

BACHELOR OF SCIENCE

Computational Mathematics Major Courses 2019-2021

15 courses; Minimum 30 credits required; 35 credits must be from SU

Take one of the following:

		Grade	Credit
MAT52-154	Calculus I		
MAT52-164	Applied Multivariable Calculus I		

Take one of the following:

MAT52-254	Calculus II		
MAT52-264	Applied Multivariable Calculus II		

Take one of the following:

MAT52-354	Calculus III		
MAT52-364	Applied Multivariable Calculus III		

Take the following:

CSC54-184	Computer Science I		
CSC54-284	Computer Science II		
CSC54-384	Discrete Mathematics		
CSC54-394	Computer Organization		
CSC54-454	Algorithms		
MAT52-674	Linear Algebra		
MAT52-754	Differential Equations		

Select two courses from the following:

CSC54-414	Operations Research		
CSC54-514	Database Management		
CSC54-524	Introduction to Numerical Analysis		
MAT52-574	Probability and Mathematical Statistics		

Select two additional approved upper level courses in Math or Computer Science*:

*Any 3 or 4 credit CSC or MAT course at or above the 300 level will serve as an approved course. PHY53-454 Math Methods in Physical Science II may also be taken as an approved, upper level course.

Select one of the following:

		Grade	Credit
MAT52-894	Senior Seminar in Math Modeling		
CSC54-894	Senior Seminar in Software Engineering		
Major Field Test			

Required Supporting Courses:

CHE51-103/101	General Chemistry I/Lab		
PHY53-154	Fundamentals of Physics I		

Select one of the following:

BIO50-123/121	Living Systems/Invest. Into Living Systems*		
BIO50-133/131	Molecular and Population Genetics/Lab*		

Select one additional course from the following:

BIO50-123/121	Living Systems/Invest. Into Living Systems*		
BIO50-133/131	Molecular and Population Genetics/Invest. Genetics*		
CHE51-203/201	General Chemistry II/Lab		
PHY53-164	Fundamentals of Physics II		
PHY53-404	Electronics		

*The same course cannot be used to satisfy more than one area within the required supporting course section.

Two courses from different departments, in the Required Supporting Course section, may be used in Exploration & Breadth.

General Education Requirements

At least 30 total credits required; minimum 3 credits per requirement.

General Education - Part I

Take one of the following first semester seminars:

UST05-014	First Year Seminar		
UST05-214	Advanced Entry Seminar		

Foreign Language (three semesters of the same language)

Social Justice Course (may double count with any requirement):

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Two Fitness/Recreational Activity courses (must be different topics):

General Education - Part II: Exploration & Breadth (6 total courses)

CSC54-XXX and MAT52-XXX courses cannot be used to satisfy E&B requirements. Additionally, PHY53-454, if taken to satisfy a major requirement, may not be used in the E&B section.

Select one course from each of the four following areas:

Humanities:

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Natural Sciences:

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Social Sciences:

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Fine Arts:

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Select one additional course from TWO of the four areas: Humanities, Natural Science, Social Science and Fine Arts. Neither course may come from the department (3 digit prefix) used above. EX: If you took PSY33-104 Principles of Psychology as a social science, you may not select another PSY33-XXX course to apply in this section.

*Public Speaking, College Writing and Creative Writing courses may not count in E&B.

University Graduation Requirements:

Minimum of 127 credits: _____

Cumulative GPA > 2.0 _____

GPA > 2.0 for Major and/or Areas of Concentration _____

All grades C- or higher in major/minor/core? _____

At least 64 credits completed at Southwestern _____

No more than 56 credits of any 5 digit prefix _____

Major credits completed (min 30 required) _____

60% of Major courses completed at Southwestern (35cr) _____

Gen Ed has minimum of 30 credits _____

Minor (optional):

Minimum 18 credits _____

Minimum of 12 credits taken at Southwestern _____

Minimum 2.0 minor courses CGPA _____

Other:

Degree Audit Completed (Due one year before grad date) _____

Grad Application Submitted (Due start of final semester) _____

Approved to be part time in last semester? _____