

This document is meant as a quick guide to what mathematics or statistics you may need for a particular Major or Minor. This is not an official document and should not be used as such. This document may be incomplete or incorrect. All official determinations for how to complete your degree program should be done in conjunction with your advisor.

Math/Stats Course Requirements by Major

Non-Technical Track Majors

The following programs in the course catalog have not provided a specific mathematics course; they have only stated the need for a USP Q course. Typically these programs use Stat 2000 or Math 1000 to satisfy the Q course requirement.

[African American and Diaspora Studies, B.A.](#)

[American Studies, B.A.](#)

[Anthropology, B.A.](#) (Stat 2050 recommended for Q)

[Art Education, B.A.](#)

[Art History, B.A.](#)

[English, B.A.](#)

[French, B.A.](#)

[Gender and Women's Studies, B.A.](#)

[German, B.A.](#)

[History, B.A.](#)

[Human Development and Family Sciences](#)

[International Studies, B.A.](#) (Stat 2050 recommended for Q)

[Jazz Performance, B.M.](#)

[Music Education, B.M.](#)

[Music Performance, B.M.](#)

[Music, B.A.](#)

[Native American and Indigenous Studies, B.A.](#)

[Organizational Leadership, B.A.S.](#)

[Philosophy, B.A.](#)

[Professional Child Development](#)

[Religious Studies, B.A.](#)

[Secondary Agricultural Education, B.S.](#) (If concurrent major, see specific requirements below.)

[Secondary Career & Technical Education, B.A.S.](#)

[Secondary English Education with Concurrent Major in English, B.A.](#)

[Secondary Modern Languages Education with Concurrent Major in French, B.A.](#)

[Secondary Modern Languages Education with Concurrent Major in German, B.A.](#)

[Secondary Modern Languages Education with Concurrent Major in Spanish, B.A.](#)

[Secondary Modern Languages Education, B.A.](#)

[Secondary Social Studies Education with Concurrent Major in History, B.A.](#)

[Secondary Social Studies Education with Concurrent Major in Political Science, B.A.](#)

[Secondary Social Studies Education, B.A.](#)

[Social Work, B.S.W.](#) (Math 1000 is required)

[Sociology, B.A.](#) (Stat 2050 also satisfies a foundation course.)

[Spanish, B.A.](#)

[Studio Art, B.A.](#)

[Studio Art, B.F.A.](#)

[Theatre and Dance, Acting Performance Concentration, B.F.A.](#)

[Theatre and Dance, B.A.](#)

[Theatre and Dance, Dance Performance Concentration, B.F.A.](#)

[Theatre and Dance, Dance Science Concentration, B.F.A.](#)

[Theatre and Dance, Design Tech Management Concentration, B.F.A.](#)

[Theatre and Dance, Musical Theatre Performance Concentration, B.F.A.](#)

[Theatre and Dance, Theatre/English Concentration, B.F.A.](#)

[Visual Communication Design, B.F.A.](#)

Math/Stat requirements by degree program

The following programs either provide explicit math courses they would like students to take in the program of study or they have courses listed in the program of study that require at least one math or stat course as a prerequisite.

[Accounting, B.S.](#)

There are no specific math requirements in the program of study, however, the following are prerequisites to courses that are required for the program.

- Math 1400 College Algebra
- Stat 2050 Fundamentals of Statistics
- Math 2355 Math Applications for Business

[Agricultural Business, B.S.](#)

- Math 1400 College Algebra
- Math 2350 Business Calculus
- 4 credits of Statistics – usually Stat 2050 Fundamentals of statistics
(Stat 2050 required for Livestock Business Management option)

[Agricultural Communications, B.S.](#)

- Stat 2050 Fundamentals of Statistics

[Animal and Veterinary Science, B.S.](#)

Production, Range Livestock, Business, Communication, Meat Science and Food Technology, and Equine Science options:

- Math 1400 College Algebra
- Stat 2050 Fundamentals of Statistics

Animal Biology, and Pre-Veterinary Medicine options:

- Math 1400 College Algebra AND Math 1405 Trigonometry
OR
Math 1450 Algebra and Trigonometry
- Stat 2050 Fundamentals of Statistics

[Architectural Engineering, B.S.](#)

- Math 2200 Calculus I
- Math 2205 Calculus II
- Math 2210 Calculus III

- Math 2310 Applied Differential Equations I
- Stat 2050 Fundamentals of Statistics

[Astronomy and Astrophysics, B.S.](#)

- Math 2200 Calculus I
- Math 2205 Calculus II
- Math 2210 Calculus III
- Math 2250 Elementary Linear Algebra
- Math 2310 Applied Differential Equations I

[Biology, B.S.](#)

- Math 1400 College Algebra
- Math 1450 Trigonometry
- Math 2200 Calculus I
- (Opt) Stat 2050 Fundamentals of Statistics

[Botany, B.S.](#)

- Math 1400 College Algebra
- Math 1405 Trigonometry
- (Opt) Math 2200 Calculus I
- (Opt) Stat 2050 Fundamentals of Statistics

[Business Economics, B.S.](#)

There are no specific math requirements in the program of study, however, the following are prerequisites to courses that are required for the program.

- Math 1400 College Algebra
 - Stat 2050 Fundamentals of Statistics
 - Math 2200 Calculus I
- OR
- Math 2350 Business Calculus
 - Math 2355 Math Applications for Business

[Chemical Engineering, B.S.](#)

- Math 2200 Calculus I
- Math 2205 Calculus II
- Math 2210 Calculus III
- Math 2310 Applied Differential Equations I

[Chemistry, B.A.](#)

- Math 2200 Calculus I
- Math 2205 Calculus II

[Chemistry, B.S.](#)

- Math 2200 Calculus I
- Math 2205 Calculus II
- Math 2210 Calculus III
- (Plan 2) Stat 2050 Fundamentals of Statistics

[Civil Engineering, B.S.](#)

- Math 2200 Calculus I
- Math 2205 Calculus II
- Math 2210 Calculus III
- Math 2310 Applied Differential Equations I
- Stat 2050 Fundamentals of Statistics

[Communication, B.A.; Communication, B.S.](#)

- Stat 2050 Fundamentals of Statistics
- (Opt) 6-8 Q credits

[Computer Engineering, B.S.](#)

- Math 2200 Calculus I
- Math 2205 Calculus II
- Math 2210 Calculus III
- Math 2300 Discrete Structures
- Math 2310 Applied Differential Equations I

[Computer Science, B.S.; Computer Science, Big Data Concentration, B.S.; Computer Science, Computers and Business Concentration, B.S.](#)

- Math 2200 Calculus I
- Math 2205 Calculus II
- Math 2250 Elementary Linear Algebra
- (Opt) Math 2300 Discrete Structures
- Stat 2050 Fundamentals of Statistics

[Construction Management, B.S.](#)

- Math 1405 Trigonometry
- Math 2200 Calculus I
- Stat 2050 Fundamentals of Statistics

[Criminal Justice, B.A.](#)

- (opt) Stat 2050 Fundamentals of Statistics
- (Prelaw) Stat 4015 Regression Analysis – prerequisite Stat 2050

[B.S. in Dental Hygiene \(BSDH\)](#)

- Math 1400 College Algebra
- Stat 2050 Fundamentals of Statistics

[Design, Merchandising, and Textiles: Apparel Design and Product Development Career Track; Interior Design Career Track](#)

There are no specific math requirements in the program of study, however, the following are prerequisites/concurrent enrollment to courses that are required for the program.

- Placement Exam 3 or above (or equivalent), OR Math 0925, Math 1400, or Math 1405

[Design, Merchandising, and Textiles: Merchandising Career Track](#)

- Math 1400 College Algebra

[Dietetics](#)

Before admission to the program

- Math 1400 College Algebra

After admission to the program

- Stat 2050 Fundamentals of Statistics

[Economics, B.S.](#)

- (Prerequisite) Math 2350 Business Calculus
- (Prerequisite) Stat 2050 Fundamentals of Statistics
- (Quantitative Concentration) Stat 4015 Regression Analysis
- (Quantitative Concentration) Stat 4025 Design and Analysis of Experiments I

[Electrical Engineering, B.S.;](#) [Electrical Engineering, F.M. Long Bioengineering, B.S.](#)

- Math 2200 Calculus I
- Math 2205 Calculus II
- Math 2210 Calculus III
- Math 2250 Elementary Linear Algebra
- Math 2310 Applied Differential Equations I

[Elementary Education, B.A.](#)

- Math 1100 Number and Operations for Elementary School Teachers
- Math 1105 Data, Probability, and Algebra for Elementary School Teachers (Can be substituted)
- Math 2120 Geometry and Measurement for Elementary School Teachers

[Elementary Education/Special Education, B.A.](#)

- Math 1100 Number and Operations for Elementary School Teachers
- Math 1105 Data, Probability, and Algebra for Elementary School Teachers (Can be substituted)
- Math 2120 Geometry and Measurement for Elementary School Teachers

[Energy Resource Management and Development, Energy & Environmental Systems Concentration, B.S.](#)

- Math2200 Calculus I
- Stat 2050 Fundamentals of Statistics

[Energy Resource Management and Development- Professional Land Management Concentration, B.S.](#)

- Math 1405 Trigonometry
OR
Math 1450 Algebra and Trigonometry
- Math 2200 Calculus 1
OR
Math 2355 Mathematical Applications for Business
- Stat 2050 Fundamentals of Statistics

[Energy Systems Engineering, B.S.](#)

- Math 2200 Calculus I
- Math 2205 Calculus II
- Math 2210 Calculus III
- Math 2310 Applied Differential Equations I

[Entrepreneurship, B.S.](#)

There are no specific math requirements in the program of study, however, the following are prerequisites to courses that are required for the program.

- Math 1400 College Algebra
- Stat 2050 Fundamentals of Statistics
- Math 2355 Math Applications for Business

[Environmental Geology and Geohydrology, B.S.](#)

- Math 2200 Calculus I
- Math 2205 Calculus II
- (Opt) Math 2210 Calculus III
- (Opt) Stat 2050 Fundamentals of Statistics

[Environmental Systems Science, B.S.](#)

- Math 1400 College Algebra
- Math 2200 Calculus I
OR
Stat 2050 Fundamentals of Statistics

[Finance, B.S.](#)

There are no specific math requirements in the program of study, however, the following are prerequisites to courses that are required for the program.

- Math 1400 College Algebra
- Stat 2050 Fundamentals of Statistics
- Math 2355 Math Applications for Business

[Geology and Earth Science, B.A.](#)

- Math 1405 Trigonometry
OR
Math 1450 Algebra and Trigonometry

[Geology, B.S.](#)

- Math 2200 Calculus I
- (Opt in Option B)
Math 2205 Calculus II
OR
Math 2250 Elementary Linear Algebra

[HDFS Career Track for Family and Consumer Sciences Teacher Certification](#)

- Math 1400 College Algebra
- Stat 2050 Fundamentals of Statistics

[Human Nutrition and Food](#)

- Math 1400 College Algebra
- Stat 2050 Fundamentals of Statistics

[Journalism, B.A.](#)

- Stat 2050 Fundamentals of Statistics

[Kinesiology and Health Promotion, B.S.](#)

- Math 1400 College Algebra
- Stat 2050 Fundamentals of Statistics

[Management, B.S.](#)

There are no specific math requirements in the program of study, however, the following are prerequisites to courses that are required for the program.

- Math 1400 College Algebra
- Stat 2050 Fundamentals of Statistics
- Math 2355 Math Applications for Business
- (Opt) Math 2350 Business Calculus

[Marketing, B.S.](#)

There are no specific math requirements in the program of study, however, the following are prerequisites to courses that are required for the program.

- Math 1400 College Algebra
- Stat 2050 Fundamentals of Statistics
- Math 2355 Math Applications for Business

[Mathematics, B.A.; Mathematics, B.S.](#)

- Math 2200 Calculus I
- Math 2205 Calculus II
- Math 2210 Calculus III
- Math 2250 Elementary Linear Algebra
- Math 2310 Applied Differential Equations I
- Math 2800 Math Major Seminar
- Math 3500 Algebra I: Introduction to Rings and Proofs
- Math 3340 Introduction to Scientific Computing
- Math 3205 Analysis I: Elementary Real Analysis
- 18 additional credit hours (additional requirements must be met)

[Mechanical Engineering, B.S.](#)

- Math 2200 Calculus I
- Math 2205 Calculus II
- Math 2210 Calculus III
- Math 2310 Applied Differential Equations I

[Medical Laboratory Science, B.S.](#)

- Math 1400 College Algebra
- Stat 2050 Fundamentals of Statistics

[Microbiology, B.S.](#)

- Math 1400 College Algebra AND Math 1405 Trigonometry
OR
Math 1450 Algebra and Trigonometry
OR
Math 2200 Calculus I
- Stat 2050 Fundamentals of Statistics

[Molecular Biology, B.S.](#)

- Math 2200 Calculus 1 (Alternatively Math 1400 College Algebra AND Math 1405 Trigonometry OR Math 1450 Algebra and Trigonometry **with Advisor approval**)
- Stat 2050 Fundamentals of Statistics

[Nursing, B.S.N., Basic BSN Option; Nursing, B.S.N., BSN Completion - ReNEW Option; Nursing, B.S.N., BSN Completion - RN-BSN Option](#)

- Math 1400 College Algebra
- (Opt) Stat 2050 Fundamentals of Statistics

[Nursing, B.S.N., BRAND Option](#)

- Stat 2050 Fundamentals of Statistics

[Outdoor Recreation & Tourism Management, Business & Hospitality Management Concentration, B.S.](#)

- Stats 2050 Fundamentals of Statistics
- (Prerequisite) Math 1400 College Algebra
- (Opt) Math 2200 Calculus I or Math 2350 Business Calculus

[Outdoor Recreation & Tourism Management, Creative Studies in Recreation & Tourism Concentration, B.S.; Cultural & International Tourism Concentration, B.S.](#)

- Stat 2050 Fundamentals of Statistics

[Outdoor Recreation & Tourism Management, Management of Recreation Resources Concentration, B.S.](#)

- Stat 2050 Fundamentals of Statistics
- (Opt) Math 1400 College Algebra

[Outdoor Recreation & Tourism Management, Outdoor Recreation Leadership Concentration, B.S.](#)

- Stats 2050 Fundamentals of Statistics
- (Opt) Math 1400 College Algebra
- (Opt) Math 2200 Calculus I or Math 2350 Business Calculus

[Petroleum Engineering, B.S.](#)

- Math 2200 Calculus I
- Math 2205 Calculus II
- Math 2210 Calculus III
- Math 2310 Applied Differential Equations I

[Physical Education Teacher Education K-12, B.S.](#)

- Math 1400 College Algebra
OR
Math 1405 Trigonometry
- Stat 2050 Fundamentals of Statistics

[Physics, B.A.; Physics, B.S.](#)

- Math 2200 Calculus I
- Math 2205 Calculus II
- Math 2210 Calculus III

- Math 2310 Applied Differential Equations I
- (B.S.) Math 2250 Elementary Linear Algebra

[Physiology, B.S.](#)

- Math 1400 College Algebra
- Math 1405 Trigonometry
- Math 2200 Calculus 1
- (Opt) Stat 2050 Fundamentals of Statistics

[Plant Production and Protection, B.S.](#)

- Math 1400 College Algebra
- (Opt) Stat 2050 Fundamentals of Statistics

[Political Science B.A.; Political Science, B.S.](#)

- Stat 2050 Fundamentals of Statistics

[Professional Sales, B.S.](#)

There are no specific math requirements in the program of study, however, the following are prerequisites to courses that are required for the program.

- Math 1400 College Algebra
- Stat 2050 Fundamentals of Statistics
- Math 2355 Math Applications for Business
- (Opt) Math 2350 Business Calculus

[Psychology, B.S.](#)

- Stat 2050 Fundamentals of Statistics
 - (Opt) Math 1405 Trigonometry
- OR
- Math 2200 Calculus 1
- OR
- Stat 2000 Statistics and the World

[Rangeland Ecology and Watershed Management, B.S.](#)

- Math 1400 College Algebra
- Stat 2050 Fundamentals of Statistics

[Secondary Agricultural Education with Concurrent Major in Agricultural Business, B.S.](#)

- Math 2350 Business Calculus
- (Recommended) Stat 2050 Fundamentals of Statistics

[Secondary Agricultural Education with Concurrent Major in Agricultural Communications, B.S.](#)

There are no specific math requirements in the program of study, however, the following are prerequisites to courses that are required for the program.

- Math 1400 College Algebra

[Secondary Agricultural Education with Concurrent Major in Animal and Veterinary Science, B.S.](#)

There are no specific math requirements in the program of study, however, the following are prerequisites to courses that are required for the program.

- Math 1400 College Algebra
- Stat 2050 Fundamentals of Statistics

Secondary Mathematics Education with Concurrent Major in Mathematics, B.A.

- Math 2200 Calculus I
- Math 2205 Calculus II
- Math 2210 Calculus III
- Math 2250 Elementary Linear Algebra
- Math 2310 Applied Differential Equations I
- Math 2800 Math Major Seminar
- Math 3500 Algebra I: Introduction to Rings and Proofs
- Math 3340 Introduction to Scientific Computing
- Math 3205 Analysis I: Elementary Real Analysis
- Math 4000 History of Mathematics
- Math 4600 Foundations of Geometry
- Stat 2000 Statistics and the World
- OR
- (Recommended) Stat 2050 Fundamentals of Statistics
- 4 additional upper division courses (additional requirements must be met)

Secondary Science - Biological Science Education with Concurrent Major in Biology (BSSE), B.A.

- Math 2200 Calculus I
- (Opt) Stat 2050 Fundamentals of Statistics

Secondary Science - Chemistry Education with Concurrent Major in Chemistry (CHSE), B.A.

- Math 2200 Calculus I
- Math 2205 Calculus II
- Stat 2050 Fundamentals of Statistics

Secondary Science - Earth Science Education with Concurrent Major in Environmental Systems Science (ESSE), B.A.

- Math 1400 College Algebra
- Math 2200 Calculus I
- (Recommended) Stat 2050 Fundamentals of Statistics

Secondary Science - Earth Science Education with Concurrent Major in Geology (GSSE), B.A.

- Math 1405 Trigonometry
- OR
- Math 1450 Algebra and Trigonometry
- Stat 2050 Fundamentals of Statistics

Secondary Science - Physics Education with Concurrent Major in Physics (PHSE), B.A.

- Math 2200 Calculus I
- Math 2205 Calculus II
- Math 2210 Calculus III
- Math 2310 Applied Differential Equations I

Speech, Language and Hearing Science, B.S.

- Math 1400 College Algebra
- Stat 2050 Fundamentals of Statistics

[Statistics, B.A.; Statistics, B.S.](#)

- Math 2200 Calculus I
- Math 2205 Calculus II
- Math 2210 Calculus III
- Math 2250 Elementary Linear Algebra
- Stat 2050 Fundamentals of Statistics
- Stat 4015 Regression Analysis
- Stat 4025 Design and analysis of Experiments I
- Stat 4255 Mathematical Theory of Probability
- Stat 4265 Introduction to the Theory of Statistics
- (B.S.) Stat 4270 Applied Bayesian Statistics
- Stat 4870 Senior Thesis
- 12 additional credit hours from Statistics (additional requirements must be met)

[Wildlife and Fisheries Biology and Management, B.S.](#)

- Math 1400 College Algebra
- Math 1405 Trigonometry
- (Opt) Math 1450 Algebra and Trigonometry can substitute for Math 1400 and Math 1405
- Math2200 Calculus I
- (Opt) Stat 2050 Fundamentals of Statistics

[Zoology, B.S.](#)

- Math 1400 College Algebra
- Math 1405 Trigonometry
- (Opt) Math 1450 Algebra and Trigonometry can substitute for Math 1400 and Math 1405
- Math2200 Calculus I
- (Opt) Stat 2050 Fundamentals of Statistics

[Zoology, B.S. UW - Casper](#)

- Math 1400 College Algebra
- Math 1405 Trigonometry
- Math2200 Calculus I
- Stat 2050 Fundamentals of Statistics

Math/Stats Course Requirements by Minor

The following program minors either provide explicit math courses they would like students to take in the required courses of the program of study or they have courses listed in the required courses of the program of study that require at least one math or stat course as a prerequisite for a minor.

[Agricultural Business Minor](#)

- Math 1400 College Algebra

[Agroecology Minor](#)

- Math 0925 , MPE 3 (or equivalent)
OR

Math 1400 College Algebra

[Agronomy Minor](#)

- Math 1400 College Algebra

[Animal and Veterinary Science, Animal and Veterinary Science Minor](#)

- Math 1400 College Algebra
- Stat 2050 Fundamentals of Statistics

[Applied Economics Minor](#)

- Math 2350 Business Calculus
- Stat 2050 Fundamentals of Statistics

[Astronomy Minor](#)

- Math 2200 Calculus I
- Math 2205 Calculus II
- Math 2210 Calculus III

[Banking and Financial Services Minor](#)

- Math 1400 College Algebra
- Math 2350 Business Calculus
OR
Math 2355 Mathematics Applications for Business
OR
Math 2200 Calculus I
- Stat 2050 Fundamentals of Statistics

[Biology, Minor](#)

- Math 1400 College Algebra

[Biomedical Engineering Minor](#)

Chemical Engineering; Mechanical Engineering; Medical School Preparation

- Math 1400 College Algebra

Electrical Engineering

- Math 2205 Calculus II

[Botany, Minor](#)

- Math 1400 College Algebra

[Computer Engineering Minor](#)

- Math 2205 Calculus II

[Data Analytics Minor](#)

- Math 1400 College Algebra
- Math 2200 Calculus I
OR
Math 2350 Business Calculus

- Stat 2050 Fundamentals of Statistics

Economics Minor

- Math 2200 Calculus I
OR
Math 2350 Business Calculus
- Stat 2050 Fundamentals of Statistics

Electrical Engineering Minor

- Math 2205 Calculus II

Farm and Ranch Management Minor

- Math 1400 College Algebra

Forest Resources Minor

- Math 1400 College Algebra

Hospitality Business Management Minor

- Math 1400 College Algebra

Human and Animal Physiology Minor

- Math 1400 College Algebra

Human Nutrition Minor

- Math 1400 College Algebra

Interdisciplinary Computational Science Minor

- (Opt) Math 4340 Numerical Methods for Ordinary and Partial Differential Equations
- (Opt) Math 340 Introduction to Scientific Computing
- Stat 4460 Statistical Software

Mathematics Minor

- Math 2200 Calculus I
- Math 2205 Calculus II
- Math 2210 Calculus III
- Math 2310 Applied Differential Equations I
- Math 2250 Elementary Linear Algebra
- Math 2800 Math Major Seminar
- Math 2305 Analysis I: Elementary Real Analysis
OR
Math 3500 Algebra I: Introduction to Rings and Proofs
OR
Math 3340 Introduction to Scientific Computing
- 3 Credits upper division math

Molecular Biology Minor

- Math 1400 College Algebra AND Math 1405 Trigonometry

- OR
- Math 1450 Algebra and Trigonometry
- OR
- Math 2200 Calculus I

Neuroscience Minor

- Math 1400 College Algebra

Physics Minor

- Math 2200 Calculus I
- Math 2205 Calculus II
- Math 2210 Calculus III

Plant Protection Minor

- Math 1400 College Algebra

Process Control Minor

- Math 2205 Calculus II

Rangeland Ecology and Watershed Management Minor

- Math 1400 College Algebra

Real Estate Minor

- Math 1400 College Algebra
- Math 2350 Business Calculus
- OR
- Math 2355 Mathematics Applications for Business
- OR
- Math 2200 Calculus I
- Stat 2050 Fundamentals of Statistics

Reclamation and Restoration Ecology Minor

- Math 1400 College Algebra

Soil Science Minor

- Math 0925, or MPE 3 (Or equivalent)

Statistics Minor

- Math 1400 College Algebra
- Stat 2050 Fundamentals of Statistics
- 12 credit hours from approved list of Statistics courses

Wildlife Fisheries Biology Management Minor

- Math 1400 College Algebra
- (Opt) Stat 2050 Fundamentals of Statistics

Zoology Minor

- Math 1400 College Algebra