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
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.

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
Mineral: 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

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
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)*
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  
The Physics Specialty recommends Calculus I.

*Psychology*
Minimal: any liberal education math  

*Social Studies B.A.*
Minimal: any liberal education 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  
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

TAD – Project Management
Minimal: any liberal education math
Advice: Math Reasoning, College Algebra, Applied Statistics