related areas.

Biology Teaching (66 credits + 36 credits in Education)

This program provides coursework and training to allow the student to qualify for licensure in Minnesota to teach all science in grades 5-8, integrated science in grades 5-10, and Biology in grades 9-12.

Biotechnology (87 credits)

Program is recommended for students interested in biotechnology. Students may seek employment or apply for admission to graduate programs after graduation. Student should contact the program adviser early on.

Biomedical Sciences (80 credits)

Program allows students to prepare for entrance into schools providing professional training in health care fields, graduate school, or a career in lab or health related areas.

Cell Biology (80 credits)

Program focuses on the cellular aspects of life. Students have an opportunity to develop skills in a variety of laboratory experience at the cellular, physiologic, and molecular levels.

Ecology and Field Biology (79 credits)

Programs provide a framework of courses and field experiences with emphasis in the areas of Ecology and Natural Resources or Wildlife Biology. Both emphasis provide students with necessary course work and field experience toward certification as professionals in their fields.