

BS in Mathematics

Credit toward a mathematics major will not be given in any MATH course or in CSCI 2510 with a grade less than C. Minimum degree requirement is **126 s.h.** of credit as follows:

1. Foundations curriculum (See Section 4, Foundations Curriculum Requirements for all Baccalaureate Degree Programs.).....42 s.h.

2. Common mathematics core.....37 s.h.

MATH 2171, 2172, 2173. Calculus I, II, III (4,4,4) (F,S,SS) (FC:MA) (P for 2171: MATH 1083, 1085, 2122 with minimum grade of C; P for 2172: MATH 2171 or 2122 with consent of instructor; P for 2173: MATH 2172)

MATH 2300. Transition to Advanced Mathematics (3) (P: MATH 2171)

MATH 3256. Linear Algebra (3) (F,S,SS) (P: MATH 2172)

MATH 3263. Introduction to Modern Algebra (3) (WI) (F,S) (P: MATH 2300, 3256)

MATH 3307. Mathematical Statistics I (3) (F,S) (P: MATH 2172)

MATH 3308. Mathematical Statistics II (3) (F) (P: MATH 3307)

MATH 4101. Advanced Calculus I (3) (P: MATH 2173, 2300, or consent of instructor)

MATH 4331. Introduction to Ordinary Differential Equations (3) (F,S) (P: MATH 2173)

CSCI 2310, 2311. Algorithmic Problem Solving and Programming Laboratory (4,0) (F,S,SS) (P: MATH 1065; C for 2310: CSCI 2311; C for 2311: CSCI 2310)

3. Concentration area (Choose one area.).....20-27 s.h.

Mathematics (27-33 s.h.):

MATH 4110. Elementary Complex Variables (3) (S) (P: MATH 2173)

Minor (24-30 s.h.)

Science (27-28 s.h.)

CHEM 1150, 1151. General Chemistry and Laboratory I (3,1) (F,S,SS) (FC:SC) (P: chemistry placement test or passing grade in CHEM 1050; P/C: MATH 1065; C for 1150: CHEM 1151; C for 1151: CHEM 1150)

CHEM 1160, 1161. General Chemistry and Laboratory II (3,1) (F,S,SS) (FC:SC) (P: CHEM 1150, 1151; C for 1160, CHEM 1161; C for 1161: CHEM 1160; R/C: MATH 1083 or 1085)

MATH 4110. Elementary Complex Variables (3) (S) (P: MATH 2173)

PHYS 2350, 2360. University Physics (4,4) (F,S,SS) (FC:SC) (C: MATH 2121 or 2171; P for PHYS 2360: PHYS 2350)

Choose one of the following:

BIOL 1100, 1101. Principles of Biology I (4,0) (F,S,SS) (FC:SC) and BIOL 1200, 1201. Principles of Biology II (4,0) (F,S,SS) (FC:SC)

A combination of any 3 courses numbered above 1999 in Chemistry or numbered above 3999 in Physics.

Statistics (21 s.h.)

ENGL 3880. Writing for Business and Industry (3) (WI) (F,S,SS) (P: ENGL 1200)

MATH 4031. Applied Statistical Analysis (3) (WI) (P: MATH 2228 or 2283 or 3308; MATH 3256 or MATH/CSCI 3584; or equivalent; or consent of instructor)

MATH 4201. Introduction to Stochastic Processes (3) (P: MATH 3307 or equivalent or consent of instructor) or

MATH 5000. Introduction to Sampling Design (3) (F) (P: MATH 3308 or 3229 or consent of instructor)

MATH 4774. Programming for Research (3) (P: MATH 2228 or MATH 2283 or equivalent)

MATH 4801. Probability Theory (3) (P: MATH 2173 or 3307)

MATH 4999. Capstone and Statistical Consulting (3) (P: MATH 4031)

PHIL 2274. Business Ethics (3) (F,S,SS) (FC:HU)

Computer Science (16 s.h.)

CSCI 2300. Computer Science Survey (3) (F,S,SS)

CSCI 3300. Introduction to Algorithms and Data Structures (4) (F,S,SS) (P: CSCI 2310, 2427)

CSCI 3310. Advanced Data Structures and Data Abstraction (3) (F,S,SS) (P: CSCI 3300)

CSCI 3650. Analysis of Algorithms (3) (S,SS) (P: CSCI 3200 or 3300; CSCI 2427)

CSCI 3526. Switching Theory and Computer Organization (3) (F,SS) (P: CSCI 2310; CSCI 2427) or CSCI 3675.

Organization of Programming Language (3) (F,SS) (P: CSCI 3200) or MATH 4110. Elementary Complex Variables (3) (S) (P: MATH 2173)

4. Specified electives

Mathematics (9 s.h.):

Choose 9 additional s.h. in consultation with advisor from MATH 3174, 3233, 3573, 4201, 4264, 4801, 5000, 5002, 5021, 5102, 5121, 5122, 5131, 5132, 5311, 5322, or 5551.

Science (3 s.h.)

Choose 3 additional s.h. in consultation with advisor from MATH 3174, 3233, 3573, 4201, 4264, 4801, 5000, 5002, 5021, 5102, 5121, 5122, 5131, 5132, 5311, 5322, or 5551.

Statistics (9 s.h.)

Choose 3 additional s.h. from MATH 4201, 5000, 5132; OMGT 4493; ECON 3343, 4430.

Choose 6 additional s.h. from MATH 3174, 3233, 3573, 4110, 4264, 5002, 5021, 5102, 5121, 5122, 5131, 5132, 5311, 5322 or 5551.

Computer Science (12 s.h.)

Choose 3 s.h. from MATH 3174, 3233, 3573, 4201, 4264, 4801, 5000, 5002, 5021, 5102, 5121, 5122, 5131, 5132, 5311, 5322 or 5551.

Choose 9 s.h. of CSCI electives numbered above 1999, excluding 2300, 2310/2311, 2510, 2610, 2611, 3300, 3310, 3510, 3584, 3601, 3650.

5. Electives to complete requirements for graduation.