Hours

COMPUTER SCIENCE, MS

The University of Alabama's Computer Science Department offers interdisciplinary graduate programs leading to master's and doctoral degrees.

Students in the master's degree program may pursue either a thesis or non-thesis option.

Research activity in the department includes active investigations in software engineering, cyber security, big data analytics, distributed autonomy and human-computer interaction, autonomous vehicles, networking and its applications, and computer science education.

Admissions

In addition to meeting the admission requirements established by the Graduate School, students applying for graduate study in the department must also meet the following general requirements:

- · Demonstrated competence in programming.
- Completion of the equivalent of the department's undergraduate core computer science curriculum.
- Grades earned in all prior computer science courses must be above the grade of C+.
- It is strongly recommended that students who wish to be considered for funding opportunities submit a score from the GRE general exam.

See the Admission Criteria section of this catalog for more information.

Curricular Requirements

Master of Science

Departmental degree requirements for the MS degree, which are in addition to those established by the College and by the Graduate School, are as follows for Plan I and Plan II students:

- Each Plan I candidate must earn a minimum of 24 semester hours of credit for coursework, plus a six-hour thesis under the direction of a faculty member.
- Each Plan II candidate must earn a minimum of 30 semester hours of credit for coursework, which may include a three-hour non-thesis project under the direction of a faculty member.
- Unlike the general College of Engineering requirements, graduate credit may not be obtained for courses at the 400-level.

Master of Science - Thesis Option (Plan I)

Hours

Code and Title

Core Course Requirements					
Select One Co	ourse from each of the Three Areas				
Software Cou	rses:	3			
CS 503	Programming Languages				
CS 507	Software Interface Design				
CS 516	Testing and Quality Assurance				
CS 520	Software Evolution				
CS 544	Software Security				
CS 545	Software Reverse Engineering				
CS 630	Empirical Software Engineering				
Systems Cour	rses:	3			
CS 538	Computer Comm & Networks				

Master of Science - Non-Thesis Option				
Т	otal Hours		30	
	Courses ta student's a	ken outside of CS are subject to the approval of the dvisor and the Graduate Program Director		
	CS 692	Independent Study		
	CS 691	Special Topics		
	CS 592	Independent Study		
	CS 591	Special Topics In CS		
С	ome from:			
Any graduate-level CS course. No more than 12 hours total can				
Flective Courses				
	CS 599	Thesis Research		
TI	hesis Course	e Requirements	6	
	CS 575	Formal Languages & Machines		
	CS 570	Computer Algorithms		
T	heory Course		3	
	CS 618	Wireless Mhile Netrwick Protocl		
	CS 613	Adv Computer Comm & Networks		
	CS 606	Analys Operating Systems		
	CS 501	High Performance Computing		
	00 567	Computer Systems Architecture		
	CS 549	Notwork Socurity		

Master of Science - Non-Thesis Option (Plan II)

Coue and Thie		nouis
Core Course R	equirements	
Select One Co	urse from each of the Three Areas	
Software Courses:		
CS 503	Programming Languages	
CS 507	Software Interface Design	
CS 516	Testing and Quality Assurance	
CS 520	Software Evolution	
CS 544	Software Security	
CS 545	Software Reverse Engineering	
CS 630	Empirical Software Engineering	
Systems Courses:		
CS 538	Computer Comm & Networks	
CS 548	Network Security	
CS 567	Computer Systems Architecture	
CS 581	High Performance Computing	
CS 606	Analys Operating Systems	
CS 613	Adv Computer Comm & Networks	
CS 618	Wireless Mbile Netrwrk Protocl	
Theory Courses:		3
CS 570	Computer Algorithms	
CS 575	Formal Languages & Machines	
Elective Courses		
Any graduate- come from:	level CS course. No more than 12 hours total can	
CS 591	Special Topics In CS	

٢c	otal Hours		30
	student's a	dvisor and the Graduate Program Director	
Courses taken outside of CS are subject to the approval of the			
	CS 692	Independent Study	
	CS 691	Special Topics	
	CS 592	Independent Study	

Transfer Credit

Information on transfer credit can be found here.

Accelerated Master's Program

Computer Science and Cyber Security students can learn more at the Graduate School AMP Program page which can be accessed here.

Comprehensive Exam

The student will complete a comprehensive exam. This exam is scheduled with the Graduate Program Director in the semester in which the student intends to graduate.

Plan I - Thesis Process Requirements

- The student must select a thesis advisor and a thesis committee. The committee must contain at least four members, including the thesis advisor. At least two members are faculty of the Computer Science department, and at least one member must be from outside the Department of Computer Science.
- The student must develop a written research proposal that contains an introduction to the research area, a review of relevant literature in the area, a description of problems to be investigated, an identification of basic goals and objectives of the research, a methodology and timetable for approaching the research, and an extensive bibliography.
- The student must deliver an oral presentation of the research proposal, which is followed by a question-and-answer session that is open to all faculty members and which covers topics related directly or indirectly to the research area. The student's committee will determine whether the proposal is acceptable based upon both the written and oral presentations.
- The student must develop a written thesis that demonstrates that the student has performed original research that makes a definite contribution to current knowledge. Its format and content must be acceptable to both the student's committee and the Graduate School.
- The student must defend the written thesis. The defense includes an oral presentation of the thesis research, followed by a question-and-answer session. The student's committee will determine whether the defense is acceptable.

Plan II - Non-Thesis Process Requirements

- The student may elect to replace 3 hours of course work with 3 hours of CS 598 Non-Thesis Research.
- The non-thesis research should be proposed in writing in advance, approved by the instructor, and a copy placed in the student's file.
- The non-thesis proposal should specify both the course content and the specific deliverables that will be evaluated to determine the course grade.

Time Limits for Degree Completion Requirements

Information on time limits for degree completion can be found here.

Student Progress Requirement

Student progress requirements are located here.

Academic Misconduct Information

Academic Misconduct information can be found here.

Withdrawals and Leave of Absence Information

Information regarding withdrawals and leave of absences is located here.

Academic Grievances Information

Scholastic Grievances information is located here.

Grades and Academic Standing

Scholastic Requirements information is located here.

Graduate School Deadlines Information

Graduate School deadlines can be found on the Graduate School website.

Application for Graduation Information

Master's degree application information can be found here.