Department of Statistics
Graduate Student Handbook
Brigham Young University
2015 – 2016 Academic Year
Department of Statistics

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Introduction

Welcome to the Master of Statistics program at Brigham Young University. We are glad to have you as a part of our program and anticipate that your time here will be stimulating, challenging, and rewarding.

The purpose of the Graduate Handbook is to help students complete the master’s degree program as smoothly as possible. We have included brief descriptions of the major stepping-stones leading to completion of the degree and a few stumbling blocks encountered by previous students. Since we intend to revise this handbook periodically, please let the Graduate Coordinator know if there are any additional topics that should be included or if any of the material is outdated.

Not all of the material in this handbook will be immediately relevant. Nevertheless, students should read the entire handbook when they begin the program and refer to it later as needed. Familiarity with the contents of the handbook will also make it easier for department personnel to help when problems arise. Additional information may be obtained from the BYU Graduate Studies Catalog, your Committee Chair, the Graduate Coordinator, or the Department Secretary.

Department Mission Statement

The mission of the Department of Statistics is to help students develop their intellect and faith, expand their understanding of the role of science in the objective systematic pursuit of truth, demonstrate how sound statistical methodology strengthens scientific conclusions, cultivate the ability to understand and communicate the results from empirical research in an ethical manner, and develop and apply methods of modern statistical science. To succeed in this mission, we will:

1. Offer the premier undergraduate educational experience to statistics and actuarial science majors that prepares them to pursue satisfying and productive careers and qualifies them to enter competitive graduate programs.
2. Offer an applied statistics graduate program that prepares outstanding students for successful and productive careers.
3. Provide superb teaching in general education and service courses to cultivate an understanding of the role of the scientific method in performing empirical research.
4. Contribute to the advancement of statistical science through peer-reviewed research, and collaborate on the pursuit of knowledge across scientific disciplines.
Expectations

What students can expect from the program

This program will prepare men and women for statistical careers or for entrance into top PhD programs in statistics or biostatistics. Graduates will understand the theoretical foundation of and be able to perform advanced statistical methods. Also, graduates will be able to identify applicable statistical methods to collaborate in research and in consulting problems.

The first year of the graduate program consists of a core curriculum that will prepare graduate students for the comprehensive exam. During the second year, classes in advanced statistical methods reflecting faculty expertise will be taken.

Students who complete the Statistics MS program will:

1. Be employable in jobs with MS Statistics requirements or prepared for top PhD statistics or biostatistics programs.
2. Demonstrate a mastery of the theoretical foundations of statistics at the first-year level of top PhD statistics or biostatistics programs.
3. Demonstrate the ability to apply sound scientific and advanced statistical methodology to research situations.
4. Demonstrate competence in relevant statistical software.
5. Demonstrate good statistical consulting skills (teaching, problem solving, and oral and written presentations).

What students can expect from the faculty

Faculty members are experts in the department’s traditionally strong areas of applied linear models and designed experiments, as well as recent developments in Bayesian methods, spatial and environmental statistics, reliability of industrial and computing processes, statistical genetics and bioinformatics, mixed models and longitudinal data, data mining, chemometrics, and issues in statistical computation.

What is expected of graduate students?

We expect students to be committed to complete their degree and graduate in two years or less. A timeline, on page 6, details the tasks and deadlines that students need to follow. While it is tempting to create a schedule that meets the minimum degree requirements, we encourage students to take at least 10 credit hours each semester. Those who take advantage of as many of the 400- and 500-level courses, as possible, will be more prepared and more competitive when entering into the job market.
Timeline to Graduation

1st Semester
- Stat 535, 624, 641, 591R
- 1 credit hour of Stat 698R
- Complete admission provisions, if any
- Complete a Program of Study form (see page 55) and return to the Department Secretary with first year advisor signature

2nd Semester
- Stat 536, 642, 538, 591R
- 1 credit hour of Stat 698R
- Prepare and give a presentation on a class project, consulting experience, or a research project at the Student Research Conference
- Comprehensive Exam
- Summer Internship

3rd Semester
- Pick two from Stat 635, 637, 651, and 666, plus 591R
- 1 credit hours of 698R
- Complete coursework listed on Program of Study list

4th Semester
- Pick two from Stat 635, 637, 651, and 666, plus 591R
- 2+ credit hour enrollment in 698R
- Prepare and give a presentation on a class project, consulting experience, or a research project at the Student Research Conference
- Apply for graduation online
- Schedule Final Defense (students will give their committee a copy of their project portfolio no later than January 13, 2017) with the graduate committee and fill out the scheduling form (see the Department Secretary). After the committee signs the form, please bring the form to the Department Secretary.
- Defense of project portfolio must be completed by March 1, 2017
- Go to printandmail.byue.edu and submit the PDF file of the project portfolio for printing (students are required to provide the department with one copy
- An alternative research project may be pursued by a student only if recommended by a member of the graduate faculty. Formation of a committee will be done by the graduate coordinator after consultation with the graduate faculty member. If this option is approved, the prospectus must be defended no later than December 16, 2016, which means the prospectus must be in the hands of the committee by December 1, 2016. The formal document must be to the graduate committee by January 13, 2017, and defended no later than March 1, 2017.
Curriculum
Prerequisites

Admission to the graduate program in the Department of Statistics presupposes that students will have completed all of the prerequisites or suitable equivalents stated below:

- A bachelor’s degree from an accredited U.S. university or equivalent, with a minimum 3.3 overall undergraduate GPA.
- A B- or better in a methods course beyond introductory statistics, a calculus-based statistical theory course, multivariate calculus, and linear algebra. A math minor is recommended.
- Students must also have taken the general GRE (Graduate Record Exam) and be proficient in written and spoken English (IELTS Score: Overall band score of 7.0, minimum band score of 6.0 in each module; TOEFL Paper-based Score: 580 or TOEFL iBT Score: Total score of 85, with a minimum score of 22 in Speaking and 21 in Listening, Reading, and Writing).

If the applicant has not clearly satisfied these prerequisites, they may be admitted to the graduate program on a provisional basis. In such cases, the admitted student should discuss their situation with the Graduate Coordinator immediately. If necessary, appropriate remedial coursework will be added to the graduate’s study list and should be completed as soon as possible. The department will generally not provide tuition assistance for coursework intended to remedy deficiencies in satisfying these prerequisites.

Prior to admission, and while enrolled in the program, a student must have a current ecclesiastical endorsement. Direct any questions about this requirement to the Department Secretary.

Graduate Courses

The Department of Statistics offers a number of courses on various statistical concepts and specializations. Once a student has been admitted into the master’s program, there will be opportunities to enroll in graduate-level courses. Stat 535, 536, 624, 641, and 642 are our required core classes. Graduate students must also enroll in three 600-level elective credit classes to fulfill part of the minimum requirements to obtain a master’s in statistics. Please see the Timeline to Graduation on page 6 for an ideal schedule. Direct any questions about coursework to the Graduate Coordinator.
Graduate Required Courses

- Stat 535  Linear Models
  \textit{Prerequisites: departmental consent}
  \textit{Offered Fall Semester}
  Analysis of full-rank model, over-parameterized model, cell means model, unequal subclass frequencies, missing and fused cells, estimability issues, diagnostics

- Stat 536  Modern Regression Methods
  \textit{Prerequisite: Stat 535, 624; or departmental consent}
  \textit{Offered Winter Semester}
  Weighted least squares, Bayesian linear models, robust regression, nonlinear regression, local regression, generalized additive models, tree-structured regression

- Stat 624  Statistical Computation
  \textit{Prerequisite: departmental consent}
  \textit{Offered Fall Semester}
  Fundamental numerical methods used by statisticians, programming concepts; efficient use of software for statisticians; simulation studies

- Stat 641  Probability Theory & Mathematical Statistics 1
  \textit{Prerequisite: departmental consent}
  \textit{Offered Fall Semester}
  Axioms of probability; combinatorics; random variables, densities, and distributions; expectation; independence; joint distributions; conditional probability; inequalities; derived random variables; generating functions; limit theorems; convergence results

- Stat 642  Probability Theory & Mathematical Statistics 2
  \textit{Prerequisite: Stat 641}
  \textit{Offered Winter Semester}
  Introduction to statistical theory; principles of sufficiency and likelihood; point and interval estimation; maximum likelihood; Bayesian inference; hypothesis testing; Neyman-Pearson lemma; likelihood ratio tests; asymptotic results including delta method; exponential family
Graduate Electives

- Stat 538  Survival Analysis
  
  *Prerequisite: Stat 341 or equivalent*
  
  *Offered Winter Semester*
  
  Basic concepts of survival analysis, hazard functions, types of censoring, Kaplan-Meier estimates, Logrank tests, proportional hazard models, examples drawn from clinical and epidemiological literature

- Stat 631  Advanced Experimental Design
  
  *Prerequisites: Stat 431 or equivalent; 535, 642*
  
  *Currently not offered*
  
  Response surface methods, mixture designs, optimal designs, fractions of two-level, three-level, and mixed-level factorials, analysis of experiments with complex aliasing, robust parameter designs

- Stat 635  Mixed Model Methods
  
  *Prerequisites: Stat 535, 624, 642*
  
  *Offered either Fall or Winter Semester*
  
  Fixed effects, random effects, repeated measures, non-independent data, general covariance structures, estimation methods

- Stat 637  Generalized Linear Models
  
  *Prerequisites: Stat 535, 642 or equivalents*
  
  *Offered either Fall or Winter Semester*
  
  Generalized linear models framework, binary data, polytomous data, log-linear models

- Stat 651  Bayesian Methods
  
  *Prerequisites: Stat 536, 642*
  
  *Offered Fall Semester*
  
  Basic Bayesian inference, conjugate and non-conjugate analyses, Markov chain Monte Carlo methods, hierarchical modeling, convergence diagnostics

- Stat 666  Multivariate Statistical Methods
  
  *Prerequisites: Stat 535, 624, 642*
  
  *Offered either Fall or Winter Semester*
  
  Inference about mean vectors and covariance matrices, multivariate analysis of variance and regression, canonical correlation, discriminant analysis, cluster analysis, principal component analysis, factor analysis
Special Courses

- **Stat 590R**  Statistical Consulting
  This course is for students working in the Consulting Center for credit.

- **Stat 591R**  Graduate Seminar in Statistics (0.0)
  Students must sign up for 0.0 credits of Stat 591R each semester they are enrolled as a full-time student (9.0 credit hours). If the student is enrolled in less than 9.0 credits, they will not register for Stat 591R. Whether registered for the class or not, all graduate students are expected to attend department seminars, which are viewed as an integral part of each student’s education. Seminars provide students with an opportunity to see current scholarly research presented by leaders in academics, industry, and government. Furthermore, they provide students with an opportunity to engage their minds in the challenging process of learning to glean and assimilate information presented at a high level. Please avoid any scheduling conflicts that would prevent attendance during the reception and the seminar.

- **Stat 595R**  Special Topics in Statistics (1.0–3.0)
  *Offered anytime with prior arrangement*

- **Stat 599R**  Academic Internship: Statistics (1.0–9.0)
  *Offered anytime with prior arrangement*
  For 3.0 credit hours, students should be working 20 supervised hours-per-week and must write a 10–15 page internship report describing the significant statistical work of the internship.

- **Stat 690R**  Advanced Special Topics (3.0)
  *Offered anytime with prior arrangement*

- **Stat 695R**  Readings in Statistics (1.0–3.0)
  *Prerequisite: departmental consent*
  *Offered anytime with prior arrangement*
Project & Thesis Credit

- Stat 698R  Master’s Project (3.0)
  Enroll in the section associated with the assigned Committee Chair

- Stat 699R  Master’s Thesis (6.0) if the student is interested in a Thesis, please see the Graduate Coordinator.
  Enroll in the section associated with the assigned Committee Chair

When enrolled in this course, each student should meet with their Committee Chair one hour each week and work three hours each week on their Project or Thesis for each registered credit hour. Registering for 698R and 699R cannot be done online. In order to register, students must receive an add code from their Committee Chair or the Department Secretary. Please make sure to register well before the add/drop deadline, which is usually two weeks after the beginning of the semester. The instructor for each section of 698R and 699R is different—please register for the section taught by the designated Committee Chair.

Undergraduate Electives

Although they are not required, we recommend students think about taking some undergraduate courses to expand career opportunities. Please keep in mind that the maximum number of 300- and 400-level credits that can count towards a graduate degree is 9 hours. 100- or 200-level credits cannot count towards a graduate degree. The final course list must be approved by the student’s Graduate Committee and the Graduate Coordinator

- Stat 123  Introduction to R Programming
  Prerequisite: Stat 121; or Stat 151; or Stat 201
  Offered Fall and Winter Semester
  Base R programming skills, introductory statistical analysis and graphics, simulation of introductory statistical concepts

- Stat 124  SAS Base Programming Skills
  Prerequisite: Stat 121; or Stat 151; or Stat 201; or Stat 301
  Offered Fall Blk 1; Winter Blk 1; Spring Semester
  SAS basic programming certification

- Stat 223  Applied R Programming
  Prerequisite: Stat 123
  Offered Fall and Winter Semester
  Base R programming skills, introductory statistical analysis and graphics, simulation of introductory statistical concepts
• Stat 224  Applied SAS Programming  
  Prerequisite: Stat 124  
  Offered Fall; Winter; Summer Semester  
  Statistical programming using the data step in SAS; basic Procs; Proc MEAN, SORT, TABULATE, SQL, and REPORT; ODS; simple MACROS

• Stat 424  Statistical Computing 2  
  Prerequisite: Stat 224 and Stat 330  
  Offered Winter Semester  
  S Plus, statistical graphics, simulation, advanced SAS (macros, Proc IML, and Proc SQL), and database programming

• Stat 431  Experimental Design  
  Prerequisite: Stat 330  
  Offered Fall  
  Basic designs, power, and sample size, Latin squares, incomplete blocks, change-over designs, factorials, fractional factorials, confounding, split-plots, response surface designs

• Stat 435  Nonparametric Statistical Methods  
  Prerequisite: Stat 330; or Stat 511  
  Offered Fall  
  Permutation tests, rank-based methods, analysis of contingency tables, bootstrap methods, curve fitting

• Stat 451  Applied Bayesian Statistics  
  Prerequisite: STAT 151 & STAT 330. Concurrent enrollment in STAT 340.  
  Offered Fall  
  Bayesian analogs of t-tests, regression, ANOVA, ANCOVA, logistic regression, and Poisson regression implemented using both WinBUGS and Proc MCMC

• Stat 462  Quality Control and Industrial Statistics  
  Prerequisite: Stat 330 and 340  
  Offered Fall Semester  
  Six sigma tools with which to define, measure, analyze, improve, and control; Advanced concepts in control charts, applying experimental design for process and product improvement

• Stat 466  Introduction to Reliability  
  Prerequisite: Stat 330; or 340  
  Offered Winter Semester  
  Mathematics, distributions, management, and maintenance of basic reliability concepts; collection and analysis of test data, fault tree analysis, applying reliability in various areas
Transfer Credit, Senior Credit, and Non-degree Credit

Transfer Credit from another university may be used toward a master’s degree in statistics. However, the following restrictions apply:

- Only graduate-level credit will be considered for transfer
- Only credit from an accredited or certified (domestic or foreign) university will be considered for transfer
- The department must approve all transfer credit
- If the credits are to be earned after the student is enrolled in the master’s program at BYU, the courses must be pre-approved by the department
- A special examination by the Department of Statistics may be administered before transfer credit is approved
- Transfer credit can only be used for elective requirements, not for core requirements
- A letter grade of B or better is required for all transfer classes
- The maximum number of transfer credits is 7.0

Senior Credit refers to credit taken while a senior at BYU. Non-degree Credit refers to credit taken after receiving a bachelor’s degree but before being admitted to the master’s program in statistics. Senior and non-degree credit may be applied toward a master’s degree in statistics under the following restrictions:

- Only credit which has not been applied toward another degree can be considered (there can be no double application of credit)
- The department must approve all senior and non-degree credit
- The total of senior and non-degree credits cannot exceed 10.0
- The total of transfer, senior, and non-degree credits cannot exceed 15.0
## Course Availability

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<th>Required Courses</th>
<th>2015-2016</th>
<th>2016-2017 (tentative)</th>
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<td>Fall</td>
<td>Winter</td>
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<th>Graduate Electives</th>
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<th>Undergrad Electives</th>
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The Integrated program handles senior credit in a different manner. If you have any questions, see the Graduate Coordinator.
Registration

Minimum Registration Requirement

U.S. graduate students are required to register for at least 2.0 credit hours during any semester or term in which they use any university facilities, consult with faculty, or take comprehensive or oral examinations. The numbers of graduate credit hours for which they register must, in the judgment of the faculty advisor, accurately reflect the student’s involvement in graduate study and use of university resources such as libraries, laboratories, and computer facilities. In no case will the registration be for fewer than 2.0 credit hours per semester. Students are required to register for at least 2.0 credit hours in the semester or term of admittance. Registering for two credits of 698R or 699R during spring term also allows for study during summer term. Graduate students must be registered for at least two 2.0 hours of Stat 698R or 699R in the semester or term they defend their final project/thesis.

If the student desires to work for the department this may also influence the student’s study list and graduation plans. The graduate student must be registered for at least 2.0 credits in a semester during which they receive a stipend from the department, and for at least 1.0 credit each during any spring or summer term (2.0 credits spring term will cover tuition for summer term). For graduate students who are not completing an internship, Stat 698R or 699R may be the most appropriate course for spring and summer terms.

U.S. Students, Academic Year

To retain active status and to qualify for subsequent registration, graduate students must register for at least 6.0 semester hours each school year and receive acceptable grades (no D, E, W, UW, NS, or I grades are allowed, nor are audits or correspondence courses). Students who do not fulfill this yearly requirement are dropped from their graduate programs; they lose their graduate status and must apply for readmission if they wish to continue.

International Students

9.0 credit hours constitute a full course of study at BYU. Therefore, international students must register for at least 9.0 semester hours each fall and winter semester to satisfy U.S. Immigration regulations. Questions should be directed to International Services (1351 WSC, Provo, UT 84602-7917, (801) 422-2695).

Full-Time Status

In order to maintain full-time graduate status, a minimum of 8.5 credits must be taken each semester or 4.5 credits each term. Any number of credit hours lower than this is considered part-time.
Employment &
Financial Assistance
Financial Assistance

The department has limited funds to supplement students’ financial resources. Admitted students receive teaching assistantships and many receive full or partial tuition awards. A limited number of research assistantships are also available.

Tuition Awards

The acceptance letter to the MS Statistics program included information regarding tuition scholarships, if available, for the first year (fall and winter semesters) in the program. Tuition scholarships for the second academic year will be awarded on a competitive basis.

Employment Opportunities

As part of the terms of the stipend that the student accepted upon admission, they are expected to work 20 hours per week. Students can make arrangements for a reduced stipend if they would like a lighter workload. Graduate students are typically employed on contract and will not need to worry about clocking in and out of work. First year Integrated BS/MS statistics students are not on contract and must clock in through Y time. Everyone will be paid every other week. Each student’s work assignments and stipend amount depend on their past performance within the department. The amount of each stipend is determined by the department chair. Employment is for fall and winter semesters, but summer support is generally available if requested.

Teaching Assistantships

Most graduate student funding supports the department teaching effort. Students may be assigned to conduct labs, grade papers, work as course assistants, or work in the Center for Statistical Consultation and Collaborative Research, among other things.

Research Assistantships

Some graduate students may also be hired to assist designated faculty members with specific research projects. If a student is interested in working with a faculty member, they should arrange to meet with that faculty member to discuss their interest. Funding for such projects is made available through grants and other funding obtained by the department faculty.

Personal Decision to Leave the Program

Students may decide that they no longer wish to continue the MS program. In order to terminate graduate student status, form ADV 7 (see page 57) will need to be filled out. Please note that if the student decides to discontinue during the semester, they will be responsible for paying the tuition and any fees incurred for discontinuing. This even applies if the tuition was paid by scholarship. The scholarship money will be returned to the department and the student will be billed for the full tuition amount. The full amount applies if one terminates early in the semester, the middle, or even the last few days. In addition, employment will be terminated the day the discontinuance is filed. The students will not be allowed to work after that date.
Health Insurance

Mandatory Health Insurance

Health insurance is mandatory for all students. Students who do not provide proof of private insurance will be automatically enrolled in the BYU Student Health Plan each semester. Verification of private insurance must be provided at the beginning of each academic year. For more information about BYU’s insurance requirements, visit health.byu.edu or contact the BYU Student Health Center at (801) 422–2661.

Student Health Plan

For details about the BYU student health plan, students can access the BYU Student Health Plan Handbook at: http://www.dmba.com/nsc/Student/Handbooks.aspx.

Insurance Coverage After Graduation

Students who graduate and wish to continue coverage under the BYU Student Health Plan may enroll in Extended Coverage if they were enrolled in the Student Health Plan their last semester or term. To learn more about Extended Coverage, consult page 8 in the BYU Student Health Plan Handbook or contact the BYU Student Health Center at (801) 422–2661.

Also, the Alumni Association offers insurance for BYU alumni. Students can reach them at 1–800–922–1245.
Department Resources
MS Student Offices

The Department of Statistics maintains several offices for graduate students. Students can expect to share the office with other statistics graduate students, but each individual will have their own area and a reasonable amount of shelf space. If an office has not already been assigned, the student is unsure about their assignment, or would prefer a different office, feel free to contact the Graduate Coordinator.

Office assignments are generally for the academic year, although we reserve the right to change office assignments as necessary. At times, the department may need to store pieces of equipment, computer manuals, etc. in a graduate office. We will do as much as possible to minimize any inconvenience. In return, we expect students to be properly careful of any items that might be stored in their office. Once a graduate student has completed the program, we request that the student vacate his or her office one week after graduation. When a student vacates an office, please remove all personal property. Occasionally office space may be needed to complete research the summer after graduation. If that is the case, please see the Graduate Coordinator.

Please do not invite or allow unauthorized persons to take up residence in their office, even if a spare desk is available. Only graduate students should use the offices. Please notify the Graduate Coordinator if unauthorized persons are using the assigned office.

All of the graduate student offices have recently been painted and carpeted. We request that the students keep their office space and facilities clean and intact. Due to issues of cleanliness and office capacity, no private refrigerators, microwaves, other appliances, or large items of furniture are permitted in student offices. A microwave is available at the south end of the main floor lobby of the Talmage Building or in the break area of 223 TMCB.

Computers

We would highly recommend that graduate students have their own wireless laptop (either a Mac or PC). Computers that are located in the SURCL (200 TMCB) are provided by the faculty and should be used for research. Personal computers and printers are allowed in student offices, but must be kept on individual desks. Internet wiring may not be modified or augmented in any way. When a student is finished using a department computer, please remember to log off. Students are responsible for anything done on the computer while they are logged in.

Computers are not to be used for inappropriate purposes. As one specific example, access to pornographic web sites will not be tolerated. Computer use in labs and offices will be monitored. Any use of department or university computers for inappropriate purposes will result in dismissal from the graduate program in statistics and will be reported to the Honor Code Office. Also, department equipment and software are not to be used for private income-producing projects.

Libraries

The department library is located in room 223M TMCB. One will find general statistics books, archived statistical journals, past projects and theses, current issues of statistical journals, and other materials that may be helpful. As the student prepares their selected project or thesis, it may be helpful to look over past projects/theses for formatting and writing style help. Books may not be removed from the libraries, except for quick trips to the copy machine.
Open Labs

Room 244 TMCB is a designated open lab for Stat 121, 124, 125, and 224. Room 235 TMCB is also a designated open lab. Graduate TA meetings should be held in 235 rather than in individual offices. The environment is more conducive to meeting with small groups of students and respects the space of office mates.

Student Research Conference

The 29th annual Student Research Conference, sponsored by the College of Physical and Mathematical Sciences, will be held in March 2016 (http://cpms.byu.edu/about/spring-research-conference/). The conference consists of two 1½-hour sessions. During each block of time there are several presentations sponsored by the departments in the college. Each session consists of six fifteen-minute presentations by students describing their research projects and results. There is also a small cash award for the best presentation in each session.

The Department of Statistics requires each graduate student to make a presentation at the Student Research Conference. Graduate students generally make a presentation on a class project, their consulting experience, or another research project. The student’s Committee Chair or the Graduate Coordinator can give advice on how to prepare for and make this type of presentation. The department also schedules times for practice sessions to provide suggestions for presenters.

Internships and Employment

After the first year of coursework, graduate students will be well prepared for a summer internship experience. An internship benefits both the organization offering the internship and the student. The student has the opportunity to work with practicing statisticians who are proficient in their fields and to learn what it is like to work in an industrial, laboratory, or office setting away from the academic environment. The organization obtains the benefit of the student’s academic and other training, contributes to the further professional development of that student, and has a first-hand opportunity to evaluate the student’s potential for future employment.

Students should investigate internships in the field in which they would like to work. We have many alumni willing to coordinate internships for highly motivated students. Each year a dozen organizations come to campus to recruit interns. The American Statistical Association publishes a list of internship opportunities in the December AmStat News. We also circulate, via email or the statistics website, all internship announcements. Be sure to have a well-prepared resume and begin looking in November for internship opportunities. Many internship plans finalize in March. For counseling and information, please contact the Graduate Coordinator or the Committee Chair.

If the student would like to receive credit for their internship, they must receive permission from the Graduate Coordinator and their Committee Chair before the internship. The student will register for 599R to receive academic credit for the internship.

We also circulate full-time employment opportunities. We encourage all our students to take advantage of employment resources available through the University. One resource can be found through BYU Career Services (bridge.byu.edu). Students will be able to create an account, upload a resume, set an appointment with a career counselor, have networking opportunities, apply for jobs, contact employers, etc. In addition, important events on campus will be listed on this website. Two events to take note of are the STEM Fair and the Career Fair. The STEM Fair will be held Thursday, September 24, 2015 from 9:00am – 3:00pm in the Wilkinson Center Ballroom. The Career
Summer Institute of Applied Statistics

Each summer, the BYU Department of Statistics hosts the Summer Institute of Applied Statistics. We invite a speaker to give lectures on certain statistical topics. The cost for graduate students is $60.00. This price includes conference attendance, conference materials and “munch & mingle” breaks. The Department also hosts a dinner and luncheon that students can attend for an extra charge. If graduate students wish to attend the Summer Institute, speak to the Department Secretary about further details and registration, or visit [statistics.byu.edu](http://statistics.byu.edu).
Awards & Recognition
Alvin C. Rencher Mentorship

The Alvin C. Rencher Mentorship is the department’s most prestigious mentorship, awarded to outstanding students to support their research. Dr. Rencher is remembered for his concern for individual students. He was a constant source of encouragement to all with whom he came in contact.

National Scholarships

The following are graduate scholarships available from the American Statistical Association and American Society for Quality. For more information, please contact the Graduate Coordinator or Department Secretary.

- Gertrude Cox Scholarship: for female full-time graduate students of U.S. or Canadian citizenship or permanent residents. Women in, or entering, the early stages of graduate training (MS or PhD) are especially encouraged to apply. $1000 cash award. The application deadline is April 30. Statistics Department Alumni who have received this award include Stacey Evers, Kristen Piggott Shepherd, and Carly Pendleton.

- Ellis R. Ott Scholarship for Applied Statistics and Quality Management: scholarship recipient must be a student who is planning to enroll or is currently enrolled in a Master’s degree— or higher-level U.S. or Canadian program that has a concentration in applied statistics and/or quality management. $5000 cash award. The application deadline is April 1. Jeff Lingwall was the 2005–2006 recipient.

- Edward C. Bryant Scholarship: for outstanding graduate students in survey statistics. Criteria: potential to contribute to survey statistics, applied experience in survey statistics, performance in graduate school. $1500 cash award. The application deadline is April 1.

- ASA Physical and Engineering Sciences Section ASQ Freund International Scholarship: for graduate study of the theory and application of quality control, quality assurance, quality improvement, and total quality management. JD Williams received this award as a PhD student at Va Tech.

- ASA Quality and Productivity Section Mary G. and Joseph Natrela Scholarship: supports master’s and PhD students with a demonstrated interest in quality applications. This scholarship provides a grant and travel stipend to attend the Quality and Productivity Research Conference, at which the students present their research.

- FTC Student Grant: the Statistics Division of the American Society for Quality offers up to 5 grants per year for students who wish to attend the Fall Technical Conference (FTC). Grants are available for currently enrolled undergraduate and graduate students of statistics and quality management. The application deadline is August 1.

- BYU Graduate Research Fellowship Awards: a university award sponsored by Graduate Studies designed to support thesis and dissertation research and to encourage independent research, scholarship, and creative activity among graduate students. Two levels of award are granted: Doctoral, $6,000; or Master’s, $4,500, to be awarded in the upcoming academic year. The award is to be used in support of students’ research and creative work. All graduate students matriculated into a graduate program are eligible to apply. Those working toward doctoral degrees are eligible if they will have completed at least one year of graduate school by the following fall. Master’s degree candidates must have been matriculated in their programs on or before fall semester. The application deadline is February 1. The application will open at the beginning of September and recommender letters will be due February 8. Announcement of the award recipients will be made before the end of spring term.
Requirements & Procedures
Degree Requirements

- Stat 535, 536, 624, 641, 642
- 30.0 credit hours for thesis and 33.0 credit hours for selected project
- Pass the comprehensive exam – please reference *Failing to meet the criteria to move on to the second year courses section*
- Fulfill 2 semesters of full-time registration (8.5 credits/semester)
- Oral defense
- 3.0 cumulative GPA for Program of Study
- Minimum Registration Requirement
- 2.0 credit hours of paid graduate tuition in final semester or semester in which oral defense is held

Program of Study

A student’s program of study is a carefully considered graduation plan, which includes all necessary elements for degree completion. It identifies the student’s major, required courses, and graduate committee. It may also include a minor. Students should complete a program of study change (see the Department Secretary) under the direction of their First-Year Committee Chair during the first semester of the students second year. Students should keep their study list current; changes can be made when authorized by their current Committee Chair and the Graduate Coordinator.

Required courses to include on the program of study are Stat 535, 536, 624, 641, and 642. The Committee Chair and the Graduate Coordinator must approve all courses on the study list. Acceptable elective graduate and undergraduate courses in statistics for both the thesis and project options are described in the Curriculum section of this handbook. Certain graduate courses in mathematics, computer science, economics, or sociology may also be approved. For the program of study, the maximum number of 300 and 400-level credits that can count toward a graduate degree is 9 hours. No 100- or 200-level credit can count toward a graduate degree.

Submitting a Study List

To officially submit a study list, fill out a Program of Study (ADV Form 3), available at [http://graduatestudies.byu.edu/content/advisement-forms-adv](http://graduatestudies.byu.edu/content/advisement-forms-adv). The form is also available on the Statistics Graduate Program webpage. Once the form is filled out and the necessary signatures are obtained, give the form to the Graduate Secretary.

As students continue in the master’s program, they may want to modify their study list or add committee members to it. In order to make changes, fill out the Program of Study Change Form (Form 3b), which is available at [http://graduatestudies.byu.edu/content/advisement-forms-adv](http://graduatestudies.byu.edu/content/advisement-forms-adv) and on the Statistics Graduate Program webpage. Students must officially make the changes by filling out this form in order to avoid future confusion and possible problems with graduation. Please fill out the form, obtain the necessary signatures, and return it to the Department Secretary so that the changes can officially be made.
Study List Approval

When the student first submits a program of study, they may not have a full committee or the necessary credit hours outlined at the time, but it is important that the student obtains an approved study list as soon as possible. In order to get a study list approved, students must have a full course plan with the appropriate number of credit hours according to their project or thesis option. The First-Year Committee Chair can approve the student’s study list until they get a Project or Thesis Committee Chair and second committee member. Students must turn in a completed study list to schedule their prospectus defense. Again, it is recommended that the student obtains an approved program of study as soon as possible.

Selected Project

In order to fulfill the requirements necessary to obtain a master’s degree, the graduate student must complete a selected thesis or project. Students will spend a significant amount of time in the program researching, preparing, writing, and presenting on a topic of real consequence.

In general, a thesis will make an intellectual contribution to the discipline of statistics, while a project involves the non-routine use of statistical methodology to make a contribution in another field. A thesis will generally lead to a paper submitted in a statistics journal. A project usually involves the application of statistics, and will often have a broader audience. It is recommended that the student speaks with their Committee Chair in making a decision as to which track to choose and which topic to work on. If the student is interested in doing a thesis, both the graduate student and a potential committee chair must speak with the Graduate Coordinator before it can be approved.

A selected project program requires a minimum of 33.0 credit hours, with 30.0 credit hours in coursework and 3.0 project hours (Stat 698R). Most students require more than one semester to complete the project and the 3.0 credits of Stat 698R can be divided over multiple semesters, except for the last semester in which they defend. Students must be enrolled in 2.0 credits of Stat 698R during the semester they defend to be compliant with graduate studies requirements.

Most students will fulfill the project requirement with what we call a project portfolio. Students will place each written class project from classes taken in the first year and the first semester of the second year in a single document that will fulfill the project requirement. Each project will be a separate chapter in the final document. The student will be prepared to defend any of the class projects in the final project portfolio defense in the second semester of the second year.

Choosing a Committee Chair and Committee Members

Upon admission to the graduate program, students will be assigned a First-Year Committee Chair. This advisor will assist with registration questions and will head the committee for a project portfolio defense. If a faculty member recruits a student to write a project, that faculty member will become the committee chair. Other committee member will be chosen by the Graduate Coordinator.
Comprehensive Exam

The comprehensive exam will assess each student’s understanding of all important statistical concepts covered in Stat 535, 624, 641, and 642. Statistics graduate students must have a 3.0 cumulative GPA or better in these courses to take the exam. Grading is on a pass/fail basis, determined by the Graduate Faculty. Students will be informed as to whether they passed or failed the exam by a letter sent through the mail. Please note that the comprehensive exam can only be taken once. There are no retakes.

The Comprehensive Exam will be held Thursday and Friday, April 28 and April 29, 2016. All students eligible to take the exam will meet with the Graduate Coordinator on Thursday, April 21, 2016. The purpose of this meeting is to answer questions that students may have, and to discuss the format of the exam, the material that will be covered on the exam, and how to study for the exam.

If a student does not pass the exam, they will receive an unsatisfactory rating Winter Semester and will not be able to register for the second year of classes. Students will be advised by the Graduate Coordinator on pursuing employment options, the course required to finish the BS degree (if applicable), or courses that will assist the student in securing future employment. If one does not pass the exam, their status as a graduate student, including all privileges associated with that status, will be withdrawn from the program.

Failing to meet the criteria to move on to the second year courses

There are two reasons a student will not qualify to continue on to the second year of the program. These are: (1) failing to maintain a 3.0 GPA in courses covered in the comprehensive exam, and thus not being allowed to sit for the exam, or (2) failing the comprehensive exam. In these cases, a student may petition the graduate faculty to continue in the program, but not as a second year student. If the petition is approved, the following remedial actions will be required. For item 1, all courses covered in the comprehensive exam where the student earned less than a B must be retaken. The student may, at their discretion, take other first year graduate or advanced undergraduate courses that they feel might be of benefit. If, at the conclusion of the year, the GPA for the courses covered in the comprehensive exam is a 3.0 or better, the student may sit for the exam. For item 2, all courses where the comprehensive exam performance was not passing must be retaken. The student may, at their discretion, take other first year graduate or advanced undergraduate courses that they feel might be of benefit. If, at the conclusion of the year, the GPA for the courses covered in the comprehensive exam is a 3.0 or better, the student may sit for the exam. In both of these cases, if the comprehensive exam is failed after the year of remedial work, the student will be required to leave the program. The student will be responsible for all tuition costs associated with courses taken during the remedial second year. The department guarantees half tuition when the comprehensive exam is passed. Students should also be aware that they will not be allowed to graduate if the GPA for courses on the Program of Study (Form AV3) falls below a 3.0. The GPA can be raised by retaking courses or by getting high enough grades in other classes to raise the GPA to or above the 3.0 level.

Departmental Evaluations

The Department Chair, the Graduate Coordinator, and the Committee will evaluate each student’s progress as a graduate student periodically. First-year students will be evaluated at the end of winter semester and summer term. Second-year students will be evaluated at the end of fall and winter semesters, and if necessary, at the end of summer term. The possible evaluations are satisfactory, marginal, and unsatisfactory. If one is rated as marginal or unsatisfactory, they will receive a
written notification to that effect from the Department via certified mail. This notification will detail the reason(s) for the rating and the steps that must be taken to return to satisfactory status. If the student feels their rating is unfair or in error, they may appeal the evaluation, in writing, to the Graduate Coordinator. If a student is rated with an unsatisfactory progress two semesters in a row or a marginal followed by an unsatisfactory, they will automatically be dismissed from the graduate program. Readmission to the graduate program is subject to university policies and procedures.

All students must maintain at least a 3.0 GPA for all the courses during each semester. If their GPA drops below this level, their academic performance will result in a marginal rating. If the Comprehensive Exam is rated a fail, their academic performance will result in an unsatisfactory rating. If a student was admitted provisionally and wishes to maintain a satisfactory rating, they must satisfy all provisions during their first semester in the program. Failure to comply with the standards of The Church of Jesus Christ of Latter-Day Saints or the Brigham Young University Honor Code may also result in an unsatisfactory rating.

Other reasons for getting a marginal or unsatisfactory rating include, but are not limited to: failure to provide an approved study list, and failure to meet the requirements of a previous marginal or unsatisfactory rating.

Readmission

Upon department and graduate dean approval to resume graduate study, former graduate students who were dropped for failure to meet the minimum registration requirement or for any other reason, and who wish to resume their graduate studies, must submit an Application to Resume Graduate Study and a Reaplication Honor Code Commitment Form (GS Form 6 and 6a available online at http://graduatesstudies.byu.edu/), and pay a $600-nonrefundable processing fee. International students will also need to submit new bank statements or sponsor contract (GS I-2). Students should expect their previous course work to be reevaluated and their degree requirements to reflect current expectations of the program. Student applications for readmission will only be considered three times per year, in April, August, and December. The graduate faculty, in consultation with the applicant’s former project or thesis Committee Chair and the Graduate Coordinator, will make the decision to accept or deny readmission.

Time Limitations

The Statistics MS program is designed to be completed within two years. Graduate Studies stipulates that all master’s degrees must be completed within five years of the first semester of enrollment in the program or from the first course taken, whichever comes first. Matriculation in the Statistics MS program may be terminated at any time for failure to make satisfactory progress toward the degree.

Leave of Absence

Students may request a leave of absence for the following reasons:

1. Medical Students must present a letter from a doctor—up to one year at a time
2. Military Students must present military orders—up to one year at a time
3. Mission Students must present a mission call—up to three years

Students will not be evaluated during a leave of absence, but the original five-year time limit in which to complete their degree will still apply. If a student needs to take a leave of absence, form ADV 5 will need to be filled out (http://graduatesstudies.byu.edu/content/advisement-forms-adv)
Personal Decision to Leave the Program

Students may decide that they no longer wish to continue the MS program. In order to terminate graduate student status, form ADV 7 (http://graduatesudies.byu.edu/content/advancement-forms-adv) will need to be filled out. Please note that if the student decides to discontinue during the semester, they will be responsible for paying the tuition and any fees incurred for discontinuing. This even applies if the tuition was paid by scholarship. The scholarship money will be returned to the department and the student will be billed for the full tuition amount. The full amount applies if one terminates early in the semester, the middle, or even the last few days. In addition, employment will be terminated the day the discontinuance is filed. The students will not be allowed to work after that date.

Before Applying for Graduation

Before applying for graduation, students will need to make sure that they have accomplished the following requirements:

- Course requirements complete or in process of completion
- Enrollment in at least 2.0 credit hours of Stat 698R or 699R final semester of defense
- Tuition paid for 2.0 credits in the final semester in which a student defense is held. If a student graduates in August, they are only required to pay tuition for 2.0 credits in spring term, or 2.0 credits total over both spring and summer terms
- The project portfolio must be submitted to the Committee Chair
- If the student is doing a research project, the prospectus must be defended, and the final document must be submitted to the Committee Chair
- Comprehensive Exam passed
- Program of Study and Committee approved

Graduation

To graduate in April, the following deadlines must be met:

- Project portfolio submitted to committee by January 13, 2017
- Alternative research project submitted to committee by January 13, 2017

Graduate Checkout List

- Return all keys to Ruth Dauwalder in 223G TMCB
- Return any textbooks or other materials used as a TA to the Secretary
- Leave computer in office and delete all unnecessary files; back up any files onto a personal storage device
- Remove all belongings from the assigned graduate office (1 week after graduation)—anything left will be thrown out
BS/MS Statistics Program
BS/MS Statistics Students

The Department of Statistics has a five-year integrated program. An Integrated master’s student is one who chooses a course of study that will enable them to get their Bachelor’s and Master’s degrees in five years.

For the first four years, integrated students will be considered an undergraduate. When they enter their senior year, they may begin to take master’s level classes that will apply to their MS degree.

During the fifth year of the program students are required to apply to the master’s program as soon as they are notified of the results of the comprehensive exam. Once the student has obtained graduate status, they will need to pay graduate tuition. A BS/MS student is required to pay for two semesters of graduate tuition. If the student received an undergraduate university scholarship, their entry into the graduate program cancels that scholarship.

When the student has become an official graduate student, they will need to fill out the “Notification of Integrated or Joint Program Status” form (GS 5 see page 66) and give the completed form to the Department Secretary. This form will allow graduate studies to know of the student’s status and to mark the system accordingly.

Graduation

If the student applies for graduation and fails to meet the necessary requirements by the established deadlines, it will be the student’s responsibility to withdraw or defer their BS application for graduation. It is a requirement that if the student is a part of the Integrated program that they do not apply for graduation until their master’s degree is complete. At that time the student will receive both their bachelor’s and master’s degree. Please note that if the bachelor’s degree is obtained before fulfilling the requirements for the master’s degree, many of the courses on the Program of Study list will no longer be counted for graduate credit.

Please be aware that students are responsible for ensuring that they complete all necessary coursework for their undergraduate degree. It will be up to the student to seek advisement for their GE and other undergraduate requirements; the Department of Statistics will primarily be concerned with their graduate coursework.
Rules of Conduct
Brigham Young University Honor Code

Brigham Young University exists to provide an education in an atmosphere consistent with the ideals and principles of The Church of Jesus Christ of Latter-day Saints. That atmosphere is created and preserved through commitment to conduct that reflects those ideals and principles. Members of the faculty, administration, staff, and student body at BYU are selected and retained from among individuals who voluntarily live the principles of the gospel of Jesus Christ. Observance of such is a specific condition of employment and admission. Those individuals who are not members of The Church of Jesus Christ of Latter-day Saints are also expected to maintain the same standards of conduct, except church attendance. All who represent BYU are to maintain the highest standards of honor, integrity, morality, and consideration of others in personal behavior. By accepting appointment on the faculty, continuing in employment, or continuing class enrollment, individuals evidence their commitment to observe the Honor Code standards approved by the Board of Trustees “at all times and . . . in all places.” (Mosiah 18:9)

We believe in being honest, true, chaste, benevolent, virtuous, and in doing good to all men. . . . If there is anything virtuous, lovely, or of good report or praiseworthy, we seek after these things. (Thirteenth Article of Faith)

As a matter of personal commitment, students, faculty, and staff of Brigham Young University, Brigham Young University-Hawaii, Brigham Young University-Idaho, and LDS Business College seek to demonstrate in daily living on and off campus those moral virtues encompassed in the gospel of Jesus Christ, and will

Be honest
Observe Dress and Grooming Standards
Obey the law and all campus policies
Participate regularly in church services
Live a chaste and virtuous life
Use clean language
Respect others
Abstain from alcoholic beverages, tobacco, tea, coffee, and substance abuse
Encourage others in their commitment to comply with the Honor Code

Specific Policies Embodied in the Honor Code

Specific policies embodied in the Honor Code include (1) the Academic Honesty Policy, (2) the Dress and Grooming Standards, (3) the Residential Living Standards, and (4) the Continuing Student Ecclesiastical Endorsement Requirement.

Academic Honesty Policy

BYU students should seek to be totally honest in their dealings with others. They should complete their own work and be evaluated based upon that work. They should avoid academic dishonesty and misconduct in all its forms, including plagiarism, fabrication or falsification, cheating, and other academic misconduct. Students are responsible not only to adhere to the Honor Code requirement to be honest but also to assist other students in fulfilling their commitment to be honest. (Complete version of the Academic Honesty Policy available at www.byu.edu/honorcode).
Applicable Actions for the University
The university may elect to place an affected student on probation or to suspend or dismiss the student and to place a temporary or permanent notation on the student’s permanent academic transcript that he or she was suspended or dismissed due to academic misconduct. The university may report an incident of academic misconduct to appropriate law enforcement officials and may prosecute an affected student if the act in question involves the commission of a crime (e.g., breaking into an office or building, stealing an examination, etc.).

Honor Code Office Involvement
The Honor Code Office will maintain a record of all violations of the Academic Honesty Policy reported to it by the faculty. If the occurrence is sufficiently egregious or if a pattern of dishonesty or misconduct is discovered, the Honor Code Office may take additional action on behalf of the university based upon the nature of the infraction(s). The Honor Code Office, in consultation with the involved academic personnel, including the Associate Academic Vice President of Undergraduate Studies, may determine to place a student on probation or to recommend suspension or dismissal from the University for Academic Dishonesty and other forms of academic misconduct.

Dress and Grooming Standards
The dress and grooming of both men and women should always be modest, neat and clean, consistent with the dignity adherent to representing The Church of Jesus Christ of Latter-day Saints and any of its institutions of higher learning. Modesty and cleanliness are important values that reflect personal dignity and integrity, through which students, staff, and faculty represent the principles and standards of the Church. Members of the BYU community commit themselves to observe these standards which reflect the direction given by the Board of Trustees and the Church publication, For the Strength of Youth. The Dress and Grooming Standards are as follows:

Men – A clean and well-cared-for appearance should be maintained. Clothing is inappropriate when it is sleeveless, revealing, or form fitting. Shorts must be knee length or longer. Hairstyles should be clean and neat, avoiding extreme styles or colors, and trimmed above the collar leaving the ear uncovered. Sideburns should not extend below the earlobe or on to the cheek. If worn, moustaches should be neatly trimmed and may not extend beyond or below the corners of the mouth. Men are expected to be clean shaven; beards are not acceptable. Earrings and other body piercing are not acceptable. Shoes should be worn in all public campus areas.

Women – A clean and well-cared-for appearance should be maintained. Clothing is inappropriate when it is sleeveless, strapless, backless, or revealing; has slits above the knee; or is form fitting. Dresses, skirts, and shorts must be knee length or longer. Hairstyles should be clean and neat, avoiding extremes in styles and colors. Excessive ear piercing (more than one per ear) and all other body piercing are not acceptable. Shoes should be worn in all public campus areas.

Residential Living Standards
As stated in its Code of Honor, Brigham Young University is committed to providing a learning atmosphere consistent with the principles of the Church. The university is likewise committed to creating such an atmosphere for students residing on and off campus. To achieve this, BYU has established living standards to help students learn some of the high ideals and principles of behavior expected at Brigham Young University. The university requires all students to adhere to the following applicable standards.
Off-Campus, Wyview Park, Foreign Language Student Residence
Visitors of the opposite sex are permitted in living rooms and kitchens but not in bedrooms in off-campus living units. The use of the bathroom area by members of the opposite sex is not appropriate unless emergency or civility dictate otherwise; and then only if the safety, privacy and sensitivity of other residents are not jeopardized. Visiting hours may begin at 9 a.m. and extend until midnight. Friday night visiting hours may extend until 1:30 a.m. Landlords may establish a shorter visiting period if proper notice is given to residents. This policy applies to all housing units occupied by single students.

Conduct
All students shall be required to conduct themselves in a manner consistent with the principles of The Church of Jesus Christ of Latter-day Saints and the BYU Honor Code. Furthermore, all students are required to abstain from possessing, serving, or consuming alcoholic beverages, tobacco, tea, coffee, or harmful drugs. Involvement with gambling; pornographic, erotic, or indecent material; disorderly, obscene, or indecent conduct or expressions; or with other offensive materials, expressions, or conduct or disruption of the peace that, in the sole discretion and judgment of the university, is inconsistent with the principles of the Church and the BYU Honor Code is not permitted in student housing. All guests of students must comply with the Residential Living Standards while on the premises of university-approved housing. All students are required to know the Dress and Grooming Standards and abide by them. (The standards expressed above apply to students at all times whether on or off campus.)
Plagiarism

Intentional plagiarism is a form of intellectual theft that violates widely recognized principles of academic integrity as well as the Honor Code. Such plagiarism may subject the student to disciplinary action administered through the university Honor Code Office, in addition to academic sanctions that may be applied by an instructor. While inadvertent plagiarism is not a violation of the Honor Code, it is a form of intellectual carelessness that is unacceptable in the academic community. Plagiarism of any kind is completely contrary to the established practices of higher education, where all members of the university are expected to acknowledge the original intellectual work of others that is included in one’s own work. In some cases, plagiarism may also involve violations of copyright law.

Intentional plagiarism is the deliberate act of representing the words, ideas, or data of another as one’s own without providing proper attribution to the author through quotation, reference, or footnote.

Inadvertent plagiarism involves the inappropriate, but nondeliberate, use of another’s words, ideas, or data without proper attribution. Inadvertent plagiarism usually results from an ignorant failure to follow established rules for documenting sources or from simply being insufficiently careful in research and writing. Although not a violation of the Honor Code, inadvertent plagiarism is a form of academic misconduct for which an instructor can impose appropriate academic sanctions. Students who are in doubt as to whether they are providing proper attribution have the responsibility to consult with their instructor and obtain guidance.

Examples of plagiarism include:

- **Direct Plagiarism:** The verbatim copying of an original source without acknowledging the source.
- **Paraphrased Plagiarism:** The paraphrasing, without acknowledgment, of ideas from another that the reader might mistake for your own.
- **Plagiarism Mosaic:** The borrowing of words, ideas, or data from an original source and blending this original material with one’s own without acknowledging the source.
- **Insufficient Acknowledgment:** The partial or incomplete attribution of words, ideas, or data from an original source.

Plagiarism may occur with respect to unpublished as well as published material. Acts of copying another student’s work and submitting it as one’s own individual work without proper attribution is a serious form of plagiarism.

EEO Statement on discrimination and harassment

Title IX of the Education Amendments of 1972 prohibits sex discrimination against any participant in an educational program or activity that receives federal funds. The act is intended to eliminate sex discrimination in education and pertains to admissions, academic and athletic programs, and university-sponsored activities. Title IX also prohibits sexual harassment of students by university employees, other students, and visitors to campus. If you encounter sexual harassment or gender-based discrimination, please talk to your professor or the Graduate Coordinator; contact the Equal Employment Office at 801-422-5895 or 1-888-238-1062 (24-hours) or [http://www.ethicspoint.com](http://www.ethicspoint.com); or contact the Honor Code Office at 801-422-2847.
Ownership of Research

Brigham Young University strives to maintain an environment of open inquiry for the pursuit of truth. In connection with your graduate studies and Brigham Young University, you will be given various assignments and opportunities to engage in scholarly work. Both the research for your project or thesis and any consulting you might do through the Center for Statistical Consultation and Collaborative Research are examples of this type of scholarly work. You may or may not receive direct financial assistance (research assistantships, scholarships, tuition waivers, etc.) in connection with this work. However, you do receive indirect support for your education; the university and its sponsor, The Church of Jesus Christ of Latter-day Saints, provide approximately two-thirds of the cost of your education. Therefore, Brigham Young University retains all rights (including rights to income from sales or licensing), ownership, and title to any scholarly work you perform in connection with your education here. This includes, but is not limited to, data, formulae, computer programs, projects, reports, research papers, copyrights, process patents and other technical information developed by you to satisfy course requirements or department assignments.

This retention of ownership allows the university to carry out its academic mission, fulfill external obligations, and ensure access to scholarship in the future. You have the right to copyright your project or thesis if you desire.

Confidentiality of Research

As a graduate student, in order to work for the Department of Statistics you must sign a Nondisclosure Agreement indicating your willingness to respect the confidentiality of certain research or other work you might perform for the department. This agreement is necessary to participate in research or consulting activities at Brigham Young University. You should sign this agreement during the first week of your initial semester or term as a graduate student and turn it in to the Graduate Secretary. A copy of this form can be found at http://techtransfer.byu.edu/resources/forms.