

Graduate Studies in Economics Handbook

University of Arizona



Table of Contents*

Program Checklist	2
Becoming a Colleague	3
Official Requirements for a Ph.D. in Economics	4
Registration Requirements and Procedures.....	6
Payment of Fees	6
Teaching Audition.....	7
Choosing your Advisor	7
Normal Progress for Ph.D. Students in Economics.....	8-11
Additional Details on Program Milestones	9
Program Teaching Requirement.....	9
1 st year Written Preliminary Examination	9
Second-Year Paper and Conference Presentation.....	9
Third-Year Paper and Conference Presentation	10
Doctoral Comprehensive “Oral” Examination and Dissertation Proposal/Abstract... 10-11	
Doctoral Comprehensive Exam “written requirement”.....	11
Final Oral Defense (Dissertation Defense).....	11-12
Organizing a Research Paper in Economics	13
Tips for Embarking on a Dissertation or Research Topic.....	14
The Nuts and Bolts of Going on the Job Market	15
You Can Do Great Things as a Graduate Student	17
Financial Support.....	18
Satisfactory Academic Progress.....	19
Life in the Economics Department	21
Appendix I - Official Requirements for a Master’s in Economics	23
Appendix II – English Proficiency for International GTA’s	24
Appendix III – Graduate Assistantships	25
Appendix IV-List of UA Graduate College required forms (<i>Master Plan of Study</i> , etc.).....	27

* Please feel free to make suggestions to Prof. Gautam Gowrisankaran or Liz Jenkins to help improve the information in the Handbook.

Program Checklist

<i>First Year</i>	<i>When</i>
<input type="checkbox"/> Graduate Teaching Assistant Orientation (GATO)	August
<input type="checkbox"/> Submit <i>Master Plan of Study</i>	Spring Semester
<input type="checkbox"/> Pass Preliminary written examination	June/August
<input type="checkbox"/> Department Graduate Coordinator reports your <i>Master Completion of Degree Requirements</i>	August, or Fall of 2 nd Year
<i>Second Year</i>	
<input type="checkbox"/> Choose Advisor	Spring Semester
<input type="checkbox"/> Second-year proposal presentation	April
<input type="checkbox"/> Submit <i>Doctoral Plan of Study</i>	May, or Third year
<i>Third Year</i>	
<input type="checkbox"/> Submit Progress Report	April
<input type="checkbox"/> Third-year paper and Conference presentation	March
<input type="checkbox"/> Grade of Pass on third-year paper	May
<input type="checkbox"/> Prepare Dissertation Proposal & Submit <i>Announcement of Doctoral Comprehensive Exam Committee</i> form	August
<input type="checkbox"/> Pass <i>Comprehensive Oral Examination</i>	During or before December of 4th year
<i>Fourth or Fifth Year</i>	
<input type="checkbox"/> Submit the <i>Doctoral Dissertation Committee Appointment</i> form	Upon passing Comprehensive Oral Exam
<input type="checkbox"/> Submit Progress Report	April
<input type="checkbox"/> Prepare Job Market Candidate Packet	October of the Job Market Year
<input type="checkbox"/> Submit <i>Announcement of Final Oral Examination</i>	Seven working days prior to the exam
<input type="checkbox"/> Submit <i>Results of Final Oral Defense</i>	Per Student's Advisor

Becoming a Colleague

Our fundamental goal in the Economics doctoral program is to transform students into successful economists. We want to move you from taking courses and exams to developing your own projects and contributing new research to the field. By the time you complete your Ph.D. you will have made a substantial contribution to the field of economics and prepared yourself to continue making contributions in the future.

The program is comprised of several phases. The core courses are the foundation for the program. This is where you will develop your abilities with the analytical tools required to do economics and where you will learn to take an economist's approach to solving problems. ECON 508 and the various 696 courses will take you to the frontier of economic research. The goal of these courses is to help you develop your own research program. The sequence of second-year paper and presentation, third-year paper and presentation, oral exam, and final dissertation defense provide a framework in which to develop your original contributions to the field.

When you complete the program with your PhD, our objective is that you obtain the best possible position as a professional economist. We can help you reach this goal, but the ultimate responsibility is yours. To succeed, you will have to put in several years of dedication and hard work.

Once you get past the coursework and the written preliminary exams in the first year, your success in the profession will largely be determined by your success in research. You don't get a good job based on your ability to take tests. You get a good job based on your ability to identify, develop and complete interesting research projects. From the first day in the program you should begin thinking about what types of topics interest you. Attend the afternoon workshops, get to know the faculty and other students, and learn what they are working on. The paper projects and other program milestones give you a short-term incentive to develop and finish research papers. But the papers are only as good as the amount of work and inspiration that you put into them. We can advise you and help you along the way. In the final analysis, the more you can show that you have developed good projects and are an independent economist with your own ideas and research agenda, the better our ability to recommend you to prospective employers.

The market for economists has become increasingly competitive. To obtain a job these days, you basically have to be within sight of finishing a dissertation at the time you interview at the American Economic Association meetings in early January. Even that is not enough for most positions because each employer (whether university, government or private company) receives hundreds of job applications, each with a dissertation abstract, a promise that the candidate will be done with his or her Ph.D. by the following August, a list of fields, and letters of recommendation saying the person is very good. To be successful on the job market, you need to stand out in some way. The most effective way to stand out is to already have one or two papers accepted for publication and others in the pipeline. Your best bet is to start working on research projects early in the program because it takes time for these projects to develop.

Official Requirements for a Ph.D. in Economics

Required Coursework at a Glance:

Core	24 Hours
Seminars	18 Hours
Minor	(see below)
Workshops	6 Hours
Dissertation	18 Hours
Total	66 Hours

PhD students in Economics who choose to minor in Economics: Since most PHD's in ECON have the same major and minor, simply list 48 units of coursework under the 'major' designation in the Graduate College's *Doctoral Plan of Study* (DPOS). Note: you do not need to list dissertation units in your DPOS. For more information on DPOS's, please read page 7.

"If the major and minor are the same, there must simply be a minimum of 45 units (*you will list 48 units*) - they need not be differentiated as major or minor. <http://grad.arizona.edu/degrecert/dpos>

Core Courses:

Number	Title	Credit Hours	Semester
ECON 501a	Graduate Microeconomics I	3 Hours	Fall/1 st Yr
ECON 501b	Graduate Microeconomics II	3 Hours	Fall/1 st Yr
ECON 520	Statistics for Economists	3 Hours	Fall/1 st Yr
ECON 501c	Graduate Microeconomics III	3 Hours	Spring/1 st Yr
ECON 502a	Graduate Macroeconomics	3 Hours	Spring/1 st Yr
ECON 522a	Graduate Econometrics I	3 Hours	Spring/1 st Yr
ECON 508	Research Methods in Economics	3 Hours	Spring/1 st Yr
ECON 522b	Graduate Econometrics II	<u>3 Hours</u>	Fall/2 nd Yr
Total		24 Hours	

Seminar Courses:

Seminar courses are designed to expose you to literature in subfields of economics and to give you an opportunity to explore research projects in those fields. A minimum of two courses in two fields is required to promote a rich and textured understanding of research opportunities within two areas. A list of available fields follows the below example of the seminar course structure.

Field One (two courses in the same field)

ECON 696_ (or similar level)	3 Hours
ECON 696_ (or similar level)	3 Hours

Field Two (two courses in the same field)

ECON 696_ (or similar level)	3 Hours
ECON 696_ (or similar level)	3 Hours

Seminar Electives

ECON 696_ (or similar level)	3 Hours
ECON 696_ (or similar level)	<u>3 Hours</u>
Total	18 Hours

The following fields are available for Seminar Study:

- Economic History (696x, 696y)
- Econometric Modeling (696e, 696f)
- Environmental & Energy Economics (696v, 696w)
- Experimental Economics (696a, 696b)
- Financial Economics (meet with the Finance advisor)
- Industrial Organization and Regulation (696p, 696q)
- Labor Economics (696h, 696i)
- Microeconomic Theory (696r, 696u)
- Law & Economics (696z)
- For Agricultural Economics and Natural Resource Economics, discuss with DGS and AREC graduate advisors

You may also take electives in special topics offered on an ad hoc basis. These electives could be economics courses, or courses offered by other departments such as mathematics, engineering, or psychology.

Specialization in other fields either within Economics or outside of Economics is a possibility subject to the agreement of the Director of Graduate Studies. Students interested in specializing in Financial Economics should consult the graduate director in Finance regarding coursework requirements. Similarly, students interested in specializing in Natural Resources or Agricultural Economics should meet with the graduate advisor in the Agricultural Economics Department.

Most Ph.D. students in our program do a major and minor in Economics; however, all UA Ph.D. students have the option of pursuing a minor in another field. A minor in another field involves taking a sequence of three or four courses in that subject; some programs require students to pass a minor exam. If students are interested in a minor outside of Economics then it is best to discuss this with the Director of Graduate Studies in Econ; in addition, students minoring outside of Economics should clarify minor requirements with Coordinator in the Department /discipline of interest.

Workshops & Dissertation Credit

The workshops, designated 697 with a letter following, provide students with an opportunity to get involved in the research life of the Department. Each workshop typically meets once a week from 3:30 p.m. to 5 p.m. and features presentations by external speakers, local faculty, and graduate students. Ph.D.'s must take at least two workshops to graduate, but **students in the third year and beyond are required to enroll in a workshop each semester**. While the exact course requirements depends on the instructor, typically a student is expected to give a research presentation, write research reports on the papers of other speakers, and attend regularly. The workshops provide an introduction to the frontiers of current research and provide a forum in which the student may become comfortable presenting and discussing his or her own research. Additionally, each student must complete 18 hours of dissertation credit.

ECON 697_	Workshop in Economics	3
ECON 697_	Workshop in Economics	<u>3</u>
Total		6

Other Requirements

- Pass the written preliminary exam (theory and quantitative parts)
- Pass the second written preliminary exam (in the form of the second and third-year papers)
- Pass the Comprehensive Oral Examination
- Teach two undergraduate courses
- Maintain a 3.0 GPA**

****In order to retain any Departmental Funding or GA position, 3.0 GPA must be maintained.**

Registration Requirements and Procedures

Department staff will register all Economics graduate students for classes prior to each semester. Beginning in the third year, all students in residence must register for one of the workshop classes (697's) each semester.

In order to maintain full time status, students should be registered for a minimum of nine semester credits each term. Students who have been awarded Graduate Assistantships must be registered for a minimum of six semester credits.

A student admitted to a doctoral program must register each fall and spring semester for a minimum of 3 graduate units from original matriculation until the completion of all course requirements, written and oral comprehensive exams, and 18 dissertation units. When these requirements are met, doctoral students not on financial assistance and/or needing to maintain appropriate visa status must register for a minimum of 1 unit each semester until final copies of the dissertation are submitted to the Graduate Degree Certification Office. Students receiving funding such as assistantships, fellowships, loans, grants, scholarships or traineeships may be required by their funding source to register for more than 1 unit to meet full-time status requirements.

Doctoral students do not have to register for graduate units during Pre-session, Summer or Winter sessions, even if completing degree requirements (including the Comprehensive Exam and the Final Oral Exam).

Unless excused by an official Leave of Absence (which may not exceed one year throughout the student's degree program), all graduate students are subject to the Continuous Enrollment Policy and must pay in-state and out-of-state tuition and fees in order to remain in the program. If the student fails to obtain a Leave of Absence or maintain continuous enrollment, he or she will be required to apply for re-admission, to pay the Graduate College application fee, and pay all overdue tuition and fees, including cumulative late penalties. No tuition or registration waivers can be applied retroactively.

There are provisions made for students who need to take a leave of absence. Information for the policies and procedures can be found at <http://grad.arizona.edu/catalog/policies/enrollment-policies/leave-of-absence>.

Payment of Fees

Payment of registration, tuition, and miscellaneous fees is due the first day of classes! While students receiving graduate assistantships at .50 FTE do not have to pay registration and tuition fees, there are still several miscellaneous fees that must be paid by the first day of classes. It is sometimes difficult to determine how much you owe for these fees because the Graduate College does not enter the total remission until several weeks after the beginning of the semester. If you are a non-resident and are taking 9 units or more each semester (or a resident, taking 7 or more units), you will owe the following in fees:

Arizona Student Association Fee	2.00
Information Tech/Library Fee	240.00
Student Services Fee	40.00
Rec Center Bond Retirement Fee	25.00
AZ Financial Aid Trust Fee	48.00
KAMP Fee	1.00
Rec Center Program Fee	3.91
Health Fee	<u>150.00</u>
Total:	\$509.91
*International Student fee	\$100.00

Students can pay fees through UAccess Student Center (<http://uaccess.arizona.edu>). Note: the UA Bursar's Office assesses late fees if students do not pay fees by first day of classes.

*for International students only

Normal Progress for Ph.D. Students in Economics

First Year

Students should expect to receive grades of B or better in all courses, typically including: ECON 501a, ECON 520, and ECON 501b during the fall semester, and ECON 508, ECON 502, ECON 522a, and ECON 501c during the spring semester. While the University does not use pluses or minuses in official grades, the Department tracks pluses and minuses internally. A grade of “B minus” in a course usually indicates that a student needs to do significant work to enhance his or her skills to be able to pass the preliminary examination.

Note that it is mandatory to participate in the graduate college assistantship training (GATO) and the Economics Department’s teaching workshop (ECON 597c) in the fall, and pass the accompanying teaching audition in the spring. International students must score a minimum of 24 on the TOEFL iBT Speak, or pass the Economics Department’s English Proficiency exam (See Appendix II for more information).

A Master’s of Arts degree option is available to students who either leave the Ph.D. program or wish to obtain the M.A. while continuing in the Ph.D. program. If students choose to earn the M.A., submit the *Master Plan of Study* (MPOS) via *GradPath* late in the spring of the first year. Please list all core coursework {core courses are listed on page 4} and two additional 3-unit courses on the MPOS. The Department’s Director of Graduate Admissions will approve the form as ‘advisor’. All forms are submitted online via *GradPath* <http://grad.arizona.edu/GradPath>

In order to continue in the program students must pass the written comprehensive examinations in Economic Theory and in Quantitative Methods in the summer following the first year. These exams cover the material in the first-year core courses. A student who fails an exam in June has the opportunity to retake the exam in August.

Second Year

Students are expected to perform well in the second-year core coursework, typically including ECON 522b and five 696-level* seminar courses. **In addition, students will choose an advisor in the spring semester to provide career advice and guidance on research projects.** The goal of the student-advisor pairing is to provide students with an advisor who is well suited to program and research agenda. We encourage students to switch advisors if they feel working with another faculty member would be more beneficial. Over the course of the second year students should talk to faculty and establish contacts to develop a committee for your oral examination.

Students will be expected to begin work on a second-year paper, which should follow the structure of a journal article, describing why the topic is important, the relevant literature, the analysis, and a set of results. This second-year paper serves as part of the written comprehensive examination for the program. More details are available below, in ‘Additional Details on Program Milestones.’

After completing all core coursework (30 units) and passing the preliminary exam the Department Graduate Coordinator will report *Master’s Completion Report* to the Graduate College Degree Certification Office. Please note that M.A. students must submit an *M.A. Committee form* via *GradPath*; the Director of Graduate Studies will serve as Committee Chair; student will also list two additional faculty from core courses as ‘committee members’. Once Committee form has been submitted, Coordinator will then submit student’s *Master Completion Report*.

During your third year, Ph.D. students will submit the *Doctoral Plan of Study* (DPOS) via *GradPath* <http://grad.arizona.edu/GradPath>. Please list all of core coursework, 696’s, 697’s on your DPOS; also list **three** courses (doesn’t matter which courses) in the **minor** field; the Graduate College will route your DPOS to Gautam (Econ Graduate advisor) as well as to your major advisor for approval. By this time in the graduate career we expect our Ph.D.’s to have chosen an advisor. NOTE: If not already done so, student must pass a departmental teaching audition. Students who receive unsatisfactory teaching evaluations may be asked to pass a second teaching audition.

*Where the term 696-level seminar is seen, courses of a similar nature and quality from other departments with different numbering systems may be taken.

Third Year

Doctoral Plan of Study (DPOS) should be submitted early in the third year. During the fall semester of the third year complete final one or two 696 courses. Additionally, students should enroll in a 697 workshop in both the fall and spring semesters. In the 697 workshops students are expected to present research to an audience of faculty and graduate students. Please also note that third year students can register for dissertation units starting in the Spring semester of their third year as long as they have met all of their coursework requirements by that point. Note that students will still need to register for a 697 course each semester, but if they have already taken six 696 courses, then dissertation units can be taken in spring.

In April of the third year, students will file a progress report that describes what has been achieved thus far, including papers written, conference presentations, grant applications, courses taught, etc. The report must be read, commented upon, and signed by the advisor. Students should seek to present research at conferences, aiming to prepare papers for journals, and pursuing funding for research.

Students will be expected to begin work on a third year paper, which should follow the structure of a journal article, describing why the topic is important, the relevant literature, the analysis, and a set of results. This third-year paper serves as the final part of the written comprehensive examination for the program. More details are available below, in ‘Additional Details on Program Milestones.’

During the second semester of the third year or the first semester of the fourth year Ph.D.’s are expected to pass the *Doctoral Comprehensive Examination* that covers the breadth and depth of the field of Economics. The Doctoral Comprehensive Oral Examination in our Department typically starts with extensive questioning on the topic of student’s dissertation proposal and related research, and then expands over time into the fundamentals of Economics that the Department expects students to understand in order to complete original research, as well as to be considered a capable Economist (see page 10 for more information about the Doctoral Comprehensive Oral Exam).

Fourth & Fifth Year

The Department expects students to have completed the Doctoral Comprehensive (Oral Exam) in December of the 4th year. Students typically complete a Ph.D. in Economics in five years, though some take only four years. During the fourth and fifth year, students should continue presenting research in the 697 workshops. If student happened to fail the Doctoral Comprehensive Examination in the third year, it’s best to make plans to re-take it in the fall of the 5th year.

In April of the fourth year, 4th year students will file a progress report that describes what has been achieved thus far, including papers written, conference presentations, grants applications, courses taught, etc. The report must be read, commented upon, and signed by your mentor. The report will be used to evaluate prospects for funding in the fifth year. Ultimately, all Ph.D. students must accumulate 18 hours of dissertation credit before graduating.

In the fourth year Ph.D.’s need start thinking about what their individual research will look like when they are on the job market in the fifth year. The most important feature of the job market packet will be the job market paper; therefore, the paper needs to be in superb shape by October of the fifth year. Work to have a decent draft of the job market paper in May of the fourth year that can be presented to the job market committee (John Drabicki & Price Fishback, and/or student’s actual Dissertation committee). Students can then use the feedback from them to improve the paper over the summer and then fine tune it in September of the fifth year.

Student Job Market year: begin preparing the job market packet in September. Include a vita, a dissertation abstract, a personal website, 3 letters of recommendation, and a job market paper by late September. Note: some students also include a paper on Teaching Philosophy. All materials must be ready to post to our department job candidate website on or before October 15th. Contact the members of your committee to write letters of recommendation and to assist you in your job search. Complete the final draft of your dissertation; defend dissertation sometime during this year. In addition, continue to send papers out for publication and continue to present your papers at conferences.

Additional Details on Program Milestones

Program Teaching Requirement:

We expect our doctoral students to teach at least two undergraduate courses during the program. In order to be eligible to teach and T.A. you must attend the University of Arizona Graduate College's Graduate Assistants in Teaching Orientation (GATO), the Teaching Assistant Training Online (TATO), the Economics Department teacher training program (ECON 597C), and pass a departmental teaching audition. International students must also attend International GATO. You may be asked to pass a teaching audition a second time at some point during your graduate career.

1st year Written Comprehensive Exam

The written comprehensive examination in Economic Theory and Quantitative Methods is held in late May to early June following the first year of study. In preparation for the written comprehensive examination, students review all of the first-year coursework.

The Economic Theory examination covers the microeconomic and macroeconomic core courses (ECON 501a, 501b, 501c, and 502). The Quantitative Methods examination covers the statistics and econometrics courses (ECON 520 and 522a). Copies of previous comprehensive exams are available for study. Students who fail the examination in May/June will have the opportunity to retake the exam in August.

Viewing Comprehensive Exams

- Student may look at their June exam with a staff member present, but not have a copy.
- Student is allowed to have a copy of previous June exam questions as a study aid.
- Students cannot look at August exams.
- Students may not obtain copies of the August exam questions.
- Student may receive information about their performance on a particular question by communicating with the professor who wrote it.

Second-Year Paper and Conference Presentation

The goal of the second and third year papers is to get students started on doing original research, while offering plenty of faculty feedback at the same time. Ideally these papers become part of a portfolio of papers that evolves into a dissertation.

Students are expected to write a research paper during the second year of the program. The paper will be due at the start of the fall semester of the third year. Papers are presented to faculty and fellow students during the annual second-year paper conference, held at the start of the fall semester.

Expectations for Second-Year Paper

Students are expected to submit a paper that satisfies three basic criteria:

- (1) The paper must demonstrate one or more results.
- (2) With proper revisions the paper has to be acceptable as a dissertation chapter.
- (3) The paper has to look like a paper, in the sense that the structure and format of the paper meet certain requirements.

What constitutes a result varies depending on the nature of the research. For an empirical project there must be a data set, one or more hypotheses to be addressed, a method for analyzing the data, and a report of results. For a theory paper, a result has to be stated in the form of a proposition, and there has to be a proof. For an experimental project there has to be a design, there have to be testable hypotheses, there have to be instructions, there have to be data from a pilot study, and these data have to be analyzed with appropriate statistical methods.

The requirement that the paper be acceptable as a dissertation chapter is meant to drive home the seriousness of the exercise and the need to start thinking about it early. It is essential that students consult regularly with faculty in their major field about this paper well before the paper is due. These consultations are critical for shaping the research question being addressed, for developing a plan to execute the research, and for learning about the standards for what constitutes an acceptable paper.

The paper must be structured and formatted so that the results are clearly communicated. Several elements are required:

- A title page with title, affiliation and an abstract; the abstract should succinctly state the problem addressed in the paper and the paper's findings.
- An introduction that expands on the abstract, explains why the problem addressed is interesting, states and gives intuition for findings, and relates the paper's findings to the literature.
- One or more core sections of the paper which clearly lay out the question asked, set up a model or framework with which to address the question, explain the approach being used, and lay out the results.
- Proper referencing, with all cited papers appearing in the list of references and, conversely, all papers in the list of references being cited in the body of the paper.

Students should begin the paper during their second year. There is a February 15 deadline for reaching an agreement with a faculty member to advise the student on the paper, and an April 15 deadline for submission of a detailed proposal for the research. The advisor is to sign a form indicating their agreement to advise the student. Students are also encouraged to seek feedback and advising from one or more faculty members in addition to their advisor. The proposal should include a complete explanation of the research question, a review of related literature, an explanation of the proposed approach to address the question, and – if possible – results from preliminary theoretical or empirical analysis. There will be one or two afternoon sessions in which students give 20-minute presentations of their proposals in late April. If the advisor does not judge the detailed proposal and proposal presentation to be acceptable then the student will not be in good standing going into the next semester. **The paper will be due on the first Friday of the Fall Semester of the student's third year.**

Grading will be based on the following criteria: originality of research idea; execution and completeness of project; and communication of ideas. There are three possible grades: Pass, Pass with Revisions and Fail. The grades will be determined by consensus by two faculty referees. A grade of "Pass with Revisions" will come with a detailed set of revisions that you must execute in order to pass the paper. You will then be responsible for updating the paper and resubmitting it to the referees for approval and conversion to a grade of Pass.

If a student receives a Fail on the second year paper then they are not in good standing in the doctoral program. The student has until November 15 to write an acceptable paper and return to good standing. It is the sole responsibility of the student to find two faculty members (not necessarily the original graders) to sign off on the revised paper. For a Pass with Revisions, the student must complete revisions by November 1.

The best 2nd year paper is awarded the \$2,000 Steven Manos Prize for the Best Second-Year Paper by a Doctoral Student. The recipient of the prize is determined by the Department faculty, based upon the originality of the research idea, the execution and completeness of the project, and the quality with which the ideas are communicated.

Third-Year Paper and Conference Presentation

In the Spring semester of the third year in the program students are expected to submit a third-year paper. The expectations for the third year paper are the same as those listed for the second-year paper (see above). A student's third year paper must be either address a different topic than their second year paper, or provide significant new results for the topic area considered in their second year paper. Here it is useful to think of the second and third year papers as potential dissertation chapters.

Each student is to identify an advisor for their paper by October 15 and have their advisor sign a form indicating their agreement to advise the student. Students are also encouraged to seek feedback and advising from one or more faculty members in addition to their advisor. The deadline for submission of a detailed proposal for the research is the first day of the spring semester of the third year.

Students will present their papers to faculty and fellow students during the annual third-year paper conference. As with the second-year paper, there are two faculty referees (student's advisor and 2nd reader). The faculty referees will read the paper, attend the paper presentation, assign a grade for the paper and provide detailed written feedback. Grading will be based on the following criteria: originality of research idea; execution and completeness of project; and communication of ideas. There are three possible grades: Pass, Pass with Revisions and Fail. The grades will be determined by consensus by the two faculty referees. A grade of "Pass with Revisions" will come with a detailed set of revisions that you must execute in order to pass the paper. You will then be responsible for updating the paper and resubmitting it to the referees for approval and conversion to a grade of Pass.

If a student receives a Fail on the third year paper then they are not in good standing in the doctoral program. The student has until July 15 to write an acceptable paper and return to good standing. It is the sole responsibility of the student to find two faculty members (not necessarily the original graders) to sign off on the paper. For a Pass with Revisions, the student must complete revisions by the start of the fall semester.

The \$2,000 Edward E. Zajac Prize for the Best Research Paper by a Doctoral Student will be awarded for the best third-year paper. The Prize is decided using the same criteria as the Steven Manos Prize.

The Doctoral Comprehensive (Oral) Examination and Dissertation Proposal

Students are expected to pass the Doctoral Comprehensive (Oral) Examination by December of the 4th year in the program.

The Comprehensive Oral Examination committee must consist of a minimum of four members. The Advisor/Chair and two additional members must be tenured, or tenure track. The fourth member may be tenured or tenure-track, or a special approved member. Special members must be pre-approved by the Dean of the Graduate College. Any members beyond the fourth can also be tenured or tenure-track, or special approved members. The examination committee need not be the same as the dissertation committee. Students choose the four faculty members in conjunction with the Director of Graduate Studies and the faculty member who will chair student's Comprehensive Oral Committee. Committees are approved by the Department Graduate Advisor and the Graduate College. ***At least two months before the Doctoral Comprehensive Oral Exam students submit the *Doctoral Comprehensive Examination Committee Appointment form*.** * All forms are submitted online via *GradPath* <http://grad.arizona.edu/GradPath>

All four committee members must be in attendance for the entire exam which should be at least one hour in length, but not exceed three hours. Students should expect the typical length to be roughly an hour and a half to two hours. In order to pass the exam, there can be no more than one negative or abstaining vote. Students who fail the comp oral exam will be allowed a second chance to retake the exam after three months have passed. The Graduate College allows no more than one retake of the oral exam. Faculty who are members on a student's Comprehensive Examination Committee do NOT approve online certification forms. Committee members will receive e-mails from *GradPath* notifying them when a student's form/exam results have been submitted and/or approved. BEFORE SUBMITTING your *Announcement of Comprehensive Exam* please read below instructions:

NOTE: Prior to choosing a date and time for the Doctoral Comprehensive Oral Comprehensive Examination, make arrangements with Department Coordinator for a room and use of Department equipment (e.g. projector and laptop). Students should not assume that the department seminar room (401KK) will be available. Additionally, Ph.D. students ought to be registered in the semester the examination takes place; however, if the date of the exam occurs after the end of the spring semester or before the first day of classes in the fall semester, that is fine; UA Ph.D.'s are no longer required to enroll for 1 unit of summer session.

Prior to the Doctoral Comprehensive (Oral) exam, students must give Advisor a copy of dissertation proposal, copies of papers unrelated to the dissertation that were written, and a description of coursework at least two weeks prior to proposed exam date. After Comprehensive Oral committee has been approved by the Graduate College, you will submit the *Announcement of Doctoral Comprehensive Exam* form. Submitting this form will officially schedule your Comprehensive Exam. In addition, approval of the *Announcement of Doctoral Comprehensive Exam* will generate the *Results of Comprehensive Exam* for the Committee Chair. All forms are submitted online via GradPath <http://grad.arizona.edu/GradPath>

After the completion of your Comprehensive Oral Exam, your Committee Chair/Advisor will report results of the Oral Comp exam on behalf of the full committee via *GradPath*.

Note: In the Economics Department the Doctoral Comprehensive Exam ‘written requirement’ is fulfilled by the second-year and third-year papers; therefore, the official date of the Doctoral Comprehensive Exam is the date upon which you submitted your third-year paper. The rare student who has progressed to the dissertation stage prior to the third-year paper conference should use the date on which he or she turned in the second-year paper.

The **dissertation proposal/abstract** should contain:

- 1) An introduction, overview, and outline of the entire dissertation.
- 2) A relatively polished chapter with results.
- 3) A second chapter that still needs more work but shows that the student is relatively far along in the research.

In the Doctoral Comprehensive (Oral) Examination students are expected to show both the depth and breadth of knowledge in the field. The typical oral examination in the Economics Department involves the following steps: Expect to present a 10 minute overview of the dissertation proposal that briefly touches on all aspects of the thesis. To aid in answering questions, students may also wish to prepare overheads for key tables. The faculty members will have read the materials included in the dissertation proposal, so there will be no need for detailed slides on the papers. This is not a workshop presentation of the dissertation research. The format of the Comprehensive Oral Examination will revolve around answering the committee’s questions. The questioning begins by focusing on the dissertation proposal and the economic issues related to the proposal. Questioning will expand to address the fundamental knowledge that student must have mastered in order to complete research in the field, and a general knowledge that professional economists are expected to know.

In assessing the Doctoral Comprehensive (Oral) Examination, faculty look to see that students are making good progress in developing a research agenda, that they have the requisite knowledge and the capability to pursue research goals, and that a working knowledge of Economics has been achieved. The comprehensive oral exam also gives the committee the opportunity to discuss the merits of the work already completed, possible improvements to the work thus far, and the remaining work to be done in order to complete a dissertation.

After passing the Doctoral Comprehensive Oral Examination students will have achieved “Advanced to Candidacy.” At this time the Graduate College will assess several one-time fees. The next step (in terms of paperwork) will be to submit (via *GradPath*) the *Doctoral Dissertation Committee Appointment* form; submit the Dissertation committee appointment form at least 6 months prior to your *Announcement of Final Oral Defense* form.

PLEASE NOTE: Students who do not pass the Doctoral Comprehensive Oral Examination by December of their fourth year without a written exception from the Director of Graduate Studies will not be considered in good standing in the program.

Final Oral Defense & Doctoral Dissertation Committee

Per above, the Doctoral Dissertation Committee should be approved at least 6 months prior to the Final Oral Defense. Dissertation committee: The Graduate College requires a minimum of three members (including committee chair) on the Dissertation Committee, all of whom must be University of Arizona tenured, tenure-track,

or approved as equivalent. If a committee has only three members, all must approve the dissertation. In departments that require four or five members, there may be one dissenting vote. The fourth member may be tenured or tenure-track, or a special approved member. Special members must be pre-approved by the Dean of the Graduate College; see Department Coordinator regarding Special Member Approval. Any members beyond the fourth member can also be tenured or tenure-track, or special approved members. All dissertation committee members are expected to attend the final defense.

Once the Doctoral Dissertation Committee has been approved by the Graduate College, proceed to submit the *Announcement of Final Oral Defense* form at least seven working days prior to your Defense date. All forms are submitted online via GradPath <http://grad.arizona.edu/GradPath> BEFORE SUBMITTING ANNOUNCEMENT OF FINAL ORAL FORM read below instructions:

Prior to submitting the *Announcement of Final Oral Defense* form, ***students must make arrangements with the Graduate Coordinator to reserve a room for Defense and use of Department equipment*** (e.g. projector and laptop). Students should not assume that the Department seminar room (401KK) will be available. Once student and Committee Chair and Committee members have agreed on a time and date for Final Oral Defense Exam, notify the Department Graduate Program Coordinator. S/he will look for a room for your Defense.

Students must be registered to Defend during Fall or Spring: To defend during the either the Fall or Spring semester, Ph.D.'s must register for a minimum of three graduate (usually ECON 920) units.

During the final defense, candidates present the dissertation to the committee members who offer comments on the material. The committee may decide that the dissertation is complete and sign-off on the dissertation at that point, acknowledging this fact. They may decide that the dissertation needs some minor revisions that will be examined only by the chair of the committee, or they may decide that the dissertation needs major revisions that must be examined by all members of the committee. The student's Committee Chair will process the voting forms and render Exam results via GradPath. Committee members will receive e-mails from *GradPath* notifying them when a student's form/exam results have been submitted and/or approved.

Preparation of the dissertation follows the Graduate College format and style rules. Refer to the Manual for Electronic Theses and Dissertation on the Graduate College Website, http://grad.arizona.edu/system/files/etd_Diss_Manual.pdf.

Our Graduate College Degree Certification Auditor is Ms. Nancy Lindsay; Nancy is a wealth of information in terms of required degree forms, GradPath and dissertation format and submission guidelines: nlindsay@grad.arizona.edu & <http://grad.arizona.edu/academics/degree-certification/gradpath>

Organizing a Research Paper in Economics

- *Model One: Applied paper*

Introduction– Describe the issue and why it is an important area to study.

Literature Review – Survey the existing literature on the issue and describe why your contribution extends the literature or fills gaps within the literature.

Model– Develop the model that you will use to analyze the issue and derive the implications.

Data– Describe the evidence you will use to test the model and discuss any possible problems with measurement error.

Estimation and Results– Describe your estimation procedure, report the results, and explain how well they fit or refute the model.

Conclusions– Summarize the results, explain why they are important, and what conclusions you can draw from the research.

- *Model Two: Experimental paper*

Introduction– Describe the issue and why it is an important area to study.

Literature Review – Survey the existing literature on the issue and describe why your contribution extends the literature or fills gaps within the literature.

Analytical Model– Discuss the analytical framework and predictions.

Experimental Design– Describe how the experiment will be done, with instructions and supporting documents in appendices.

Data from the Experiments and Results– Analyze the data and discuss the results.

Conclusions– Describe how the results enhance the literature and make suggestions for further research.

- *Model Three: Theoretical Paper*

Introduction– Describe the issue and why it is an important area to study.

Literature Review – Survey the existing literature on the issue and describe why your contribution extends the literature or fills gaps within the literature.

The Model – Develop the fundamental modeling framework.

Theorems, Lemmas and Proofs– Modern papers typically give intuitive descriptions of the findings, as well as more formal statements of findings in the form of theorems and lemmas, and proofs.

Conclusions– Describe how the results enhance the literature and make suggestions for further research.

Tips for Embarking on a Dissertation or Research Topic

Plunge Ahead into a Topic

Often students will start with a broad topic, narrowing research and scope over time. Many students try to keep their options open in case they choose to switch topics in the future. While choosing another topic is an option, the only way to arrive at a solid dissertation topic is to plunge deeply into that subject.

Find an Advisor or Co-Advisors with Interests in Your Topic

It is *extremely* important to forge relationships with faculty who share your research interests in order to aid you in the development of your topic and guide your research. They can help you identify whether a topic merits further consideration or should be disregarded in favor of other, more appropriate areas of inquiry, reducing the number of mistakes you make. When employers are evaluating our students, they pay close attention to individual faculty members' student assessments. If you capture the attention and respect of the faculty, you empower them with more tools to sell you on the job market.

Write Up Everything While You Work

At every stage of your planning, research, and analysis write up what you are working on. If you are reading articles for a literature review, summarize the articles after you read them. Find ways to tie them to the articles you have already read, and document new questions or directions to explore. If you are developing a theoretical model or a theorem, write it out formally as you go. The process of writing about your topic propels your thinking forward. Ideas that seem promising while floating around your brain may look silly once you write them down. The writing clarifies your thinking because it forces you to explain your ideas in ways that others can understand. The other major advantage of writing is that you can share what you have written with others and get much better feedback as a result.

Expect to Have to Redo Steps, Reread, and Rethink Issues

Most research requires you to backtrack at times and rethink what you are doing. Nearly all respected scholars write and rewrite articles several times before they send them out for publication, and then further revise them in response to the comments of referees.

Set Aside Specific Times that you Devote Completely to Your Research

Given the long-term nature of your research you will find that short-term distractions are many. There are always other immediate deadlines vying for your attention --grading, teaching, and work at home--will draw you away from working on the dissertation. To combat this, be sure to set aside four hours a day that you devote exclusively to the dissertation. Let nothing interfere with that time. You may end up staring off into space sometimes during that period, but even that time is helping you formulate the work.

Set Short-Term Goals Related to the Research

The dissertation is a big project and seems overwhelming at the start. Take smaller portions of the project and set times that you will finish them, you may choose to do this with your dissertation advisor. Attempting to meet a deadline for each part forces you to start working on it. You may miss your deadline by a couple of days or a week, but striving to meet your deadlines will help you to finish sooner. As soon as you meet one deadline, set another goal.

The Nuts and Bolts of Going on the Job Market

Just about everything that you have been doing in the program has been preparing you for going on the Job Market. The more you can show that you have a successful and viable research agenda, the better off you will be. This includes published papers, papers submitted to journals, working papers, grants received, conference presentations given, courses taught. Remember you are going to be one of 300 or so applicants for each position, so you need to stand out in some way.

In your fourth year it's best to begin thinking about what your research will look like when you are on the job market in the fifth year. The most important feature of the job market packet will be the job market paper; therefore, the paper needs to be in superb shape by the time you get to October of your fifth year. Work to have a decent draft of the job market paper in May of the fourth year that you can present to your committee. Then use the feedback from them to improve the paper over the summer and fine tune it in September of the fifth year.

The academic market and a significant portion of the nonacademic market revolve around several institutions: The American Economic Association publishes, in hard copy and on the web, Job Openings for Economists (JOE). The openings list nearly all of the academic openings and a significant number of nonacademic openings.

The timing of the market usually centers on the Allied Social Sciences Association meetings (also known as the AEA meetings) in early January. Most job candidates typically send out several dozen job packets in response to the jobs listed in the JOE. Most schools and a number of nonacademic employers organize screening interviews at the AEA meetings. Plan to send packets out in early to mid November, as most schools and employers begin screening the applications between Thanksgiving and December 15th. After the AEA meetings, schools and employers bring their finalists to campus for a job talk and meetings with future colleagues.

Start preparing the job market packet in September. The packet should contain a vita, which lists your name, address, citizenship, research fields, teaching fields; past employment related to economics, papers published, papers submitted to journals, working papers, grants received, refereeing done, conference presentations, and other signs of your capabilities. Also, you should have a one to two page dissertation abstract that succinctly describes the importance of your dissertation topic and your key results. You want to include at least one completed paper that shows your research skills; some students also include a paper on their Teaching Philosophy. John Drabicki, Assistant Department Head reads through all job market papers and teaching philosophies and offers comments; both John and Price read over letters of recommendation, as well.

Job market candidates will typically need three letters of recommendation from the faculty with whom you are working. Our faculty provide an honest assessment of the quality of your work in these letters and describe both your strengths and weaknesses. It is important to the reputation of the Department to have our Ph.D. students succeed in the jobs that they obtain. Much of what we can say has been determined over the course of your career here. If you are performing well and show all the signs of great potential, we will work hard to publicize your potential. At the other extreme, if you have been just scraping by we will have to communicate this because we do not want to get a reputation for overselling students who cannot perform in job placements.

Most schools will ask for documentation of your teaching ability. The Assistant Department Head will also write a letter of recommendation related to your teaching skills and can provide summary evidence from your teaching evaluations.

Once you know where you wish to apply, contact the faculty with whom you are working and let them know. Often, it helps to have your advisor and committee members writing emails and/or making phone calls to their friends and colleagues to alert them to take another look at your packet. The Department provides funding assistance to offset the cost of mailing out your applications, though in the past years, most universities, colleges and companies advertise open positions online; candidates apply online for positions, and Coordinator uploads letters, or emails letters.

The market for nonacademic jobs in business and consulting is somewhat tied to the timing described above, but not fully. Often we find out about job openings through former students or through employers contacting the Director of

Graduate Studies. We have a strong pipeline to American Express in Phoenix. We have also placed students in a variety of companies around the nation and around the world.

You Can Do Great Things as a Graduate Student

There is a tendency for students to think that publishing papers and receiving grants is beyond the capabilities of a graduate student. This is patently false. Here are just some of the successes that graduate students here have accomplished during the last few years:

Publications:

Cary Deck in the *American Economic Review*, accepted in fourth year.

Bart Wilson in the *Journal of Economics, Behavior, and Organization* in fourth year.

David Dickinson in the *Journal of Economics, Behavior, and Organization* in fourth year.

Taylor Jaworski in the *Journal of Law, Economics, and Organization* co-authored with Bart Wilson, Karl Schurter, and Andrew Smyth, accepted in third year.

Karina Córdova Gonzalez in the *Colección Economía y Finanzas*, accepted in fourth year.

David Rietzke (co-author) in *Social Choice and Welfare*, accepted in his third year.

Awards ~ Fellowships/Grants:

McGuire Small Research Grant Award for the 2013-14 year: Doctoral Awards (\$2500)

Taylor Jaworski

Jianjing Lin

Arizona Board of Regents Doctoral Research Grant (\$5,000)

Shane Thompson (2013)

Ken Sokoloff Dissertation Fellowship (\$15,000)

Theresa Gutberlet (received 2012-2013)

Economic History Association Dissertation Fellowship (\$10,000)

Todd Neumann (received 2005-2006)

Economics History Association Exploratory Travel Grant

Todd Neumann (2003-2004)

Jonathan Fox (2009-2010)

Brendan Livingston (2009-2010)

Carl Kitchens (2010-2011)

Taylor Jaworski (2012-2013)

Rodrigo Parral Duran (2012-2013)

Mike Matheis (2013-2014)

Alex Hollingsworth (2013-2014)

John E. Rovensky Fellowship in Economic History (University of Illinois Foundation)

Taylor Jaworski (2012-2013)

NSF Dissertation Grants (\$10,000):

Ryan Johnson (2000-2001)

Sam Allen (received 2003-2004)

Radovan Vadovic (received 2005-2006)

Jed Brewer (received 2006-2007)

Quazi Shariar (received 2006-2007)

Jonathan Fox (2009-2010)

Matt Van Essen (2009-2010)

Jonathan Fox (2009-2010)

Brendan Livingston (2009-2010)

Carl Kitchens (2010-2011)

Theresa Gutberlet (received 2012-2013)
Taylor Jaworski (received 2012-2013)

NBER Dissertation Fellowship (\$14,000):
Nidhi Thakur (received 2003-2004)
Simona Lup (received 2004-2005)

UC San Diego Dissertation Fellowship: Pre doctoral Research Fellowship, Ctr. for US-Mexican Studies
Karina Cordova Gonzalez (2012-2013)

Dissertation Awards:

Rebecca Holmes, Nevins Prize for Best Dissertation in North American Economic History from the Economic History Association.

Samuel Allen, John Heinz Award for the Best Social Science Dissertation on Social Insurance from the National Institute for Social Insurance.

Kurt Schnier, The American Agricultural Economics Association outstanding dissertation of 2003

Summer Internships in Other Places:

Bart Wilson, Federal Reserve Board of Governors

Sam Allen, National Institute for Social Insurance

Jeff Fuller and Joe Bial, Political Economy Research Center at Montana State University

Finished Thesis in Four Years or less:

A variety of people, including Tim Davies, Clemente Hernandez, Mary Rigdon, Eric Schorvitz, Joseph Bial, Ryan Johnson, Giorgio Coricelli, Shahiri Hazrul and Kurt Schnier. Not only did Kurt Schnier finish in four years but his dissertation "Economic Analysis of Spatially Heterogeneous Resources: the Case of the Fishery" was named the outstanding dissertation of 2003 by the American Agricultural Economics Association.

Plus, students in quantities too numerous to count regularly give presentations at leading conferences, receive University Dissertation Grants of up to \$1,000, receive Departmental Travel Grants of up to \$300 and a handful of students have received Russell Sage Foundation Grants as well. The Department will also provide up to \$300 towards data purchases.

Financial Support

Graduate Assistantships

Graduate students are primarily supported through Graduate Assistantships. Students awarded teaching assistantships are assigned to support a faculty member with course responsibilities. Most frequently, TA's are asked to grade and hold office hours and review sessions. Teaching assistants whose native language is not English and who are not citizens or permanent residents of the US must demonstrate proficiency in spoken English (see Appendix II for guidelines). As a general rule, teaching assistants do not serve as the primary instructor for a course during the fall or spring semesters.

Research assistantships (RA's) are generally provided by individual faculty members' research grants. Faculty members submit requests for students for these particular research assignments to the Director of Graduate Studies or the Department Coordinator. The duties of graduate research assistants vary according to the nature of the research project in which they participate and the source of funding. In some cases, the assigned work is directly applicable to the student's own research interests.

Decisions regarding graduate assignments are made by the Director of Graduate Studies, Department Chair and the Graduate Program Coordinator. Both students and faculty are given the opportunity to make specific requests for assignments each semester. The committee makes every effort to honor these requests whenever possible but the

primary consideration is to provide adequate support for faculty teaching undergraduate courses (see Appendix III for specific requirements and benefits associated with Graduate Assistantships).

It is important to note that graduate assistants are evaluated by their supervising faculty members each semester. The Graduate College does not allow a student receiving an unsatisfactory appraisal to receive funding in subsequent semesters. Additionally, students who are not meeting satisfactory progress in the Economics Ph.D. program are vulnerable to losing their funding.

Satisfactory Academic Progress: The following list summarizes the criteria used to determine satisfactory progress and eligibility for funding:

- Students must pass the preliminary written exams in both theory and econometrics after their first year.
- Students must submit a second and third year research paper that is judged as “passing”. Students who do not submit passing papers have the opportunity to revise their papers in the summer. Revisions must be submitted by mid-July.
- Students must submit a progress report approved by their advisor in April of both the third and fourth years.
- The Doctoral Comprehensive Examination must be completed by December 1 of the fourth year.
- To receive funding in the fifth year, students must meet all the above criteria and must appear to be prepared to enter the job market during the fifth year and to defend their dissertation by the end of their fifth year.
- Students must maintain a grade point average of at least 3.0. If student falls below a 3.0, he/she will not be eligible for funding which includes University of Arizona (UA) tuition waivers, UA TA/RA salaried positions and fellowships/grants.

Graduate Registration/Tuition Scholarships

The university charges both non-resident tuition and registration (in-state tuition) fees. Arizona residents are not charged tuition but do pay registration (also known as ‘in-state’) fees. Graduate Assistants/Associates appointed to a .50FTE assistantship (full support) have both their registration and tuition waived as part of the assistantship. Graduate Assistants appointed to a .25FTE assistantship (half time) receive a full tuition waiver and a 50% registration waiver.

The department has a limited number of Registration/Tuition Scholarships (tuition waivers) available to students receiving a .25 FTE assistantship, or to students not receiving a graduate assistantship. These tuition waivers are primarily awarded to first year students at the time of admission.

Summer/Winter Session Teaching

Students who have passed the preliminary written examinations and a teaching audition may apply to teach a course during winter session (taught between the Fall and Spring semester), Pre-Session (taught in May, after the Spring semester), Summer I or Summer II. All students in the Ph.D. program are expected to teach two courses prior to completing the program.

Department Fellowships

A limited number of Department fellowships are available but are primarily awarded to first year students at the time of admission.

Travel Grants

The department awards \$300 travel grants to help students defray the cost of attending conferences. These grants are normally granted to students in their third year and beyond and are limited to one per year. To apply for the grant, students email the Director of Graduate Studies requesting the grant and stating the purpose of the grant. Students should specify if they are attending to present a paper. A Travel Authorization and an email from the Director of Graduate Studies must be completed and given to the Department Accountant **prior** to leaving on the trip. Upon return, receipts and a copy of the conference flyer must be turned in to the Department Accountant. In order to be reimbursed for meals, you should turn in all itemized meal receipts. If you do not have receipts you can be awarded no more than one-third the per diem rate.

The Graduate College, in conjunction with the UA's Graduate and Professional Student Council (GPSC), also awards travel grants for graduate and professional students who are attending or presenting research at academic or professional conferences. Visit the Graduate College webpage for further details:
(<http://www.gpsc.arizona.edu/sections/funding/fundingSubsection/travelGrants.php>)

Life in the Economics Department

Department Access

The Economics department is located on the fourth floor of McClelland Hall. In order to provide access to the department at times when the department is not open to the public, all Ph.D. students will receive keys to both the building and department for their use while in the program. Students will also be given a Room Privilege Card which identifies them as someone who has legitimate access to the building. It is important to keep this card with you at all times. Campus Police will confiscate your keys if you cannot produce this card. The card has a sticker indicating the academic year for which you have been granted access. Each year get a new sticker from the Department's Office Specialist.

Student Carrels

When possible, all students are assigned a study carrel for their use while in the program. This space consists of a desk chair and an overhead cabinet that locks for security. It is important to remember that this is a study area and it is important to show respect to fellow students by keeping the noise level low. **Teaching Assistants should never work with their students in the carrel area.**

There are Ethernet ports located throughout the carrel areas; however, not every carrel has a port. If needed, arrangements can be made to ensure access to a port. Wireless connectivity is also available throughout the building. Students who have laptops can access the internet through the wireless network. In order to access the wireless network you must first register your computer at https://netid.arizona.edu/wireless_reg.php.

Please remember that the department cannot guarantee the security of belongings left in the carrel area. It is best to secure valuables in the overhead portion of your carrel. Please keep your carrel area neat.

If there is not enough carrel space in the department, first-year students are sometimes asked to share carrel space; however, every effort is made to provide each student with a carrel. Fourth and Fifth year students may be asked to move to another building (Esquire) where the department has additional study space.

Graduate Lounge

The department maintains a lounge for use by the Economics doctoral students. The lounge contains four desktop computers, one laser printer, a small refrigerator and microwave, student mailboxes, and a telephone for student use. Upon arrival, students will receive an individual sign on and password in order to access the computer and the network printer. **Please remember to log off when you leave the computer!**

This area is used as a group study area and a place to relax and visit with fellow students. It is the students' responsibility to keep this area neat and orderly. Please make sure that food items are not left for long periods of time in the refrigerator. It is the student's responsibility to keep the appliances clean. There is another refrigerator in the supply room. This refrigerator is for staff and faculty use and IS NOT for graduate student use.

Office Hours Rooms

There are three small rooms located in the front office of the department that are set aside for teaching assistants to hold office hours and meet with students. At the beginning of each semester Teaching Assistants should see the Undergraduate Coordinator to schedule a time. Times and rooms will be assigned on a first come first served basis.

When not in use for office hours, the rooms can be used for group study by doctoral students. Please check the schedule before using the room and be sure to vacate the room for students who have it scheduled for office hours. Additionally, please be sure to vacate the room on time if another teaching assistant has the room scheduled immediately following your office hours.

Department Copiers

The department has two copy machines that are accessible by individual copy code. The main copier located in the mailroom is primarily used for copying related to teaching and department business. Teaching Assistants may use this machine to make copies for their supervising instructors by using the faculty member's copy code. Teaching Assistants serving as primary course instructors will be assigned a copy code for this machine in order to make copies for their class. This machine is normally available during office hours only and is not to be used for copies related to a student's own coursework.

There is a smaller copier located mid-department which is primarily for graduate students to use and is available at all times. Each student will be assigned a unique copy code. While we currently do not have a limit or charge students for use of this machine, usage is monitored and we ask that students limit use to coursework and research needs.

Fax Machine

The student copier also serves as the department fax machine. The machine requires a code for long distance calls. Please see the department staff for permission to use the machine for any long distance faxes. There is no charge for faxes related to educational and research needs.

Department Security

The doors to the department should remain closed at all times by order of the fire marshal. The front doors to the department remain unlocked from 8:00am to 5:00pm Monday through Friday. They should remain locked and closed at all other times. The back door to the department is shared with MIS and should be closed and locked at all times. **Please do not prop the doors open!**

The door between the front office and main department should be closed and locked during all non-business hours. Also, please do not leave unsecured personal items (i.e. laptop computers or wallets) at your carrel.

Please help us maintain department security by following these simple rules.

Appendix I - Official Requirements for a Master's Degree in Economics

The graduate program in the Department of Economics is designed for Ph.D. students only. However, an M.A. option is given to students who either leave the Ph.D. program or wish to obtain a master's while continuing the Ph.D. program.

Students interested in earning the M.A. in Economics must complete 24 hours of core courses plus 6 more hours of graduate courses subject to the Graduate Director's approval (consider using the 696 seminar courses); students must submit the *Master Plan of Study* listing all core coursework and two additional courses. Further, students must pass a written masters examination on the core material. This exam is typically the same as the Ph.D. preliminary examination. Students opting for the M.A. must also submit a *Master Committee form* listing Director of Graduate Studies as Advisor and two faculty from core coursework as committee members. After Committee form has been approved, Department Coordinator will submit the *Master Completion Report* via GradPath.

Core Courses:

Number	Title	Credit Hours
ECON 501a	Graduate Microeconomics I	3 Hours
ECON 501b	Graduate Microeconomics II	3 Hours
ECON 520	Statistics for Economists	3 Hours
ECON 501c	Graduate Microeconomics III	3 Hours
ECON 502	Dynamic Economic Analysis	3 Hours
ECON 522a	Graduate Econometrics I	3 Hours
ECON 508	Research Methods in Economics	3 Hours
ECON 522b	Graduate Econometrics II	3 Hours
Total		24 Hours

Two additional courses totaling 6 units **6 Hours**

Grand Total **30 Hours**

Appendix II–English Proficiency for International GTA’s

All graduate assistants engaged in direct student contact whose NATIVE language is NOT ENGLISH and who are NOT CITIZENS OR PERMANENT RESIDENTS OF THE U.S. must demonstrate proficiency with spoken English. Verification of a passing score on either the iBT (international TOEFL), TSE, SPEAK , Economics Department English Proficiency Exam or, T-BEST¹ exam is required **before** the student’s hiring paperwork will be processed. Minimum scores for these tests are shown in the chart below.

Test Type	Minimum Score	Duties
iBT (international TOEFL)	24 or higher in the speaking subtest	No teaching limitations. No need of further screening.
	< 24	Graduate Assistant must re-take iBT Toefl or take the Department of Economics English Proficiency Exam before being appointed as Graduate Teaching Assistant/Associate
TSE/SPEAK ²	50 or higher	No teaching limitations.
	45	Students must take GRAD 697D or CESL classes to teach in English. They are approved to teach their Native language, assist with lab set-up and grading, and hold office hours.
	< 45	Not eligible for TA position; must take CESL classes
T-BEST ¹	7	No teaching limitations.
	6	Students must take GRAD 697D or CESL classes to teach in English. They are approved to teach their Native Language, assist with lab set-up and grading, and hold office hours.
	5	Not eligible for TA position; must take CESL classes.
The UAZ Department of Economics English Proficiency Examination	PASS	<p>All Graduate students in UAZ Economics who score below the iBT TOEFL speak minimum (24) and who have not taken and passed either the IELTS, TSE/SPEAK or T-BEST exam are required to take the Department of Economics English proficiency examination. Our evaluation of English proficiency consists of three parts: 1.) Mini lecture. Student prepares one mini lecture on the topic of Dr. Drabicki’s choice. Topics may include “Price Controls” and/or “The Law of Demand.” There is no specific amount of information student needs to cover (mini lecture may end up only introducing the topic), and, 2.) Speaking & Conversation skills: After student’s lecture, Dr. Drabicki and Graduate Coordinator questions student and engages student in a conversation which further probes English language speaking and comprehension skills. This conversation measures pronunciation and verbal syntax construction. 3.) Drabicki & Coordinator then discuss student’s overall lecture with regard to speaking level, and grade accordingly:</p> <p>Scoring: Pass = instructionally ready, or Pass Conditional = limited or no instructional duty, such as grader, lab prep, web support. Fail = no T.A. ship</p>

¹The Task-Based English-Speaking Test (T-BEST) was an online test of English proficiency exam developed by the University of Arizona; however, it is no longer being used.

²The TSE and SPEAK tests are discontinued. International Graduate Assistants will no longer be able to take this exam at the University of Arizona.

Appendix III–Graduate Assistantships

Academic Eligibility

Graduate Assistants must be enrolled in a graduate degree program at the University of Arizona and be admitted with a GPA of 3.0 or higher if a new student or maintain a 3.0 minimum GPA for all University of Arizona graduate credit courses.

Employment Status and Limitation

Graduate Assistants are salaried employees. In the Department of Economics, they are appointed at either .25 FTE or .50 FTE. Depending on the appointment, they are required to work an average of 10 or 20 hours per week respectively.

Graduate Assistants are classified as student employees. As such they are:

- Limited to no more than 30 hours per week in total campus employment during periods of enrollment. Employment for International students on F-1 or J-1 visas must be limited to 20 hours per week while school is in session (Summer sessions are voluntary and are not limited). **This is a Federal regulation and there are no exceptions.**
- Exempt from deductions for Social Security taxes (FICA) during semesters or summer sessions when officially enrolled. Minimum enrollment for the exemption is six (6) units per semester for Fall/Spring or three (3) units for Summer session.
- Required to discuss with their supervisor any employment outside of the University of Arizona as this may interfere with their ability to carry out their duties effectively. (Employment outside the Department of Economics is strongly discouraged during the Fall/Spring semesters. Students should discuss any outside employment with the Director of Graduate Studies.)
- Not eligible for participation in The University of Arizona’s employee benefits program or the State of Arizona Retirement Program.
- Graduate Assistants hired on academic year contracts are NOT normally required to work before the start of classes, after finals, or during winter and spring break periods as part of their appointment, except for special circumstances which should be articulated in writing prior to hire. GA’s are hired for the ‘whole job’ and therefore required to perform work whenever it may be necessary. Often Graduate Assistants have preparation work to do before classes start. Work requirements must be articulated prior to hire as with any employee. Any hours worked about the norm must be paid via supplemental compensation.
- According to the Arizona Board of Regents policy, Graduate Assistants are not eligible for concurrent employment as staff or faculty. They may however, be eligible for additional compensation though Supplemental Compensation.

Enrollment Limitations

In the Fall and Spring semesters Graduate Assistants are required to enroll for and complete a minimum of six (6) units of graduate credit each semester. Graduate Assistants are not required to enroll during the summer session to maintain student employment.

Minimum Training Requirements

Graduate Assistants who will have direct instructional contact with students are required to FULLY participate in the Graduate Assistants/Associates Teaching Orientation (GATO), presented by The University Teaching Center and the Graduate College. GATO is a partial-day on-site presentation. International Graduate Assistants will also be required to attend the International GATO held on the same day. To register for GATO <http://grad.arizona.edu/ta/gato/registration>

Teaching Assistant Online Training is a collection of online modules about teaching and learning. Only the UA Policies module is required and students must achieve a minimum score of 95 to be considered passing. Students scoring less than 95 after their third attempt will require mandatory remediation with their department. To register for TATO go to <http://grad.arizona.edu/ta/tato/login>

In addition to these Graduate College requirements, the Department offers a teaching workshop (ECON 597C) which is mandatory for all first-year students in the doctoral program.

Additional Requirements

No commercial activity: The Graduate Council has ruled that Graduate Assistants not be allowed to engage in any commercial activity relative to the courses with which they are assisting at this university (e.g. selling course materials or conducting paid review sessions for courses in which they are directly involved as a TA.

Assignment to graduate level classes: Graduate Assistants may not be the instructor of record for classes giving graduate credit.

“RECORDING COURSEWORK FOR MA & PHD”

- *Master’s Plan of Study* – submit in May of first year (see page 7).
- *Master’s Completion of Degree** – Graduate Coordinator reports in August of second year (see page 7).
- *Doctoral Plan of Study* form – file in third year (see page 7).

“ORALS”

- *Doctoral Comprehensive Examination Committee Appointment (Orals)* form – submit at least 2 months before your Comp Oral Exam. (p.10)
- *Announcement of Doctoral Comprehensive Exam (Orals)* form - Submit in order to officially schedule your Comprehensive Exam (Orals). Approval of the *Announcement* will generate the Results of Comp Exam for your Committee Chair. (p.10)
- *Results of the Doctoral Comprehensive Examination (Orals)* form – Your Committee Chair will report results of your Orals (see page 11).

*Prospectus/Proposal Approved Confirmation*** - Graduate Coordinator reports to Grad College.

“FINAL DISSERTATION DEFENSE”

- *Doctoral Dissertation Committee Appointment* form – submit at least 6 months before Announcement of Final Oral Exam (see page 11-12).
- *Announcement of Final Oral Examination (Final Dissertation Defense)* form – file at least 7 working days before your Final Oral Exam defense date. (see page 12).
- *Results of Final Oral Defense* – Committee Chair or Graduate Coordinator will email the degree auditor to report final approval. (p.12)

HELPFUL LINK FOR ALL UA GRADUATE STUDENTS: Graduate College website—there is so much helpful information on this site including details for dissertation formatting and Degree Audit dates:

<http://grad.arizona.edu/>

* After student has satisfied all Departmental requirements, the ECON Department Graduate Coordinator will report each student’s M.A. in Economics degree received (via Master’s Completion Report) to the Graduate College via GradPath.

** The Graduate Coordinator will report when student has an approved proposal or prospectus for the dissertation or other culminating work.