

BIOLOGY

Associate in Science (AS) Degree

Minimum Credits: 60.0

Contact Hours: 74.0

INTRODUCTION: This is a suggested program of study which may be altered to meet individual goals and transfer plans. Students should refer to the descriptions of Alpena Community College graduation requirements and degree distribution requirements and consult with an academic advisor concerning specific course selection. A minimum total of 60 credits is required for the Associate in Science degree.

GENERAL EDUCATION COURSES**(MEETS GRADUATION REQUIREMENTS AND MTA)**

COURSE	TITLE	CREDITS	CONTACT HOURS
ENG 111 or ENG 121	English Composition I or Advanced English Composition I	3.0	3.0
ENG 112 or ENG 122	English Composition II or Advanced English Composition II	3.0	3.0
MTH 122	Plane Trigonometry	3.0	3.0
PLS 221 or PLS 222 or HST 221 & HST 222	American Government Requirement ^A	3.0-6.0	3.0-6.0
	Humanities/Fine Arts/Social Science Requirement ^A	3.0-4.0	3.0-5.0
	Humanities/Fine Arts Requirement ^A	3.0-4.0	3.0-5.0
CEM 121	General & Inorganic Chemistry	4.0	7.0
BIO 210	Introduction to Botany	<u>4.0</u>	<u>5.0</u>
GENERAL EDUCATION CREDITS/CONTACT HOURS:		26.0-31.0	30.0-37.0

CORE PROGRAM COURSES**(MEET WITH ACADEMIC ADVISOR TO DETERMINE CORE PROGRAM COURSES FOR CONCENTRATION AND TRANSFER)**

COURSE	TITLE	CREDITS	CONTACT HOURS
BIO 211	General Zoology	4.0	5.0
BIO 227	Microbiology	4.0	6.0
CEM 122	Inorganic Chemistry & Qualitative Analysis	4.0	7.0
CEM 221	Organic Chemistry	5.0	7.0
CEM 222	Organic Chemistry	5.0	7.0
MTH 119	Introduction to Computers & Programming	3.0	3.0
MTH 123	College Algebra & Analytic Geometry	4.0	4.0
	Math/Science Elective	<u>4.0</u>	<u>4.0-7.0</u>
CORE PROGRAM CREDITS/CONTACT HOURS:		33.0	43.0-46.0

SUGGESTED ELECTIVES**(MEET WITH ACADEMIC ADVISOR TO DETERMINE ELECTIVES FOR CONCENTRATION AND TRANSFER)**

Electives will change depending on area of concentration and the specific 4-year transfer institution's requirements. Consult your ACC academic advisor.

ELECTIVE CREDITS/CONTACT HOURS:		
TOTAL MINIMUM PROGRAM CREDITS/CONTACT HOURS:	60.0	74.0

SUGGESTED SEQUENCING OF COURSES

YEAR 1 (FALL SEMESTER) <u>14.0</u> CREDITS		CREDITS	CONTACT HRS	YEAR 1 (SPRING SEMESTER) <u>15.0</u> CREDITS		CREDITS	CONTACT HRS
ENG 111 or ENG 121 English Comp	3.0	3.0	ENG 112 or ENG 122 English Comp	3.0	3.0		
CEM 121 General & Inorganic Chemistry	4.0	7.0	CEM 122 Inorg Chem & Qual Analysis	4.0	7.0		
BIO 210 Introduction to Botany	4.0	5.0	BIO 211 General Zoology	4.0	5.0		
MTH 122 Plane Trigonometry	<u>3.0</u>	<u>3.0</u>	MTH 123 Coll Alg & Analytic Geometry	<u>4.0</u>	<u>4.0</u>		
TOTAL	14.0	18.0	TOTAL	15.0	19.0		
YEAR 2 (FALL SEMESTER) <u>14.0-15.0</u> CREDITS		CREDITS	CONTACT HRS	YEAR 2 (SPRING SEMESTER) <u>14.0-18.0</u> CREDITS		CREDITS	CONTACT HRS
CEM 221 Organic Chemistry	4.0	6.0	CEM 222 Organic Chemistry	4.0	6.0		
MTH/SCI Elective	4.0	4.0-7.0	American Government Requirement	3.0-6.0	3.0-6.0		
MTH 119 Intro to Computers & Programming	3.0	3.0	BIO 227 Microbiology	4.0	6.0		
Humanities/Fine Arts Requirement	<u>3.0-4.0</u>	<u>3.0-5.0</u>	Humanities/Fine Arts/Soc Science Req	<u>3.0-4.0</u>	<u>3.0-5.0</u>		
TOTAL	14.0-15.0	16.0-21.0	TOTAL	14.0-18.0	18.0-23.0		

NOTES:

^A A total of 10 semester credits are required in combination from Group III Social Sciences and Group IV Humanities/Fine Arts with a minimum of three credits from each group.