

Advising for Mathematics Courses

The Bemidji State University Mathematics Program encourages all students to advance the breadth and depth of their mathematical experience during their time in college. This document is intended to summarize the program requirements and math program advice for incoming students.

Courses mentioned are:

MATH 1100 Math Reasoning
MATH 1120 Environmental Math
MATH 1170 College Algebra
STAT 2610 Applied Statistics
MATH 1470 Precalculus
MATH 2210 Discrete Math
MATH 2471 Calculus I
MATH 2472 Calculus II
MATH 2480 Multivariable Calculus
MATH 2490 Differential Equations

Accounting

Minimal: College Algebra
Advice: College Algebra, Precalculus, Calculus I

Biology - Aquatics

Advice: College Algebra, Applied Statistics, Environmental Math, Precalculus, Calculus I
Emphases with Applied Statistics elective: Aquatic Systems, Wetlands Ecology, Fisheries Biology
Emphases with Calculus I elective: Fisheries Biology

Biology – B.A.

Minimal: any liberal education math.
Advice: Applied Statistics, Environmental Math, Precalculus, Calculus I

Biology – B.S.

Minimal: any liberal education mathematics
Advice: Applied Statistics, Precalculus, Calculus I, Calculus II.
Electives: Applied Statistics, Calculus I

Biology - Medical Laboratory Science 3+1

Minimal: College Algebra or Precalculus
Advice: College Algebra or Precalculus, Applied Statistics
Elective in major: Applied Statistics

Biology & Chemistry – Cellular and Molecular Biology

Advice: Applied Statistics, Precalculus, Calculus I

Emphases with Applied Statistics requirement: Cellular and Molecular

Emphasis with Calculus I requirement: Biochemistry

Business Administration

Minimal: College Algebra

Advice: College Algebra, Precalculus, Calculus I

Chemistry – BA

Minimal: any liberal education math

Advice: Applied Statistics, Precalculus, Calculus I

Chemistry B.S.

Emphases with Calculus I requirement: Biochemistry/Biotechnology, Criminalistics, Environmental Chemistry,

Emphasis with Calculus I and Calculus II requirement: Chemistry

Advice: Applied Statistics, Precalculus, Calculus I, Calculus II, Multivariable Calculus, Differential Equations. Students entering with credit for precalculus or any calculus course should be placed in the next higher calculus course as soon as possible.

Communication Studies (minor)

Minimal: any liberal education math

Advice: Math Reasoning

Community & Criminal Justice Studies

Minimal: any liberal education math

Advice: Math Reasoning

Computer Information Systems

Required: College Algebra or Precalculus

Computer Science

Minimal: Precalculus

Advice: Precalculus, Calculus I, Calculus II, Multivariable Calculus

Students entering with credit for precalculus or any calculus course should be placed in the next higher calculus course as soon as possible.

Criminal Justice

Minimal: any liberal education math

Advice: Math Reasoning

Earth Science

Minimal: any liberal education math

Advice: Applied Statistics, College Algebra, Environmental Math, Precalculus, Calculus I

Economics

Minimal: College Algebra.

Advice: Applied Statistics, Precalculus, Calculus I

Elective in Major: Applied Stats, Calculus I

English

Minimal: any liberal education math

Advice: Math Reasoning

Environmental Studies

Minimal: Precalculus or Calculus I

Advice: Precalculus, Calculus I, Applied Statistics, Environmental Math

Elective in Major: Applied Stats

Exercise Science

Minimal: Any liberal education math

Advice: College Algebra, Math Reasoning, Applied Statistics, Precalculus, Calculus I

Gender and Women's Studies

Minimal: any liberal education math

Advice: Math Reasoning

Geography

Minimal: any liberal education math

Advice: Environmental Math, Math Reasoning, College Algebra, Precalculus

Elective in major: Applied Statistics

Geology (minor):

Minimal: any liberal education math

Advice: Environmental Math, College Algebra, Precalculus, Calculus I

Health

Minimal: any liberal education math

Advice: Math Reasoning, College Algebra, Applied Statistics

History

Minimal: any liberal education math

Advice: Math Reasoning

Humanities

Gender and Women's Studies

Minimal: any liberal education math

Advice: Math Reasoning

Indigenous Studies

Gender and Women's Studies

Minimal: any liberal education math

Advice: Math Reasoning, Environmental Math

Individualized Studies

Minimal: any liberal education math

Advice: Math Reasoning

International Studies

Minimal: any liberal education math

Advice: Math Reasoning

Leadership (minor)

Minimal: any liberal education math

Advice: Math Reasoning

Liberal Studies

Minimal: any liberal education math

Advice: Math Reasoning

Mathematics

Advice: Precalculus, Calculus I, Calculus II, Multivariable Calculus, Discrete Math.

Students entering with any of these courses should be placed in the next higher course as soon as possible. Calculus I is the first course in the mathematics majors.

Applied Statistics is an elective in some of the emphases.

Media, Integrated

Minimal: any liberal education math

Advice: Math Reasoning

Modern Languages

Minimal: any liberal education math

Advice: Math Reasoning

Music

Minimal: any liberal education math

Advice: Math Reasoning

Nursing

Minimal: any liberal education math

Advice: Math Reasoning, Applied Statistics

Philosophy

Minimal: any liberal education math

Advice: Math Reasoning

Physical Education

Minimal: any liberal education math

Advice: Math Reasoning

Physics

Minimal: Calculus I, Calculus II

Advice: Precalculus, Calculus I, Calculus II, Multivariable Calculus, Differential Equations

Students entering with credit for any of these courses should be placed in the next higher course as soon as possible.

Political Science and Applied Public Policy minor

Minimal: any liberal education math

Advice: Math Reasoning, Environmental Math

Pre-Professional Studies

Courses listed are needed for entrance into most professional schools. Students should investigate specific requirements for programs to which they wish to apply.

Occupational Therapy: College Algebra, Applied Statistics

Chiropractic, Dentistry, Optometry, Physical Therapy: Precalculus

Engineering: Calculus I required.

Advice: Precalculus, Calculus I, Calculus II, Multivariable Calculus, Differential Equations.

Students entering with credit for any of these courses should be placed in the next higher course as soon as possible.

Law: Any liberal education math course.

Mortuary: Math Reasoning

Medical, Veterinarian: Math requirements vary for professional schools.

Osteopathic, Pharmacy, Podiatric: Precalculus, Calculus I, Calculus II

Physician Assistant: Applied Statistics

Professional Education

Elementary Education

Minimal: Any liberal education math

Advice: Math Reasoning, College Algebra, Applied Statistics, Precalculus

Students doing the Mathematics endorsement in Elementary Education are strongly recommended to take Precalculus.

English Education, Health Education, Music Education, Physical Education, Social Studies Education

Minimal: Any liberal education math

Advice: Math Reasoning, Applied Statistics

Mathematics, Mathematics Education (secondary)

Advice: Precalculus, Calculus I, Calculus II, Multivariable Calculus, Discrete Math.

Students entering with any of these courses should be placed in the next higher course as soon as possible. Calculus I is the first course in the mathematics majors.

Applied Statistics is an elective in some of the emphases.

Science Education

Minimal: any liberal education math

Advice: Applied Statistics, Environmental Math, Precalculus, Calculus I

The Physics Specialty recommends Calculus I.

Psychology

Minimal: any liberal education math

Advice: Math Reasoning, College Algebra, Applied Statistics, Environmental Math

Social Studies B.A.

Minimal: any liberal education math

Advice: Math Reasoning, Applied Statistics, Environmental Math

Social Work

Minimal: any liberal education math

Advice: Math Reasoning

Sociology

Minimal: any liberal education math

Advice: Math Reasoning, Environmental Math

Space Studies (minor)

Minimal: any liberal education math

Advice: Applied Statistics, Environmental Mathematics, College Algebra, Precalculus, Calculus I

Spanish

Minimal: any liberal education math

Advice: Math Reasoning

Sports Management

Minimal: any liberal education math

Advice: Math Reasoning, College Algebra, Applied Statistics

TAD – Applied Engineering, Applied Management, Design B.S.

Minimal: any liberal education math

Advice: Math Reasoning, College Algebra, Applied Statistics

TAD – Engineering Technology

Minimal: Precalculus

Advice: College Algebra, Applied Statistics, Environmental Math, Precalculus, Calculus I

TAD – Project Management

Minimal: any liberal education math

Advice: Math Reasoning, College Algebra, Applied Statistics

