

## Mathematical Sciences M.S. Program Handbook

### Welcome

Welcome to the Department of Mathematical Sciences. We are delighted that you have chosen us for your graduate study.

We have a well-established M.S. program with concentrations in Applied Mathematics, Pure Mathematics, Statistics, and Teaching Mathematics (Math Education) to serve students in different areas of Mathematical Sciences. The program is designed to prepare students for a broad range of careers in industry, government and education as well as prepare them for further studies at the doctoral level.

The concentrations in pure, applied, and statistics each include a core requirement corresponding to the given area. Additional credits are required so that students can develop knowledge in a field of interest. All three require the student to either defend a thesis or pass a written comprehensive exam corresponding to the core requirements. The teaching mathematics concentration requires a variety of content courses, as well as education courses. The degree options for the teaching math concentration include the opportunity to write a professional paper.

### Mission Statement(s)

The mission of the Department of Mathematical Sciences is to serve the public through teaching, research and service. In particular, the Department:

- Fosters a supportive environment while providing comprehensive mathematics and statistics education at both the graduate and undergraduate levels.
- Nurtures research in mathematical sciences, contributing to humankind's understanding and facilitating current and future scientific advances.
- Supports the application of mathematics and statistics, and the improvement of mathematics education, in order to address the needs of the local, regional, and national communities.

The Department of Mathematical Sciences is strongly committed to becoming a world-recognized center of excellence in teaching, research and service. Principal goals include placing in the top 100 mathematical sciences graduate programs nationally, including the efficient transition of our matriculating students, and improving student performance & retention in the Department's service courses.

### Purpose

The purpose of this handbook is to provide program specific information that is not found in the UNLV Graduate Catalog. Students are responsible for understanding and following the policies and procedures delineated in this document and the UNLV Graduate Catalog, as well as the NSHE Code, UNLV Bylaws, and the UNLV Student Conduct Code. Questions about policies should be directed to the Graduate College: [valarie.burke@unlv.edu](mailto:valarie.burke@unlv.edu) or [GradAssociateDean@unlv.edu](mailto:GradAssociateDean@unlv.edu).

## Department Graduate Faculty

A current listing of the graduate faculty can be found in the UNLV Graduate Catalog. Faculty must hold either associate or full graduate faculty status to be involved in graduate education at UNLV. For up to date information regarding graduate faculty status in your department, visit the [Graduate Faculty status web page](#).

## Program Information

[Master of Science - Mathematical Sciences](#)

[Subplan 1: Pure Mathematics - Thesis Track](#)

[Subplan 2: Pure Mathematics - Comprehensive Exam Track](#)

[Subplan 3: Applied Mathematics - Thesis Track](#)

[Subplan 4: Applied Mathematics - Comprehensive Exam Track](#)

[Subplan 5: Applied Statistics - Thesis Track](#)

[Subplan 6: Applied Statistics - Comprehensive Exam Track](#)

[Subplan 7: Teaching Mathematics - Professional Paper Track](#)

[Subplan 8: Teaching Mathematics - Comprehensive Exam Track](#)

[Link to program information in the Graduate Catalog:](#)

### Contact Information

Department Website

[UNLV Math](#)

Department Chair

Zhijian Wu, Ph.D.

CDC 801

[zhijian.wu@unlv.edu](mailto:zhijian.wu@unlv.edu)

Graduate Coordinator

Jichun Li, Ph.D.

SEB 2127

[jichun.li@unlv.edu](mailto:jichun.li@unlv.edu)

Graduate Affairs Coordinator, College of Sciences

Keala Kiko

MPE-A 120

[keala.kiko@unlv.edu](mailto:keala.kiko@unlv.edu)

Department Main Office

CDC Building 8

[math@unlv.edu](mailto:math@unlv.edu)

Phone: 702-895-3567

Fax: 702-895-4343

## Program Requirements

Program requirements regarding [admission, coursework and culminating experience are found in the graduate catalog](#).

## Advisory Committee Guidelines

**Thesis or Professional Paper Track:** On completion of 12 credits of coursework, students should be ready to form an advisory committee. It is the responsibility of the student to identify a faculty member of the department who would be willing to guide the student's thesis or professional paper and serve as chair of the advisory committee. With the guidance of this chair, at least two other faculty members from the department and least one faculty member from outside the department will be chosen to serve on this committee. The advisory committee must be formed no later than one semester after completing 12 credits of coursework.

**Comprehensive Exam Track:** Students on this track should form their advisory committee under the guidance of the Graduate Coordinator. The committee will consist of at least three faculty members of the department and at least one faculty member from outside the department. Usually, the committee members from the department will include the faculty members administering the M.S. comprehensive exam.

## Degree Program Benchmarks

**Thesis Track:** No later than one semester after forming their advisory committee, students should present a thesis proposal to the committee for approval. Upon approval, students should enroll in thesis credits and start working on their thesis. Enrollment in at least 6 thesis credits is required. Upon completion, the thesis must be orally defended before the advisory committee. The thesis defense must be advertised at least 1 week in advance and will be open to all members of the public.

**Comprehensive Exam Track:** No later than four months before the date they plan to take the comprehensive examination, students must notify the Graduate Coordinator. Comprehensive examination is offered once a year, usually one week before the beginning of fall semester classes. An additional offering may be made one week before the beginning of spring semester classes at the discretion of the Graduate Studies Committee depending on the availability of examiners. A score of at least 70% on the comprehensive examination will be considered a passing grade. Students may opt to use the Ph.D. qualifying exam for their M.S. comprehensive exam, in which case, a score of at least 60% will be considered a passing grade.)

The comprehensive examination will consist of two parts. The composition of the two parts will depend on the student's concentration and will be based on courses as follows:

Applied Mathematics concentration: (i) MAT 707-708 or MAT 709-710, (ii) MAT 771-772 or MAT 717-718

Pure Mathematics concentration: (i) MAT 707-708 or MAT 709-710, (ii) MAT 703-704

Applied Statistics concentration: (i) STA 761-762, (ii) STA 767-768

Teaching Mathematics concentration: The two parts will correspond to those of the Applied Mathematics concentration or the Pure Mathematics concentration mentioned earlier.

**Professional Paper track (offered only for Teaching Math):** No later than one semester after forming their advisory committee, students should start working on their professional paper, under the guidance of their advisory committee chair. Enrollment in at least 3 credits of Professional Paper is required. Upon completion, the professional paper must be orally defended before the advisory committee.

## Program Timeline

Students normally take 2.5 to 3 years to finish the program.

## Professional Code of Ethics/Discipline Guidelines

UNLV Graduate College policy regarding academic integrity can be found in the graduate catalog. Additional discipline-specific guidelines for professional conduct and ethics can be found below.

[American Mathematical Society Ethical Guidelines.](#)

[American Statistical Association Ethical Guidelines.](#)

[Society of Industrial and Applied Mathematics Authorial Integrity in Scientific Publication](#)

## Annual Review Procedures

Each winter break and early spring term, graduate students are **required** to complete the Graduate Student Individual Development Plan (IDP) form. The review covers the prior calendar year and assesses student progress, and it establishes reasonable goals for the year ahead. Reported student data is shared with students' graduate coordinators and advisors to foster opportunities for discussion about students' strengths and weaknesses, accomplishments and next requirements, and mentoring plans so that students know what they need to do in order to progress successfully through their programs in a timely manner. Students who are graduating are also required to complete the form in

order to record their achievements since the data is also used to track metrics related to the annual productivity of all students. This survey will be sent by the Graduate College to the student's Rebelmail account. The review covers the prior calendar year and assesses student progress while setting goals for the year ahead.

Each spring semester, a student's yearly progress will be assessed by his/her advisory committee (if formed) or by the Graduate Studies Committee. Students are required to make adequate yearly progress towards degree completion. Satisfactory progress includes passing the recommended courses with a grade above C (and maintaining a cumulative program GPA of at least 3.0) and timely progression through the appropriate program milestones. Failure to make adequate progress will cause the student to be put on probation. Note that courses with a grade below C cannot be used towards the degree and will need to be repeated for a better grade or replaced with an equivalent course.

## **Probation**

If a student fails to successfully progress in their degree program, their department/school will recommend that the student be placed on probation by the Graduate College. Students on probation may be dismissed/separated from their program for failing to successfully meet the conditions of their probation by the deadline provided. Please see the [Probation and Separation](#) section of the Graduate Catalog for more information.

## **Additional Program Information**

### **Discipline Resources**

Professional Organizations:

American Mathematical Society (AMS)

Mathematical Association of America (MAA)

American Statistical Association (ASA)

Institute of Mathematical Statistics (IMS)

Society of Industrial and Applied Mathematics (SIAM)

Conferences:

Joint Mathematics Meetings (JMM)

Joint Statistical Meetings (JSM)

## University Resources

### Leadership and Professional Development Academy

The goal of the Professional Development Academy is to serve as a virtual resource providing support and many professional opportunities to UNLV graduate students. The Academy offers information about events and services such as graduate certificate programs, workshops, training sessions and career services. You can follow Academy activities via social media or look for regular updates on the website.

### Academic Success Center

The goal of the Academic Success Center is to help students do well academically and complete their studies on time. They offer or will refer you to such programs and resources as tutoring, advising, skills testing, career exploration and more. They guide students every step of the way to the many established resources created to ensure they complete their educational goals. Learn more about the programs and services the center currently offers.

### Alumni Association

With an alumni base 120,000 strong, the UNLV Alumni Association offers a variety of services and opportunities in support of alumni and their families. UNLV alumni are encouraged to support the values of higher learning through advocacy, involvement, and giving.

### Commencement Office

Located in the UNLV Office of the Registrar, the commencement office is the last step in the graduation process. Please check with the commencement office for information on the commencement ceremony and your diploma; for all other information about graduate student degree completion and graduation, including thesis/dissertation requirements and doctoral hooding, please contact the Graduate College. It is the students' responsibility to ensure they apply for [graduation on time](#) and submit all required forms to the Graduate College. Questions regarding thesis/dissertation should be directed to the Graduate College [Student Services Team](#) and questions regarding required forms should be directed to the Graduate College [RPC Team](#)

### Office of Diversity Initiatives

The vision of the Office of Diversity Initiatives is to advocate, promote, and support the advancement of equity, inclusiveness, and empowerment of a continuously changing collegiate and global community. The mission of the Office of Diversity Initiatives is to provide leadership and support for UNLV's diversity mission: *to nurture equity, diversity, and inclusiveness that promotes respect, support, and empowerment*. This Office also handles UNLV Title IX questions, inquiries, and reporting.

### Disability Resource Center (DRC)

The DRC is committed to supporting students with disabilities at UNLV through the appropriate use of advocacy, accommodations, and supportive services to ensure access to campus courses, services, and activities. The DRC is the university-designated office that determines and facilitates reasonable accommodations in compliance with the Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act of 1973. Graduate students with disabilities must disclose to the DRC in order to receive appropriate accommodations.

### Office of International Student and Scholars

International Students and Scholars (ISS) ensures compliance with both SEVIS (Student and Exchange Visitor Information System) and federal law, so that the university can continue to be authorized by the U.S. federal government to enroll international students; host and hire international scholars; assist and advise employment eligibility and authorization relating to international students and scholars, and visa, travel, and immigration issues; provide critical and specialized services to the international students and scholars of the UNLV community; and facilitate their transition to the campus and the

U.S.

### Jean Nidetch Women's Center

The Jean Nidetch Women's Center is committed to creating a supportive and inclusive environment for all genders through programming, services, and advocacy for the UNLV community. The Women's Center has informational resources, brochures, and flyers for a variety of on and off campus organizations to help empower and protect yourself, and learn about your options. They also provide free tampons, pads, and condoms.

### The Intersection

The Intersection is a one-stop resource for UNLV's highly diverse student body — a comprehensive multicultural center grounded in the academic life of our students. As an intersecting campus resource, the Intersection helps ensure students, particularly first-generation and students of color, successfully navigate their academic careers. Here, all members of campus can discuss their differences, discover their similarities, and build a shared sense of belonging.

### UNLV Libraries

UNLV Libraries has always been more than books; they are about encouraging students and creating quality programs that elevate growth and learning. Please visit their website for important information about the services they offer to graduate students.

### Graduate & Professional Student Association (GPSA)

The Graduate & Professional Student Association serves all currently enrolled University of Nevada, Las Vegas graduate and professional students. The GPSA maintains the Graduate Student Commons located in the Lied Library room 2141 and Gateway Building PDAC Room. The facility a working office equipped with a copier, fax, flatbed scanners, color laser printer, office supplies, and computers with printers and a small kitchen area. The GPSA is the graduate student governance body at UNLV; the GPSA Council consists of one graduate student representative from each graduate department, and they meet monthly. The GPSA also provides volunteer opportunities, sponsors social events, and supports graduate student research through the graduate research and travel grants program.

### Office of Student Conduct

The Office of Student Conduct is a student-centered, service-oriented office located within the Division of Student Affairs. The Office of Student Conduct collaborates with the UNLV community to provide an inclusive system through enforcement of the *UNLV Student Code of Conduct* by:

- Promoting awareness of student rights and responsibilities;
- Establishing accountability for student choices;
- Creating opportunities for involvement in the process; and
- Striving to uphold the values and ethics that advance the common good.

### Military and Veteran Services Center

The Military and Veteran Service Center is staffed with veterans and veteran education benefits-experienced staff to assist more than 1,800 veterans, dependents, active duty service members, National Guard members, and reservists attending UNLV. Their mission is to develop a welcoming, veteran-friendly campus environment that fosters academic and personal success.

### The Financial Aid & Scholarships Office

The Financial Aid & Scholarships Office supports higher-education access and persistence by providing financial aid to eligible students. The office partners with student organizations, the UNLV Foundation, the Graduate College, and other external constituents to provide financial aid learning opportunities and scholarship support for graduate students.

### Writing Center

This is a free service to UNLV students to help you with any writing project, from papers to creative writing, to resumes, and we can work with you at any stage of the writing process. The center can help you brainstorm, make an outline, work on your drafts, or just be a soundboard for your ideas. The center staff can assist you in person, or via the Online Writing Lab (OWL) page.

## **University Policies and Procedures**

Graduate students are responsible for knowing and acting in accordance with UNLV Policies and Procedures. To view the most commonly referenced campus policies and procedures, you can refer to the [Graduate Student Handbook](#), and following websites:

- [Academic Integrity](#)
- [Activation for Military Service](#)
- [Change of Address](#)
- [FERPA/Privacy Rights](#)
- [Health Insurance - Mandatory](#)
- [Jean Clery Campus Safety and Security Report](#)
- [Proof of Immunization](#)
- [Policies and Procedures on the Protection of Research Subjects](#)
- [Rebelmail Policy](#)
- [Student Conduct Code](#)
- [Student Computer Use Policy](#)
- [Title IX](#)

UNLV does not discriminate in its employment practices or in its educational programs or activities, including admissions, on the basis of sex/gender pursuant to Title IX, or on the basis of any other legally protected category as is set forth in NSHE Handbook Title 4, Chapter 8, Section 13. Reports of discriminatory misconduct, questions regarding Title IX, and/or concerns about noncompliance with Title IX or any other anti-discrimination laws or policies should be directed to UNLV's Title IX Coordinator Michelle Sposito.

The Title IX Coordinator can be reached through the online reporting form at [Title IX Reporting Form](#), by email at [titleixcoordinator@unlv.edu](mailto:titleixcoordinator@unlv.edu), by phone at (702) 895-4055, by mail at 4505 S. Maryland Parkway, Box 451062, Las Vegas, NV, 89154-1062, or in person at Frank and Estella Beam Hall (BEH), Room 555.

To ensure compliance with Graduate College policies and procedures, please review the relevant sections of the [Graduate Catalog](#):

- [Academic Calendar](#)
- [Academic Policies](#)
- [Admission and Registration Information](#)
- [Degree Progression Policies & Procedures](#)

In addition, the [Graduate College website](#) contains additional information regarding policies and procedures.

*Nothing in this handbook supersedes any NSHE, UNLV, or Graduate College policy.*

## **Handbook Information**

Revisions to this handbook are approved by the departmental Graduate Studies Committee.

Last revised	Revised by	Changes summary
11/30/16	Kaushik Ghosh	First version
4/30/2018	Kaushik Ghosh	Updated with new graduate coordinator information, modified comprehensive examination information for teaching mathematics concentration