



ADVISING WORKSHEET: Environmental Science

GENERAL NOTES

- A minimum of 123 credits are required for graduation.
- Credits earned for COM 100 and MAT 100 do not count toward the 123 credits required for graduation.
- Where appropriate, courses required for the major can be used to satisfy General Education requirements. However, the credits earned for these courses are applied to either Gen Ed requirements or the major, not both.
- Paths of Knowledge coursework may count towards major or minor requirements, but may not fulfill a second Mid-Level Liberal Arts Exploration requirement.
- Students are expected to follow the catalogue requirements for General Education, the major, and additional requirements.
- A minor or second major within the areas listed under Paths of Knowledge automatically fulfills that area of the Gen Ed requirements.

OPPORTUNITIES FOR MAJORS

Science Association

The object of this club is to afford an opportunity for the students of science to become better acquainted, to secure the intellectual stimulation that arises from professional association, to obtain experiences in preparing and presenting technical material before chemical audiences, to foster a professional spirit among the members, to instill a professional pride in the sciences, and to build an awareness of the responsibilities and challenges facing the modern scientist. Membership of this association is open to students pursuing their study in the area of science and related fields.

Pre-Health Club

The Pre-Health Professions Club includes, but is not limited to, Pre-Medical, Pre-Dental, Physician Assisting, Occupational Therapy, Nursing, and Pre-Veterinary students. It provides a setting in which students who are working toward future careers in the health professions can get together, share information, learn more about the health professions in general, and develop friendships with students who share some of their interests. Members of this organization are composed of students pursuing study in several areas of science and related health fields.

Environmental Club

The purpose of this student organization is to maintain the temperate deciduous forest, riparian, and freshwater ecosystems about Alvernia University and the community it serves. The organization does this by recruiting new members, educating the public, and holding events that draw attention to the environment. Such events are Eco-Fun Day, trail clean-up days, and hosting public speaker seminars.

Beta Kappa Chi

Beta Kappa Chi is the National Science Honor Society composed of chapters which seek to encourage and advance scientific education through original education, the dissemination of scientific knowledge and the stimulation of high scholarship in pure and applied science.

Epsilon Gamma Chapter of the Delta Epsilon Sigma Honor Society

This is a National Scholastic Honor Society for students, faculty, and alumni of colleges and universities with a Catholic tradition.

The Washington Center Experience

Alvernia students have an opportunity to earn college credit by spending a semester or summer in Washington, D.C. where they serve as interns in a congressional office, government agency, major corporation, newspaper or news network, or agencies devoted to legal affairs, international relations, or business and economics. They also may intern with one of several non-profit groups dealing with the environment, women's issues, the arts, education, science, or labor relations among others. Participants are customarily juniors or seniors who have achieved grade point averages of 2.5 or better and who have the endorsement of the appropriate academic area. In addition to their internship, students select one seminar dealing with the arts and humanities, communication, public policy, the legal system, business, and government. Interested students should see their academic advisor.

General Education (54-56 credits)

First Year Curriculum: Enduring Questions	Credits Required	Course	Term	Grade	Credits Earned
SRH 101: Search Sem-Enduring Questions or HNR 160: Honor Search-Enduring Questions	3	SRH 101 / HNR 160			
COM 101: Composition & Research <i>(Must earn a C or higher)</i>	3	COM 101			
THE 105: Foundations of Theology	3	THE 105			
PHI 105: Introduction to Philosophy	3	PHI 105			

Mid-Level Liberal Arts Exploration	Credits Required	Course	Term	Grade	Credits Earned
EXPLORING THE NATURAL WORLD (6-8 credits)					
Lab Science (Biology, Chemistry, Physics) <i>PHY</i>	3-4	<i>MET IN REL REQ</i>			
Math (Other than MAT 100)	3-4	<i>MET IN REL REQ</i>			
INDIVIDUALS & COMMUNITIES (6 credits)					
History or Political Science	3				
PSY 101, HIS, POS, SOC, SSC, or ECON	3				
CULTURE & LANGUAGE (9 credits)					
Communication <i>(Not COM 100 or 101)</i>	3				
World Language – 2 courses in sequence	3				
	3				
CREATIVE EXPRESSIONS (6 credits)					
Literature (ENG)	3				
Art or Music or Theatre	3				

Ethical Leaders and Followers	Credits Required	Course	Term	Grade	Credits Earned
Theology or Philosophy (200-400 level)	3				
Theology or Philosophy (200-400 level) <i>ethics/morality</i>	3	<i>PHI 290 recommended</i>			

Paths of Knowledge – Choose 1 Path		PoK may count towards minor or Related Requirements, but not Mid-Level Arts Exploration requirements.			
<p>_____ PATH 1:</p> <p>Interdisciplinary Study (IS) Three courses, at least two from Liberal Arts disciplines, not the major, at the 200-400 level from the interdisciplinary minors of Women & Gender Studies, Digital Media, Community & Environmental Sustainability, Community Engagement, Cultural Studies, Leadership Studies or Pre-Law.</p>	<p>_____ PATH 2:</p> <p>Multi-disciplinary Study (MS) Three courses, at least two from Liberal Arts disciplines, not the major, at the 200-400 level employing multiple disciplinary perspectives to explore the Enduring Questions in one of the following themes: Cultural & Global Studies, Imagination & Creativity, Peace & Conflict, Poverty & Wealth or Sustainability, Science & Technology.</p>	<p>_____ PATH 3:</p> <p>In-depth Disciplinary Study (DS) Three courses at the 200-400 level in one Liberal Arts discipline other than one's major, guided by common ideas and methods of inquiry. Students choose from Art, Biology, Chemistry, Communication, Computer Science, Economics, English, History, Mathematics, Music, Philosophy, Political Science, Psychology, Sociology, Theology, Theatre or World Languages. This path may be used to give students a firm foundation in a discipline supporting their chosen major, or to pursue an interest in one of the Liberal Arts disciplines.</p>			
Course (See Catalog for lists of approved courses for each area.)		Area/Discipline	Term	Grade	Credits Earned
<i>Met in Related Requirement w/ BIO 203</i>					
<i>Met in Related Requirement w/ BIO 205</i>					
<i>Met in Related Requirement w/ BIO 230</i>					

BS ENVIRONMENTAL SCIENCE (90-95 credits)

REQUIRED MAJOR COURSES (59 credits)				
Course	Pre-Requisites	Co-Requisites	Grade	Credits
CHE 104: General Chemistry I		CHE 110		3
CHE 105: General Chemistry II	CHE 104, 110	CHE 111		3
CHE 107: Laboratory Safety				1
CHE 110: General Chemistry Lab I		CHE 104		1
CHE 111: General Chemistry Lab II	CHE 104, 110	CHE 105		1
CHE 201: Organic Chemistry I	CHE 105, 111	CHE 210		3
CHE 202: Organic Chemistry II	CHE 201, 210	CHE 211		3
CHE 210: Organic Chemistry Lab I	CHE 105, 111	CHE 201		1
CHE 211: Organic Chemistry Lab II	CHE 201, 210	CHE 202		1
CHE 212: Analytical Chemistry	CHE 104, 105, 110, 111			4
CHE 221: Instrumental Analysis	CHE 212			4
CHE 320: Environmental Toxicology	CHE 202			3
CHE 430: Environmental Chemistry	CHE 221			4
BIO 103: Principles of Biology I (Integrates lab)				4
BIO 104: Principles of Biology II	BIO 103 or instructor permission			4
BIO 221: General Microbiology	BIO 103, 104, 107/117, or instructor permission			4
BIO 320: Ecology	BIO 103, 104 or instructor permission			4
BIO 440: Biodiversity	BIO 103, 104			3
SCI 402: Seminar				2
Choose one 6-credit option from =>	SCI 480 Internship (must complete 6 credits) OR 6 credit research sequence: SCI 406: Research I (3 credits) SCI 407: Research II (3 credits)			6

***SCI 480: The 6 credit option requires 252 hours done in the semester in which it is taken. The two consecutive semesters of 3 credits requires 126 hours completed each semester to meet the 252 hour requirement. Prerequisites: junior status and a 2.5 GPA.**

RELATED REQUIREMENTS (31-36 credits)				
Course	Pre-Requisites	Co-Requisite	Grade	Credits
PHY 103: Earth Science				3
PHY 200: Physics I	MAT 230			4
PHY 201: Physics II	PHY 200			4
MAT 209: Probability & Statistics	Satisfactory score on math placement test			3
MAT 230: Calculus I	MAT 131 or math placement test			4
BIO 203: Biosphere				3
BIO 205: Botany				4
BIO 230: Sustainability Principle & Practices				3
BIO 325: Environmental Law & Policy				3

Recommended: (5 credits)				
Course	Pre-Requisites	Grade	Credits	
MAT 131: Pre-Calculus			3	
CES 330: Sustainability Field Experience			2	

EIGHT SEMESTER PLAN

During the first 3 semesters, it is important for students to make substantial progress toward completing those BIO and CHE courses that are pre-requisites for other required science courses (red).

Semester 1	Credits	Semester 2	Credits		
SRH 101: Search Seminar or HNR 160: Honor Search	3	BIO 104 – Principles of Biology II w/lab	4		
COM 101 – Composition & Research or MAT 131: Pre-Calculus	3	CHE 105 – General Chemistry II	3		
BIO 103 – Principles of Biology I w/lab	4	CHE 111 – General Chemistry Lab II	1		
CHE 104 – General Chemistry I	3	MAT 230 – Calculus I	4		
CHE 110 – General Chemistry Lab I	1	BIO 230 – Sustainability Principles and Practices	3		
CHE 107 – Laboratory Safety	1	COM 101: Composition & Research, THE 105 or PHI 105	3		
TOTAL	15	TOTAL	18		
Semester 3	Credits	Semester 4	Credits		
CHE 201 – Organic Chemistry I	3	CHE 202 – Organic Chemistry II	3		
CHE 210 – Organic Chemistry Lab I	1	CHE 211 – Organic Chemistry Lab II	1		
CHE 212 – Analytical Chemistry II	4	CHE 221 - Instrumental Analysis	4		
BIO 203 – Biosphere	3	PHY 103 – Earth Science	3		
MAT 209 – Probability and Statistics	3	THE 105 or PHI 105	3		
CES 330 – Sustainability Field Experience (optional)	2	Gen Ed SEARCH	3		
TOTAL	16	TOTAL	17		
NOTE: Math & Science students can enroll for an optional Math & Science internship for 6 credits anytime after they reach Junior standing.					
Semester 5	Credits	Semester 6	Credits		
PHY 200 - Physics I w/lab	4	PHY 201 - Physics II w/lab	4		
BIO 320 - Ecology with lab	4	BIO 221 - General Microbiology w/lab	4		
Gen Ed SEARCH	3	CHE 320 - Environmental Toxicology	3		
Gen Ed SEARCH	3	Gen Ed SEARCH	3		
Gen Ed SEARCH	3	Gen Ed SEARCH	3		
TOTAL	17	TOTAL	17		
Semester 7	Credits	Semester 8	Credits		
SCI 406 – Research I or SCI 480	3	BIO 205 – Botany	4		
BIO 440 – Biodiversity	3	CHE 430 – Environmental Chemistry	4		
SCI 402 – Senior Seminar	2	SCI 407 – Research II or SCI 480	3		
Gen Ed SEARCH	3	Gen Ed SEARCH	3		
Gen Ed SEARCH	3	Gen Ed SEARCH	3		
Gen Ed SEARCH	3				
TOTAL	17	TOTAL	17		
ADDITIONAL GRADUATION REQUIREMENTS		RESIDENCY REQUIREMENTS		GRADUATION CREDITS EARNED	
___ SRH 101/HNR 160: Search Seminar-Enduring Questions		___ Minimum of 123 non-remedial credits earned		General Education credits earned	
___ HUMAN DIVERSITY		___ 45 of last 60 credits		Major and Related Area credits earned	
___ SENIOR CAPSTONE met with SCI 406/407		___ Minimum of 12 Alvernia credits in the major		Elective and/or Minor credits earned	
___ WRITING ENHANCED COURSE (met with CHE 211)		___ Minimum of 9 Alvernia credits in the minor (if applicable)		SUBTOTAL	
___ COMMUNITY SERVICE HOURS				SUBTRACT CREDITS EARNED FOR MAT 100, COM 100	
___ OVERALL GPA = 2.0 or higher				TOTAL GRADUATION CREDITS	
___ GPA IN MAJOR = 2.0 or higher					

Academic Policy on Eligibility for Participation of May Commencement Ceremony

The academic policy, which the Registrar follows, is: A student who has 6 or less credits remaining to complete the degree may participate in the May Commencement Ceremony.

Application Deadlines: August Graduation - December 1; December Graduation - March 1; May Graduation - October 1.

Any questions, please call the Registrar's Office.