UNIVERSITY OF PITTSBURGH DIETRICH SCHOOL OF ARTS AND SCIENCES DEPARTMENT OF STATISTICS

Graduate Student Handbook Updated April 2023

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Graduate Student Handbook

The Department of Statistics is in the Dietrich School of Arts & Sciences at the University of Pittsburgh founded in 1997. Our degree programs lead to the Master of Arts or Master of Science in either Statistics or Applied Statistics and the Doctor of Philosophy in Statistics. Statistics is the art of making informed decisions in the face of uncertainty. Our research strengths, aside from traditional interest in multivariate analysis, reliability, and time series, are now in the areas of high-dimensional inference, statistical learning, neuroimaging, statistics in psychiatry, and clinical trials methodology.   We collaborate throughout the University.

Our graduate programs can be pursued part-time or full-time. The Applied Statistics master's program is a professional degree, intended for people who want to be statisticians in industry or government, or individuals wanting a background in statistical methods for use in connection with a PhD in another subject. One of the highlights and key required component of the Applied Statistics Master's degree is the course of Supervised Statistical Consulting, STAT 2381. Under the supervision of a faculty member, the course teaches the student how to meet and help clients with statistical needs and is an excellent source of practical experience for graduate students and the Pitt community. The regular MA degree in statistics is primarily an academic degree satisfied solely by course work in statistics and thus can be completed while a student is in progress towards a PhD.

This handbook describes the rules, requirements, and responsibilities of graduate students in the Department of Statistics at the University of Pittsburgh, however, is by no means inclusive. Students should read and abide by these policies as well as those set forth by the Dietrich School of Arts and Sciences Graduate Studies Office of the Provost. Please review their guidelines, policies and resources [here](#) .

The student should always keep their advisor and the academic administrator current on their status, progress, and plans, and be responsive and timely to the emails and requests of the Graduate Administrator and the Department Administrator.   International students should additionally keep in contact with the Office of International Services (OIS) and be familiar with policies and procedures specifically for international students studying here

. The Department of Statistics' immigration specialist who works with current students is Sara Jones, sara.jones@pitt.edu and he should be contacted regarding any immigration issues.

Department Requirements

I. **Department requirements for the <u>Master of Arts in Applied Statistics</u> are the completion of 30 credits:**

1. STAT 2630 (Intermediate Probability) & STAT 2131 (Applied Statistical Methods 1) in the fall term.

2. STAT 2640 (Intermediate Mathematical Statistics) & STAT 2132 (Applied Statistical Methods 2) in the Spring term.

3. STAT 2381 Consulting (minimum three credits)—often taken Fall of 3rd semester but Spring of 4th semester is also ok.

4. Three courses (9 credits) in statistical methods or theory other than those in those listed above.
    Note: 1231/2230, Applied Experimental Design is not accepted for graduate credit
    Note: 1221/2220, Applied Regression is not accepted for graduate credit
    Note: 1293/2292, Topics in applied statistics is not accepted for graduate credit.

5. Two (2) graduate courses in a field other than statistics to which you might apply statistical methods. The goal is to require students to obtain some substantive knowledge in a discipline outside what is typically taught in a statistics department. The outside courses would not necessarily have any statistical content, for example, two graduate courses in accounting or two in neuroscience would be perfectly acceptable. (Both accounting and neuroscience are strong users of statistical methods.) The outside courses may also include some quantitative content, e.g., quantitative finance or quality management.

    Examples of courses or types of courses include:
    > Biostat 2046 Cohort Studies or Biostat 2062 clinical trials
    > Biostat 2063, 2064 Bayesian & Empirical Bayesian Computational Methods
    > Epidemiology (many courses)
    > Economics: (many courses including advanced econometrics, game theory, advanced micro- or macro-economics)
    > Information Science: 2710 (database mgmt), 2500 (data structures)
    > Industrial Engineering 2102 (six sigma—to green belt level—quality management)
    > Financial mathematics
    > Computer Science: 2750 (machine learning)
    > Psychology (many non-statistical graduate courses)

> *NOTE: The preceding is not an all-inclusive list of courses. Furthermore, to be explicitly clear, courses that duplicate materials already taught in our department are not allowed. Students are strongly advised to discuss their choices with their advisor for approval.*

6. Passing the Preliminary Evaluation, equivalent to receiving grades B or higher in STAT 2630-2640 and STAT 2131-2132. A student failing to meet the grade requirement needs to re-take the necessary course(s). Students are allowed to take the same course twice. They will be terminated from the master's program if they fail to achieve a grade of B or higher on their second attempt.

II.   Department requirements for the <u>Master of Science in Applied Statistics, Thesis option</u>:

Requirements #1-6 as above except that requirement #4 is reduced to one graduate courses. In addition, the student should enroll in two courses (6 credits) in STAT 2001, Research and Thesis for the Master of Science degree. To qualify for this degree option, the student must find a faculty member in the department to direct the student's thesis. For full-time students, this should be done no later than the beginning of the student's second year in graduate school. The student must write and successfully defend a master's thesis.

III.   Department requirements for the <u>Master of Arts in Statistics</u> are the completion of 30 credits:

1. STAT 2630 (Intermediate Probability) & STAT 2131 (Applied Statistical Methods 1) in the Fall

2. STAT 2640 (Intermediate Mathematical Statistics) & STAT 2132 (Applied Statistical Methods 2) in the Spring

3. Seven (6) graduate statistics courses, no more than two (2) of which can be dual level (have both an undergraduate and a graduate number). Examples:

1201/2200	Applied Nonparametric Statistics
1211/2210	Applied Categorical Data Analysis
1241/2240	Applied Sampling
1251/2250	Quality Control
1301/2300	Statistical Packages (SAS & R)
1311/2310	Applied Multivariate Statistics
1321/2320	Applied Time Series

Note: 1231/2230, Applied Experimental Design are not accepted for graduate credit
Note: 1221/2220, Applied Regression are not accepted for graduate credit
Note: 1293/2292, Topics in applied statistics is not accepted for graduate credit

4. Passing the Preliminary Evaluation, equivalent to receiving grades B or higher in STAT 2630-2640 and STAT 2131-2132. A student failing to meet the grade requirement needs to re-take the necessary

course(s). Students are allowed to take the same course twice. They will be terminated from the master's program if they fail to achieve a grade of B or higher on their second attempt.

5. Note: If this degree is taken as an end in itself, with the goal of working in industry, government or research labs, it will be a good idea to take at least 3 credits of Statistical Consulting (STAT 2381).

IV. **Department requirements for the <u>Master of Science in Statistics-Thesis</u> are the completion of 30 credits:**

Requirements #1-4 as above except that requirement #3 is reduced to four graduate courses. In addition, the student should enroll in two courses (6 credits) in STAT 2001, Research and Thesis for the Master of Science degree. To qualify for this degree option, the student must find a faculty member in the department to direct the student's thesis. For full-time students, this should be done no later than the beginning of the student's second year in graduate school. The student must write and successfully defend a master's thesis.

V. **Department requirements for Combined Five-Year Bachelor's and Master's Degree in Statistics**

Admission to the program requires the approval of both the undergraduate and graduate directors. Interested students should discuss this five-year program with the Director of Undergraduate Studies and submit their letter of interest to DUGS by March of their junior year. Students must have least a B grade in STAT 1221 and 1151 to be considered for the five-year program.

Those who are selected and do well must apply for MA or MS in Statistics officially through GATS by January 15 of their senior year. Upon application, students must earn at least a B grade in STAT 1631 and 2131 and maintain a 3.0 QPA to be formally admitted to MA or MS in Statistics.

Requirements for a Combined BS and MA in Statistics (74 credits total)

1. Introductory Mathematics Courses: MATH 0220, 0230, 0240, and 0280 or 1180
2. Introduction to Applied Statistics and Applied Regression: STAT 1000, STAT 1221, and STAT 1223 where STAT 1223 is a W (writing) course
3. Two Introductory Applied Statistics Courses from the following list: STAT 1201, 1211, 1231, 1241, 1251, 1261, 1291-1294
4. One Intermediate Applied Statistics course from the following list: STAT 1301, 1311, 1321, 1361
5. One advanced elective (usually STAT 1731)
6. One open elective from the following list: any STAT 12xx, 13xx, 16xx, 17xx)
7. Introduction to Probability and Mathematical Statistics: STAT 1151 and 1152
8. Intermediate Probability and Mathematical Statistics: STAT 1631 and 1632
9. Applied Statistical Methods 1 and 2: STAT 2131 and 2132
10. Supervised Statistical Consulting: STAT 2381 (minimum three credits)
11. Electives in Statistics: three graduate-level courses and must be approved by the student's advisor.

12. Two open graduate-level electives: could be courses from outside of the department, chosen in consultation with the graduate advisor.

13. Passing the Preliminary Evaluation, equivalent to receiving grades B or higher in STAT 1631-1632 (STAT 2630 – 2640 if taken in the graduate status) and STAT 2131-2132. A student failing to meet the grade requirement needs to re-take the necessary course(s). They will be terminated from the master's program if they fail to achieve a grade of B or higher on their second attempt.

Requirements for a Combined BS and MS in Statistics

Requirements #1-13 as above except that requirement #11 are reduced to one graduate course. In addition, the student must write and successfully defend a master's thesis.

Sample Schedule
First Year: MATH 0220, STAT 1000, MATH 0230, STAT 1221, STAT 1223
Second Year: MATH 0240, STAT 12xx, MATH 0280, STAT 12xx
Third Year: STAT 1151, STAT 12xx, STAT 1152, STAT 13xx
Fourth Year: STAT 1631, STAT 2131, STAT 1632, STAT 2132, 17XX (usually 1731 Stochastic Processes).

Fifth Year: Must register for two terms, 9 credits each. Take STAT 2381; at least three STAT graduate-level electives; two additional graduate-level courses.

Comparison of Programs
Separately, the Bachelor of Science in Statistics requires 50 credits and the Master's of Statistics requires 33 credits, of which 30 must be graduate level. The combined program requires 74 credits total, of which 24 must be graduate level. At least 18 credits must be completed as a graduate student. In addition, the MA/MS degree cannot be awarded until 12 months after receiving the bachelor's degree.

VI.   **Department requirements for the <u>PhD in Statistics</u> are the completion of 72 credits:**

1. Passing at the PhD level the preliminary exam, given right before the beginning of the Fall term of the 2nd year of graduate study. (Students with the background covered by this exam are encouraged to take the preliminary exam their first year.)

   Note: Students will ordinarily be given two chances to pass the PhD comprehensive exam. The second attempt must be made no later than the end of the next academic year semester following the first attempt.

2. Take the following five (5) required courses:
    STAT 2631 Advanced Mathematical Statistics

STAT 2641 Large Sample Methods of Statistics
STAT 2661 Theory of Linear Models
STAT 2711 and 2712 Advanced (measure-theoretic) Probability

3. Three (3) credits of STAT 2381, Supervised Statistical Consulting. Students anticipating a career involving consulting should take a substantial number of credits of STAT 2381.

4. Complete 72 graduate credits. Some of the courses taken can be taken outside of the department, i.e., Biostatistics, Psychology in education, Economics, Mathematical finance or Machine learning. Some credits will be for independent study (STAT 2991), directed study (STAT 3901) and/or research (3001).

5. Pass the PhD Comprehensive Exam. Students, with the advice of their chosen committee members, read the literature in the area of their proposed research and present a creative summary of the material in an open seminar attended by their dissertation committee and any other interested individuals. After their talk, students will be further quizzed in private by their committee on their knowledge of the material.

6. Present a written and oral thesis proposal to their dissertation committee and obtain approval of the proposal.

   NOTE: #5 & #6 can be combined into one presentation or done separately.

   Once the above steps are completed, the student is admitted to PhD candidacy and enrolls in FTDB (FTDS/FTDB 3999) and pays a flat-rate tuition of $500 plus fees.

7. Complete the dissertation research, write the dissertation and successfully defend it orally in an open seminar.

   NOTE: Admission to candidacy must be at least 8 months before the defense of the dissertation in order to provide an opportunity for the members of the doctoral committee to review, criticize, and monitor the proposed research.

Dietrich School of Arts and Sciences Requirements:

The *general* requirements for the master's degrees and doctoral degrees are detailed under Regulations Pertaining to Master of Arts and Master of Science Degrees, Regulations Pertaining to Professional Master's Degrees (including the MFA), and Regulations Pertaining to Doctoral Degrees in the University's catalog. See here.

The following requirements must be satisfied for the MA and MS degree:

- Completion of 12 credits from the 2000 or 3000 series with a grade of B or higher.
- All courses from the 2000 or 3000 series must be completed with an average grade of B (3.00)
- **At least 30 credits at the graduate level** must be completed with at least an average grade of B (3.00)

- Directed studies can count toward the overall degree requirements but not toward the required 12 credits of 2000/3000-level course work
- Independent study credits *do not count* towards the MA/MS/MFA degrees

The following requirements must be satisfied for the PhD degree:

The minimum requirement for the PhD degree: 72 credits may be earned in formal course work, directed study, independent study, and/or thesis and dissertation research.

Graduate Advising:

It is usually the case that students who are admitted for a master's degree have the Graduate Director as their advisor throughout their stay in the department. Before each enrollment period, the student meets with the Graduate Director to discuss and choose courses, following the requirements of the program. Before the enrollment of the last semester of the student, the Graduate Director checks that all unfulfilled degree requirements will be completed and informs the student to file timely for their application for graduation at the A&S Dietrich Graduate Office.

Students are encouraged to speak with the Graduate Director and other faculty in the department about possible employment opportunities and job openings, and to also seek help on resumes and tips on interviewing. If the Master's student intends to continue his education in another department or school, the Graduate Director helps the student review choices and has recommendation letters submitted on the student's behalf. Other faculty, likewise, can be asked to write recommendation letters for the student.

PhD students who pass the Preliminary Examination at the PhD level at the start of their 2nd year of graduate school are encouraged to look for an advisor to eventually direct the student's dissertation research. Once the student selects a dissertation advisor, he/she is expected to serve as the student's course advisor and mentor for the rest of the time the student spends in the department. The dissertation advisor is expected to educate the student in the requirements of scientific integrity, including copyright rules and co-authorships, to help the student make professional contacts, to introduce the student to bibliographical and data resources and to inform the student of employment opportunities.

Registration:

Full-time graduate students are those registered for nine or more credits in any given term. (Teaching assistants, fellows and graduate student researchers **must be enrolled full-time** during the fall and spring terms of their appointment and may register for up to 15 credits.)

All students will have an academic hold placed on their accounts every semester, which needs to be removed, by the Academic Administrator or the student's advisor. For the first two years, this hold is removed **only after** the student has met with the advisor and discussed which courses the student still needs to fulfill the degree

requirements.   After their completed 2nd year, the Academic Administrator at the start of the enrollment date removes the hold, but it is advisable that the student keep their advisor posted on their enrollment choices.

All graduate students must be in active status and must register for at least one credit during the term in which they are completing any milestones, such as preliminary exams, comprehensive exams, candidacy admission, dissertation defenses and graduation.

Doctoral students, who have completed the 72-credit requirement with a minimum cumulative grade point average GPA of 3.0, have passed all PhD department required courses, and been working full-time on their dissertation, should register for Full-Time Dissertation Study (FTDB 3999), which carries no credits or letter grade, but provides students with full-time status to meet funding and/or visa eligibility requirements. 3999 allows the student to receive an assessed lower tuition fee of $500.00 plus some fees.

Cross-Registration:

Graduate students can register for courses at Carnegie Mellon University (or other approved universities). Cross-registration requires prior approval by the director of graduate studies, is limited to one course per term (Fall or Spring), counts toward the departmental graded credit requirement as well as toward the student's GPA. The student must be registered at the University of Pittsburgh for at least nine credits (full time status) *before* cross-registration. Cross-registration is handled through the Arts & Sciences Graduate Dean's Office, Room 5141 Sennott

Square. No additional tuition is charged, however, if there are any special course or lab fees associated with the course, the student must pay them.

Grading:

 A graduate student must maintain a GPA of 3.0 (B average) to remain in good standing, to be appointed to a Teaching assistantship/Fellowship, and to graduate.   If the student's GPA falls below 3.00, the student is automatically placed on academic probation, is not eligible for a teaching assistantship, fellowship, or participation in the department's examinations. The department will so warn the student in writing.

Statute of Limitations:

Master's students must complete all requirements for a master's degree within four consecutive calendar years of the first registration. The Master's Comprehensive exam has a strictly enforced statue of four years and will not be extended for any reason per Dietrich School of Arts and Sciences.

PhD students must complete all requirements for the PhD degree within ten consecutive years from the first term of registration. If a student enters with a master's degree (regardless if credits are transferred or not) the statute of limitations is eight years from the first term of registration. The Doctoral Comprehensive exam has a strictly enforced statue of seven years and will not be extended for any reason. Students may apply for an extension of the

statute of limitations. The following must be submitted for an extension: an application for an extension of their statute of limitations (there is a form for master's students and one for Ph.D. students). A detailed plan of study with a time line for completion of all items for the degree signed by the student and committee chair stating that if milestones are not completed the student will be terminated from the program.

Annual Student Performance Evaluations:

Once a year, near the end of the spring semester, the faculty will meet to discuss the performance and academic progress of each student. The Graduate Director then writes each student a letter to convey the conclusions of the faculty's review of his/her progress and to remind him/her of important degree requirements that need fulfilled, to let them know of continued funding, and to make general comments on their academic performance.

Preliminary PhD Examinations:

These exams are given at the end the 1st year of the student's program. The exams are typically held on Monday and Friday of a week in August. The exams are given in two parts: Probability/Mathematical Statistics and Applied Statistics. The theory exam requires the completion of five written questions in four hours. The Applied exam requires the completion of four questions in four hours, and usually two of the questions will need to analyze a given dataset on the computer in the stat lab. After the exams, the student is notified in writing of his/her performance on the examinations, i.e., pass/fail for each part and told of any options to him/her in the event of a non-passing performance. The student who fails on the first attempt is allowed to retake the Preliminary Exams again in the following year. In the event that the student passes only one exam, theory or applied, on the first attempt, that student will be required only to retake and pass only the exam that was failed on the first attempt.

Dissertation and Committees:

Students are responsible for the formation of their Doctoral committee, which is composed of 4 members – 3 (three) members from **inside** the student's department, all of whom must have graduate faculty status. Graduate faculty status lists can be found here: http://www.ir.pitt.edu/gradfac/homepg.htm

Adjunct members or members with a secondary appointment in Statistics may also serve as an inside member as long as they have graduate faculty status and the appointment is current.

A committee may be comprised of more than 4 members, but all members must participate fully.

Committee members who leave the university may stay on the committee, (assuming he has graduate faculty status) will be considered an inside member for a period of one year from the date he left. After one year, he will no longer be considered the inside member, but rather the outside member.

If a committee member retires, they may remain on the committee as long as they are still willing to serve and will return for the defense. Retired faculty may be appointed on new committees as long as they are still active professionally in the academic community.

One member of the committee must be from **outside** the student's department. This outside member may be from:

- A different department in the School of Arts and Sciences, and must have graduate faculty status.
- A different school in the University of Pittsburgh, Pittsburgh campus, and must have graduate faculty status.
- Another university or, in some circumstances, industrial or professional research institution. Should the outside member be in these categories, the Dean needs to determine whether, if this person were at University of Pittsburgh, he/she would have graduate faculty status. In order to do this, the Dean requires a current detailed CV and a memo. A complete CV details past and present positions held, lists publications, and demonstrates graduate student mentoring and advising. Graduate student mentoring and advising may be demonstrated by listing courses taught at the graduate level and service on graduate student committees or roughly equivalent oversight of, for example, post-graduate fellows. This memo should address the rationale for inclusion of the outside member and assure that the outside member will be present at both the overview and defense.
- Only in extenuating circumstances is the Dean willing to permit a committee member not to be physically present at either the overview or the defense.
- The outside committee member can only be a co-chair, not a chair
- If an outside committee member is approved for one student's committee that approval holds only for that student.

Students are responsible for contacting their committee members and arranging for their PhD Comprehensive/Overview or PhD Defense time and date. Contact the academic administrator of the department when you have the date and time and provide her with the following information:

> Names, department, and emails of your committee members
> Chair of your committee
> The title of your thesis

The academic administrator will obtain a room for your PhD oral comprehensive and your final Dissertation exam and will send out notices to the department and the university community.

Graduation:

All students must be enrolled in at least one credit or FTDS/FTDB to apply for graduation. Application forms for graduation are available at the Dietrich Graduate School Office, 5141 Sennott Square. Applications are initially free up to a certain date, then a fee is applied. Pay attention to email and posted announcements pertaining to the deadlines.

Students who are applying for their PhD degree should carefully read through all the instructions and pay close attention to detail and the date the ETD/paperwork must be in.

Financial Assistance:

There is a limited amount of financial assistance in the form of teaching assistantships (TAs) and/or fellowships available to entering full-time graduate students. Such financial aid is awarded competitively. Not all entering students can be supported financially and TA's are given only to PhD students. Once PhD students have passed the PhD qualifying exam and are beginning research on their dissertations, they can become teaching fellows (TFs) or graduate student researchers (GSRs). A few of the appointments may be with other departments in the University. To date, the Department of Statistics has been successful in finding such appointments for its PhD students, but no guarantees can be made.

TFs and GSRs are paid slightly more than TA's. Note that TAs, TFs, and GSRs receive tuition scholarships proportionate to the level of their award (full or partial) during the terms in which they have appointments. The University provides individual health insurance to graduate students with eligible academic appointments. Supported graduate students however, are responsible for paying the $30.00 graduate activity fee each semester. Full-time TAs and TFs are expected to work 20 hours per week in addition to the time they require for course work and study.

Some support is available to TAs and TFs who request teaching assignments during the summer term. Tuition scholarships are limited to 3 credits. Students who want to register for more than 3 credits must receive formal approval from the Graduate Studies Office prior to registration. Current TAs are encouraged to apply to be an "instructor" during the summer term, i.e., teach the undergrad-level course.

Duties of a TA/TF

All Department of Statistics new TAs are required to enroll in STAT 2020, the Department's Teaching Seminar. Additionally, new TA's are also required to attend the CIDDE New Teaching Assistant Orientation and classes http://www.cidde.pitt.edu/teaching-support/.

The work assigned to TAs in the Department is to lead recitations for the undergraduate level courses, STAT 0200, 1000, and 1100, assist faculty as graders for upper-level undergraduate courses and occasionally a grad-level course, or work in the STAT lab. A TA is to work 20 hours per week and will receive a stipend based on the percent of their assistantship.

The Office of Measurement and Evaluation of Teaching (OMET) conducts online surveys each term. Dietrich School policy is that all TA's must be evaluated by their students each term in their first two years of teaching and at least

once each year thereafter. Results of the surveys are to be sent to the TA's and copies will be sent to the designated TA/TF coordinator or Chair.

Note: International student instructors, in accordance with the English Fluency in Higher Education Act, are required to be certified in English fluency. The Department will arrange for the English exam to be given by the English Language Institute to all international TA's. The student must score a "4" or above to be qualified to lead a recitation. A score of 3 will only allow the TA to grade or work in the Stat Lab. The TA who scores a 3 will be advised to take additional English language courses and will be re-tested.

A guide titled, *TA Handbook: The Teaching Assistant Experience* can be found at this link:

http://www.cidde.pitt.edu/wp-content/uploads/2014/07/TA-Handbook.pdf

The TA/TF Policy Regulations can be found at http://www.pitt.edu/~graduate/tapolicyrev.htm

In general, students are awarded a two-term teaching contract and as long as they are progressing satisfactorily in their academic studies and their teaching duties, they will receive such funding as a TA/TF in the department for a total of 5 years.

Additional Funding:

Andrew Mellon Predoctoral Fellowships: These are a one-year fellowship that provide the student with a little more funding/stipend and reprieves them from all teaching responsibilities. PhD students can apply for the Andrew Mellon and the department faculty will be permitted to submit a certain number of applicants based on the amount of the previous year's awards. Information is sent out around November by the academic administrator.

Dean's Tuition Scholarships: These are awarded by the A&S Graduate Studies Office to continuing graduate students who demonstrate academic achievement and have exhausted their departmental funding, typically FTDS students. The award provides tuition only for one semester; the student must pay all fees.

Dean's Research Scholarships: These research scholarships (around $3,000) are awarded by the A&S Graduate Studies Office to exceptional incoming PhD students to support their research efforts in the first summer after joining the department.

Graduate Student Researchers:

GSR's may work with professors in the Statistics department, and sometimes other departments or schools, on research projects. These positions are at the invitation of individual faculty members. The GSR support can also be combined with TA/TF support, e.g., 50% GSR and 50% TA.

Travel Grants for Conferences:

There are various travel grants available to graduate students attending or presenting at conferences and professional meetings. Examples of these are the A&S PBC and Alumni Travel Fund, Dietrich School of A&S Graduate Student Organization (GS), and Graduate and Professional Student Government Travel Grants. Please see

the financial assistance page of the Dietrich School of Arts and Sciences http://www.asgraduate.pitt.edu/financial-assistance.

Graduate Student Organizations

The Dietrich School of Arts and Sciences Graduate Student Organization (A&S GSO) represents the interests and concerns of all graduate students in the Dietrich School of Arts and Sciences. Monthly meetings of the GSO offer a place for A&S graduate students to hear reports from various University committees and to discuss and act on issues concerning graduate students, as well as getting to know what is happening in other departments within A&S. Each A&S department sends a graduate student representative to the monthly A&S-GSO meetings, but all graduate students in A&S are invited to attend. Announcements regarding meetings and functions can be found here http://pre.asgso.pitt.edu/about-us/ or call the Administrative Assistant at (412) 624-6698. A&S-GSO also offers Travel Grants to students.

The Graduate and Professional Student Government (GPSG) is the umbrella organization that oversees the student government of each graduate and professional school within the university. As the governing body for all graduate and professional students, GPSG takes an active role in ensuring that the concerns of these students are heard throughout all levels of the university. In addition to acting as a unified voice at the university, GPSG provides serves and funding to individuals and groups whose goals and ideas further the mission of this organization. All graduate and professional students at the University of Pittsburgh are members of GPSG. They also offer several services, including free legal service and travel grants. For more information, see their website of: http://www.gpsa.pitt.edu

Job Market:

Many Career opportunities are available to students of statistics. The private sector needs statisticians in areas such as management, product quality, medicine, pharmaceutical research and marketing. The government depends on statisticians across many agencies, such as the Census Bureau, the Bureau of Labor Statistics and the Food and Drug Administration.   College and Universities require statisticians in all areas, such as teaching, statistical research, and consulting. The American Statistical Association has more information on career opportunities in statistics http://www.amstat.org/careers/index.cfm?fuseaction=main.