

Mathematics Major Bachelor of Science (47 credit hours)

MATH 1000, 1100, 1110, 1220, 1250, 1300, 1400, and 4700 do not apply to the Mathematics major.

Prerequisites: Students must demonstrate mathematics proficiency in one of three ways

- SAT (MSS 540 or higher) and/or (SRM 510 or higher)/ACT (ACNM 23 or higher)
- Passing university computer based Math placement exam
- Successful completion of MATH 1000 (CR)

Major Requirements

- MATH 2010, Calculus I, 4 credit hours*
- MATH 2020, Calculus II, 4 credit hours*
- MATH 2200, Discrete Mathematical Structures, 4 credit hours*
- MATH 3010, Linear, Algebra, 4 credit hours*
- MATH 3020, Calculus III, 4 credit hours**
- MATH 3300, Numerical Analysis, 3 credit hours
- MATH 4000, Problem Seminar, 2 credit hours**
- MATH 2120, Intro. Statistics with Applications OR MATH 4010, Mathematical Statistics, 4 credit hours*
- MATH 4100, Real Analysis OR MATH 4200, Abstract Algebra, 3 credit hours
- An additional 3 credit hours from MATH courses numbered 3010 or higher, excluding MATH 4700
- ENGR 2310, Computational Problem Solving, 3 credit hours**
- CPSC 2320, C++ Programming, 1 credit hour
- PHYS 2240, General Physics I, 4 credit hours*
- An additional 4 credit hours from CHEM 2110 or above, PHYS 2250 or above, BIOL 2210 or above

* Indicates a course which satisfies both Mathematics and Computer Science Major *requirements*.

** Indicates a course which satisfies the Computer Science *electives*.

NOTE: at least 12 credit hours must be unique to the Math major, and not used to satisfy requirements for the Computer Science major.

The Mathematics major for the Bachelor of Science prepares students for a variety of mathematics-related career paths in business and industry, as well as graduate study.

Computer Science Major Bachelor of Science (82 credit hours)

Major Requirements:

Foundational Courses (28 credit hours):

- CPSC 2020, Fundamentals of Computational Thinking and Programming, 4 credit hours
- CPSC 2030, Object-Oriented Analysis and Design, 4 credit hours
- CPSC 2100, Database Programming, 4 credit hours
- CPSC 2330, Introduction to Web Applications, 4 credit hours
- CPSC 2420, Computer Architecture, 2 credit hours
- CPSC 2430, Programming Languages and Compilers, 2 credit hours
- CPSC 2500, Data Structures and Algorithms, 4 credit hours
- MATH 2200/CPSC 2250, Discrete Mathematical Structure, 4 credit hours*

Professional Core (22 credit hours):

- CPSC 3380, Applied Cryptography and Security, 4 credit hours
- CPSC 3410, Computer Networks, 4 credit hours
- CPSC 4420, Operating Systems, 4 credit hours
- CPSC 4430, Software Engineering, 4 credit hours
- Any 4 credit hours from the following:
 - CPSC 4480, Technical Certification, 1 credit hour
 - CPSC 4800, Software Engineering Internship, 2-4 credit hours
 - CPSC 4970, Senior Project, 2-4 credit hours
- CPSC 4950, Senior Seminar: Professional Development, 1 credit hour
- CPSC 4960, Senior Seminar: Ethics, 1 credit hour

Mathematics and Science Core (20 credit hours):

- MATH 2010, Calculus I, 4 credit hours*
- MATH 2020, Calculus II, 4 credit hours*
- MATH 3010, Linear Algebra, 4 credit hours*
- MATH 4010, Mathematical Statistics, 4 credit hours*
- PHYS 2240, Physics I, 4 credit hours*

Computer Science Elective (6 credit hours):

- Either CPSC 3500, Design & Analysis of Algorithms, 4 credit hours OR CPSC 3520, Introduction to Artificial Intelligence, 4 credit hours
- And remaining 2-3 credit hours from CPSC/ENGR 2000 and above **

Mathematics and Science Electives (6-8 credit hours):

- An additional 6 credit hours is required in combination from:
 - MATH 3020 and above, and/or***
 - CHEM 2110 and above, and/or
 - PHYS 2250 and above

* Indicates a course which satisfies both Mathematics and Computer Science Major requirements.

** Indicates that this elective is satisfied through the Mathematics requirements: ENGR 2310

*** Indicates that these electives are satisfied through the Mathematics requirements: MATH 3020 and MATH 4000.

Questions? Contact the [Department of Mathematics](#) or the [Department of Computer Science](#).

Math/Computer Science B.S. Dual Major Suggested Course Sequence

SEMESTER 1		SEMESTER 2	
MATH 2010 (Quant. Reason.)	4 Hours	MATH 2020	4 Hours
CPSC 2020	4 Hours	ENGR 2310	3 Hours
LART 1050	1 Hour	PHYS 2240 (Scientific WoK)	4 Hours
ENGL 1100/1110	3-4 Hours	CPSC 2030	4 Hours
COMM 1000	3 Hours	ENGL 1120	3 Hours
Aesthetic Ways of Knowing*	3 Hours		

SEMESTER 3		SEMESTER 4	
MATH 3010	4 Hours	MATH 3020	4 Hours
CPSC 2320	1 Hour	MATH 2200	4 Hours
PHYS 2250	4 Hours	CPSC 2420	2 Hours
CPSC 2100	4 Hours	CPSC 2430	2 Hours
CPSC 2500	4 Hours	Social/Behavioral WoK*	3 Hours
		Civil Discourse & C.R.	2-4 Hours

SEMESTER 5		SEMESTER 6	
CPSC 3380	4 Hours	MATH 3100/MATH 3200	3 Hours
CPSC 4430 (Exp WoK)	4 Hours	CPSC 2330	4 Hours
MATH 4010	4 Hours	CPSC 4420	4 Hours
MATH 4100	3 Hours	CPSC 3500 or CPSC 3520	4 Hours
BIBL 2000	3 Hours	Global/Intercultural WoK*	3 Hours

SEMESTER 7		SEMESTER 8	
MATH 3300	3 Hours	ENGR 4050 (or CPSC 3410 prev sem)	4 Hours
MATH 4000	2 Hours	CPSC 4960 (WI)	1 Hour
CPSC 4480/4800/4970	4 Hours	Foreign Language	4 Hours
CPSC 4950 (SI)	1 Hour	Christian Ways of Knowing*	3 Hours
CPSC 3410 (or ENGR 4050 next sem.)	4 Hours	Civic Ways of Knowing*	3 Hours
PHYS 4220	3 Hours	Personal Wellness	2 Hours

136 total credits

*At least **one** of these Ways of Knowing must be a Writing Intensive Designated course to meet the Liberal Arts Core Requirements.

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