GRADUATE INFORMATION HANDBOOK

DEPARTMENT OF STATISTICS AND PROBABILITY

MICHIGAN STATE UNIVERSITY

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http://www.stt.msu.edu
and
http://www.msu.edu

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This Handbook: This document is designed to serve as an introduction to the graduate programs of the department for those who may wish to apply and as a document of reference for those already enrolled.

To Possible Applicants: We welcome your inquiry concerning our Graduate Program in Statistics and Probability. This booklet contains as much information as is usually sought by applicants to our Department. If, after reading this, you have further questions or a problem which warrants special attention, please do not hesitate to contact: **Department of Statistics and Probability, A-413 Wells Hall, Michigan State University, East Lansing, Michigan 48824, (517) 353-3233 or by e-mail to Ms. Sue Watson (Graduate Secretary) (gradsec@stt.msu.edu).**

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I. HOW TO APPLY

I.1 On-Line Application

The application for admission, application fee, and all the required supporting documents should be received at least two months prior to your desired semester of enrollment (see deadlines below). All outstanding applicants are automatically considered for graduate assistantships, teaching and research), and fellowships.

A complete application consists of the following:

1. MSU Graduate Application: Please complete the on-line Application for Graduate Studies. You will be required to pay an application fee.
2. Department of Statistics & Probability Graduate Application: Please complete the on-line Department of Statistics & Probability application, which is found on the Statistics & Probability Graduate Information Management System (GIMS). You will create an account when you do this and GIMS allows you to inquire about the status of your application at any time.
3. Three letters of recommendation: You will need to provide contact information in both applications for three references. When you enter the name and email for your references they will receive an email asking them to submit their recommendation for you. They will also be told if you have waived the right to view the recommendation.

Note: We no longer process paper applications. In filling out the two on-line applications listed above, **it is imperative that you provide a correct and working email address**. Almost all of our correspondence is conducted via email.

Additional required application materials:

1. Official transcripts of all college work (undergraduate and graduate). These are sent to our Department directly from the school(s) which you attended. Our address is:
    Graduate Office
    Department of Statistics & Probability
    Michigan State University
    A415 Wells Hall
    East Lansing, MI 48824-1027
2. TOEFL scores (for international applicants whose native language is not English)
3. GRE General Test
    NOTE: Test Scores are submitted to the Michigan State University Graduate Admissions Office by the Educational Testing Service. The Institutional Code for MSU is 1465 and the Department code is 59.
4. Mathematics/Statistics Courses Taken – Submitted to our Department in GIMS

Admission Deadline
Applications are usually accepted only for Fall Semester, which starts at the end of August. Full consideration for admission and assistantships for Fall Semester 2011 will be given to applications completed by **February 1, 2012**. Applications for admission only (no assistantship) will be accepted no later than **April 15**.

The Graduate Information Management System (GIMS) allows you to inquire about the status of your application at any time.

Incomplete applications will **NOT** be reviewed.

I.2 Financial Aid for Applicants

The Department has approximately seven new assistantships available each year. In addition, fellowships are available to outstanding U.S. citizens. In almost all cases, in order to be offered assistantships, international students must have a master's degree in either mathematics or statistics and pass the TOEFL requirements. All domestic applicants should have a good background/degree in mathematics and/or statistics in order to be considered for assistantships.

International students must have a minimum of 80 (IBT) overall and no subscore below: 19 19 19 22 on TOEFL for regular admission to the University. TOEFL is required for all international students unless student has received a degree in the United States. Applications will not be considered without TOEFL scores.

Students who have an English provisional admission cannot enroll in classes until they arrive on campus and take the English exam. The results of the English test will determine how many academic courses the applicant can enroll in.

It is to the advantage of those who wish to obtain an assistantship that your materials arrive in the Department by January 1, 2012 and certainly no later than February 1, 2012. Graduate Applications without financial support will be accepted until April 15, 2012.

I.3 Graduate Record Examination (GRE)
The Graduate Record Examination is required. There is no minimum required score. In the past, almost all admitted students scored more than 1200.

I.4 Other Sources of Information:

Academic Programs
     http://www.reg.msu.edu/AcademicPrograms/
Graduate Students Rights and responsibilities (GSSR)
     http://splife.studentlife.msu.edu/graduate-student-rights-and-responsibilities
MSU/GEU Contract
     http://www.hr.msu.edu/documents/contracts/GEU2011-2015.pdf
Guidelines for Graduate Student Advising and Mentoring Relationships
     http://grad.msu.edu/publications/docs/studentadvising.pdf
Guidelines for Integrity in Research and Creative Activities
     http://grad.msu.edu/publications/docs/integrityresearch.pdf

II. MASTER'S DEGREE PROGRAMS

The Department of Statistics and Probability offers two majors that lead to master's degrees: statistics and applied statistics. For the master's degree, a student may emphasize either theoretical or applied material. Your academic advisor coordinates the student's program of study; any exception to the written requirements must be approved by the chairperson of the department.

If a student chooses to write a thesis (Plan A) he/she must choose a faculty member who will direct the thesis. The student also must arrange for a guidance committee of at least three faculty members. The committee may be changed at any time, with the agreement of the department chairperson.

Each of the master's degree programs is described below.

IT IS ALWAYS THE STUDENT'S RESPONSIBILITY TO MAKE SURE THAT ALL UNIVERSITY AND DEPARTMENT REQUIREMENTS ARE SATISFIED. SEE "MASTER'S PROGRAMS" IN THE UNIVERSITY ACADEMIC PROGRAMS CATALOG.

II.1 Master of Science with a Major in Statistics (3875, MSU code)

The goal of the master's degree programs in Statistics is 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). Almost all students choose Plan B. 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 of the College of Natural Science, students must meet the requirements specified below.

II.1.1 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.1.2 Requirements for the Regular Master's Degree:

1. At least 30 credits in courses in the Department of Statistics and Probability, or in a field of application of probability and statistics.

MSU Courses outside STT which can be used for this degree are:
CEP 921, CEP 923, CEP 934, CEP 935, CSE 881, EC 820a, EC 821a&B, EC822a&b, EPI 920, GEO 866, MTH 421

Complete STT 861, 862, 863, 864 . STT 802 is strongly recommended.

Electives: At least 9 additional credits in STT courses at the 800 level or higher. The other credits have to be in STT or in related fields. The elective courses in a student's program must be approved by the student's academic advisor.

4. Master's Examination: Students who maintain a 3.25 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 strongly recommended that students who do NOT maintain a 3.25 GPA in the three core courses: STT 861, 862, 863, 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 Statistic and Probability. The oral exam is in addition to the master's written/oral exam.

II.2 Master of Science with a Major in Applied Statistics (3871, MSU code)

The goals of the master's degree program in applied statistics 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.2.1 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. Any exception should be approved by the graduate director and/or chairperson.

II.2.2 Requirements for the Degree in Applied Statistics

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

Requirements are:

1. At least 33 credits in courses in the Department of Statistics and Probability, or in a field of application of probability or statistics.
MSU Courses outside STT which can be used for this degree are:
BE 835, EPI 808, EPI 809, EPI 849, FW 850, MGT 914, MTH 421

2. Complete STT 441-2 or STT 861-2. Also complete STT 801, 802, and 863.

3. Electives: At least 9 additional credits in STT courses at the 800 or 900 level. We strongly recommend: STT 825, 844, 847, 864. The other credits have to be in STT or in a related field. The elective courses in a student's program must be approved by the student's academic advisor.

4. Master's Examination: Students who maintain a 3.25 GPA in the five core courses: STT 861-2 or STT441-2 and 801, 802, 863 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 strongly recommended that the students who do NOT maintain a 3.25 GPA in the four out of five core courses, take the written/oral exam.

II.3 Annual Progress Report for Master's Students, both Regular and Applied

In May or June of each year the student must submit an "Annual Progress Report for Plan A (or B) Master's Students." These forms are available from http://grad.msu.edu/forms/docs/progressreportmastersplana.pdf. Copies are included in the Appendix of this Handbook. The student's advisor and the graduate director for the Department are responsible for completion of the second page of the report.

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, with the possible exception of 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.

III. THE PH.D. PROGRAM:

The Department of Statistics and Probability at Michigan State University has had an established Ph.D. program since 1955, one of the oldest in the country. Either statistics or probability can be emphasized.

The Department would like to attract into its Ph.D. program those students who have ability in and enjoy mathematics and its applications. We believe that students with solid training and interest in mathematics will be able to make a contribution to the field of statistics and probability, and we particularly welcome applications from undergraduate and graduate mathematics majors who have studied some probability or statistics.

A student without previous graduate work is usually admitted to the M.S. program, even if planning to work toward the Ph.D. Most graduate courses taken while a M.S. student counts toward the Ph.D. requirements. A student with previous graduate work may be admitted directly to the Ph.D. program. Each student is assigned an advisor who helps plan the student's academic program.

III.1 The Guidance Committee

Every student will have a Guidance Committee as soon as he/she enters the Ph.D. program. An advisor selected by the department will chair it and it will have 3 more members: the current instructor for STT 871, the current instructor for STT 881 and the Graduate Director. The committee must approve the course selection of the student.

The Guidance Committee will be reconstituted as soon as the student selects a thesis advisor. This normally will occur during the second year after passing both prelims. It 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 his/her thesis research.

III.2 Course Work

STT 871-2, STT 881-2 and STT 863 are the core courses. In addition: 8 courses as follows:

1. At least 5 courses from among (a) and (b):

(a) Advanced Probability: STT 961, 964, 996 (at least 2)

(b) Advanced Statistics: STT 953, 954, 997 (at least 2)

2. At least 3 electives: Graduate courses taken inside or outside the Department.
NOTE: STT 996 and STT 997 are special topic courses, which may change from year to year.
Descriptions of courses can be found at: http://www.reg.msu.edu/ ~ Course Descriptions.

A working knowledge of real analysis is required for successful completion of the Ph.D. program. Students without sufficient background must take Real Analysis I, (MTH 828) prior to (or concurrent with) STT 871 or STT 881.   MTH 828 can be counted as an elective. A student entering with rigorous real analysis and STT861-862 level probability and statistics might take a program approximating the following: (Such students should review their previous work in real analysis. A placement examination may be used to confirm readiness.)

STT 953, 954, 997 and STT 961, 964, 996 are offered as follows:

953	Asymptotic Theory	(Fall, even years)
954	Semi-Nonparametric Inference	(Fall, odd years)
997	Advanced Topics in Statistics	(Fall, Spring, Summer)
961	Convergence of Measures and Stochastic Processes	(Spring, odd years)
964	Stochastic Analysis	(Spring, even years)
996	Advanced Topics in Probability	(Fall, Spring, Summer)

Ph.D. Program (Year 1)

At the time a student arrives a decision will be made by the student's graduate committee regarding the student's level of preparation. Students with sufficient understanding of probability and statistics at the master's level and a rigorous course on real variable as represent by MTH 828 at MSU will be expected to take program II below. Others may instead begin with program I. In some cases a student may be asked to enroll in a combination of these courses. For example, a student with a strong background in real variable, but relatively little statistics might take STT 881-2 his/her first year, but not STT 871-2.

Program I

Fall	Sem. Cr.	**Spring**	Sem. Cr.
MTH 828	3	STT 862	3
STT 861	3	STT 864	3
STT 863	3	STT 802	3

Program II

Fall	Sem. Cr.	**Spring**	Sem. Cr.
STT 863	3	STT 864	3
STT 871	3	STT 872	3
STT 881	3	STT 882	3

NOTE: STT 881-2 is a rigorous sequence in measure theory and probability. STT 871-2 is a rigorous sequence in mathematical statistics. STT 863-4 is sequence in regression methodology. STT 865 is a course on advanced statistical methods.

Ph.D. Program (Year 2)

During Fall and Spring of the second year, the student will need to take a 900 level probability and a 900 level statistics class each semester. The third course each semester is an elective. For students who begin with program I above this would be their third year program.

At this point in the Ph.D. program (after Spring semester of the second year) a student will have completed the core courses, the 900 level STT courses and 3 electives on applications. The other courses could be taken in the Summer and in the third year of study. A student's program is always subject to the approval of the Guidance Committee.

Summer offerings

The offerings of the Department in the summers are light. Students usually use the time to prepare for examinations or for thesis research. 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, chaos theory, stochastic models in biology, finance, inference for stationary processes, reliability and survival analysis, limit theorems for dependent random variables, density estimation, curve estimation and wavelets, statistical inference for Markov and general stochastic processes, graphical methods in regression, and, statistical inference for images.

III.3 Examinations

Prelim exam is in 3 modules: (a) Probability prelim based on STT881-882; (b) Theoretical statistics prelim based on STT871-872 and (c) Methodological statistics prelim based on STT864-865. In order to remain in the doctoral program, students are required to pass at least two modules which must be taken in the semester following their enrollment in STT865, 872, 882. To continue in the Ph.D. program, a student must pass the exams in at most two attempts for each and within 3 years of their study.

III.4 Attendance at Colloquia and Seminars

The Department has colloquia which meet regularly on Tuesdays at 10:20-11:10 a.m. Speakers are either members of the Department or are statisticians, probabilists, or those conducting research in other disciplines related to statistics or probability. The Department strongly recommends attendance by doctoral students, and occasionally, by masters students. In addition, seminars on statistics or probability are regularly scheduled in which both professors and doctoral students participate.

III.5 Thesis

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. Copies of theses written by former students are available in the Department's Katz Library. The candidate must present the results of his/her thesis research in a talk of approximately one hour 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 are available from the Graduate School web page http://grad.msu.edu/etd/dates.aspx.   Two bound copies of the thesis must be submitted to the Department. The thesis is stored in electronic form by the university.

III.6 Annual Progress Report for Ph.D. Students

In May or June of each year the student must submit an "Annual Progress Report for Ph.D. Students." This form is available from http://grad.msu.edu/forms/docs/progressreportphd.pdf. The chairperson of the student's Guidance Committee is responsible for completion of the second page of the report. Students who hold assistantships and international students on F-1 visas are expected to complete nine credits which contribute to the completion of the degree each of Fall and Spring semesters. Those holding assistantships during the summer must complete at least three credits. Students who have completed their coursework that is listed by their Guidance Committee can begin enrolling in STT 999. The University requires that a Ph.D. candidate complete 24 credits of 999 courses (thesis research) to graduate.

IV. GRADUATE ASSISTANTSHIPS

In 2011-12 the Department of Statistics and Probability has 30 teaching or research assistants. Approximately 7 of these assistantships become available each year as previous holders complete their degrees. Advanced students fill assistantships for statistical consulting and research assistantships. A few students hold assistantships in other departments.

Requirements for the three levels (I, II, and III) of teaching assistantships are as determined by the MSU/GEU contract. See http://grad.msu.edu/2011-2015GEUContract.pdf. Research assistantships are classified in approximately the same way.

Assistants are paid in equal installments every two weeks over nine months on 9/16 and on 5/15. For international students assistantships are sufficient to satisfy the financial requirements of the University. The 2011-2012 stipends for the nine month academic year are approximately:

	Per 9 months	Per Month
Level 1	$15,000	$1,666
Level 2	$15,174	$1,686
Level 3	$15,363	$1,707

Teaching assistants with a master's degrees begin at Level 2 and reach Level 3 after six semesters as a teaching assistant. 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 usually been able to provide an assistantship for students, who have passed the SPEAK test (see IV.5), for the three summer months, at the same rate of pay as their academic salary for the previous academic year. All new graduate assistants are guaranteed an assistantship for the following summer. If the SPEAK 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. For 2011-12 if a graduate assistant takes more than 9 credits he/she will pay $531.75 (in-state) per credit hour. There is a tuition waiver for 9 credits for Fall and Spring Semesters. Students who hold summer appointments receive waivers for 5 credits. Half-time assistants are expected to take 9 credits for Fall and Spring Semesters and 3-5 credits in Summer Semester. The university requires that all Ph.D. students enroll in 24 credits of 999 (research) courses before they can graduate. The University pays for insurance for graduate assistants and part of the fees for spouse and children. See the MSU/GEU contract

IV.1 Acceptance of an Assistantship

Those offered assistantships during the period November 16 to April 15 for the following academic year 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 his/her decision.

IV.2 Duties of an Assistant

The Department presently teaches 3 undergraduate courses which meet in large lectures supplemented by recitation classes that meets once each week: STT 200, STT 201, and STT 315. Our STT 315 course is for business students and STT 200 and 201 are courses for students from a variety of disciplines. STT 201 has a computer laboratory component. Graduate assistants teach the recitations during the academic year. Assistants are assigned four recitation sections in STT 200 and STT 315 and three two hour recitations in STT 201 (computer lab) per semester, are asked to grade for those recitations, hold regular tutoring sessions (office hours), and work in the department helproom at assigned times. The maximum number of hours for a half-time assistant is 20 hours per week during the semester. Assistants must pass the University English test, SPEAK, before being allowed to teach classes. (See Section IV on SPEAK). Those who have not passed SPEAK are assigned to grade for faculty members. If an assistant has not shown any improvement on SPEAK the assistantship may not be renewed for the following year.

IV.3 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. Particular attention is paid to the student's grades in mathematics. Students should ask those writing reference letters to comment on their impression of their mathematical ability. While students are progressing successfully their assistantships are continued for two academic years for MS candidates and 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.4 Responsibilities of a Teaching Assistant

The responsibilities of a teaching assistant are as described in the MSU/GEU contract.
Suggestions are offered below.

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 Helproom hour for reasons of illness or other personal or professional matters the assistant will arrange for a replacement and will inform a department secretary of the change.
3. The assistant will treat students with respect, and, to the best of her/his ability, teach classes and grade papers as requested by her/his supervisor.

IV.5 SPEAK

Students whose native language is not English are required by the University to score 50 or more on the SPEAK examination in order to teach. This exam is given by the English Language Center at the beginning and end of each semester. Students who score 45 may also be approved upon appeal to teach in recitations. Since most department assistantships are for teaching, the Department expects assistants to be approved within a maximum of one year, preferably sooner. The assistantship of a student may not be renewed for a second year if this requirement 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.6 Union for Teaching Assistants

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. Currently that is approximately $24/month with slightly less for those only "represented". For the specific amount see the union contract at http://grad.msu.edu/2011-2015GEUContract.pdf.

IV.7 Medical Insurance for Assistants

Coverage is provided by the assistantship, as described at
http://grad.msu.edu/wellness/occupational/healthinsurance.aspx. The insurance company is
Chickering.

IV.8 Renewal of Assistantships

Each February or March the graduate assistant is asked whether he/she wishes his/her
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 his/her 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 he/she wishes.

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 his/her 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.9 Student Conduct and Conflict Resolution

Whenever a student and advisor are in conflict the student may appeal to the Department
Chairperson for a resolution. The chairperson should then consult with the advisor and student,
and seek advice from others, within and outside the department. The student has the right to ask
for a change of advisors, and the chairperson should ordinarily make such a change within one
month to accommodate the wishes of the student.

IV.10 Integrity in Research and Creative Activities

Each advisor and student should read the document "Guidelines for Integrity in Research and
Creative Activities," available at http://grad.msu.edu/publications/docs/integrityresearch.pdf,
particularly pages 12-15 of that document. For example, that document states

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

During orientation the Department will summarize these guidelines and will remind faculty and students periodically. Students with questions concerning these issues should consult their advisors, the graduate director, and/or the Department chairperson.

IV.11 Responsible Conduct of Research Training

The initial training of PhD students and individuals associated with research projects will consist of the following components:

1. Completion of at least 2 workshops offered by the Graduate School on Responsible Conduct of Research. The schedule and description of workshops is available at http://grad.msu.edu/rcr/. For individuals involved in human subjects research, one of the workshops may be substituted with MSU tutorial for Human Research Protection Program (HRPP) available at http://www.humanresearch.msu.edu/ .

   Total time: 4 hours during academic year.
   Documentation: list of workshop participants from the Graduate School, HRPP certificate.

2. Completion of a 2-hour face to face training with a designated faculty member. During the training, the following issues will be addressed:
   - Authorship guidelines
   - Plagiarism
   - Conflict of interest
   - Research Misconduct
   - Questionable Research Practices
   Students keep a summary RCR document outlining these issues.

   Total time: 2 hours during first or second week of Fall semester.
   Documentation: signed Form I below after completion of this portion of training.

3. Completion of assigned reading from the list below. This list will be updated annually.
   - MSU Authorships Guidelines available at http://rio.msu.edu/authorshipguidelines.htm
   - Research Data: Management, Control, Access available at http://rio.msu.edu/research_data.htm
   - Parker RA, Berman NG. Criteria for authorship for statisticians in medical papers. Statistics in Medicine 1998, 17:2289-2299.
   - Teaching Responsible Conduct of Research. Lancet 2009 Nov 7;374(9701):1568.

- Hegyvary ST. What every author should know about redundant and duplicate publication. Journal of Nursing Scholarship, 2005, 37(4): 295-297.
- DeAngelis CD. Duplicate publication, multiple problems. JAMA, 2004, 292:1745-1746.
- Froman RD. The importance of peer review. Research in Nursing and Health, 2006, 29:253-255.

Total time: 2 hours during Fall/Spring semester for student's first year at MSU. Documentation: signed Form II given below after completion of this portion of training.

The refresher training will occur annually and will include:

1. Review of the summary RCR document, conflict of interest and authorship issues and discussion with a designated faculty member. Total time: 1 hour.
2. Completion of assigned reading from the updated list of resources. Total time: 2 hours.
3. Completion of HRPP refresher training as required (every 2 years, total time: 4 hours)

STT GRADUATE STUDENT'S CERTIFICATION FORM I

I have attended the two hour face to face training and I understand each of the preceding standards._____ (initial)

I certify that I am able to meet each of these standards as a graduate student at the Michigan State University Department of Statistics and Probability_____ (initial)

OR

I wish to discuss these standards and/or discuss reasonable accommodations with the appropriate individuals at the Michigan State University Department of Statistics and Probability _____ (initial)

Name (please print or type)_____

Signature_____   Date _____

STT GRADUATE STUDENT'S CERTIFICATION FORM II:

I have completed the assigned reading and I understand their content. _____ (initial)

OR

I wish to discuss their content with the appropriate individuals at the Michigan State University Department of Statistics and Probability _____(initial)

Name (please print or type)_____

Signature_____   Date_____

IV.12 Vacations, Leaves, Attendance at Meetings

To the best of its ability the department tries to accommodate leaves for illness, pregnancy, and other personal matters. It will make arrangements 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: http://www.reg.msu.edu/AcademicPrograms/

IV.13 Student Files

The Department maintains two files for teaching assistants:

(1) An academic file, maintained for all graduate students, and
(2) An assistantship file is maintained for all teaching assistants. 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 (GSSR), available at: http://splife.studentlife.msu.edu/graduate-student-rights-and-responsibilities .

IV.14 Orientation

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

      (1)   A university orientation for all new graduate students usually held in the week prior to the beginning of Fall semester,

      (2)   A university orientation for new teaching assistants, usually held about two weeks prior to the beginning of Fall semester,

      (3)   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, 2011 or before. Appointments begin August 16, 2011.

IV.15 Outside Pay

An assistant may accept outside pay for such things as tutoring (other than the class he/she is teaching) and consulting, keeping in mind his/her responsibilities as a student and assistant. International students should always be aware of "U.S. Citizenship and Immigration Services" - USCIS) rules which prohibit the earning of additional amounts beyond that paid by halftime assistants. Such students should always check with the International Students Office before accepting such additional pay.   Tutoring for additional pay for a class an assistant is teaching is not allowed.

IV.16 Judicial Structure

The Graduate Support Committee, which includes one student,   will   serve   to   hear student complaints at such times as this becomes necessary.   This 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://grad.msu.edu/gsrr/).

IV.17 Grievance Procedure

The 56-year history of the department indicates that serious instances of disputes involving the academic life of students occur very infrequently. However, when they do, students may ask the Advisory Committee of the Department (a committee consisting of all tenure-track faculty, plus two elected students) to consider their case, keeping in mind a student's wish for privacy. If, in the opinion of the students, there is no satisfactory resolution, the student may contact the Office of the Ombudsman of the University (soffin@msu.edu).

V. EMPLOYMENT OPPORTUNITIES

General - Good employment opportunities exist for our graduates. About 50% of our Ph.D. graduates have taken academic positions. There seems to be a good market for such graduates, especially for those who have demonstrated the ability to teach well, and the flexibility of handling the theory and applications of statistics and probability. A new Ph.D. accepting an assistant professorship earns from $70,000 to $90,000 for the nine-month academic year. At many universities, summer teaching would add approximately 20% to these figures.   Annual salaries for industrial positions command $75,000-$90,000.

Almost all of our M.S. graduates who have not continued into Ph.D. work have found professional positions in industry or government. Positions are more easily found for those with a background in the use of computers and experience in statistical consulting. A M.S. graduate can expect to be offered a salary of $50,000 to $65,000 per year. Over the last ten years our M.S. graduates have taken positions at Discover Co., Experian Co., State Farm Insurance, Kohl Co., US Bureau of Labor Statistics, AAA of Michigan, Intel Corp., Bristol-Myers Squibb, American Express, Sears, Kellogg Cereal Company, Scorex Corp and Caterpillar Corp.

V.1 Positions   Accepted by Ph.D. Graduates:

Below is a list of Ph.D. graduates of the Department since Fall 2007, their thesis advisors, and their initial (or in some cases latest) positions.

Name (Advisors)	Thesis Title	Date of Ph.D.	Position
Song, Weixing (Hira L. Koul)	Minimum distance measurement errors model fitting	SU 2006	Kansas State Univ.
Wang, Jing (Lijian Yang)	The application of B-spline smoothing: Confidence bands and additive modeling	SU 2006	Univ. of Illinois at Chicago
Luo, Jun (Hira Koul & Y. Zuo)	High dimension and small sample size problems: Classification, gene selection and asymptotics	FS 2006	Clemson Univ.
Liu, Lin (Joseph Gardiner)	Estimation of net present values of total health care costs	FS 2006	Eli Lilly & Co.
Wang, Li (Lily) (Lijian Yang)	Polynomial spline smoothing for time series	SP 2007	Univ. of Georgia
Aggarwal, Deepa (Hira L. Koul)	On some inference problems for current status data	SU 2008	Lown Cardiovascular Foundation
Zhu, Yongfang (Sarat Dass)	Statistical models for assessing the individuality of fingerprinting	FS 2008	Discovery Financial Services
Chakraborty, Paramita (V. Mandrekar)	Particle tracking using SDE driven by pure jump Levy Processes	SU 2009	California State Univ. Bakersfield

Du, Juan (V. Mandrekar)	Asymptotic and computational methods in spatial statistics	SU 2009	Kansas State Univ.
Liu, Rong (Lijian Yang)	Non- and semiparametric modeling of financial and Macro-economic time series	SU 2009	Univ. of Toledo
Bhan, Chandni (V. Mandrekar)	Asymptotic properties of spot rate rate models and their control	SU 2010	Belgium
Li, Gengxin (Yuehua Cui)	Variance components model in mapping imprinted genes: statistical theory and applications	SU 2010	Yale Univ.
Song, Qiongxia (Lijian Yang)	Application of simultaneous confidence bands in statistical inference of heteroscedastic, high dimensional and functional data	SU 2010	Univ. Texas at Dallas
Ren Hao (Tapabrata Maiti)	Some New Models for Small Area Estimation	SU 2011	Teaching Bureau California
Tang, Xiaoqin (Joseph Gardiner)	Modeling Hospital Length of Stay and Cost with Heterogeneity		Geisinger Health Systems
Ma, Shujie (Lijian Yang)	Theory of Spine Regression with Applications to Time Series, Longitudinal, and Categorical Data, and Data with Jumps		U. of Calif. Riverside
Wu, Wei-Ying (Chae Young Lim)	Tail Estimation of the Spectral Density Under Fixed-Domain Asymptotics		Post Doc Institute Of Statistical Science- Taiwan
Li, Shaoyu (Yuehua Cui)	Statistical Issues and Novel Strategies for Expression Quantitative Trait Loci Mapping		St. Jude Children's Research Hospital

VI. MISCELLANEOUS INFORMATION
MSU and the Department

Michigan State University has a student body of approximately 45,000 including 9,000 graduate students. About 55% of all M.S.U. students are women. The Department of Statistics and Probability has about 100 graduate students, of whom approximately 30 hold assistantships and for whom office space is provided with usually two/three per office. The Department is located in Wells Hall: "A" wing houses the Department of Mathematics on the first three floors, this Department on the fourth and part of fifth floor. "B" wing contains several large lecture rooms and a new microcomputer facility, B100. "C" wing contains three floors of normal sized classrooms. "D" wing contains the Mathematics-Statistics Library and additional Mathematics offices. The Department of Statistics and Probability also has the Katz Memorial Library (located on the fourth floor of Wells). Most classes in Mathematics and Statistics meet in this building. The Computer Center is just 100 yards away; and the International Center with a cafeteria and large bookstore is even closer.

Although the University is large, graduate students in the Department soon find that they know all or most faculty members and most of their fellow graduate students.

A pioneer land grant institution, Michigan State University has a beautiful campus, located on both sides of the Red Cedar River and separated from the city of East Lansing by Grand River Avenue. East Lansing is a residential city of 54,000 (including students) located 4 miles east of the capitol building in downtown Lansing. Lansing has 136,000 inhabitants. Detroit is 90 miles and 1 1/2 hours away by freeway. Many opportunities for cultural and social development are available. Examples include the Kresge Art Center, Wharton Center for the Performing Arts, University Museum, Planetarium, and World Travel and Foreign Film Series. Sports fans will enjoy watching the fine Spartan teams. Recreational facilities maintained by the University include a year-round ice arena, two 18 hole golf courses, tennis courts, and outdoor and indoor swimming pools.

VII. Housing

On campus housing is available to both married and unmarried students. Owen Graduate Dormitory has accommodations for single students. For current rates check the University web page (www.hfs.msu.edu). Somewhat more expensive apartments are available in East Lansing; students commonly share these apartments.

VIII Graduate-Credit Courses Offered by the Department

Course: STT 441 Probability and Statistics I: Probability

Semester: Fall of every year, Spring of every year, Summer of every year

Credits: Total Credits: 3   *Lecture/Recitation/Discussion Hours: 3*
3(3-0)

Recommended Background: MTH 234 or MTH 254H or LBS 220

Description: Probability models and basic statistics at an intermediate mathematical level. Discrete, continuous, univariate, and multivariate distributions. Random variables. Normal approximation. Sampling distributions, parameter estimation, and elementary tests of hypotheses.

Course: STT 442 Probability and Statistics II: Statistics

Semester: Spring of every year

Credits: Total Credits: 3   *Lecture/Recitation/Discussion Hours: 3*
3(3-0)

Recommended Background: STT 441 and (MTH 309 or MTH 314 or MTH 415)

Description: Estimation, testing hypotheses and simple and multiple regression analysis. Time series: ARMA (Auto Regressive Moving Average) and ARIMA (Auto Regressive Integrated Moving Average) models, data analysis and forecasting.

Course: STT 455 Actuarial Models

Semester: Spring of every year

Credits: Total Credits: 3   *Lecture/Recitation/Discussion Hours: 3*
3(3-0)

Recommended Background: STT 441 and MTH 360

Description: Stochastic models used in insurance. Survival distributions, life insurance, life annuities, benefit premiums, benefit reserves, and analysis of benefit reserves.

Interdepartmental With: Mathematics

Course: STT 461 Computations in Probability and Statistics

Semester: Spring of every year

Credits: Total Credits: 3   *Lecture/Recitation/Discussion Hours: 3*
3(3-0)

Recommended Background: (CSE 131 or CSE 230) and (MTH 314 and STT 441)

Description: Computer algorithms for evaluation, simulation and visualization. Sampling and prescribed distributions. Robustness and error analysis of procedures used by statistical packages. Graphics for data display, computation of probabilities and percentiles.

Course: STT 471 Statistics for Quality and Productivity

Semester: Fall of even years

Credits: Total Credits: 3   *Lecture/Recitation/Discussion Hours: 3*
3(3-0)

**Recommended
Background:** STT 351 or STT 422 or STT 442

Description: Scientific context of quality: Box, Deming, Taguchi. Graphical techniques, control charts. Design of experiments: factorials and fractional factorials, confounding and aliasing. Engineering parameter design through experimentation.

Course: STT 490 Directed Study of Statistical Problems

Semester: Fall of every year, Spring of every year, Summer of every year

Credits: Variable from 1 to 3

**Reenrollment
Information:** A student may earn a maximum of 9 credits in all enrollments for this course.

Restrictions: Open only to juniors or seniors in the Department of Mathematics or Department of Statistics and Probability. Approval of department.

Description: Individualized study of selected topics.

Course: STT 801 Design of Experiments

Semester: Fall of odd years

Credits: Total Credits: 3   *Lecture/Recitation/Discussion Hours: 3*
3(3-0)

**Recommended
Background:** STT 422 or STT 442 or STT 465 or STT 471

Description: Blocking and randomization. Split-plot, latin square and factorial designs. Fractional factorial designs, aliasing and confounding of effects. Mixture and central composite designs and response surface exploration. Clinical trials.

Course: STT 814 Advanced Statistics for Biologists

Semester: Spring of every year

Credits: Total Credits: 4   *Lecture/Recitation/Discussion Hours: 3   Lab Hours: 2*
4(3-2)

**Recommended
Background:** STT 464

Description: Concepts of reducing experimental error for biological and agricultural research. Covariance, randomized block designs, latin squares, split plots, repeated-measures designs, regression applications, and response surface designs. Analyses using statistical software.

**Interdepartmental
With:** Animal Science, Crop and Soil Sciences

Course: STT 825 Sample Surveys

Semester: Fall of every year

Credits: Total Credits: 3   *Lecture/Recitation/Discussion Hours: 3*
3(3-0)

Recommended Background: STT 422 or STT 442 or STT 862

Description: Application of statistical sampling theory to survey designs. Simple random, stratified, and systematic samples. Sub-sampling, double sampling. Ratio and regression estimators.

Course: STT 843 Multivariate Analysis

Semester: Spring of even years

Credits: Total Credits: 3   *Lecture/Recitation/Discussion Hours: 3*
3(3-0)

Recommended Background: STT 442 or STT 862

Not open to students with credit in: FW 850

Description: Multivariate normal distribution, tests of hypotheses on means, multivariate analysis of variance. Discriminant analysis. Principal components. Factor analysis. Analysis of frequency data.

Course: STT 844 Time Series Analysis

Semester: Spring of odd years

Credits: Total Credits: 3   *Lecture/Recitation/Discussion Hours: 3*
3(3-0)

Recommended Background: STT 442 or STT 862

Description: Stationary time series. Autocorrelation and spectra. ARMA and ARIMA processes: estimation and forecasting. Seasonal ARIMA models. Identification and diagnostic techniques. Multivariate time series. Time series software.

Course: STT 847 Analysis of Survival Data

Semester: Spring of even years

Credits: Total Credits: 3   *Lecture/Recitation/Discussion Hours: 3*
3(3-0)

Recommended Background: STT 422 or STT 442 or STT 862

Description: Analysis of lifetime data. Estimation of survival functions for parametric and nonparametric models. Censored data. The Cox proportional hazards model. Accelerated failure time models. Frailty models. Use of statistical software packages.

Interdepartmental With: Epidemiology

Course: STT 855 Statistical Genetics

Semester: Fall of odd years

Credits: Total Credits: 3   *Lecture/Recitation/Discussion Hours: 3*
3(3-0)

**Recommended
Background:** STT 442 or STT 862

Description: Probabilistic and statistical methods for genetic linkage and association studies. Quantitative trait locus mapping.

Effective Dates: FALL 2007 - Open

Course: STT 861 Theory of Probability and Statistics I

Semester: Fall of every year

Credits: Total Credits: 3   *Lecture/Recitation/Discussion Hours: 3*
3(3-0)

**Recommended
Background:** MTH 320 or concurrently

Description: Discrete and continuous random variables and vectors. Important probability models. Inequalities and limit laws. Sampling distributions and functions of random vectors. Statistical inference.

Course: STT 862 Theory of Probability and Statistics II

Semester: Spring of every year

Credits: Total Credits: 3   *Lecture/Recitation/Discussion Hours: 3*
3(3-0)

**Recommended
Background:** STT 861 and (MTH 415 or concurrently)

Description: Statistical inference: sufficiency, likelihood, estimation, and tests of hypotheses in parametric and nonparametric cases. Linear models, goodness of fit, and other topics.

Course: STT 863 Applied Statistics Methods I

Semester: Fall of every year

Credits: Total Credits: 3   *Lecture/Recitation/Discussion Hours: 3*
3(3-0)

**Recommended
Background:** (STT 442 or STT 862) and (MTH 415 or concurrently)

Description: Application of regression models including simple and multiple regression, model diagnostics, model selection, one- and two-way analysis of variance, mixed effects models, randomized block designs, and logistic regression.

Semester Alias: STT 841

Course: STT 864 Applied Statistical Methods II

Semester: Spring of odd years

Credits: Total Credits: 3   *Lecture/Recitation/Discussion Hours: 3*
3(3-0)

**Recommended
Background:** STT 863

Description: Generalized linear models, loglinear models, hierarchical models, repeated measures, discriminant analysis and classification, clustering, regression, classification trees, selected nonparametric methods.

Course: STT 865 Modern Statistical Methods

Semester: Spring of even years

Credits: Total Credits: 3   *Lecture/Recitation/Discussion Hours: 3*
3(3-0)

Recommended Background: STT 863

Description: Modern statistical methods. Applicability and computer implementation. Resampling methods, including the bootstrap. Markov chain Monte Carlo methods. Survival analysis. Nonparametric curve estimation.

Course: STT 871 Theory of Statistics I

Semester: Fall of every year

Credits: Total Credits: 3   *Lecture/Recitation/Discussion Hours: 3*
3(3-0)

Recommended Background: (MTH 828 or concurrently) and (STT 881 or concurrently)

Description: Empirical distributions, quantiles, Glivenko-Cantelli Theorem. Important distributions and families. Convergences, Slutsky Theorem, asymptotics of differentiable functions. Basic concepts of decision theory. Confidence sets. Some basic statistical methods.

Course: STT 872 Theory of Statistics II

Semester: Spring of every year

Credits: Total Credits: 3   *Lecture/Recitation/Discussion Hours: 3*
3(3-0)

Recommended Background: STT 871 and (STT 882 or concurrently)

Description: Theory of Neyman Pearson tests and extensions. Convex loss estimation, best unbiased estimates, sufficient statistics, information lower bounds. Extensive application to linear models. LAN families and applications to estimation and tests.

Course: STT 881 Theory of Probability I

Semester: Fall of every year

Credits: Total Credits: 3   *Lecture/Recitation/Discussion Hours: 3*
3(3-0)

Recommended Background: MTH 828 or concurrently

Description: Measures and their extensions, integration, and convergence theorems. Product measures, Lebesgue decomposition, transition probabilities, Kolmogorov consistency theorem. Independence. Classical limit theorems for partial sums.

Course: STT 882 Theory of Probability II

Semester: Spring of every year

Credits: Total Credits: 3   *Lecture/Recitation/Discussion Hours: 3*
3(3-0)

Recommended Background: STT 881

Description: Conditional expectation, martingales, stationary processes. Brownian motion, convergence in distribution, and the invariance principle.

Course: STT 886 Stochastic Processes and Applications

Semester: Fall of every year

Credits: Total Credits: 3   *Lecture/Recitation/Discussion Hours: 3*
3(3-0)

Recommended Background: STT 441 or STT 861

Description: Markov chains and their applications in both discrete and continuous time, including classification of states, recurrence, limiting probabilities. Queuing theory, Poisson process and renewal theory.

Course: STT 888 Stochastic Models in Finance

Semester: Spring of even years

Credits: Total Credits: 3   *Lecture/Recitation/Discussion Hours: 3*
3(3-0)

Recommended Background: STT 441 or STT 861

Description: Stochastic models used in pricing financial derivatives. Discrete-time models. Brownian motion. Stochastic integrals and Ito's formula. Basic Black-Scholes model. Risk neutral distribution. European and American options. Exotic options. Interest rate market, futures, and interest rate options.

Semester Alias: STT 887

Effective Dates: FALL 2007 - Open

Course: STT 890 Statistical Problems

Semester: Fall of every year, Spring of every year, Summer of every year

Credits: Variable from 1 to 3

Reenrollment Information: A student may earn a maximum of 24 credits in all enrollments for this course.

Restrictions: Approval of department.

Description: Individualized study on selected problems.

Course: STT 899 Master's Thesis Research

Semester: Fall of every year, Spring of every year, Summer of every year

Credits: Variable from 1 to 6

Reenrollment Information: A student may earn a maximum of 36 credits in all enrollments for this course.

Restrictions: Approval of department.

Description: Master's thesis research.

Course: STT 953 Asymptotic Theory

Semester: Fall of even years

Credits: Total Credits: 3   *Lecture/Recitation/Discussion Hours: 3*
3(3-0)

Recommended Background: STT 872

Description: Asymptotics of M- and R- estimators. Asymptotically efficient and adaptive procedures.

Effective Dates: FALL 2007 - Open

Course: STT 954 Semi-Nonparametric Inference

Semester: Fall of odd years

Credits: Total Credits: 3   *Lecture/Recitation/Discussion Hours: 3*
3(3-0)

Recommended Background: STT 872

Description: Robust procedures in regression and time series settings, nonparametric curve estimation, survival analysis in non- and semi-parametric models.

Course: STT 961 Convergence of Measures and Stochastic Processes

Semester: Spring of odd years

Credits: Total Credits: 3   *Lecture/Recitation/Discussion Hours: 3*
3(3-0)

Recommended Background: STT 882

Description: Convergence of measures on metric spaces. Prohorov's theorem. Function spaces with the uniform and Skorokhod metric. Empirical processes. Weak convergence of Martingales. Applications.

Effective Dates: FALL 2008 - Open

Course: STT 964 Stochastic Analysis

Semester: Spring of even years

Credits: Total Credits: 3   *Lecture/Recitation/Discussion Hours: 3*
3(3-0)

Recommended Background: STT 882

Description: Stochastic integrals and semi-martingales, Ito formula, stochastic differential equations. Applications.

Course: STT 990 Problems in Statistics and Probability

Semester: Fall of every year, Spring of every year, Summer of every year

Credits: Variable from 1 to 3

Reenrollment Information: A student may earn a maximum of 6 credits in all enrollments for this course.

Recommended Background: STT 872

Restrictions: Approval of department.

Description: Individual study on an advanced topic in statistics or probability.

Course: STT 996 Advanced Topics in Probability

Semester: Fall of every year, Spring of every year, Summer of every year

Credits: Total Credits: 3   *Lecture/Recitation/Discussion Hours: 3*
3(3-0)

Reenrollment Information: A student may earn a maximum of 15 credits in all enrollments for this course.

Recommended Background: STT 882

Restrictions: Approval of department.

Description: Current topics in probability.

Course: STT 997 Advanced Topics in Statistics

Semester: Fall of every year, Spring of every year, Summer of every year

Credits: Total Credits: 3   *Lecture/Recitation/Discussion Hours: 3*
3(3-0)

Reenrollment Information: A student may earn a maximum of 15 credits in all enrollments for this course.

Recommended Background: STT 872

Restrictions: Approval of department.

Description: Topics selected from non- and semi parametric statistics, multivariate analysis, time series analysis, Bayesian statistics, regression and kernel estimation, and other topics in advanced statistics.

Course: STT 999 Doctoral Dissertation Research

Semester: Fall of every year, Spring of every year, Summer of every year

Credits: Variable from 1 to 24

Reenrollment Information: A student may earn a maximum of 120 credits in all enrollments for this course.

Restrictions: Approval of department.

Description: Doctoral dissertation research.

IX. FACULTY
    DEPARTMENT OF STATISTICS AND PROBABILITY
    2010-2011

Professors:

Hira Lal Koul, Chair
Univ. of California, Berkeley, 1967

Non- and Semiparametric Statistics,
Survival Analysis, Time Series Analysis

Dennis Gilliland   .
Michigan State University, 1966

Compound and Empirical Bayes,
Repeated Games, Applications

Raoul LePage (sabbatical leave)
University of Minnesota, 1967

Stable Processes, Resampling Theory
Mathematical Finance, Inverse Problems

Shlomo Levental
University of Wisconsin, 1986

Stochastic Models in Finance

V. Mandrekar
Michigan State University, 1965

Stochastic PDEs, Stationary & Markov Fields,
Stochastic Stability, Signal Analysis

Tapabrata Maiti
University of Kalyahi, 1996

Small Area Estimations, Inference with
Missing Values, Bayesian Methods Biostatistics

Mark M. Meerschaert
University of Michigan, 1984

Stochastic Processes, Time Series, Heavy Tails

Connie Page
University of Michigan, 1972

Sequential Allocation, Adaptive Designs for
Clinical Trials, Statistical Consulting

R.V. Ramamoorthi (leave)
Indian Statistical Institute, 1981

Foundations, Bayesian Inference, Graphical Models

Habib Salehi (consultantship)
Indiana University, 1965

Prediction Theory, Time Series Analysis
Stochastic Analysis

Anatoli Skorokhod (consultantship)
Institute of Mathematics, Kiev, 1962

Limit Theorems for Stochastic Processes

Yimin Xiao
Ohio State University, 1996

Stochastic Processes, Random Fields, Fractals

Lijian Yang (leave Spring 2011)
University of North Carolina,
   Chapel Hill, 1995

Curve Estimation, Model Selection,
Non- and semi- Parametric Methods
in Econometrics, Time Series

Yijun Zuo
University of Texas at Dallas, 1998

Data Depth and Applications, Multivariate
Data Analysis, Robust Statistics, Nonparametric
Methods

Associate Professors:

Yuehua Cui   Statistical genetics, bioinformatics, cancer
University of Florida, 2005   epidemiology, longitudinal data analysis

Sarat Dass   Bayesian Computational Methods, Image
Purdue University, 1998   Reconstruction and Pattern Recognition,
Foundation of Statistics

James Dudziak   Actuarial Science and Function Theory
Indiana University, 1981

Marianne Huebner, (leave, Fall 2010)   Stochastical Genetics, Microarry Analysis,
Univ. of Southern California, 1993   Mathematical Ecology, Complex Traits, Biological
                                                    Networks

Vincent Melfi   Markov Chains, Renewal Theory, Sequential
University of Michigan, 1991   Allocations

Lyudmilla Sakhanenko   Empirical Processes, High Dimensional Probability
University of New Mexico, 2002

Aklilu Zeleke   Probability, Stochastic Processes
Temple University, 1997

Assistant Professor:

Daniel Dougherty   Mathematical Biosciences
North Carolina State Univ, 2002

Jennifer Kaplan   Math and Statistics Education, Quantitative Literacy
University of Texas/Austin, 2006

Chae Young Lim   Spatial statistics, Environmental Statistics, Spectral
University of Chicago, 2007   Analysis

Parthanil Roy   Heavy Tails, Long Range Dependence, Extreme
Cornell University, 2007   Value Theory

Alla Sikorskii   Biostatistics, Item Response Theory
Michigan State University, 2000

Lifeng Wang   High-dimensional Data Analysis, Machine Learning
University of Minnesota, 2006   Bioinformatics.

Retired Faculty Members:

Roy V. Erickson, Emeritus   Limit Theorems
University of Michigan, 1968

Dorian Feldman, Emeritus   Decision Theoretic Orderings of Experiments
University of California, Berkeley, 1961

James Stapleton   Linear and Log-Linear Models
Purdue University, 1957

Habib Salehi   Prediction Theory, Time Series Analysis
Indiana University, 1965.

Visiting Faculty for 2010-2011:

Dikong, Elijah   Queuing and Stochastic Processes, Graph and
Florida Institute of Technology, 1998   Random Graph Theory

Robert Lovell
Western Michigan University, 1996

Mimoto, Nao
University of Western Onatario, 2008

Pramod K. Pathak   Sampling Theory and Mathematical Statistic
Indian Statistical Institute, 1963

Ashoke Sinha
Erasmus Univ., Netherlands, 1997

Appendix

Michigan State University
Annual Progress Report for Plan A (Thesis) Master's Students

Name_____Student PID Number_____

Portion Completed by the Student

<u>Academic Progress</u>

A copy of the current program of study should be attached to this report.

Date of entrance into program*_____Expected completion date_____

Most recent contact with the guidance committee/academic advisor: __

Date or expected date of thesis proposal approval   _____

Date or expected date of thesis defense   _____

Current GPA:_____   Number of credits below 3.0:   _____

Remaining required courses:

<u>Professional Performance and Potential</u>

The student should attach the following information:

1. Professional goal statement
2. Goals for the next academic year
3. Papers published or submitted
4. Presentations at professional conferences
5. Participation on funded grants
6. Participation in undergraduate education (e.g. courses taught, mentoring of undergraduates)
7. Other

Comment briefly on your progress in achieving your academic goals during the past year. Note areas in which you are experiencing any difficulty.

Comment briefly on your progress toward achieving your career goals during the past year. If you feel you are not making progress, explain why. Include perceived departmental/school obstacles that hinder your program.

Portion Completed by the Major Professor

Academic Performance

1. Has the student made acceptable progress during the evaluation period? Please comment below.

2. Please comment on the overall academic performance of the student, including teaching experiences, if applicable.

*If admitted under provisional status, date provisional status removed: _____

Student Your signature below indicates that you have discussed the contents of this progress report with your major professor.

Student_____ Date_____

Major Professor Your signature below indicates that you have discussed the contents of this progress report with the student.

Major Professor_____ Date_____

Dept. /School Chair/Director_____ Date_____

When both the major professor and student have reviewed and signed this progress report, copies of the report should be given to the student and the major professor. The original progress report should be placed in the student's file in the department/unit office. Students who wish to appeal any part of the major professor's evaluation may do so in writing to the department chair/school director.

**Note: Departments/Units may choose to use this form for annual or academic year evaluations.

*If admitted under provisional status, date provisional status removed: _____

Michigan State University
Annual Progress Report for Plan B (Non-Thesis) Master's Students

Name   Student PID Number

Portion Completed by the Student

Academic Progress

A copy of the current program of study should be attached to this report.

Date of entrance into program*   Anticipated completion date

Date or anticipated date of certifying exam or evaluation
   (Evaluation methods may differ across departments/units):

Are all program requirements completed?   Yes   No

If no, what requirements remain?

Most recent contact with the guidance committee:

Current GPA: Number of credits below 3.0:

Professional Performance and Potential
The student should attach the following information:

1. Professional goal statement for the year (noting both academic and career goals)
2. Goal statement for the next year
3. Vitae including
    a. Presentations at professional conferences or meetings
    b. Service to the department/school/college, if any
    c. Any publications for lay or professional audiences
    d. Participation with faculty on research projects or similar endeavors
    e. Participation with faculty on community projects, workshops or other outreach efforts
4. Other

Comment briefly on your progress in achieving your academic goals during the past year. Note areas in which you are experiencing any difficulty.

*If admitted under provisional status, date provisional status removed:

Comment briefly on your progress toward achieving your career goals during the past year. If you feel you are not making progress, explain why. Include perceived departmental/school obstacles that hinder your program.

Portion completed by Academic Advisor/Program Director

Academic Performance

1. Has the student made acceptable progress during the evaluation period? Please comment below.

2. Please comment on the overall academic performance of the student, including teaching experiences, if applicable.

Student   Your signature below indicates that you have discussed the contents of this progress report with your major professor.

*If admitted under provisional status, date provisional status removed: _____

Student   Date_____

Academic Advisor/ Your signature below indicates that you have discussed the contents of this
Program Director progress report with the student.

Academic Advisor/Program Director_____ Date_____

Dept./School Chair/Director_____ Date_____

When both the major professor and student have reviewed and signed this progress report, copies
of the report should be given to the student and the major professor. The original progress report
should be placed in the student's file in the department/unit office. Students who wish to appeal
any part of the major professor's evaluation may do so in writing to the department chair/school
director.

**Note: Departments/Units may choose to use this form for annual or academic year
evaluations.

*If admitted under provisional status, date provisional status removed: _____

Michigan State University
Annual Progress Report for Ph.D. Students

Name_____Student PID Number_____

Portion Completed by the Student

Academic Progress

A copy of the current program of study should be attached to this report.

Date of entrance into program*****_____Expected completion date_____

Most recent contact with the guidance committee/academic advisor:

Date or expected date of qualifying exams (if applicable)_____   Passed?_____

Date or expected date of comprehensive exams_____   Passed?_____

Date or expected date of dissertation proposal approval   _____

Date or expected date of dissertation defense   _____

Current GPA:_____   Number of credits below 3.0:   _____

Remaining required courses:

Professional Performance and Potential
The student should attach the following information:

1) Professional goal statement
2) Goals for the next academic year
3) Papers published or submitted
4) Presentations at professional conferences
5) Participation on funded grants
6) Participation in undergraduate education
   (e.g. courses taught, mentoring of
   undergraduates)
7) Other

*If admitted under provisional status, date provisional status removed: _____

Comment briefly on your progress in achieving your academic goals during the past year. Note areas in which you are experiencing any difficulty.

Comment briefly on your progress toward achieving your career goals during the past year. If you feel you are not making progress, explain why. Include perceived departmental/school obstacles that hinder your program.

Portion Completed by the Major Professor

<u>Academic Performance</u>

1. Has the student made acceptable progress during the evaluation period? Please comment below.

2. Please comment on the overall academic performance of the student, including teaching experiences, if applicable.

*If admitted under provisional status, date provisional status removed: _____

Student   Your signature below indicates that you have discussed the contents of this progress report with your major professor.

Student_____   Date_____

Major Professor Your signature below indicates that you have discussed the contents of this progress report with the student.

Major Professor_____   Date_____

Dept./School Chair/Director_____   Date_____

When both the major professor and student have reviewed and signed this progress report, copies of the report should be given to the student and the major professor. The original progress report should be placed in the student's file in the department/unit office. Students who wish to appeal any part of the major professor's evaluation may do so in writing to the department chair/school director.

**Note: Departments/Units may choose to use this form for annual or academic year evaluations.

2/15/2012

*If admitted under provisional status, date provisional status removed: _____