CLAYTON STATE UNIVERSITY CENTER FOR ADVISING & RETENTION (CAR)

MATHEMATICS

CORE CURRICULUM REQUIREMENTS

Area A: Essential Skills
A1: Two Courses
A2: MATH 1112 *or* MATH 1113 or *higher* *(Recommended)*

Area B: Critical Thinking & Communication
B1: One Course
B2: One to Two Courses

Area C: Humanities
C1: One Course
C2: One Course

Area D: Natural Sciences, Mathematics & Technology
D1: Two Sciences & Two Labs
D2: MATH 1501 *or* MATH 2502 *(Recommended)*

Area E: Social Sciences
E1: One Course
E2: One Course
E3: One Course
E4: One Course

For more detailed information on Core Curriculum requirements related to this major, review the associated Core Curriculum overview sheet or DegreeWorks.

AREA F: LOWER DIVISION MAJOR REQUIREMENTS (18 HOURS)

MATH 1501: Calculus I
MATH 2140: Linear Algebra
MATH 2502: Calculus II
MATH 2503: Calculus III

Programming Class (choose one – 3 hours)
CSCI 1301: Computer Science I
CSCI 1371: Computing for Engineers

Other Courses (3 or 6 hours as long as not used previous)
CHEM 1211: Principles of Chemistry I
CSCI 1302: Computer Science II
MATH 1231: Introduction to Statistics
MATH 2020: Introduction to Discrete Mathematics
PHYS 2211: Principles of Physics I

GENERAL ELECTIVES (33 HOURS)

May not include: MATH 1101, MATH 1111, MATH 1112, MATH 1241, MATH 2010, MATH 2020, MATH 2030, MATH 3902, MATH 4020, CSU 1000, CSU 1022, CSU 2500

At least 12 Credits at 3000 or Above

Must complete either a second science major science sequence (listed in D1) and one additional course with prefix BIOL, CHEM, or PHYS at the 2000 or above level (Excluding BIOL 2250) or an approved minor.

UPPER DIVISION MAJOR REQUIREMENTS (27 HOURS)

Required (15 credits)
MATH 3005: Transitions to Higher Mathematics
MATH 3006: Communications in Mathematics
MATH 3110: Survey of Algebra
MATH 3303: Ordinary Differential Equations
MATH 3520: Introduction to Analysis
MATH 4988: Directed Undergraduate Research
MATH 4989: Senior Capstone Project

Electives Group A (choose any 9 credits)
MATH 3220: Applied Statistics
MATH 4231: Modern Geometry
MATH 4250: Elementary Number Theory
MATH 4261: Intro to Probability
MATH 4303: Partial Differential Equations
MATH 4320: Numerical Methods
MATH 4350: Graph Theory
MATH 4360: Combinatorics

Electives Group B (3 hours)
MATH 3003: Applied Math Modeling
MATH 4800: Special Topics:
MATH XXXX: Course from Group A's list not used previously

SPECIAL NOTES

- Take 15 credit hours each semester
- Create a Pre-Advising Sheet before you attend an advising session

Why Become a Mathematics Major?

Bachelor of Science in Mathematics

The Bachelor of Science in Mathematics (BS) is a 120-credit program that prepares students to explore problems, organize data, conjecture and test for solutions. Today mathematics is not only a respected discipline – it is the language of science and an important tool in physical, biological, and data sciences, as well as in engineering, finance, business, medicine and industrial applications.

Industry Outlook

Students in mathematics are in high demand, as employers look for candidates who are trained to be critical thinkers and problem solvers. The completion for talented math graduates among employers is also reflected in highly competitive salaries.

The US Department of Labor projects 21 percent growth in mathematics profession by 2024, as business will need mathematicians to analyze the increasing volume of digital and electronic data.

Career Opportunities

- Appraiser
- Banker
- Commodities Trader
- Computer Programmer
- Estimator
- Forensic Analyst
- Pollster
- Researcher
- Retail Buyer
- Risk Analyst
- Statistician
- Stockbroker
- Teacher
- Technical Writer
- Traffic Controller