



**COLLEGE OF THE  
ENVIRONMENT, FORESTRY AND  
NATURAL SCIENCES**

**DEPARTMENT OF  
MATHEMATICS AND STATISTICS**

**HANDBOOK FOR  
GRADUATE STUDENTS**

**2024 - 2025**



**DEPARTMENT OF MATHEMATICS AND STATISTICS GRADUATE  
PROGRAM POLICIES**

**I. ADMISSION REQUIREMENTS**

Mathematics Education, or the Certificate in Applied Statistics) and must reapply to be admitted to another program. If the regular admission requirements are not met, an applicant may still be admitted but on a provisional basis, subject to some additional requirements. Regular admission is granted if the provisions are met satisfactorily.

International students whose native language is not English must present a TOEFL (Test of English as a Foreign Language), International English Language Testing System (IELTS) or Duolingo score before being considered for admission. For admission, the department requires minimum scores of 80 (TOEFL), 6.5 (IELTS) or 105 (Duolingo). To be eligible for assistantship, higher scores are required - 89 (TOEFL), 7 (IELTS), 115 (Duolingo). This does not apply to international students whose undergraduate degree was taken in English or those from NAU's list of English-speaking countries <https://nau.edu/cie/education-abroad/programs/english-speaking-countries/>

## **II. FINANCIAL AID**

A number of teaching assistantships are offered each year by the Department of Mathematics and Statistics. This number varies from year to year according to budgetary limitations.

Northern Arizona University is committed to providing an excellent education to its undergraduates, and the department strives to have a quality team of graduate teaching assistants (GTAs) working as part of that commitment. The most common graduate teaching assistant appointment is for 20 hours

beyond a fourth semester.

In addition, the Graduate College offers a limited number of waivers of the nonresident portion of tuition available to nonresidents of Arizona. Graduate program coordinators across the university make annual recommendations for these waivers. The department is permitted to make just a few such recommendations, and waivers are given totally at the discretion of the Graduate Dean. Such recommendations are made with the goal of attracting the very best applicants, especially those with undergraduate degrees obtained elsewhere. Recommendations may also be made in cases of financial need.

Teaching assistantships are generally not offered to incoming international students whose native language is not English, although financial support may be available in the form of hourly wages. To be awarded a GTA position, a student whose native language is not English must demonstrate evidence of effective communication skills in English, through a personal interview and/or a score on the Test of Spoken English (TSE) of at least 50.

The Graduate College may provide further financial support. See <http://nau.edu/Student-Orgs/Graduate-Student-Government/Funding-Opportunities/>

### **III. ACADEMIC INTEGRITY**

All students at Northern Arizona University are expected to adhere to the [Academic Integrity Policy](#). (Policy 100601 in the Academic Catalog).

Prior to their initial enrollment in classes, each student must complete academic dishonesty training by taking the course *Academic Integrity @NAU for Students* available in their list of courses in Canvas. On completion of this training course each student must can take a picture of the certificate they earn and should send this to the Graduate Coordinator at [math.grad@nau.edu](mailto:math.grad@nau.edu).

The Department of Mathematics & Statistics applies a zero-tolerance interpretation of the Academic Integrity Policy. First offenders should not expect a friendly warning from their instructor.

### **IV. ADVISORS**

Once a student has been admitted to a graduate program in the Department of Mathematics and Statistics, and the student has indicated their intent to enroll in classes the Graduate Operations Committee will formally assign the student an advisor, with this assignment recorded in the student's department file and made available on LOUIE. Any change

## **V. TRANSFER CREDIT**

Graduate students may obtain transfer credit for graduate coursework completed at other colleges and universities. To obtain such credit the Graduate College form “Petition for Transfer Credit” must be filled out (<http://nau.edu/gradcol/policies-and-forms/forms>) signed by the student’s advisor and submitted to the Graduate Operations Committee, along with catalog copy and transcripts for the courses in question. The Graduate Operations Committee must approve this petition before it is forwarded to the Graduate College for the final approval. Note that the number of units that may be transferred from other institutions cannot exceed twenty-five percent of the total minimum units of credit required for the Master’s Degree or graduate certificate. See the current Academic Catalog for additional details: <https://nau.edu/catalog/>

## **VI. COURSE SUBSTITUTION**

It may be necessary for a graduate student to substitute a course

have their assistantship terminated due to unsatisfactory progress toward their degree.

### **VIII. COMPREHENSIVE ORAL EXAMINATION (NON-THESIS OPTION)**

The Comprehensive Examination Committee shall normally consist of 3 members. The Committee and topics to be covered shall be selected by the student's assigned graduate advisor in the program and approved by the Graduate Operations Committee. Where possible, the committee membership should be restricted to those faculty members under whom the student has completed or is in the process of completing coursework in their program. The Chair of the Committee shall be the student's assigned graduate advisor, or a member designated by the advisor should he/she not be a member of the Committee.

The Comprehensive Examination will normally take place on the NAU Flagstaff campus with

exam a discussion of the committee members



members of his/her Research Committee. This committee will verify that the objectives of the student's research plan have been met and that the work is of an appropriate standard. Only once it is agreed that the student is ready to defend, and following an initial format check, may the defense be scheduled.

On the completion of the written thesis, the student is required to give a public presentation of their work on the NAU campus. This presentation must occur within the month prior to the formal thesis defense.

The student's Research Committee must all be present at the thesis defense and are free to ask questions on any material contained in the student's thesis. The defense is closed to all but the student and the Research Committee.

**X.**

Mathematics and statistics software on the computers is regularly updated.

There are numerous student computer labs across campus with both Macintosh and PC computers. Upon admission, students receive a university e-mail account. Students are expected to regularly check this account for official department and university announcements. For more information about university computing, visit the Information Technology Services (ITS) website <https://in.nau.edu/its/> or call the ITS Service Desk at (928) 523-3335.

### **XIII. SCHEDULE OF GRADUATE COURSES**

Graduate students need to carefully plan their schedule of coursework in consultation with their advisor as not every course is offered every year.

The [Course Rotation Schedule](#) for graduate courses in each Master's program is updated regularly. Note that The Master of Science programs in Mathematics and Statistics are typically four-semester programs (no summer courses are available), while the M.S. Mathematics Education program is year-round.

### **XIV. DEPARTMENT OF MATHEMATICS AND STATISTICS PERMANENT FACULTY**

**Mikhail Baltushkin, M.S.** (Northern Arizona University) Undergraduate mathematics

**Brian Beaudrie, Ed.D.** (Montana State University) Mathematics education

**Allison Berkman, M.S.** (Northern Arizona University) Mathematics education

**Ellie Blair, M.A.** (University of Colorado-Boulder) Undergraduate mathematics

**Barbara**

**Monika Keindl, M.A., M.S.** (Arizona State University) Number theory and statistics  
**Jaechoul Lee, Ph.D.** (The University of Georgia) Statistics  
**Minah Kim, Ph.D.** (Florida State University) Mathematics Education  
**Katie Louchart, M.S.** (Northern Arizona University) Undergraduate mathematics  
**Benjamin Lucas, Ph.D.** (Monash University) Spatiotemporal, spatial, and temporal machine learning and applications  
**Bianca Luedeker, Ph.D.** (Northern Arizona University) Mathematics and undergraduate education  
**Gabriel Markou, M.S.** (Northern Arizona University). Undergraduate mathematics  
**Shanna Manny M.S.** (Northern Arizona University) Undergraduate mathematics  
**Gina Nabours, Ph.D.** (Northern Arizona University) Undergraduate mathematics  
**John Neuberger, Ph.D.** (University of North Texas) Nonlinear differential equations and numerical analysis  
**Rachel Neville, Ph.D.** (Colorado State University) Topological data analysis and dynamics  
**Hannah Prawzinsky, M.S.** (Northern Arizona University) Undergraduate mathematics  
**Amy Rangel, M.S.** (Northern Arizona University) Undergraduate mathematics  
**Amy Rushall, M.M.** (University of Tennessee-Knoxville) Undergraduate mathematics  
**Jeffrey Rushall, M.A.** (University of Texas-Austin) Number theory and undergraduate education  
**Roy St. Laurent, Ph.D.** (University of Minnesota) Statistics, nonlinear regression, and diagnostics  
**Nándor Sieben, Ph.D.** (Arizona State University) Operator algebras, game theory, and combinatorics  
**James Swift, Ph.D.** (University of California-Berkeley) Dynamical systems  
**Michele Torielli, Ph.D.** (Warwick University) Combinatorics, algebra, and topology  
**Victoria Vakarchuk, M.S.** (Arizona State University) Statistics  
**Jin Wang, Ph.D.** (University of Texas-Dallas) Statistics  
**Sarah Watson, M.S.** (University of Arkansas) Undergraduate mathematics  
**Ian Williams, M.S.** (Northern Arizona University) Undergraduate mathematics  
**Xiangming Wu, Ph.D.** (West Virginia University) Undergraduate mathematics education  
**Yan Ling Zhou, M.S.** (Kennesaw State University) Statistics