

**The University of Georgia
ARTIFICIAL INTELLIGENCE
STUDENT HANDBOOK**

(Updated 7/2017)

Welcome to Georgia!

Welcome to the University of Georgia's interdisciplinary program in artificial intelligence. This handbook is designed to help you make the most of your stay here. You should also obtain and read the *Graduate School Bulletin*, which contains the official regulations governing graduate study.

The Institute for Artificial Intelligence

AI is not a department at Georgia; instead, it is an interdisciplinary institute (which is very similar to a department). The Institute for Artificial Intelligence grew out of the AI Programs established in 1987. The AI Programs became the Center for Artificial Intelligence in 1994, and is now an Institute designed to serve as headquarters for the graduate/undergraduate degree programs and for AI research. The Institute is housed within the Franklin College of Arts and Sciences, and reports to the Dean of the Franklin College.

The artificial intelligence curriculum

The University of Georgia AI curriculum is interdisciplinary. We see AI, not as a self-contained subject, but as a research area at the intersection of several existing fields, including cognitive science, computer science, philosophy, psychology, linguistics, and engineering.

The curriculum reflects this view. Not all of the courses are designed specifically for AI students. We think it is important that an AI student take a linguistics course designed for linguists, philosophy courses designed for philosophers, and so forth, in order to appreciate each of the fields in its own terms rather than developing the narrow (and mistaken) view that all these other sciences exist only to serve AI.

Details of the curriculum are contained in the *Policies* section later in this handbook.

The AI faculty

All of the following faculty members are eligible to serve on AI thesis committees. Many of them are willing to serve as major professors. We encourage you to work with any faculty member whose interests coincide with yours.

- Dr. Jason Anastasopoulos (Political Science, Public Administration and Policy)
- Dr. Janine Aronson (Management)
- Dr. Budak Arpinar (Computer Science)
- Dr. O. Bradley Bassler (Philosophy)
- Dr. Pete Bettinger (Forest Resources)
- Dr. Suchendra Bhandarkar (Computer Science)
- Dr. Chris Cieszewski (Forest Resources)
- Dr. Fredric Dolezal (English)
- Dr. Prashant Doshi (Computer Science)
- Dr. Mark Ebell (Epidemiology and Biostatistics)

- Dr. Adam Goodie (Psychology)
- Dr. Takoi Hamrita (Biological and Agricultural Engineering)
- Dr. Yi Hong (Computer Science)
- Dr. William Hollingsworth (Computer Science)
- Dr. Elena Karahanna (Management Information Systems)
- Dr. Bill Kretzschmar (English)
- Dr. Jaewoo Lee (Computer Science)
- Dr. Changying Li (Engineering)
- Dr. Tianming Liu (Engineering)
- Dr. Frederick Maier (Institute for Artificial Intelligence)
- Dr. Roberto Perdisci (Computer Science)
- Dr. Shannon Quinn (Computer Science)
- Dr. Khaled Rasheed (Computer Science)
- Dr. Margaret Renwick (Linguistics Program, Department of Romance Languages)
- Dr. Paula Schwanenflugel (Professional Studies)
- Dr. Sarah Wright (Philosophy)

Emeritus Faculty

- Dr. Robert Burton (Philosophy)
- Dr. Michael Covington (Institute for Artificial Intelligence)
- Dr. Don Potter (Computer Science)
- Dr. Ron McClendon (Biological and Agricultural Engineering)
- Dr. Donald Nute (Philosophy)
- Dr. Raymond Woller (Philosophy)

Access to offices and equipment

Fortunately, we are able to provide graduate students with some office space and access to computers. Due to the limited office space, you will have to share an office with a good many other students. Please bear in mind, however, that we do not provide any secretarial services to graduate students except in support of any work they do as employees of the University.

Students may receive mail at the IAI office, but delivery to one's home address (off campus) is usually faster. Incoming mail *must mention Institute for Artificial Intelligence* in the address, and *should give the full ZIP code, 30602-7415*; mail is sorted by department, not building or room number. Packages (UPS, Federal Express, etc.) use the building and room number as well as the street name "D. W. Brooks Drive" in the address.

Equipment in the AI offices and laboratory is to be used only by AI faculty members, AI employees, and AI students. Use by guests requires the permission of a faculty member.

After working hours and on weekends, the only people permitted in the offices and laboratory are those who have been granted access and their immediate families. In the interests of security, we do not admit guests after hours.

Front office laser printer and photocopier

The photocopier and other equipment in the front office are for official use only. Students are permitted to use them in carrying out their duties as an employee, or when directed to do so by an employee whom they are assisting.

Other printers are available in the AI office suite that may be used by students for purposes related to their studies or research. Permissible uses include homework, AI-related papers, any course work done by AI students, and AI-related job search.

Essential lab and computer policies

- (1) No food or drink in the common areas.
- (2) Clean up after yourself. Keep your office space clean and leave all common-use machines, printers, etc. ready for the next person to use.
- (3) Don't use the equipment in the front office.
- (4) Read all notices posted in the lab and follow the policies stated there.
- (5) Current software licenses allow our software to be used on our machines only. We will not provide software for home computers.
- (7) Never give passwords to other people; never use a password that is not your own.
- (8) Never engage in, or assist, or tolerate, any form of "cracking" of computer accounts or other unauthorized computer access. Using computers without permission is illegal.
- (9) Don't install software on Institute computers. If you need additional software installed, please contact the technical support staff.
- (10) Student Use of Institute for AI Equipment for Outside Projects:
With prior approval from the Director, students may use Institute equipment (this includes any network components and connections) for internships or other outside projects directly related to their educational programs provided such use
 - does not violate University policies,
 - will not impose additional maintenance requirements on Institute staff,
 - will not reduce the reliability of Institute systems,
 - will not compromise security for Institute staff, network, or equipment,
 - will not be used to provide services to an outside entity, and
 - will not be used for any commercial gain to the student or outside entity.

Before using Institute equipment for any outside project, students must provide a written request to the Director clearly stating which equipment will be used and how it will be used, as well as how this use is relevant to the student's academic program and who is sponsoring the project.

Students (and sponsors) must keep in mind that regular University guidelines apply when considering ownership, patent rights, or any other rights related to the project or its outcome. In addition, equipment may be taken out of service or its usage function changed at any time without prior notice to the student or sponsor. It will be the student's responsibility to be prepared for any unforeseen disruption of the project due to equipment reassignment.

Computers on campus

The campus-wide network connects virtually all the multi-user computers on campus, as well as many PCs and Macintoshes. The network forms part of the Internet.

EITS labs, in the Main Library, and elsewhere on campus provide PCs or Macintoshes primarily for student word processing, laser printing, and logging into other systems on the network. They are open to all University students.

The AI Institute, in conjunction with Franklin OIT, manages a set of PCs and servers for research and internal use. In most cases, AI students use their UGA MyID and password to log into them. However, for some machines, separate accounts must be created. AI students requiring access should request an account from the network administrator.

The Computer Science Department also maintains its own computers for internal use and instruction. AI students usually do not use them unless required to when taking a Computer Science class. The Computer Science Department will provide proper accounts for their machines.

Required Student E-mail Address Policy

The University requires you to have an e-mail address and to keep it on file with the Registrar. In addition, if you are an AI student, you must keep your current e-mail address on file with the Institute for Artificial Intelligence so that you can be contacted. The University will issue you an e-mail account on UGAMail free of charge and strongly prefers that you use it. You can arrange for your e-mail to be forwarded elsewhere, but remember that *important messages will be sent to you and you are responsible for receiving them.*

Thesis planning

The thesis is an essential part of your degree program. Start looking for a thesis topic as soon as you arrive. If possible, write a term paper on a related subject early in your coursework. *If you do not have a definite thesis topic by the beginning of your second year, it will be very difficult to finish the MS degree on time.*

Plan your thesis and defense well in advance. Familiarize yourself with all Graduate School and AI Institute policies regarding committee membership, thesis formatting, and deadlines. Communicate frequently with your advisor and committee to ensure that you are making adequate progress. Once you and your advisor are confident that you are ready to defend, schedule a date with the other committee members, and distribute copies of the thesis to them. Understand that faculty members have many obligations and are often not available between semesters. Because of this, do not wait until the last minute to schedule your defense or distribute your thesis.

Remember that it is you (not your advisor or committee) who is earning the degree. Do not ask people to alter deadlines, lower their standards, or do extra work for you just because time is short. Do not ask the University to accept a thesis that contains technical errors or errors of grammar or spelling.

Job hunting

Your search for employment should start six months to a year before you graduate. Important steps are the following:

- Contact the University placement office (in Clark Howell Hall). They can help you look for a job and can put you in contact with employers who visit the campus.
- Prepare an up-to-date résumé. Don't use Institute for AI stationery (job applications come from you as an individual, not from your department).
- Study the ads in professional publications. Send a copy of your résumé, with a letter of inquiry, to any company that appears to be doing work you are interested in, whether or not they advertise positions available.
- If at all possible, attend AAI and other professional conferences.
- We recommend that you *do not leave before you've finished your degree*. If you do, it is very unlikely that you will ever finish. The absence of an advanced degree might lower your ability to obtain a high salary or advance in your career.
- If you do plan to leave the University and finish your thesis elsewhere, you should *take the final oral examination on your course work before departing*, even though your thesis is not finished.

The University of Georgia
Master of Science Degree in Artificial Intelligence

Policies

Important note

This document is *not a substitute* for the *Graduate School Bulletin*. It is *absolutely essential* that students familiarize themselves with the policies contained in the *Bulletin*.

Entrance requirements

To enter the program, a student must have earned a bachelor's degree at an accredited college or university, must have at least an undergraduate GPA equivalent to 3.0 on a 4.0 scale, and must score in the 75th percentile or above on each of the verbal and the quantitative sections of the GRE. The admissions committee can make exceptions to these requirements in unusual cases.¹

Because of the interdisciplinary nature of artificial intelligence, a bachelor's degree in a specific major is not required. However, undergraduate credits in computer science, philosophy, linguistics, mathematics, psychology, cognitive science, and/or relevant areas of engineering will improve a student's chances of acceptance.

Advisement and program of study

Each student admitted to the program is advised by the Graduate Coordinator until a major professor is chosen. In addition, the Graduate Coordinator must approve all programs of study.

In the first or second semester of residence, an advisory committee should be selected by each student. This consists of a major professor and two other faculty members, as follows:

- The major professor and at least one other member must be full members of the Graduate Faculty.
- The major professor and at least one other member must be members of the Institute for Artificial Intelligence Faculty.

No later than the third semester of residence, each student must submit to the Graduate School, through the Graduate Coordinator, a "Program of Study" form indicating how and when degree requirements will be met.

¹Because of competition for a limited number of places in the program, the actual admission requirements can be higher than this minimum standard.

Curriculum

The Program of Study must include a minimum of 30 hours of graduate course work and 3 hours of thesis credit (ARTI 7300). Of the 30 hours of course work, at least 12 must consist of courses open only to graduate students.

The following courses shall be included on the Program of Study unless specifically waived for a particular student by that student's Advisory Committee and by the Graduate Coordinator:

PHIL/LING	6510	Deductive Systems (3 hours)
CSCI	6380	Data Mining (4 hours)
CSCI/PHIL	6550	Introduction to Artificial Intelligence (3 hours)
ARTI	8800	Research Seminar (1 hour)

Select

At least 19 hours must be taken from the following list. Of the 19 hours, 12 hours must come from Group A and 6 hours must come from Group B. See below:

GROUP A:

CSCI	6330	AI and the Web (4 hours)
CSCI	6360	Data Science II (4 hours)
CSCI/ARTI	6530	Introduction to Robotics (4 hours)
CSCI/ARTI	6540	Symbolic Programming (3 hours)
CSCI	6560	Evolutionary Computing (4 hours)
CSCI	6800	Human Computer Interaction (4 hours)
CSCI	8050	Knowledge Based Systems (4 hours)
CSCI	8380	Advanced Topics in Information Systems (4 hours)
CSCI/LING	8570	Natural Language Processing (4 hours)
CSCI/PHIL	8650	Logic and Logic Programming (4 hours)
CSCI	8820	Computer Vision and Pattern Recognition (4 hours)
CSCI	8860	Biomedical Informatics (4 hours)
CSCI	8920	Decision Making Under Uncertainty (4 hours)
CSCI/ENGR	8940	Computational Intelligence (4 hours)
CSCI/ARTI	8950	Machine Learning (4 hours)
CSCI	8955	Advanced Data Analytics (4 hours)
CSCI	8960	Privacy-Preserving Data Analysis (4 hours)
ENGL	6885	Introduction to Humanities Computing (3 hours)
FORS	8450	Advanced Forest Planning and Harvest Scheduling (3 hours)
MIST	7730	Business Intelligence Systems (3 hours)
MIST	7770	Data Warehouses and Mining (1.5 hours)

GROUP B:

EPSY/LING	8130	Psycholinguistics (3 hours)
LING	6021	Phonetics and Phonology (3 hours)
LING	8150	Generative Syntax (3 hours)
PHIL/LING	6300	Philosophy of Language (3 hours)
PHIL	6310	Philosophy of Mind (3 hours)
PHIL/LING	6520	Model Theory (3 hours)
PHIL	6530	Philosophy of Math (3 hours)
PHIL/LING	8300	Seminar in Philosophy of Language (max of 3 hours)
PHIL	8310	Seminar in Philosophy of Mind (max of 3 hours)
PHIL	8500	Seminar in Problems of Logic (max of 3 hours)
PHIL	8610	Epistemology (max of 3 hours)
PSYC	6100	Cognitive Psychology (3 hours)
PSYC	8240	Judgment and Decision Making

Note: Since not all courses have the same number of credit hours, MSAI students routinely have more than 30 hours of regular coursework. For example, 3 four hour courses + 2 three hour courses + a 3 or 4 hour course for a total of 21 or 22 minimum, plus the 10 required hours above. Other courses may be substituted for those on the SELECT list, provided the subject matter of the course is sufficiently related to artificial intelligence and consistent with the educational objectives of the MS degree program. Substitutions can be made only with the permission of the student's Advisory Committee and the Graduate Coordinator.

Alternates

Students may (in certain special circumstances) use up to 6 hours from the following list to apply towards the SELECT group requirement. Permission of the Advisory Committee, Graduate Coordinator, and Course Instructor is required.

ARTI 8800	Directed Readings in Artificial Intelligence
ARTI 8000	Topics in Artificial Intelligence

****NOTE:** It is very rare that a student is able to use the 8800 or 8000 hours to replace SELECT list course hours. Students attempting to use an alternate without prior permission from their advisory committee, the course instructor, and the graduate coordinator run the risk of having to fulfill the non-alternate requirements regardless of their graduation, employment, or other degree program status. The alternate hours are not for extra thesis work hours. They are for special situation independent study with a faculty member on a special AI related topic. The reason an alternate is rare is due to the fact that there are regular courses that can/should be used. Alternates are reserved for only the rarest or most special of cases.

Thesis Credit

In addition to the 30 hours of graduate course work, students must take at least 3 hours of thesis credit.

Notes

Graduate School requirements apply in addition to the above. Exceptions to these requirements may be allowed under certain special circumstances and with appropriate approval of the student's Advisory Committee and Graduate Coordinator. This is exceedingly rare, however.

Prerequisites

As far as possible, necessary undergraduate courses are to be taken at the beginning of the student's graduate course work.

Attendance requirements

Classes are scheduled for full-time students. There are no special provisions for part-time or off-campus students. Students are required to attend all meetings of classes for which they are registered. Absence is permitted only in cases of illness or other unforeseen emergency. Students are advised not to take personal vacations while classes are in session. This includes students who are working independently.

Incompletes

A grade of 'incomplete' is given to students who are unable to complete a course on time because of illness or other unforeseen emergency. Incompletes are *not* given to students who find the work more difficult than expected or who simply want more time. This is a University policy.

A student should not register for a course if he or she does not expect to be able to meet its requirements for any reason, including travel or employment obligations.

Graduate assistantships

The following policies shall apply to graduate assistantships unless pre-empted by other policies imposed by the source of funding:

1. Graduate research assistants are chosen by a committee designated by the AI Faculty. In the case of externally funded assistantships, the assistants are chosen by the faculty members responsible for the grant funds.
2. Every assistant is assigned one or more supervisors and a specific number of hours of work per week (normally 15).
3. It is up to the supervisor whether a graduate assistant is required to work when classes are not in session. The University has the right to require assistants to work throughout the periods for which they are paid.

4. An assistantship can be revoked at any time because of unsatisfactory performance of assigned work or failure to make satisfactory progress towards the degree.
5. Any graduate assistant whose personal or academic situation precludes doing the assigned work satisfactorily should resign the assistantship.

Progress Review

Each semester the Graduate Coordinator reviews the academic progress of students in the Artificial Intelligence degree program. This review includes coursework (for AI degree related courses only), Program of Study and thesis/dissertation exams, thesis/dissertation progress, Graduate School paperwork preparation, and professional accomplishments beyond course and program requirements. Situations of unsatisfactory progress identified by the Graduate Coordinator will be forwarded to the Admissions Committee and the student's advisor (or major professor) for action. Committee recommendations may include dismissal from the degree program, or non-renewal of assistantships.

Satisfactory progress means successful completion of course work towards the Program of Study; resolution of incomplete grades; planning and execution of the Program of Study, examinations, and thesis/dissertation preparation; or significant research towards the thesis/dissertation (as exhibited by conference/journal publications).

Students enrolled in an AI degree program are advised to maintain at least a 3.5 grade point average on AI related coursework.

Grievance procedures

Students have the right to appeal decisions affecting them. The following grievance procedures shall apply to the conduct of the programs, assistantships, and courses with the AI prefix. Disputes regarding courses with other prefixes are to be resolved with the appropriate department. Students are reminded that the Institute for AI does not necessarily have control over externally funded assistantships.

Before filing a formal appeal, the student shall attempt to resolve the dispute by discussing the decision with the faculty member or members responsible for it.

Policy on Grade Appeals

1. The following policy applies to students registered in courses under the ARTI prefix. Grades in courses with other prefixes can be appealed in the appropriate department.
2. The University requires that grades be assigned equitably but does not specify a specific numerical procedure for computing them. The University's grading system is described more fully in the Undergraduate and Graduate Bulletins.
3. The purpose of a grade appeal is to correct errors or inequities in grading. Every appeal must therefore point out a specific error or inequity that appears to have occurred. A grade appeal

cannot be based on a mere wish or feeling that a grade ought to be higher. Grades shall be changed only to correct definite errors, not to negotiate a compromise between differing opinions.

4. All errors or inequities discovered during a grade appeal shall be corrected; the student's grade may end up higher, lower, or unchanged.
5. Before appealing a disputed grade, the student should always discuss it with the instructor. If the student and instructor are unable to resolve their disagreement, the next step is for the student to appeal the grade, in writing, to the Director (or, if the Director is the instructor, then to the Graduate Coordinator), pointing out specific evidence of an error or inequity.
6. The Director (or, where applicable, the Graduate Coordinator) will then consult the instructor and determine whether correcting the alleged error would actually change the grade on the student's transcript. If not, the grade appeal is moot and no further action is necessary.
7. Optionally, at this stage the Director or Graduate Coordinator can meet with the student and the instructor and attempt to settle the dispute by mutual agreement.
8. The next step is to convene a grade appeals committee consisting of the Director or Graduate Coordinator and two members of the AI Faculty. At least one of these two committee members must be nominated or approved by the student and at least one must be nominated or approved by the instructor.
9. Final action in a grade appeal is to be determined by the appeals committee after hearing the student's appeal and the instructor's response to it. If the student disputes the result, graduate students can appeal to the Graduate School, and undergraduates can appeal to the College of Arts and Sciences.
10. Additional details about grade appeals can be found at the College of Arts and Sciences web site: <http://www.franklin.uga.edu/oa/guidelines-student-appeals>

OVPI Policies

Additional information regarding academic honesty may be found at:
<http://ovpi.uga.edu/academic-honesty/academic-honesty-policy>

Graduate School Policies

Students should refer to the *Graduate School Bulletin* for University policies relating to minimum enrollment, programs of study, application for graduation, and the like.

Please note the following:

- In order to maintain continuous enrollment until they graduate, UGA graduate students must register for at least 3 credit hours in at least two of the fall, spring, and summer semesters of each year. Students on assistantship must register for at least 12 graduate credit hours in the fall and spring semesters and 9 hours in the summer.

- Graduate students must register for at least 3 graduate credit hours during the semester in which degree requirements are met.
- In order to graduate, students must first submit to the Graduate School both a completed Program of Study form and an Application for Graduation form. The deadlines for both of these are posted by the Graduate school each year. Also, an approved Advisory Committee form must be on file with the Graduate School by the time they submit the Program of Study.
- Apply for graduation no later than the Friday of the second full week (the first full week for summer) of classes in the semester of the anticipated graduation date.

It is the responsibility of the student to meet deadlines and ensure that proper paperwork is submitted.

Comprehensive Oral Examination

Master's students nearing the end of their coursework are advised to schedule the comprehensive oral examination on their Program of Study soon after completing all necessary coursework. A student must pass the comprehensive oral examination on the Program of Study before defending the thesis. It is **strongly encouraged** that the comprehensive exam take place on a separate day than the thesis defense.

The comprehensive examination is open to the University community. Students will answer questions from both their advisory committee and the audience. Each committee member votes to pass or fail the student, and at least two passing votes are required for final approval.

If the comprehensive examination is failed, at least four weeks must elapse before a re-examination is given.

Thesis & Thesis Defense

In addition to the course work and comprehensive examination, every student will conduct research in artificial intelligence under the direction of a faculty advisor and advisory committee and report the results of his or her research in a thesis acceptable to the Graduate School.

The Institute for AI accepts either the manuscript style thesis or the regular research style thesis. With the manuscript style thesis there is a requirement of (at least) two publications in a national level conference or journal. IC-AI, FLAIRS, and IEA-AIE are national level conferences, SE-ACM or IEEE Southeast are not.

When the thesis is finished and has the major professor's approval, copies of it are distributed to the student's advisory committee and a final examination is scheduled.

Scheduling of the final examination is subject to the following constraints:

- The thesis must be submitted to the advisory committee and the Graduate Coordinator with sufficient time for them to review it. Typically, this is at least two weeks before the examination.
- The Graduate Coordinator must be notified in a timely manner of the place and time of the examination.
- The examination shall not be held on a weekend or state holiday.
- The candidate must be enrolled during the semester in which the examination is held. The candidate must satisfy *all* Graduate School requirements before Phase II registration of the following semester, or register for another semester.

It is the responsibility of the student to determine when the advisory committee will be available and will have time to examine the thesis. When a member of the committee is unavailable, the

Graduate Coordinator may appoint a replacement. It is not appropriate to change major professors when the thesis is finished or well under way.

The thesis defense is open to the University community. During it, the student will first give a brief summary of the thesis and then face questions from the advisory committee and audience.

Each committee member votes to pass or fail the student's defense. Separately, each committee member may approve the thesis, approve it with suggested changes, or else disapprove it. At least two of the three committee members must approve the thesis, and at least two passing votes are required for final approval of the thesis defense.

Failed thesis examinations

If the thesis is disapproved by the advisory committee, at least four weeks must elapse before it is submitted to the advisory committee again.

If the oral examination is failed, at least four weeks must elapse before a re-examination is given.

Departing Students

Departing students must be prompt in clearing out their offices, turning in their keys, and ceasing to use their AI Lab computer accounts.

The deadline for doing these things is:

- One week after the end of exams in the last semester if the student is graduating;
- Immediately upon ceasing to be actively registered in the M.S. program if the student leaves in some other way (by transferring to another program, dismissal, or simply dropping out).

As soon as the deadline has passed, the Institute for Artificial Intelligence will deactivate computer accounts and delete files.

Over the summer, students who are returning in the fall can keep their offices and computer privileges, but they must be ready to assist with moving, since offices are usually reassigned.

Graduates who want a continuing relationship with the Institute for AI can apply to be AI Fellows if they are doing AI research under the sponsorship of a Faculty Fellow.