ADVISING WORKSHEET: MATH

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.

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.

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 (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) PHY	3-4	MET IN REL REQ			
Math (Other than MAT 100)	3-4	MET IN MAJOR			
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 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 (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

BS MATHEMATICS (53-56 credits)

REQUIRED COURSES (30-33 credits)

Course	Pre-Requisites	Co-Requisites	Term	Grade	Credits
MAT 204: Intro to Mathematical Logic					3
MAT 209: Probability & Statistics	Satisfactory score on the Mathematics Placement test.				3
MAT 230: Calculus I	MAT 131 or satisfactory score on Math Placement test.				4
MAT 231: Calculus II	MAT 230				4
MAT 232: Calculus III	MAT 231				4
MAT 240: Linear Algebra	MAT 231				3
MAT 401: Real Analysis	MAT 232, MAT 204				3
MAT 415: Mathematics Seminar	Junior or senior standing				3
MAT 420: Abstract Algebra	MAT 204				3

REQUIRED MATH ELECTIVES Students must choose 4 MAT classes from the 300 level or above (excluding MAT 345) including SCI 305

Course	Pre-Requisite	Terms	Grade	Credits
MAT 300+				
MAT 300+				
MAT 300+				
MAT 300+ OR SCI 305: Research in BIO/CHE/MAT				

RELATED REQUIREMENTS (11 credits)

Course	Pre-Requisites	Terms	Grade	Credits
CS 155: Intro to Object-Oriented Programming				3
PHY 200: Physics I	MAT 230			4
PHY 201: Physics II	PHY 200			4

Recommended: (3 credits)

Course	Pre-Requisites	Grade	Credits
MAT 131: Pre-Calculus	Two years of high school algebra and satisfactory score on the Mathematics Placement test.		3

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

	Term	Grade	Credits

*** 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.***

Semester 1	Credits	Semester 2	Credits
SRH 101: Search Sem-Enduring Questions or HNR 160: Honor Search-Enduring Questions	3	MAT 230 or MAT 231: Calculus I OR II	4
COM 101: Composition & Research	3	CS 155: Intro to Object-Oriented Programming	3
THE 105 or PHI 105	3	THE 105 or PHI 105	3
MATH 131: Pre-calculus (if needed, based on placement) or MAT 230: Calculus I	3 - 4	Gen Ed SEARCH	3
Gen Ed SEARCH	3	Gen Ed SEARCH	3
TOTAL	15 -16	TOTAL	16

Semester 3	Credits	Semester 4	Credits
MATH 209: Probability and Statistics	3	MAT 232: Calculus II	4
PHY 200: Physics I w/lab	4	PHY 201: Physics II w/ lab	4
Gen Ed SEARCH	3	Gen Ed SEARCH	3
Elective or MAT 231: Calculus I	3-4	Gen Ed SEARCH	3
Elective	3	Elective	3
TOTAL	16-17	TOTAL	17

Semester 5	Credits	Semester 6	Credits
MAT 204: Math Logic	3	MAT 401: Real Analysis	3
Math Elective	3	Math Elective	3
Gen Ed SEARCH	3	Gen Ed SEARCH	3
Gen Ed SEARCH	3	Gen Ed SEARCH	3
Elective	3	Elective	3
TOTAL	16	TOTAL	15

Semester 7	Credits	Semester 8	Credits
MAT 240: Linear Algebra	3	MATH 420: Abstract Algebra	3
Math Elective	3	Math Elective	3
Gen Ed SEARCH	3	MAT 415: Mathematics Seminar	3
Gen Ed SEARCH	3	Elective	3
Elective	3	Elective	3
TOTAL	15	TOTAL	15

ADDITIONAL GRADUATION REQUIREMENTS	RESIDENCY REQUIREMENTS	GRADUATION CREDITS EARNED	
___ SRH 101/HNR 160: Search Seminar- ___ HUMAN DIVERSITY ___ SENIOR CAPSTONE Met with MAT 415 ___ WRITING ENHANCED ___ 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, and if applicable COM 100	
		TOTAL GRADUATION CREDITS	

Academic Policy on **Eligibility for Participation of May Commencement Ceremony**
The <u>academic policy</u>, 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.