

# MATHEMATICS

College of Natural Science and Mathematics  
Department of Mathematics and Statistics  
907-474-7332  
[www.dms.uaf.edu](http://www.dms.uaf.edu)

## M.A.T., M.S., Ph.D. Degrees

Minimum Requirements for Degrees: M.A.T.: 36 credits;  
M.S.: 30 – 35 credits; Ph.D.: 18 thesis credits

The number of new fields in which professional mathematicians find employment grows continually. This department prepares students for careers in industry, government and education.

The M.S. in mathematics prepares students for Ph.D. work, in addition to providing a terminal degree for those planning to enter industry or education. The M.A.T. degree prepares graduates to teach secondary school mathematics. The aim of the Ph.D. program is to provide the student with the expertise to accomplish significant research in applied or pure mathematics, as well as to provide a broad and deep professional education.

In addition to the major programs, the department provides a number of service courses in support of other programs within the university. Current and detailed information on mathematics degrees and course offerings is available from the department.

The Department of Mathematics and Statistics also offers programs in statistics (see separate listings).

### Graduate Program — M.A.T. Degree

1. Complete the following admission requirements:
    - a. Submit three letters of recommendation concerning the applicant's educational background and quantitative training.
    - b. Submit complete transcripts for all college-level work.
    - c. Submit a resume.
    - d. Submit a written statement of goals.
    - e. The department does not require any GRE, but recommends applicants provide GRE general scores.
    - f. Complete and submit a TOEFL score of at least 600 (this requirement is only for foreign applicants who seek a teaching assistantship).
    - g. The department gives preference to foreign applicants who also submit results of the Test of Spoken English.
  2. Complete the general university requirements (page 202).
  3. Complete the M.A.T. degree requirements (page 208).
  4. Complete the following:

|               |    |
|---------------|----|
| MATH courses* | 18 |
|---------------|----|
  5. Minimum credits required..... 36
- \* At least 12 credits must be at the F600-level.

### Graduate Program — M.S. Degree

1. Complete the following admission requirements:
  - a. Submit three letters of recommendation concerning the applicant's educational background and quantitative training.
  - b. Submit complete transcripts for all college-level work.
  - c. Submit a resume.
  - d. Submit a written statement of goals.
  - e. The department does not require any GRE, but recommends applicants provide GRE general scores.
  - f. Complete and submit a TOEFL score of at least 600 (this requirement is only for foreign applicants who seek a teaching assistantship).
  - g. The department gives preference to foreign applicants who also submit results of the Test of Spoken English.
2. Complete the general university requirements (page 202).
3. Complete the master's degree requirements (page 206) including a written comprehensive exam.
4. Complete the following mathematics (core) courses:

|  |   |
|--|---|
| MATH F631—Theory of Modern Algebra I ..... | 4 |
| MATH F641—Real Analysis.....               | 4 |
| MATH F645—Complex Analysis .....           | 4 |
| MATH F651—Topology .....                   | 4 |
5. Complete mathematics electives.
6. Complete a project or thesis.
7. Minimum credits required ..... 30 – 35

### Graduate Program — Ph.D. Degree

1. Complete the following admission requirements:
  - a. Submit three letters of recommendation concerning the applicant's educational background and quantitative training.
  - b. Submit transcripts indicating completion of a master's degree in mathematics or equivalent.
  - c. Submit a resume.
  - d. Submit a written statement of goals.
  - e. The department does not require any GRE, but recommends applicants provide GRE general scores.
  - f. Complete and submit a TOEFL. (For teaching assistantship consideration, foreign applicants whose native language is not English. Score of at least 600.)
  - g. The department gives preference to applicants who also submit results of the Test of Spoken English.
2. Complete the general university requirements (page 202).
3. Complete the Ph.D. degree requirements (page 207).
4. Minimum credits required ..... 18