



ADVISING WORKSHEET:

BIOLOGY MEDICAL LAB 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; however, COM 100 students may petition for elective credit.
- 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 catalog 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.

Major Description

Students interested in a career working in a clinical laboratory can pursue the Biology Medical Laboratory Science degree. This 3 + 1 program offers instructional courses at Alvernia's campus for the first 3 years, and a fourth year of clinical study in a school of medical technology approved by the National Accrediting Agency for Clinical Laboratories Sciences (NAACLS).

Alvernia has an affiliation agreement with Reading Hospital and Medical Center who assists the application process for admission to the clinical program. Admission is determined solely by the hospital.

Upon acceptance and completion of required coursework, graduates become eligible to take the certification examination for medical technologists and after successful completion, are entitled to use the designation "Medical Technologist".

In addition to Alvernia's curriculum listed below, clinical experience in the hospital facility requires 30-32 credits. Courses include: Immunohematology, Chemistry, Clinical Microscopy, Coagulation, Hematology, Microbiology, Serology and Immunology.

For students who do not obtain a position in the NAACLS accredited program, their fourth and final year at Alvernia would be spent completing the requirements for a Bachelor of Science in Biology.

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.

American Society for Clinical Laboratory Sciences

The American Society for Clinical Laboratory Sciences (ASCLS) is the pre-eminent Medical Laboratory professional society. ASCLS encourages scholarly endeavors and encourages students to become young professional members. Membership provides students with opportunities for scholarships and encourages students to be engaged in research, providing them with an opportunity to display their research findings at professional meetings. Membership also allows the student the opportunity to become actively involved in their professional organization through participation in the student forum.

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 (Must earn a C or higher)	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) CHE 104/110	3-4	MET IN REL. AREA			
Math (Other than MAT 100) MAT 209	3-4	MET IN REL. AREA			
INDIVIDUALS & COMMUNITIES (6 credits)					
History or Political Science	3				
PSY 101, HIS, POS, SOC, SSC, or ECON	3				
CULTURE & LANGUAGE (9 credits)					
Communication (Not COM 100 or 101)	3				
World Language – 2 courses in sequence	3				
	3				
CREATIVE EXPRESSIONS (6 credits)					
Literature (ENG)	3				
Art, 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 (Ethics/Morality @ 200 level)	3				

Paths of Knowledge – Choose 1 Path		PoK may count towards minor or Related Requirements, but not Mid-Level Arts Exploration requirements.			
_____ PATH 1: 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.		_____ PATH 2: 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.		_____ PATH 3: 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.	
Course (See Catalog for lists of approved courses for each area.)		Area or Discipline	Term	Grade	Credits Earned
CHE 201 (REL AREA)					
CHE 202 (REL AREA)					
CHE 212 (REL AREA)					

*** Please be advised to double check the 22-23 Course Catalog to ensure that you meet all prerequisite expectations for all required and related classes for this major.***

BS BIOLOGY – MEDICAL LAB SCIENCE (85-86 credits)

REQUIRED COURSES (61-62 credits)					
Course	Pre-Requisites	Co-Requisites	Term	Grade	Credits
BIO 103: Principles of Biology I					4
BIO 104: Principles of Biology II	BIO 103 or instructor permission				4
BIO 107: Anatomy & Physiology I		BIO 117			3
BIO 117: Anatomy & Physiology I Lab		BIO 107			1
BIO 108: Anatomy & Physiology II		BIO 118			3
BIO 118: Anatomy & Physiology II Lab		BIO 108			1
BIO 221: General Microbiology	BIO 103, 104, 107/117 with grade of "C"				4
BIO 303: Genetics	BIO 103 or instructor permission	BIO 309			4
BIO 409: Immunology	BIO 104, 220 or 221, and CHE 105, or instructor permission				3
BIO 420: Medical Lab Sci Clinical I					16
BIO 421: Medical Lab Sci Clinical II	BIO 420				16
One BIO elective: (3 or 4 cr) BIO:					3 or 4

REQUIRED RELATED COURSES (24 credits)

Course	Pre-Requisites	Co-Requisites	Term	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
MAT 209: Probability and Statistics	High school algebra and satisfactory score on math placement test				3

ELECTIVES or MINOR as required for the minimum 123 credits (not including MAT 100, COM 100)

[illegible]

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 (in red).

Semester 1	Credits	Semester 2	Credits
SRH 101: Search Sem-Enduring Questions or HNR 160: Honor Search-Enduring Questions	3	BIO 104: Principles of Biology II	4
COM 101: Composition & Research	3	CHE 105: General Chemistry II	3
BIO 103: Principles of Biology I	4	CHE 111: General Chemistry II Lab	1
CHE 104: General Chemistry I	3	THE 105 or PHI 105	3
CHE 110: General Chemistry I Lab	1	Gen Ed SEARCH	3
CHE 107: Laboratory Safety	1	Gen Ed SEARCH	3
TOTAL	15	TOTAL	17
Semester 3	Credits	Semester 4	Credits
MAT 209: Probability and Statistics or BIO 409: Immunology	3	CHE 202: Organic Chemistry II	3
THE 105 or PHI 105	3	CHE 211: Organic Chemistry II Lab	1
CHE 201: Organic Chemistry I	1	BIO 108/118: Anatomy & Physiology II w/Lab	4
CHE 210: Organic Chemistry II	4	Gen Ed SEARCH	3
BIO 107/117: Anatomy & Physiology I w/lab	3	Gen Ed SEARCH	3
Gen Ed SEARCH			
TOTAL	17	TOTAL	14
Semester 5	Credits	Semester 6	Credits
CHE 212: Analytical Chemistry	4	BIO 221 General Microbiology	4
BIO 303 Genetics (BIO 309 Lab)	4	BIO ELECTIVE	3-4
BIO 409: Immunology or MAT 209	3	Gen Ed SEARCH	3
Gen Ed SEARCH	3	Gen Ed SEARCH	3
Gen Ed SEARCH	3		
TOTAL	17	TOTAL	13-14
Semester 7	Credits	Semester 8	Credits
BIO 420: Medical Lab Science Clinical I	16	BIO 421: Medical Lab Science Clinical II	16
TOTAL	16	TOTAL	16

ADDITIONAL GRADUATION REQUIREMENTS	RESIDENCY REQUIREMENTS	GRADUATION CREDITS EARNED	
___ SRH 101/HNR 160: Search Seminar-Enduring Questions ___ HUMAN DIVERSITY ___ SENIOR CAPSTONE ___ WRITING ENHANCED met with CHE 211 ___ COMMUNITY SERVICE HOURS ___ OVERALL GPA = 2.0 or higher ___ GPA IN MAJOR = 2.0 or higher	___ Minimum of 123 non-remedial credits earned ___ 45 of last 60 credits ___ Minimum of 12 Alvernia credits in the major ___ Minimum of 9 Alvernia credits in the minor (if applicable)	Liberal Arts Core credits earned	
		Major and Related Area credits earned	
		Elective and/or Minor credits earned	
		SUBTOTAL	
		SUBTRACT CREDITS EARNED FOR MAT 100, COM 100	
		TOTAL GRADUATION CREDITS	

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.