The University of Georgia
ARTIFICIAL INTELLIGENCE
STUDENT HANDBOOK
2013 - 2014

(updated 1/2014)
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 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. Janine Aronson (Management)
- Dr. Budak Arpinar (Computer Science)
- Dr. Pete Bettinger (Forest Resources)
- Dr. O. Bradley Bassler (Philosophy)
- Dr. Suchendra Bhandarkar (Computer Science)
- Dr. Charles Cross (Philosophy)
- 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. Gerrit Hoogenboom (Biological and Agricultural Engineering)
- Dr. Elena Karahanna (Management Information Systems)
- Dr. Eileen Kraemer (Computer Science)
- Dr. Bill Kretzschmar (English)
- Dr. Changying Li (Engineering)
- Dr. Robert Mahan (Psychology)
- Dr. Frederick Maier (Institute for Artificial Intelligence)
- Dr. Roberto Perdisci (Computer Science)
- Dr. Don Potter (Computer Science)
Dr. Khaled Rasheed (Computer Science)
Dr. Paula Schwanenflugel (Professional Studies)
Dr. Sarah Wright (Philosophy)

Emeritus Faculty
Dr. Robert Burton (Philosophy)
Dr. Michael Covington (Institute for Artificial Intelligence)
Dr. Ron McClendon (Biological and Agricultural Engineering)
Dr. Donald Nute (Philosophy)
Dr. Raymond Woller (Philosophy)

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.

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.

Do not give the IAI's telephone number to prospective employers as a place where you can be contacted. Instead, give your home telephone number or your personal cell phone number.

Access to offices and equipment

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 issued keys 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. Personal use costs 5 cents per sheet. Any personal use not recorded with the secretary will be considered theft.

Essential lab and computer policies

1. No food or drink in the labs.
2. Clean up after yourself. Leave all 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. On the PCs in graduate student offices, you may install your own software on the hard disk if you have the proper account, but make your own backups of important data.
6. 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 your own software on the lab PCs.
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
    • 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.

AI students normally use the Institute for AI’s Windows network with roaming user profiles. That is, you can sit down at any of our PCs (though not those elsewhere on campus) and get to your own files and desktop. Roaming user profile accounts are issued to students upon their arrival. Each account includes web space but not e-mail service.

The Computer Science Department 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 of Georgia
Amended March 2002

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. Your account on the Institute for AI Windows network does not provide e-mail service.
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, do a term paper on a related subject as early as possible. *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.*

Your thesis defense *cannot be scheduled* until your thesis is *finished*. Your first draft must be complete several weeks before scheduling your defense, because your advisor will not be able to give you any feedback on your work until you have written it up and turned in a draft. Once you and your advisor settle on a final version, then schedule the defense and distribute thesis copies to your other committee members. Note that faculty members are generally not available to hold thesis defenses during University vacations (between semesters).

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).
- **Make sure your résumé is on file with big Prolog vendors who can refer you to their clients.**
- **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 AAAI 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

Adopted by the
Institute for Artificial Intelligence Faculty,
June 1, 1989

As amended through July 2004

Important note
This document is not a substitute for the Graduate School Bulletin, to which students and faculty are referred for further information.

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, epistemology, linguistics, logic, mathematics, psychology, 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.

1Because of competition for a limited number of places in the program, the actual admission requirements are frequently higher than this minimum standard.
All committee members must hold the rank of Assistant Professor (or Adjunct Assistant Professor) or higher.

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.

**Curriculum**

The Program of Study shall 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 half shall 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/ARTI 6540 Symbolic Programming (3 hours)
- CSCI/ARTI 6550 Introduction to Artificial Intelligence (3 hours)
- ARTI 8800 Research Seminar (1 hour)

**Select**

At least 20 hours must be taken from the following list. Of the 20 hours, 14 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/ARTI 6530 Introduction to Robotics (4 hours)
- CSCI 6560 Evolutionary Computing (4 hours)
- CSCI 6800 Human Computer Interaction (4 hours)
- CSCI 6900 Data Mining (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/PHEL 8650 Logic and Logic Programming (4 hours)
- CSCI 8820 Computer Vision and Pattern Recognition (4 hours)
- CSCI 8920 Decision Making Under Uncertainty (4 hours)
- CSCI/ENGR 8940 Computational Intelligence (4 hours)
- CSCI/ARTI 8950 Machine Learning (4 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 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 are 4 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

Students must take at least 3 hours of thesis credit.

ARTI 7300 Master's Thesis

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.

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. Exceptions are exactly that… exceptions. They are not granted just because someone has a job, or has a lease that is up. We do not cater to the “It’s better to ask forgiveness rather than seek permission” tactic. In fact, it will not be tolerated.

Prerequisites

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

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.

The AI colloquium series is arranged for the benefit of AI students and regular attendance is expected.

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.

**Exam Scheduling**

Master’s students nearing the end of their coursework are advised to schedule the comprehensive oral examination on their Program of Study immediately after completing all necessary coursework yet before any significant effort is invested in the preparation of the thesis.

In any case, a student must pass the comprehensive oral examination on the Program of Study before submitting the thesis to his/her committee for review.

The final examination on the thesis (i.e., the thesis defense) cannot be scheduled sooner than four weeks after the student has passed the comprehensive oral exam.
It is the student’s responsibility to ensure a timely and successful completion of the degree requirements.

**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 website: http://www.franklin.uga.edu/senate/bylaws2.htm

OVPI Policies

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

Candidacy and other procedures

Students are referred to the Graduate School Bulletin for University policies relating to programs of study, application for candidacy, application for graduation, and the like.

☐ Apply for candidacy no later than the first week of the semester in which the courses on the Program of Study are completed.

☐ Apply for graduation no later than the first week of the semester two semesters before the anticipated graduation date. For example, apply for June graduation by early January.

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

Thesis

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

Thesis proposal

In the semester preceding the student's first semester of thesis work (ARTI 7300), each student shall submit, to his or her advisory committee and to the Graduate Coordinator, a thesis proposal not more than 1,000 words in length not counting bibliography and appendices, identifying the exact topic of the thesis, the plan of work to be followed, and the background information that has been obtained from the literature. The committee shall approve this proposal before thesis work begins.

Reading of finished thesis

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. At least two of the three must approve the thesis before the examination can be held.

Scheduling of the final examination is subject to the following constraints:
The thesis must be submitted to the advisory committee and to the Graduate Coordinator at least two weeks before the examination.

The Graduate Coordinator must be notified of the time and place of the examination at least two weeks before it takes place.

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.

**Comprehensive examination and thesis defense**

Each student will take an oral comprehensive examination, open to the University community, on his or her course work. This may form the first part of a session that also includes the thesis examination described below. However, students are permitted to take the two examinations separately, and are strongly encouraged to do so.

Each student will defend his or her thesis in an oral examination open to the University community. The student will first face questions on his or her course work (unless this examination has been completed separately), then give a brief summary of the thesis, and then face questions on the thesis.

The student should give a 1-hour seminar about the thesis project, open to the public, several days before the examination. The student is encouraged to do this and it is good practice for the defense.

After the examination, and before the thesis is bound, the student shall present it to the Graduate School for final checking of style and format.

In addition to the copies required by the Graduate School, the student shall provide one bound copy of the thesis to the Institute for AI library and one to the major professor. If a student uses the electronic submission process, they must provide the Graduate Coordinator with an electronic version (pdf format) also.

**Failed 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.

Because the Institute for Artificial Intelligence no longer runs an e-mail service, previous policies about e-mail access for alumni no longer apply. 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.