Duluth Campus

Teaching Mathematics B.A.Sc.

Education, Mathematics & Statistics

College of Education and Human Service Professions

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2015
- Required credits to graduate with this degree: 121
- Required credits within the major: 99
- This program requires summer terms.
- Degree: Bachelor of Applied Science

The B.A.Sc. in teaching mathematics is offered by the Department of Education in conjunction with the Department of Mathematics and Statistics. This major is for students who plan to teach mathematics in grades 5-12.

Program Delivery

This program is available:

- via classroom (the majority of instruction is face-to-face)

Admission Requirements

Students must complete 45 credits before admission to the program.

Freshman and transfer students students are usually admitted to pre-major status before admission to this major

A GPA above 2.0 is preferred for the following:

- 2.50 already admitted to the degree-granting college
- 2.50 transferring from another University of Minnesota college
- 2.50 transferring from outside the University

Students entering the secondary and K-12 licensure programs are bound by the policies in effect at the time of application; admission is based on criteria established by the Dept of Education, consistent with MN policies, as established by the National Council for Accreditation in Teacher Education. Students must 1)complete EDUC 1101; 2)GPA of at least 2.50 cumulative including transfer work & in major courses completed at time of application; 3)take the MTLE Basic Skills Test for licensure; 4)passing scores on a nationally recognized standardized test (MTLE Basic Skills Test, ACT, SAT); 5)minimum 30 documented hours working with students in grades 5-12; 6)receive a C- or better in all required courses for the major. Students must submit a letter of application, resume, letters of recommendation, and their APAS report. There are alternatives to the admission procedures to encourage the participation of individuals from underrepresented groups and students as determined by the dept.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites

Introductory Course (1 cr)

This course will be waived for transfer students or students who change colleges from a college where it is not required.

Register course for one credit.

UST 1000 - Learning in Community (1.0 - 2.0 cr)

Lower Division (18 cr)

Computer Science

CS 1511 - Computer Science I [LE CAT] (5.0 cr)

or CS 1581 - Honors: Computer Science I [LE CAT] (5.0 cr)

Education

EDUC 1101 - Education in Modern Society [LE CAT7, HUMANITIES] (3.0 cr)

Calculus I

MATH 1296 - Calculus I [LE CAT, LOGIC & QR] (5.0 cr)

or MATH 1596 *{Inactive}*[LE CAT2, LOGIC & QR] (5.0 cr)

Calculus II

MATH 1297 - Calculus II [LOGIC & QR] (5.0 cr)

or MATH 1597 *{Inactive}*[LOGIC & QR] (5.0 cr)

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General Requirements

The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:

1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements

1. Compliance with general regulations governing granting of degrees. Students are required to review their degree status in the CEHSP Advising & Academic Services Office early in their senior year.

2. Make satisfactory academic progress and demonstrate acceptable professional performance in field experiences.

3. Program completers must pass all tests required by the Minnesota Board of Teaching to be recommended for licensure.

4. Students are expected to: a) make satisfactory progress each semester, including grades of C- or better in all courses required in the major; b) demonstrate acceptable professional performance in applied learning settings (e.g., laboratory, field experiences, clinical experiences); and c) obtain an approved background check before being placed in clinical, field, intern, or student teaching experiences. Students who do not meet program expectations can be dismissed from the major. Details on these requirements are available from the department office.

Upper Division (80 cr)

Students must take EDUC 3412 for 4 credits. Application for admission to the blocks can only be completed fall semester for spring semester admission. Application for admission to the blocks must be submitted by the 6th Friday of the semester. Applications are available from the Department of Education website.

EDUC 3412 - The Computer in Education (3.0 cr)
EDUC 4226 - Geometry for Teachers in Grades 5-8 (3.0 cr)
EDUC 4227 - Number Theory for Teachers in Grades 5-8 (3.0 cr)
EDUC 4228 - Teaching Mathematics with Technology (3.0 cr)
HLTH 3202 - Drug Education (2.0 cr)
MATH 3110 - Foundations of Mathematics and Geometry (4.0 cr)
MATH 3280 - Differential Equations with Linear Algebra (4.0 cr)
MATH 3355 - Discrete Mathematics (4.0 cr)
MATH 3941 - Undergraduate Colloquium (1.0 cr)
MATH 4201 - Elementary Real Analysis (4.0 cr)
MATH 4370 - Introduction to Abstract Algebra for Teaching Majors (3.0 cr)
STAT 3611 - Introduction to Probability and Statistics (4.0 cr)

Advanced Writing

WRIT 3140 - Advanced Writing: Human Services (3.0 cr)
or WRIT 3150 - Advanced Writing: Science (3.0 cr)

Block 1

All courses must be taken concurrently. Consult advisor for additional upper division math course.

EDSE 4204 - Designing Learning Environments and Lessons (3.0 cr)
EDSE 4100 - Teaching in a Diverse Society (3.0 cr)
EDSE 4501 - Adolescent/Adult Development and Learning Theory (3.0 cr)
SPED 3415 - Special Education in the Secondary School (3.0 cr)

Block 2

All courses must be taken concurrently. Application for student teaching must be made by the 4th Friday of the semester before student teaching. Applications are available from the Department of Education website. Consult advisor for additional upper division math course.

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EDSE 3206 - Apprenticeship: Secondary School (2.0 cr)
EDSE 4214 - Teaching Content-Area Reading (3.0 cr)
EDSE 4222 - Teaching Mathematics: Grades 5-12 (3.0 cr)
EDSE 4525 - Assessment for Secondary Education (3.0 cr)
EDUC 4381 - Teaching Indigenous Students (3.0 cr)

Block 3

All courses must be taken concurrently. Students must take EDSE 4600 for 12 credits. Registration for student teaching in the senior year requires: grades of C- or better in all courses in the teaching major(s) and minor(s); completion (graded) of all education block courses; and completion of at least 85 percent of teaching major courses. Students must have personal liability insurance while they are working in field placement settings.

EDSE 4600 - Student Teaching (3.0 - 24.0 cr)
EDUC 4500 - Professional Issues and Ethics (1.0 cr)

Diversity Immersion Experience

Candidates must spend a minimum of 40 hours at a formal or non-formal educational setting that has a high percentage (greater than 50 percent) of children, young adults, or families from diverse communities. The format of this experience allows candidates to observe, interact, and reflect in an educational setting guided by focus questions and recommended readings.
Students must meet this requirement after they take EDUC 1101 and before they complete their education program. Registration for credit is not required for this experience; however, candidates who wish to earn credit may register for EDUC 4991.

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