



# 2021-2022 GRADUATE HANDBOOK

*Revised December 2021*

This document is designed to serve as an introduction to the Master of Science or Arts and PhD programs in the Department of Statistics and Probability for those who may wish to apply and as a reference for those already enrolled.

University Policies override all inconsistent provisions in this handbook.

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## Department Information

### Department of Statistics and Probability

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## Welcome and Introduction

On behalf of the Department of Statistics and Probability (STT) at Michigan State University, I welcome you as graduate director.

Statistics is the science of learning from data. With rapid breakthroughs in technology, data are generated at an unprecedented pace in every discipline. We are surely into an era of data explosion, which brings enormous opportunities for our profession, while presenting daunting challenges for statistical modeling and inference. STT is an energetic community of scholars. Our faculty are striving toward solving important theoretical and real-world problems of our time, while making our expertise available to serve the needs of our graduate students and educate the next generation of statisticians.

Our graduate program aims to provide a strong, rigorous, and quality curriculum that prepares students to enter the professional workforce, either in industry, academia, or government and public service. The department has a long tradition of being theory-oriented, which guarantees a great deal of rigor in the training of our grad students. At the same time, we are making great efforts to broaden our scope. We now cover a variety of areas in modern statistics, in methodology, computation, and applications, while maintaining our high standards. We continue to be proud of the robust emphasis we pursue in probability theory and stochastic processes, as the only department in the country whose name reflects all of probability. Our students receive world-class level training in theory and methodology and are highly sought after by leading industrial employers and high-ranking academic department throughout the US.

If you are considering a future career in the sciences of statistics and probability, or if you are a current student looking to fulfill requirements for your course study, I encourage you to look at our webpages which provide useful information about our M.S. and Ph.D. programs. If you have chosen or will choose our program, we hope it will equip you with powerful skills for a lifelong benefit to your career and intellectual growth. We think your study at MSU will leave you with the most cherished memories in your life as a scholar.

Again, I am delighted to have the opportunity to welcome you to our program, and invite you to explore our campus, student activities, and research pursuits.

### Yuehua Cui, Ph.D.

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### STT Graduate Office Contact Information

Phone: (517) 884-1485

Email: [stt.gradoffice@msu.edu](mailto:stt.gradoffice@msu.edu)

# 1. How to Apply

## I.1 Online Application

- A. Please visit [stt.natsci.msu.edu/graduate-program/](http://stt.natsci.msu.edu/graduate-program/) and the MSU Graduate Application at [explore.msu.edu/apply/](http://explore.msu.edu/apply/) for the REQUIRED online application.
1. Create an account and follow the prompts.
  2. Remember your user ID and password to log in to the Application Portal, where all documents must be uploaded. [explore.msu.edu/apply/](http://explore.msu.edu/apply/)
- Choose the major:
- Applied Statistics (M.S.)
  - Statistics (M.S.)
  - Statistics (Ph.D.)
- B. Upload **all** required documents. See list below and please use this helpful checklist: [Application Checklist](#)
- C. You must pay the application fee \$65 (domestic) or \$75 (international). If you are financially unable to pay the fee, visit the Application Fee Waiver site for assistance: <https://grad.msu.edu/application-fee-waiver>
- D. Deadline to apply is February 1, 2022. To be considered for college and university fellowships, applicants must have applications completed by Dec. 1, 2021.

**Applications are accepted for Fall Semester only.** ONLY IN EXCEPTIONAL cases will a student be admitted for Spring or Summer Semesters.

You can check your application status through the [Application Portal](#).

## REQUIRED APPLICATION DOCUMENTS

The graduate application documents vary depending on the program. <https://stt.natsci.msu.edu/graduate-program/application-checklist-2022/>

- Complete online application via the MSU Graduate School Application Portal: [explore.msu.edu/apply/](http://explore.msu.edu/apply/)

**All college course work** (undergraduate and graduate), including diplomas and certificates translated in English, must be sent to our Department directly from the school(s) which you attended or are currently attending. There is no need to send more than one transcript. We will forward the original transcript to the MSU Office of Admissions.

- **The Graduation Record Examination (GRE)** is required for PhD applicants. Sub tests are not required. Test Scores must be submitted to the Michigan State University Graduate Admissions Office by the Educational Testing Service. **The Institutional Code for MSU is 1465.** No department code is necessary. The GRE is **NOT** required for MS applicants but can be uploaded to the portal. *(The GRE is not a requirement for Fall 2022 applications.)*
- **THREE (3) letters of reference / recommendation.** These must be submitted from professors or other professionals who can assess your promise of success in our graduate program. You cannot upload the letters of reference yourself. There is a place for you to list the name and email of your recommenders and they will be contacted and asked to upload a letter for you. *\*\*As writing and submitting a letter might take some time, please give your recommenders enough time to prepare their letters.\*\**

- **Advanced Mathematics Profile:** List of Math/Statistics courses with (along with title and author of the textbook, if any) grades, university attended
- **Academic Statement** (sometimes referred to as your Statement of Purpose)
- **All international students must submit English language proficiency scores** to the Michigan State University Graduate Admissions Office by the Educational Testing Service. **The Institutional Code for MSU is 1465.** No department code is necessary. *The TOEFL test is valid for 2 years from the date of the test to the first day of class for the semester student is admitted. For fall semester 2021 that would be September 1, 2021.* In some instances, the department may accept other exams in place of TOEFL. Please contact the STT department.
- **Affidavit of Support for MS applicants (only for International Students):** Go to <https://grad.msu.edu/internationalapplicants> and scroll down to Financial Proof. Fill out the PDF form. Upload your completed Affidavit of Support along with a certified bank statement to the [Application Portal](#).
- **Resume / CV** or other academic documents and publications

## I.2 Financial Aid for Applicants

No special forms are needed to apply for STT Department financial support for PhD students. All applicants are considered for assistantships. The Department has approximately seven new assistantships available each year, which includes a bi-weekly stipend, health insurance, and up to 9 credits of tuition.

Assistantships are not promised to MS applicants. Students who apply to either MS programs will be responsible for finding funding. International MS applicants must submit an Affidavit of Support and a certified bank statement: <https://grad.msu.edu/internationalapplicants>

For detailed information regarding Financial Aid for graduate students, visit <https://reg.msu.edu/AcademicPrograms/Text.aspx?Section=111#s353>

## I.3 Graduate Record Examination (GRE)

The Graduate Record Examination is required for PhD applicants. There is no minimum required score. In the past, almost all admitted students scored more than 1200. The GRE is not required for MS applicants, but students can upload scores to the application portal if desired. **The Institutional Code for MSU is 1465.**

## I.4 Links to University Policies

[Academic Programs Catalog](#)  
[Anti-Discrimination Policy \(ADP\)](#)  
[Code of Teaching Responsibility](#)  
[Disability and Reasonable Accommodation Policy](#)  
[General Student Regulations](#)  
[Graduate Students Rights and Responsibilities \(GSRR\)](#)  
[Guidelines for Integrity in Research and Creative Activities](#)

[Integrity of Scholarship & Grades](#)  
[MSU Guidelines for Graduate Student Mentoring and Advising](#)  
[MSU-GEU Contract](#)  
[Policy on Relationship Violence and Sexual Misconduct](#)

## II. Master of Science or Arts Programs: Statistics (Regular) and Applied Statistics

### II.1 Master of Science or Arts with a Major in Statistics (Regular)

The goals of the master's degree program in Statistics (MSU Code 3875) are to provide students with a sound foundation in probability, mathematical statistics, and statistical methodology. The degree may be earned under either Plan A (with thesis) or Plan B (without thesis). If Plan A is chosen, a student needs to find a thesis advisor. To distinguish this degree from the degree in Applied Statistics, we refer to it as the "regular MS degree."

In addition to meeting the requirements of the University and the College of Natural Science, students must meet the requirements specified below.

**II.1.a Admission:** A good background in calculus and linear algebra at the senior undergraduate level is required for admission. At least one statistics and probability course at the post-calculus level (such as our STT 441-442 courses) is required. Students without these prerequisite courses will generally have to take them as preparatory courses in their first year, with no credit toward the requirements for the degree. Any exception should be approved by the Graduate Director and/or Chairperson.

#### II.1.b Requirements for the Master's Degree in Statistics (Regular):

1. **At least 30 credits in courses in the Department of Statistics and Probability, or in a field of application of probability and statistics.**
2. **Core Courses:** Complete STT 861, 862, 863, 864. STT 801 and STT 802 are strongly recommended.
3. **Electives:** At least 9 additional credits in STT courses at the 800 level or higher. The other credits must be in STT or in related fields at the graduate level. The student's academic advisor must approve the elective courses in a student's program. Some of the currently accepted elective courses for the STT MS degree from other departments are CEP 921, 923, 934, 935; CSE 802, 847, 881; EC 820 a & b, 822 a & b; EPI 920; GEO 866; MTH 844. The department updates this data regularly. For inquiries about other courses as possible electives, please contact the Graduate office, C413 Wells Hall, or email [hankeyt@msu.edu](mailto:hankeyt@msu.edu).
4. **Master's Examination:** Students who maintain a 3.5 GPA in the Four Core Courses: STT 861, 862, 863, 864 will not have to take a master's exam. The exam is given at about the middle of the Fall and Spring semesters. It may be either a written or oral examination, as determined by a department committee. It is mandatory that students who do NOT maintain a 3.5 GPA in the Four Core Courses, must take the written/oral exam.

A student who is choosing to write a thesis (also known as Plan A) will do it under STT 899 with a minimum of 4 credits. The student will also have to pass an oral examination in defense of the thesis in front of a committee consisting of at least 3 MSU regular faculty members out of which at least 2 must be from the Department of Statistics and Probability. The oral exam is in addition to the master's written/oral exam.

## II.2 Master of Science or Arts with a Major in Applied Statistics

The goals of the master's degree program in applied statistics (MSU Code 3871) is to provide students with a broad understanding of the proper application of statistical methodology and with experience in using computers effectively for statistical analysis. Special emphasis is placed on the concerns that an applied statistician must address in dealing with practical problems.

### II.2.a. Admission

A good background in calculus and linear algebra at the senior undergraduate level is required for admission. At least one statistics and probability course at the post-calculus level is required. The graduate director and/or chairperson should approve any exception to the above-required background.

### II.2.b. Requirements for the Master's Degree in Applied Statistics

An academic advisor works with the student to plan their program of study (any exception to the written program must be approved by the chairperson of the Department).

1. **At least 33 credits in courses in the Department of Statistics and Probability, or in a field of application of probability or statistics.**
2. **Core Courses:** Complete STT 441-2 or STT 861-2, as well as STT 801, 802, and 863.
3. **Electives:** At least 9 additional credits in STT courses at the 800 or 900 level. Strongly recommended: STT 843, 844, 847, and 864. The other credits must be in STT or in a related field. Some of the currently accepted elective courses for the applied STT MS degree from other departments are BE 835; CEP 921, 923, 934, 935; CSE 802, 847, 881; EC 820 a & b, 822 a & b; EPI 809; FW 849; GEO 866; MTH 844. The department updates this data regularly. For inquiries about other courses as possible electives, please contact the Graduate office, C413 Wells Hall, or email [hankeyt@msu.edu](mailto:hankeyt@msu.edu).
4. **Master's Examination:** Students who maintain a 3.5 in the Four Core Courses: STT 861-2 or STT441-2, 801, and 863 will not have to take a master's exam (NOTE: STT 802 is a required core course but not calculated with your GPA of core courses). The exam is given at about the middle of the Fall and Spring semesters. It may be either a written or an oral examination, as determined by a department committee. It is mandatory that the students who do NOT maintain a 3.5 in the Four Core Courses, must take the written/oral exam.

## II.3 Annual Progress Report for Master Students: Statistics (Regular) and Applied

By April 20 of each academic year, the student must submit an "Annual Progress Report for Plan A (or B) Master's Students." These forms are available from the STT graduate office by emailing [stt.gradoffice@msu.edu](mailto:stt.gradoffice@msu.edu). Links to the documents are included in the Appendix of this Handbook.

Graduate assistants and international master's students on F-1 visas are expected to complete at least nine credits during each of Fall and Spring semesters, except for the student's last semester or because of medical exemptions. Other students, especially those holding jobs, may choose to take fewer than nine credits, keeping in mind the university requirement that all work be completed within a seven-year period.

## II.4 BS / MS Dual Degree Program

### College of Natural Science Dual Degree Program: BS and MS from the STT Department

The dual degree program provides an opportunity for academically talented undergraduate students who are enrolled in BS degree programs in the College of Natural Science to enroll in graduate courses and conduct research toward the MS degree while completing the last two years of their bachelor's degree programs.

*During the second semester of the sophomore year, the student should contact the undergraduate advisor in the STT Department to discuss the dual degree program and apply for admission.*

A student who is accepted into the dual degree program can be admitted to both the BS degree program and the MS degree program as early as the beginning of the junior year. Upon completion of the requirements for both the BS degree and the MS degree, both degrees are awarded simultaneously. The MS degree will **not** be awarded until the student has completed the requirements for the BS degree.

To be admitted to the dual degree program, an applicant must:

1. Have a grade–point average of 3.00 or higher in all undergraduate course work.
2. Have a grade–point average of 3.00 or higher in all courses in the College of Natural Science.
3. Be accepted for admission by the graduate admissions committee of the College or department or school.

Within the first semester of enrollment in the dual degree program, the student will work with the STT MS advisor in developing a program of study for the MS degree. Up to 9 credits of graduate course credit can be charged the undergraduate tuition rate.

A student who is admitted to the dual degree program must:

1. Satisfy all of the requirements for the BS degree program to which the student was admitted. Although a minimum of 120 credits is required for the BS degree, more than 120 credits may be required for a given degree program.
2. Satisfy all of the requirements for the MS degree program to which the student was admitted **after** being admitted to that program: MS in Statistics (30 credits) or MS in Applied Statistics (33 credits). See II. on page 7 for details regarding the MS programs.

The credits and courses that are used to satisfy the requirements for the BS degree may *not* be used to satisfy the requirements for the MS degree. Departments and schools may specify additional requirements for the dual degree program. The student should contact the appropriate department or school for additional information.

## II.5 Integrity and Safety: Responsible Conduct of Research (RCR)

Students in the MS program are required to complete the Responsible Conduct of Research (RCR) plan. Please visit <https://stt.natsci.msu.edu/graduate-program/current-students/stt-responsible-conduct-of-research-rcr-plan/> to see the requirements. For more information, see III.8 of this handbook.

## III. PhD Program: Statistics

The Doctor of Philosophy degree program with a major in statistics is designed for students who plan to pursue careers in university teaching and research or in industrial and government research and consulting. A doctoral student pursuing the degree program in statistics may choose to emphasize either statistics or probability.

In addition to meeting the requirements of Michigan State University and of the College of Natural Science, students must meet the requirements specified below.

### III.1 Admission

A master's level understanding of statistics and probability and a sound understanding of undergraduate-level real analysis are necessary for success in the doctoral program. Strong applicants with deficiencies in one of these areas will be considered for admission, and if accepted will be given the opportunity to learn the required material during their first year in the program. The Graduate Record Examination (GRE) General Test is required for all applicants.

### III.2 Course Work

Students who hold half-time graduate assistantships and international students with an F-1 visa are required to enroll in a minimum of 3 credits during Fall and Spring semesters if they have not yet passed both preliminary exams. Once a student passes both exams, they must enroll for a minimum of 1 credit when holding a TA or RA appointment. Those holding assistantships during the summer must be enrolled for at least 3 credits.

A working knowledge of real analysis is required for successful completion of the Ph.D. program. Students without sufficient background must take a course in analysis, e.g., MTH 421.

University policy: [reg.msu.edu/AcademicPrograms/Print.aspx?Section=350](http://reg.msu.edu/AcademicPrograms/Print.aspx?Section=350)

MSU OISS F-1 policies: [oiss.isp.msu.edu/immigration1/visa-immigration/status/](http://oiss.isp.msu.edu/immigration1/visa-immigration/status/)

1. STT 867, 868, 872, 881, and 882 are the core courses. In addition, 8 courses as follows:
2. Complete at least five (5) courses from among (a) and (b):
  - (a) Advanced Probability: STT 961, 962, 964, 996 (at least 1)
  - (b) Advanced Statistics: STT 873, 874, 951, 953, 997 (at least 1)
3. Complete at least three (3) additional elective courses offered at the 800-level or higher from any department. These courses must be approved by the student's guidance committee.

NOTE: STT 996 and STT 997 are special topic courses, which may change from year to year. Descriptions of courses can be found at <https://student.msu.edu>.

4. Pass two written preliminary examinations. See III.3 on page 12.

Course descriptions of STT 867, 868, 872, 873, 874, 953, 954, 961, 964, 996, 997 can be found at <https://student.msu.edu> . These courses are offered during the following semesters:

867	Linear Models Methodology	(Fall, every year)
868	Mixed Models: Theory, Methods, and Applications	(Spring, every year)
872	Statistical Inference I	(Spring, every year)
873	Statistical Learning and Data Mining	(Fall, odd years)
874	Introduction to Bayesian Analysis	(Fall, even years)
951	Statistical Inference II	(Spring, odd years)
953	Asymptotic Theory	(Spring, even years)
961	Weak convergence and Asymptotic Theory	(Fall, odd years)
962	Fractional Processes and Power Laws	(Spring, even years)
964	Stochastic Analysis	(Spring, odd years)
996	Advanced Topics in Probability	(Fall, Spring, Summer)
997	Advanced Topics in Statistics	(Fall, Spring, Summer)
999	PhD Dissertation Research Credits	24 minimum; 36 maximum

### Ph.D. Program (Year 1)

At the time a student arrives, they should consult with the graduate director regarding their level of preparation. Students with sufficient understanding of probability and statistics at the master's level and a rigorous course in real analysis as represented by MTH 421 or MTH 828 at MSU will be expected to take courses listed under the year 1 program below. In some cases, a student may be asked to enroll in a combination of courses. For example, a student with a strong background in real analysis, but relatively little in statistics might take STT 881-2, STT 861-862, 863-864 during their first year, but not STT 867-8 or 872.

#### Program I: Doctoral Courses for Year 1

<u>Fall</u>	<u>Sem. Cr.</u>	<u>Spring</u>	<u>Sem. Cr.</u>
STT 867	3	STT 868	3
STT 881	3	STT 872	3
Elective	3	STT 882	3

NOTE: STT 881-2 is a sequence in measure theory and probability. STT 872 is a course in mathematical statistics. STT 867-8 is a sequence in theory based statistical methodology.

### Year 2

Students who complete Program I courses in Year 1 are required to take the prelim exams (see section III.3 Examinations for details). Once a student passes both prelims, they are required to choose their thesis advisor and form their guidance committee. Students will consult with their advisor to decide what courses to take for their Year 2 program. Others will be expected to take three courses each semester in consultation with the Graduate Director. Program I is treated as fast track. It is advisable that the student be careful in choosing the course work.

## Summer offerings

The offerings of the Department in the summers are light. Students usually use the time to prepare for examinations, work on thesis research, or hold summer internships. Two graduate courses are offered each summer with topics varying: STT 890 (master's level) and either STT 996 or 997 (doctoral level). In the past few summers, graduate courses were offered in nonparametric density estimation, Bayesian statistics, analysis of contingency tables, inference for stationary processes, reliability and survival analysis, limit theorems for dependent random variables, curve estimation and wavelets, statistical inference for Markov and general stochastic processes, graphical methods in regression, statistical inference for images, spatial statistics, high-dimensional statistics and probability theory, and in statistical machine learning. Senior students (2/3+) are encouraged to look for internships in research labs, government, and industries.

## Year 3+

Students who have completed the coursework listed by their Guidance Committee can begin enrolling in STT 999. The University requires that a Ph.D. candidate completes 24 credits of 999 courses (thesis research) to graduate but no more than 36 credits.

### III.3 Preliminary Examinations

Preliminary exams are given before the start of Fall and Spring semesters to gauge students' understanding. The exams have two parts: (a) Probability prelim based on STT881-882, and (b) Statistics prelim based on STT 867, 868 and 872. To remain in the doctoral program, students are required to pass both exams, which are taken in the semester following completion of STT 867, 872, 882. A student must pass the exams in at most two attempts for each and within 3 years of being admitted to the Ph.D. program. Each exam has a committee that generates the problems on the exam and evaluates the exams. Students are assigned a number by the graduate secretary for them to submit the exam solutions anonymously. The department's prelim policy is posted here <https://stt.natsci.msu.edu/graduate-program/current-students/stt-preliminary-exam-policy/>. For MSU comprehensive exam policy: <https://reg.msu.edu/AcademicPrograms/Text.aspx?Section=111#s398>

### III.4 Selection of Thesis / Dissertation Advisor

Once students pass both preliminary exams, they are expected to choose a thesis advisor before the end of the semester in which the exams were taken. The STT graduate office helps guide each student to select a faculty advisor in a timely fashion. Students are encouraged to meet with interested faculty members, learn about their research work, and discuss potential research topics before making their final decision.

Faculty members (tenure-stream assistant, associate, or full professors) who are full-time with STT or have a joint appointment with STT can serve as a student's thesis advisor. If a student chooses a faculty member outside of STT as their advisor, then a co-advisor from STT must be chosen.

If the major professor (designate as professor A) leaves MSU before a student completes their degree program, then the student has the choice to either quit from MSU or choose another professor in STT (designate as professor B) as their new advisor. Another option is to have Professor A as their major professor but choose Professor B as their co-advisor. In this case, Professor A can request to be an MSU adjunct professor and keep guiding the student's research together with Professor B. Once a

professor leaves MSU, they can no longer serve as regular committee members and must apply for approval as non-regular committee members. See the Graduate School's procedure for approving non-regular committee members. [grad.msu.edu/graduate-school-approved-faculty-committees](http://grad.msu.edu/graduate-school-approved-faculty-committees)

The STT Department adheres to the guidelines and expectations for successful faculty advising consistent with the [MSU Guidelines for Graduate Student Mentoring and Advising](#).

### **III.5 Formation of the Guidance Committee**

The Guidance Committee is expected to share responsibility for reviewing the graduate student's progress, guiding the student toward completion of courses and program requirements, and preparing the student for professional success after graduation.

After a student passes both preliminary exams, they will choose their thesis advisor and then form their Guidance Committee. The Committee will consist of at least three faculty members of this Department and at least one from outside the Department as determined by the thesis advisor in consultation with the student. The primary responsibility of the Committee will be to advise the student in their thesis research. If a student fails to form their guidance committee within two semesters of passing the preliminary exams, their graduate assistant position could be suspended. See <https://reg.msu.edu/AcademicPrograms/Text.aspx?Section=111#s394>

### **III.6 Thesis / Dissertation Defense and Final Oral Examination**

A doctoral candidate must demonstrate the ability to carry out significant original research in statistics and probability. This is accomplished through the writing of a dissertation under the direction of a thesis advisor. It is the responsibility of the student to find a thesis advisor (See III.4).

The candidate must present the results of their thesis research in a talk of approximately one hour, which is open to the public. After that presentation, the Guidance Committee meets further in a closed session to determine whether the student's thesis should be approved. The thesis must be submitted in an electronic form acceptable to the Graduate School. Deadline dates and information regarding electronic submission are available from the Graduate School web page <https://grad.msu.edu/etd>. Two bound copies of the thesis must be submitted to the Department. The thesis is stored in electronic form by the university. Copies of theses written by former students are available in the Department's Katz Library.

### **III.7 Academic and Professional Performance**

Michigan State University strives to provide an academic and work environment, which fosters the values of safety; mutual respect; dignity; equity; responsibility; and clear and timely communication. Relationship violence, sexual misconduct, and stalking are in direct conflict with our institution's values and policies and present barriers to fulfilling the University's missions. The University's commitment to preventing and responding to relationship violence, sexual misconduct, and stalking applies to admissions, employment, and access to and treatment in University programs and activities. All staff, faculty, and students are required to complete [Relationship Violence and Sexual Misconduct \(RVSM\) policy and training](#).

The guidance committee should meet together and review at least once every 18 months the PhD student's progress in their research or creative activity, as well as plans for work in the coming year by completing the "Annual Guidance Committee Report." This form is available from the STT Graduate Program by emailing [stt.gradoffice@msu.edu](mailto:stt.gradoffice@msu.edu). Links to the documents are included in the Appendix

of this Handbook. This review will be signed by the members of the guidance committee and by the graduate student. It will be filed with the graduate director and placed in the graduate student's file together with any response the graduate student may attach to the report of the guidance committee.

By April 20 of each academic year, the faculty advisor and the graduate student will complete the form "Annual Progress Report for Ph.D. Students" and then submit to the Graduate Director. This form is available from the STT Graduate Program by emailing [stt.gradoffice@msu.edu](mailto:stt.gradoffice@msu.edu). Links to the documents are included in the Appendix of this Handbook. The faculty advisor and graduate student will meet to discuss this evaluation and, if applicable, sources of funding. The faculty advisor and the graduate student will sign the completed annual progress report, which will be submitted to the graduate director and then uploaded to the student's GradPlan. Graduate students who wish to appeal any part of the faculty advisor's evaluation may do so in writing to the chair of the department or the director of graduate studies, and this appeal will be filed together with the annual progress report.

### **III.8 Integrity and Safety: Responsible Conduct of Research (RCR)**

Integrity in research and creative activities is based on sound disciplinary practices as well as on a commitment to basic values such as fairness, equity, honesty, and respect. Students learn to value professional integrity and high standards of ethical behavior through interaction with members of the STT department and their faculty advisor, and by emulating exemplary behavior. The University views misconduct in research as the most serious violation of University policy. Every student and their faculty advisor must read and understand the document. [Guidelines for Integrity in Research and Creative Activities](#). Criteria for dismissal from the graduate program due to unethical or dishonest behavior is also described in this document.

To understand who must complete RCR training, visit [ora.msu.edu/train/rcr/index.html](http://ora.msu.edu/train/rcr/index.html). For students to become familiar with responsible conduct of research, the department requires our graduate students to complete the necessary training. The Responsible Conduct of Research (RCR) plan applies to students who began the statistics graduate program in Fall 2017 or later <https://grad.msu.edu/researchintegrity>. The Graduate School RCR Workshop series may be used to help fulfill both the annual refresher and discussion-based training requirements: <https://grad.msu.edu/rcr> or visit <https://stt.natsci.msu.edu/graduate-program/current-students/stt-responsible-conduct-of-research-rcr-plan/> for details.

#### **Key Principles of Integrity**

Integrity in research and creative activities embodies a range of practices that includes:

- Honesty in proposing, performing, and reporting research
- Recognition of prior work
- Confidentiality in peer review
- Disclosure of potential conflicts of interest
- Compliance with institutional and sponsor requirements
- Protection of human subjects and humane care of animals in the conduct of research
- Collegiality in scholarly interactions and sharing of resources

#### **Additional MSU Policies:**

[MSU Guidelines on Authorship](#)

[MSU's Institutional Data Policy](#)

[MSU's Procedures Concerning Allegations of Misconduct in Research and Creative Activities](#)

Students who are supported by a federal grant may be required to complete additional specific training; they must meet the timeline and content requirements of training for that award. See [michiganstate.sharepoint.com/sites/AbilityTrainingSystemHelpFAQ/SitePages/RCR-Home.aspx](https://michiganstate.sharepoint.com/sites/AbilityTrainingSystemHelpFAQ/SitePages/RCR-Home.aspx) and [grad.msu.edu/sites/default/files/content/researchintegrity/NSFDraft.pdf](https://grad.msu.edu/sites/default/files/content/researchintegrity/NSFDraft.pdf)

Students engaged in research involving human subjects must complete the Michigan State University training modules for human subjects before submitting IRB approvals. Please visit [hrpp.msu.edu/](https://hrpp.msu.edu/)

### **III.9 Attendance at Colloquia and Seminars**

The Department has colloquia which meet regularly during most weeks of the academic year. Speakers are either members of the Department, scholars in the fields of statistics or probability, or those conducting research in other disciplines related to statistics or probability. The Department strongly recommends attendance by doctoral students, and occasionally, by master's students. In addition, seminars on statistics or probability are regularly scheduled in which both professors and students participate.

## **IV. GRADUATE ASSISTANTSHIPS**

Graduate assistantship (GA) is a generic term referring to financial support of graduate students that results in a [stipend and compensation](#) and for which performance of defined duties is expected. Specific graduate assistant appointments are made in one of three categories: research assistants, teaching assistants represented by the MSU Graduate Employees Union, and teaching assistants not represented by the MSU Graduate Employees Union Collective Bargaining Agreement.

Approximately seven new teaching or research assistantships are available each year as students graduate from the PhD program. Some senior students fill assistantships for statistical consulting and research assistantships. Some students hold assistantships in other departments.

Requirements for the three levels (1, 2, and 3) of teaching assistantships are as determined by the MSU/GEU contract. See [geuatmsu.org/wp-content/uploads/2019/08/GEU-2019-2023-FINAL](https://geuatmsu.org/wp-content/uploads/2019/08/GEU-2019-2023-FINAL) . Research assistantships are classified in approximately the same way.

Assistants are paid in equal installments every two weeks over nine months from August 16 through May 15. For international students, assistantships are sufficient to satisfy the financial requirements of the University. Stipends are updated each year, and you may check with the STT graduate program assistant for current stipend. There are limited teaching assistant positions in the summer based on funding and enrollment.

Teaching assistants with a master's degree begin at Level 2. Students without a master's degree begin at Level 1 and reach Level 2 after 2 semesters as an assistant. Precise definitions are given in the MSU/GEU contract document for teaching assistants. For other assistants, the spirit of the MSU/GEU rules is maintained, with the provision that an assistant's level is never decreased.

In recent years, the Department has been able to provide summer assistantship positions for students who have passed the MSU SPEAKING test (see IV.2) at the same rate of pay as their academic salary for the previous academic year. These opportunities are based on enrollment and funding as determined by the STT Department Chair. If the SPEAKING test is not passed by the second summer, the student may not receive an assistantship offer for the summer.

Whenever graduate assistants pay tuition, they are considered at in-state rates. There is a tuition waiver for 9 credits for Fall and Spring Semesters. If a graduate assistant takes more than 9 credits, they will pay (in-state) per credit hour rate. Students who hold summer appointments receive a waiver for up to 5 credits. Half-time assistants who have not yet passed both preliminary exams are required to take 3 credits for Fall and Spring Semesters and 3 credits during Summer Semester. After passing both exams, assistants must enroll in a minimum of 1 credit for Fall and Spring and 3 credits for Summer. The university requires that all Ph.D. students enroll in 24 credits of 999 (research) courses before they can graduate. The University pays for health insurance for graduate assistants. See Section IV. 6 below.

### **IV.1 Criteria for Awarding Graduate Assistantships**

A student's academic record, GRE scores, and reference letters of professors are the principal determining factors in awarding assistantships when they are first admitted to the program. Particular attention is paid to the student's mathematical/statistical preparations. Students should ask those writing reference letters to comment on their impression of their mathematical/statistical ability. While students are progressing successfully, their assistantships are continued for up to five years for doctoral candidates. Doctoral candidates with particularly strong preparation may be informed of a shorter expected time until completion of the degree.

### **IV.2 English Proficiency Requirement and the MSU Speaking Test**

Students whose native language is not English are required by the University to score 50 or more on MSU's Speaking examination to be appointed as a Teaching Assistant. This exam is given by the English Language Center at the beginning and end of each semester. The Department expects students to score a 50 or above within their first year at MSU. The assistantship of a student may not be renewed for a second year if the minimum score is not satisfied. A decision not to renew for this reason is made by the Graduate Support Committee of three or more faculty members, in concurrence with the chairperson.

### **IV.3 Acceptance of an Assistantship**

Incoming PhD students who are accepted into the program during December 1 through April 15 are offered assistantships for the following academic year beginning Fall Semester. They are encouraged to respond as soon as possible. However, a student is not obligated to respond until April 15. A student who has accepted an assistantship should notify other universities immediately of their decision.

### **IV.4 Responsibilities of a Teaching Assistant**

Visit the MSU/GEU contract under Article 14 <http://geuatmsu.org/wp-content/uploads/2019/08/GEU-2019-2023-FINAL-1-1.pdf> for the responsibilities of a teaching assistant. Some of the Department requirements are as follows:

1. The assistant will arrive at each assigned class or recitation at least five minutes before the assigned meeting time.
2. If the assistant needs to miss an assigned class or Statistics Learning Center (SLC) hour for reasons of illness or other personal or professional matters, the assistant will arrange for a replacement and will inform the instructor of the change.
3. The assistant will treat students with respect, and, to the best of their ability, teach classes and grade papers as requested by their supervisor.

More detailed department responsibilities of a TA will be given to new TAs at the department orientation.

## **IV.5 Graduate Employees Union (GEU)**

Teaching assistants (those assigned to meet students in a classroom or computer laboratory) are represented by the MSU Graduate Employees Union. Teaching assistants must either choose to join the union or choose to be "represented by" the union. In either case, an amount is deducted from the student's stipend bi-weekly and is approximately 1.6% or about \$30/month. For more information, see the union contract at <http://geuatmsu.org/wp-content/uploads/2019/08/GEU-2019-2023-FINAL-1-1.pdf>

## **IV.6 Medical Insurance**

MSU provides health coverage for graduate assistants and their eligible dependents through Blue Care Network (BCN). As a graduate assistant, you are enrolled **automatically** in the health plan, and MSU picks up the cost of your health coverage. Through this plan, you have access to quality health care through hospitals, physicians, and affiliated health care professionals in the BCN provider network. [Locate a provider through the BCN website](#). Visit MSU Human Resources for more information: <https://hr.msu.edu/benefits/graduate-assistants/health/>

## **IV.7 Renewal of Assistantships**

Each Spring Semester, the graduate assistant is asked whether they wish for their assistantship to be renewed for the following academic year. As stated in the MSU-GEU contract, an assistant must be informed by March 31 of each year whether their assistantship will be renewed. Decisions are made by the Chairperson as recommended by the Graduate Support Committee. In the case of non-renewal, the student may appeal to the Graduate Support Committee and be represented at a meeting by any person they wish.

### **Assistantships may not be renewed if**

1. The student has failed to maintain a GPA above 3.0.
2. The student has not passed a preliminary examination within the three years of entrance into the doctoral program.
3. The student has not passed a preliminary examination after two tries.
4. The student's performance as a teaching assistant has been unsatisfactory as determined by teaching evaluations and visits to their classroom.
5. The student has not qualified to teach within 12 months of entrance into the doctoral program as determined by the English Language Center and the Department.

## **IV.8 Disability Accommodations**

Graduate assistants (RAs, TAs, and TEs) are both students and employees. They are thus eligible for disability accommodations in both of these roles, and these accommodations are provided through distinct documents coordinated by the Resource Center for Persons with Disabilities (RCPD): Students receive VISAs (Verified Individualized Services and Accommodations) or VISTAs (Verified Individualized Services and Temporary Accommodations) and employees receive SEADs (Statements of Employee Accommodation Determination). Graduate assistants can register for both situations using [RCPD's MyProfile portal](#).

## IV.9 Work Related Policies

Graduate assistants are responsible for knowing the specific policies and procedures that govern their assistantship and academic program. One good place to look for these is [Academic Programs](#). For additional policies and information, visit <https://grad.msu.edu/assistantships>. When a graduate student is employed in another department, the policies of that department apply.

Graduate assistants are covered under other MSU policies, including those regarding laboratory and campus safety, Drug and Alcohol-Free Workplace, policy on Religious Observance, Procedures for Handling Allegations of Misconduct in Scholarship, MSU Anti-discrimination Policy, and the policies on Sexual Harassment and Conflict of Interest in Educational Responsibilities Resulting from Consensual Amorous or Sexual Relationships.

**Teaching Assistants** (TAs) are subject to the collective bargaining agreement with the Graduate Employees Union/American Federation of Teachers. To view the contract, see [Graduate Employees Union \(GEU\) Contract 2019-23](#).

If you have completed the Free Application for Federal Student Aid, then you should be aware that receipt of a fellowship, scholarship or assistantship may reduce your eligibility for federal student loans. Please contact the Office of Financial Aid at [finaid@msu.edu](mailto:finaid@msu.edu) if you have questions.

## IV.10 Vacations, Leave, and Meeting Attendance

To the best of its ability, the department tries to accommodate leaves for illness, pregnancy, and other personal matters. We will arrange for temporary replacement of such assistants for up to 6 weeks with no loss in pay. The Department encourages attendance at professional meetings and does its best to accommodate this. Vacations are ordinarily not allowed for teaching assistants during the academic year and summer sessions. See “Graduate Assistant Illness, Injury, and Pregnancy Leave Policy” in the Graduate Education section of the Academic Programs: <https://reg.msu.edu/AcademicPrograms/Text.aspx?Section=111#s351>

# V. University and STT Department Policies and Information

## V.1 Academic Standards

The minimum grade level at which course credit is awarded is 2.0. The minimum standard for a degree is a 3.0 grade point average. The accumulation of grades below 3.0 in more than three courses (of three or more credits each) or deferred grades in more than three courses (of three or more credits each) automatically removes the student from candidacy for the degree. An accumulation (more than four courses) of a combination of grades below 3.0 and deferred grades will also remove the student from candidacy for the degree. A student who fails to meet the standards for any program may be required by the graduate director or the dean to withdraw at the end of the semester. A warning message will be sent to the student from the college or the department graduate office when academic performance or progress is judged to be unsatisfactory.

## V.2 Orientation

Three orientation meetings are available to new graduate students who will begin study in the Fall semester. Details are sent to new students in the early part of summer.

- A university orientation for all new graduate students usually held in August
- A university orientation for new teaching assistants usually held in August
- A departmental orientation held during the week before Fall semester begins. This has two parts, a session for new teaching assistants, and another on department programs and policies. A departmental meeting of all faculty and students is held a few days before classes begin. All graduate students are required to attend. Graduate assistants are expected to be on campus by August 16 or earlier. Appointments begin August 16.

### **V.3 Graduate Student Rights and Responsibilities (GSRR)**

Michigan State University is committed to maintaining a learning and working environment for all students, faculty, and staff that is fair, humane, and responsible – an environment that supports career and educational advancement based on job and academic performance. The University is a community of scholars, and all graduate students are expected to conduct themselves in a civilized and scholarly manner.

The principles of truth and honesty are fundamental in a community of scholars. The University expects students to honor these principles and to protect the integrity of the University grading system.

Specifics of student's rights and responsibilities are contained in the document Graduate Student Rights and Responsibilities (GSRR). Each right of an individual places a reciprocal duty upon others: The duty to permit the individual to exercise the right. The student, as a member of the academic community, has both rights and duties. Within that community, the student's most essential right is the right to learn. The University has a duty to provide for the student those privileges, opportunities, and protections which best promote the learning process in all its aspects. The student also has duties to other members of the academic community, the most important of which is to refrain from interference with those rights of others, which are equally essential to the purposes and processes of the University. <http://splife.studentlife.msu.edu/graduate-student-rights-and-responsibilities/article-1-graduate-student-rights-and-responsibilities-at-michigan-state-university>

### **V.4 Student Files**

The Department maintains two files for teaching assistants:

- An academic file
- An assistantship file
  - Any information concerning a student's role as a teaching assistant is kept in this file. That file may be read by the teaching assistant at any time. A teaching assistant may challenge the accuracy of any item in that file by submitting a letter to the chairperson. The letter will be placed in the file. See the MSU/GEU contract for more details. Students who are not teaching assistants may wish to consult "Graduate Student Rights and Responsibilities (GSRR), available at <http://splife.studentlife.msu.edu/graduate-student-rights-and-responsibilities>

### **V.5 Student Conduct and Conflict Resolution**

When there are conflicts between a graduate student and their faculty advisor or guidance committee, including those that may require a change in the student's Major Professor, the following procedure should be followed.

1. Consult with the Graduate Director, and hopefully reach an informal resolution if possible.
2. If such a resolution is not possible, a meeting should be set up with the conflicting parties and the Graduate Support Committee. The Committee will attempt to resolve the conflict in keeping with the policies of the Department and University including the Guidelines for Graduate Student Advising and Mentoring Relationships.
3. If a student remains unsatisfied with the outcome of those conversations, the student may submit a written request to the Department Chairperson for a grievance hearing. The letter must state the specific nature of the complaint or remedy that the student seeks as an outcome of the hearing.
4. Upon receiving a request for a grievance hearing, the Department Chair will follow the grievance procedure laid out in V.7 Grievance Procedure and form a hearing board. The Hearing Board is governed by rules set forth in the document "Graduate Student Academic Grievance Hearing Procedures" at <https://stt.natsci.msu.edu/graduate-program/graduate-student-academic-grievance-hearing-procedures/>
5. If the student prevails at the hearing, the Department Chair will implement an appropriate remedy to accommodate the student. If the faculty member(s) prevails at the hearing, the student may file a request to appeal the Statistics Program Hearing Board's decision to the College of Natural Science Hearing Board (see the document Graduate Student Rights and Responsibilities).

The University Ombudsperson is available to assist students, instructors, and hearing boards through every stage of the grievance process. The Office of the Ombudsperson can be consulted to determine the process for resolution at the Departmental, College or University level [www.msu.edu/unit/ombud/](http://www.msu.edu/unit/ombud/)

## **V.6 Judicial Structures**

The Graduate Support Committee will hear student complaints only if the problem cannot be resolved after consulting with the graduate director, the student's major professor(s), and the department chairperson. If satisfactory resolution of a conflict is not achieved, the student may seek resolution through appropriate college/university judiciary structure (See the Graduate Student Rights & Responsibilities document, <http://splife.studentlife.msu.edu/graduate-student-rights-and-responsibilities/article-5-adjudication-of-cases-involving-graduate-student-rights-and-responsibilities>)

## **V.7 Grievance Procedure**

The Michigan State University Student Rights and Responsibilities (SRR) and the Graduate Student Rights and Responsibilities (GSRR) documents establish the rights and responsibilities of MSU students and prescribe procedures to resolve allegations of violations of those rights through formal grievance hearings. In accordance with the SRR and the GSRR, the Hearing Board procedures for adjudicating graduate student academic grievances and complaints in the Department of Statistics and Probability (STT) have been established. (See GSRR 5.4.) <https://stt.natsci.msu.edu/graduate-program/graduate-student-academic-grievance-hearing-procedures/>

## V.8 Dual and Joint Degree Programs

STT has established a dual major PhD degree with the Department of Computational Mathematics, Science and Engineering (CMSE).

<https://stt.natsci.msu.edu/graduate-program/current-students/requirements-for-dual-major-doctoral-degrees-stt-and-cmse/>

For general University Policies, please check the following links:

[Dual degrees](#)

[Joint degrees](#)

[Second, joint, or dual master's degrees](#)

[Linked bachelor's-master's degrees](#)

[Dual doctoral majors](#)

## V.9 University Resources

[Diversity, equity, & inclusion programs](#)

[Events](#)

[Forms](#)

[Funding](#)

[Graduate life & wellness](#)

[Mentoring](#)

[Policy information](#)

[Professional development](#)

[Research integrity](#)

[Traveling scholar opportunities](#)

[University Committee on Graduate Studies](#)

Resources provided by university-level units such as [OISS](#), [RCPD](#), [Student Affairs](#), [the Libraries](#), [the Olin Health Center](#), [Inclusion & Intercultural Initiatives](#), [the Burgess Institute for Entrepreneurship & Innovation](#), [the Writing Center](#), and [University Outreach & Engagement](#)

## VI. STT Courses

To see STT course listings and descriptions by semester, please visit <https://student.msu.edu> and click the tile "Class Search."

## VII. Appendix: Links to STT Forms and Policies / Procedures

## **STT Forms**

<https://stt.natsci.msu.edu/graduate-program/forms/annual-progress-report-for-ms-students-plan-a/>

<https://stt.natsci.msu.edu/graduate-program/forms/annual-progress-report-for-ms-students-plan-b/>

<https://stt.natsci.msu.edu/graduate-program/forms/annual-progress-report-for-phd-students/>

## **STT Policies and Procedures**

<https://stt.natsci.msu.edu/graduate-program/current-students/graduate-student-academic-grievance-hearing-procedures/>

<https://stt.natsci.msu.edu/graduate-program/current-students/requirements-for-dual-major-doctoral-degrees-stt-and-cmse/>

<https://stt.natsci.msu.edu/graduate-program/current-students/stt-preliminary-exam-policy/>

<https://stt.natsci.msu.edu/graduate-program/current-students/stt-responsible-conduct-of-research-rcr-plan/>