

Major requirements to complete a B.S. degree in Mathematics (2009-2010)

<u>Course No.</u>	<u>Hrs.</u>	<u>Course Name</u>	<u>Prerequisites</u>
CS 202	4	Intro to Computer Science	MATH 111 or equivalent with C or better
MATH 150	4	Calculus I	MATH 111 or equivalent with C or better
MATH 221	3	Introduction to Linear Algebra	MATH 150 with C or better
MATH 250	4	Calculus II	MATH 150 with C or better
MATH 251	3	Calculus III	MATH 250 with C or better

At least one course from each of the following four groups for a total of 12 hours. (One group may be waived for students who have a minor or second major in Computer Science.)

Group A: Algebra/Discrete Mathematics/Linear Algebra

MATH 319	3	Introduction to Abstract Algebra	MATH 221
MATH 349	3	Introduction to Discrete Mathematics	MATH 221
MATH 419	3	Introduction to Abstract Algebra II	MATH 319
MATH 421	3	Linear Algebra	MATH 221
MATH 447	3	Introduction to Graph Theory	MATH 349
MATH 449	3	Introduction to Combinatorics	MATH 349

Group B: Analysis

MATH 352	3	Theory of Calculus	MATH 221, 250
MATH 450	3	Methods of Advanced Calculus	MATH 251
MATH 452	3	Introduction to Analysis	MATH 250
MATH 455	3	Complex Analysis and Applications	MATH 251

Group C: Applied Mathematics/Numerical Analysis

MATH 305	3	Intro to Ordin Differential Equations I	MATH 250 with C or better
MATH 361	3	Numerical Calculus	MATH 221, 250; CS 202
MATH 471	3	Optimization Techniques	MATH 221, 250
MATH 472	3	Linear Programming	MATH 221
MATH 475A	3	Numerical Analysis	MATH 221, 250

Group D: Probability/Statistics

MATH 380	3	Elements of Probability	MATH 250, CS 202
MATH 480	4	Probability, Stochastic Processes	MATH 251
MATH 483	4	Math Stats in Engr and the Sciences	MATH 250

Plus five additional courses in mathematics numbered above 299 to total 15 hours (excluding 300i, 311, 314, 321, 322, 411, 412, 458). A "C" or better must be earned in each mathematics course used for the major. Each student's program must include at least one of 302, 319, or 352 and at least 5 mathematics courses at the **400** level approved by a mathematics department advisor.

Total hours = 45

Supportive Skills: a two-semester sequence in foreign language.

Mathematics majors must see their department advisor before registering for EACH semester.

The Mathematics Department is located in Neckers A360, phone 618-453-5302, fax 618-453-5300, email math@math.siu.edu. Make an appointment with your faculty advisor by calling the department.

The College of Science Advisement office is located in Neckers A185, phone 618-536-5537, fax 618-453-7067, email us at advise@cos.siu.edu, or see our web site at <http://www.science.siu.edu/advisement/index.html>. The College of Science advisors are Dana McKenzie, Jean McPherson and Becky Reed.

Updated 5/7/09