MATHEMATICS MAJOR

MAJOR OBJECTIVES

In addition to fulfilling the Science-Mathematics Departmental objectives:

- Students majoring in **Mathematics** are expected to:
  - Apply mathematical principles and procedures to solve real-world problems
  - Effectively communicate mathematical ideas, both verbally and in written form
  - Become involved in the exploration and development of mathematics not found in the regular undergraduate curriculum
  - Construct logical and accurate mathematical proofs using a variety of techniques
  - Become thoroughly prepared for successful work at the graduate school of their choice

Important Notes

- 40% of major requirements must be completed at Judson.
- At least 18 hours of major requirements must be upper division.

Gen Eds Required by Major

- Any Mathematics course of 3 hours or more (fulfills Gen Ed Mathematics Requirement)
- Any Science course (with Lab) of 4 hours or more (fulfills Gen Ed Science Requirement)
- MAT301 Mathematics Junior Seminar (1 c.h.) (fulfills Gen Ed GEN301 Requirement)

Major Requirements

Code	Title	Hours
Mathematics		
MAT301	Mathematics Junior Seminar	1
MAT311	Probability and Statistics w/Lab	4
MAT312	Modern Abstract Algebra	3
MAT316	Multivariable Calculus	4
MAT318	Linear Algebra	3
MAT492	Senior Readings in Mathematics	1-3
Mathematics Elective		16
Biology/Chemistry/Physics		
Select one of the following sequences for a total of 8 hours:		8
Sequence A		
BIO171	Principles of Biology w/Lab	
Select one from the following:		
BIO172	Prin of Organismal Biology w/Lab	
BIO177	Environmental Science w/Lab	
SAP3** Dpt-approved course [1]		
Sequence B		
CHM153	General Chemistry I w/Lab	
CHM154	General Chemistry II w/Lab	
Sequence C		
PHY237	General Physics I w/Lab	
PHY238	General Physics II w/Lab	
Science/Mathematics Electives		
Select 2 hours from the following: [2]		2
Mathematics Elective		
Biochemistry Elective		
Biology Elective		
Chemistry Elective		
Physics Elective		
Physical Science Elective		
Science Elective		
Total Hours		**42-44**

[1] Shedd Aquarium, Morton Arboretum, Au Sable Institute of Environmental Studies, etc

[2] SCM181* Science Concepts courses are not applicable. MAT110/111 Mathematics Models and MAT112 Mathematics for Elementary Education may not apply.

Bachelor of Science in Mathematics (Four-Year Plan)

Academic planning is the student's responsibility. This Graduation Plan is designed to be a guide to assist students as they plan their course selections. This is only a suggested schedule, and is not a substitute for a student's Degree Audit, nor the Program Requirements in the Judson University Catalog. Actual course selections should be made with the advice and approval of an academic advisor. Students should become familiar with the catalog in effect at the time at which they entered the institution. Course requirements and sequencing may vary with AP courses, transfer courses, English/math placement, or other conditions.

A full-time course load for undergraduate students is 12-18 credits per semester. Illinois residents receiving state aid should register for 15 hours per semester.

Course	Title	Hours
First Year		
First Semester		
BST110	Intro to the Christian Bible	3
ENG101	Expository Writing (or ACT/SAT placement)	3
GEN101 or ESS101	Questions of Life: Entering the Judson Conversation (<24 transfer hours) [1] or Wellness	1
Physical Activity course		1
MAT211 or MAT215	Functions and Calculus I or Calculus w/Analytic Geometry I	3-5
	Hours	11-13
Second Semester		
THS110	Christian Faith: Understanding and Application	3
ENG102	Critical Thinking and Writing (or ACT/SAT placement)	3
PSY111 or SOC151	Introduction to Psychology or Introduction to Sociology	3
MAT216	Calculus w/Analytic Geometry II	4
Any Elective		3
	Hours	16
Second Year		
First Semester		
Gen Ed Visual and Performing Arts Elective		3
SPC120	Foundations of Speech	3
MAT318	Linear Algebra	3
Math Elective [2]		3

Any Elective		3
	Hours	**15**
Second Semester		

HIS261
   or HIS262
	History of Civilization I
	   or History of Civilization II
		3

MAT312	Modern Abstract Algebra	3
Math Elective [2]		3
Any Electives		6
	Hours	**15**
Third Year		
First Semester		
Gen Ed Biblical Studies Elective		3
Gen Ed Science w/Lab [1]		3
Math Elective [2]		3
Any Electives		6
	Hours	**15**
Second Semester		
Gen Ed Science w/Lab [1]		4
MAT301	Mathematics Junior Seminar [3]	1
MAT311	Probability and Statistics w/Lab	4
MAT316	Multivariable Calculus	4
Math Elective [2]		3
	Hours	**16**
Fourth Year		
First Semester		
GEN401	The Good Life: Continuing the Conversation	3
MAT492	Senior Readings in Mathematics	1
Any Electives		12
	Hours	**16**
Second Semester		
Math Elective [2]		3
Science/Math Elective [2]		3-4
Any Electives		9-11
	Hours	**15-18**
	Total Hours	**119-124**

[1] First-time students (those entering college directly from high school) should take GEN101; transfer students should take ESS101

[2] see major audit

[3] GEN301 equivalent