Learn Computer Science and Software Engineering Graduate Programs at Auburn

Xiao Qin
Director of Graduate Programs
Department of Computer Science and Software Engineering
Auburn University
Learn Computer Science and Software Engineering Graduate Programs at Auburn - 2

Rankings

1. Largest Computer Science Department in Alabama
2. Top 50 Public University in the U.S
3. Top 100 CS Department in the U.S.
Auburn ranked No. 1 nationally in the “happiest students” category in Princeton Review
#18 BEST ONLINE ENGINEERING PROGRAM

#21 BEST ONLINE IT PROGRAM

2021 U.S. News & World Report Best Online Programs
CSSE at Auburn University

- 25 Tenured/Tenure-Track Faculty Members
- 7 Teaching Faculty Members
- 5 Graduate Degrees and Certificates
- 120 PhD Students
- 70 Master's Students
- 100 Assistantship Awards
Application Procedure

1. Complete the online application at ApplyYourself (AY)

   Online System

2. Unofficial Ones Mail Official Ones

   Transcripts

3. $60 Domestic $70 Int’l Students

   Application Fee

4. Order GRE Scores School Code: 1005

   GRE (Waived for Fall’21)

5. Invite references to submit letters of recommendations

   Recommendations

6. Upload Resume Statement of Purpose

   Documents in AY
Master's Degrees

CSSE, Thesis
30 hrs
9 hrs Core
7300 Adv. CA
7500 Adv. OS
15 hrs Electives
6 hrs Thesis

CSSE, Non-Thesis
33 hrs
9 hrs Core
7300 Adv. CA
7500 Adv. OS
21 hrs Electives
3 hrs Cap. Project (optional)

Cybersecurity
33 hrs
9 hrs Core
7300 Adv. CA
7500 Adv. OS
9 hrs CYBE
6350 D Forensics
6370 CN Sec
7370 Adv. Sec
9 hrs CYBE Elec.
3 hrs Electives
3 hrs Cap. Project

Data Sci. & Eng.
30 hrs
9 hrs COMP
6120 Databases
6130 D. Mining
6630 M Learning
9 hrs STAT
6000 I. Stat DS
6600 Pro Sta DS
6650 StaLearning
9 hrs Elec.
3 hrs Cap. Project
Ph.D. in Computer Sci. and Software Eng.

66 hrs
9 hrs Core
7300 Adv. CA
7500 Adv. OS
39 hrs Electives
18 hrs Thesis
Notes: Transfer up to 30hrs

Qualifying exams within one year and a half
Proposal defense (General Oral Exam)
Dissertation defense (Final Exam)

Hours
Exam
Graduate-Level Courses

- 41 Regular Courses
- 4 Research Courses

- 17: New Courses
- 41% Courses are New

- 6 Courses
- 10 Courses
- 5 Courses

- AI and Machine Learning
- Cybersecurity
- Software Engineering

Course Lineup
Courses Development
Data Science and Big Data
New Courses: Data Science and Big Data

- **6130** Data Mining
- **6970** Information Retrieval
- **6650** Deep Learning
- **6530** Cloud Computing
- **6630** Machine Learning
- **6660** Evolutionary Computing
New Courses: Cybersecurity Engineering

- 6970 Comp Intl and Adversarial ML
- 6970 Cyber-Physical Security
- 7970 AI for Security
- 6970 Cybersecurity Threats & CounterM
- 6970 Security in Wireless Networks
- 6970 Computer Security at the Fringes
# Broad Area Research Groups

<table>
<thead>
<tr>
<th>Broad Area Research Groups</th>
<th>Faculty Members</th>
</tr>
</thead>
<tbody>
<tr>
<td>Artificial Intelligence &amp; Machine Learning</td>
<td>Narayanan, Dozier, A. Nguyen, Bhattacharya, Karmaker, Zhou</td>
</tr>
<tr>
<td>Cybersecurity &amp; Internet of Things</td>
<td>Springall, Shu, Yampolskiy, Chapman</td>
</tr>
<tr>
<td>Computer and Wireless Networks</td>
<td>Biaz, Lim, Shu</td>
</tr>
<tr>
<td>Human-Computer Interaction &amp; Computer Games</td>
<td>Narayanan, Seals, Thomas</td>
</tr>
<tr>
<td>Software Engineering</td>
<td>Hendrix, Cross, T. Nguyen, Umphress, Yilmaz</td>
</tr>
<tr>
<td>Parallel and Distributed Systems &amp; High-Performance Computing</td>
<td>Baskiyar, Zhou, Chapman, Biaz, Qin</td>
</tr>
</tbody>
</table>

☆ Faculty members who are recruiting new students
Learn Computer Science and Software Engineering Graduate Programs at Auburn - 13

Tuition Fee

**On Campus**
- Fall, Spring, or Summer
  - $5,898
  - MS Degrees (2 Years)
    - ~$23K
  - PhD Degree (4 Years)
    - ~$47K
- Alabama Resident

**On Campus**
- Fall, Spring, or Summer
  - $15,978
  - MS Degrees (2 Years)
    - ~$64K
  - PhD Degree (4 Years)
    - ~$128K
- Non-Alabama Resident

**Distance Learning**
- $949/Credit Hour
  - MS Degrees (3-4 Years)
    - ~$28K-31K
  - PhD Degree
    - ~$34K (with Transfers)
    - ~$63K (w/o Transfers)
- Alabama Resident
Funding

Teaching Assistantships
70 Positions
No Need to Apply
Stipend + Tuition

Research Assistantships
40-50 Positions
Contact CSSE Faculty
Stipend + Tuition

Fellowship Programs
Deadline: Jan. 15
More Details
Apply Here
Graduate Teaching Assistants

Total GTAs: 70

- 79% PhD Students
- 14% MS-PhD Students
- 7% MS Students

10 MS-PhD Students
5 MS Students
Scholarship for Service Program

About

The CyberCorps Scholarship for Service (SFS) program is a scholarship program funded through grants awarded by the National Science Foundation and administered through select universities. The SFS program at Auburn University is run under the auspices of the Auburn Cyber Research Center (ACRC). AU’s SFS Program Director is Dr. Dean Hendrix, Associate Department Chair and Associate Professor in AU’s Department of Computer Science and Software Engineering (CSSE). AU’s SFS Program Co-Directors are Dr. David Umphress, ACRC Senior Advisor and COLSA Corporation Cyber Security and Information Assurance Professor in CSSE, and Dr. Daniel Tauritz, CSSE Associate Professor and ACRC Interim Director and Cyber AI Strategist.

SFS Program Overview

Scholarship for Service (SFS) is a program designed to increase and strengthen the cadre of federal information assurance professionals that protect the government’s critical information infrastructure. The scholarship typically funds two years of study, with the option of extending to a third year with permission of the team that supervises the scholarship program. The scholarship pays tuition and fees, and provides a book allowance of $2000 per year. Undergraduate scholars are paid a yearly stipend of $22.5K; graduate scholars are paid a yearly stipend of $34K. Each scholarship recipient is obligated to take part in career-building activities during the regular academic year, participate in a paying public sector internship each summer, and obtain a full-time cybersecurity-related job in the public sector (federal, state, territorial, local, or tribal level) within two years of the end of scholarship funding. Scholarship recipients must work in the public sector for a period equivalent to the length of the scholarship rounded.
http://www.auburn.edu/administration/human_resources/student_employment/index.html

Gain real world experience!

Weagle Workers: Meet Carlos

Weagle Workers Mission (updated)
RADIO FREQUENCY IDENTIFICATION

The RFID Lab at Auburn University is a research institute focusing on the implementation of RFID and other emerging technologies in retail, aviation, and manufacturing.

Justin Patton
RFID Lab Director
jpatton@auburn.edu

Senthilkumar CP
RFID Lab - Director of Technology
senthil@auburn.edu

https://rfid.auburn.edu
Research Data Services: Welcome

Why manage research data effectively? It benefits other investigators, the community, future scholars... and you.

The Least You Need to Know

- Most federal funding agencies now require data management plans to be included in the grant proposal, and many other institutions do as well.
- Whether or not research is externally funded, data is likely to be reused within the same research group later, so planning ahead for data management will save future time and effort as well as increase the chances datasets can be leveraged for additional publications.
- Preserving raw data enhances the integrity of research by improving transparency and reproducibility.
- Students can develop data management skills that are transferable to a wide variety of careers.
- Data that is shared in a registered repository increases research impact and can yield higher citation counts.
- Confidential or proprietary data that is managed properly will be more secure, protecting researchers, subjects, and sponsors.

Ali Krzton

Email Me
Heather Avery  
PhD ’15  
Vice President  
Aflac

Seth Denney  
BS ‘14  
Software Engineer  
Amazon

Sean Cook  
BS’06  
Senior Engineer  
Twitter

Jhilmil Jain  
PhD ‘05  
Senior UX Manager  
Google

Rose-Gaëlle Belinga  
MS ’12  
Software Engineer  
Morgan Stanley

Ziliang Zong  
PhD ‘08  
Associate Professor  
Texas State University
Google

Engineers are coming to campus!

Tech Challenge

Interested in participating in a fun and friendly puzzle competition? Assemble a team of up to five of your friends to put your knowledge and tech expertise to the test against other student teams!

Shelby Room 3129

All Students
ENGINEERING AND TECHNOLOGY CAREER FAIR
February 10 & 11 | 12 PM-5 PM | Career Fair + | aub.ie/ETCF
All Students. All Writing.

The Miller Writing Center offers free, one-on-one consultation for all writers at Auburn University. Our highly trained staff of undergraduate and graduate peer tutors will help you with any kind of writing, whether for class or otherwise, at any stage in the writing process.

Our goal is to help you become a better writer. You can bring in any kind of assignment, including (but not limited to) lab reports, essays, research papers, PowerPoints, dissertations, theses, annotated bibliographies, scientific posters, cover letters, CVs/resumes, personal statements, ePortfolio—bring whatever you're working on. You can be just developing your ideas, working on your first draft, putting finishing touches on your final version, or anywhere in-between.

Our main location is in the second floor Learning Commons in RBD Library, and we have satellite locations across campus. We are open:

- August 27 – December 7
The Biggio Center engages, supports, and empowers Auburn’s academic community in each phase of the scholarly teaching and learning process.
Learn Computer Science and Software Engineering Graduate Programs at Auburn - 26

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Graduate Programs - Graduate Degree Programs
Complete Your Graduate Degree In As Few As 3 Semesters At Auburn University At Montgomery. Auburn University at Montgomery Offers Graduate Programs In The Most Sought After Fields. Graduate Scholarship Opps. No GMAT/GRE Requirements.

Auburn Department of Computer Science and Software...
... technological innovations that change the course of everyday life, computer science and software engineers are making a global impact now and in the future.

Faculty · Graduate Programs · Academics · Staff
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Learn Computer Science and Software Engineering Graduate Programs at Auburn - 27

GPO's Response to COVID-19
Read how our department is responding to the COVID-19 pandemic, and get resources to help graduate students.
Learn more

Graduate Programs

Computer Science and Software Engineering
The Ph.D. program is intended to prepare students for research and teaching careers in universities or in industry. The Master of Science in Computer Science and Software Engineering program nurtures students to develop in-depth knowledge of computer science and software engineering disciplines.

PhD in Comp Sci. and Software Eng.
MS in Comp Sci. and Software Eng.

Cybersecurity Engineering
The Master of Science in Cybersecurity Engineering program prepares students for analyzing, developing, investigating, protecting, and defending the cyber ecosystem of organizations. This program is designed to appeal to practitioners and research scholars through capstone experience.

MS In Cybersecurity Engineering
Graduate Certificate in CYBE

Data Science and Engineering
The MS in Data Science and Engineering degree program fosters students to pursue careers in data science and engineering. Our curriculum offers an excellent balance between theory and application, equipping students with skills and state-of-the-art technologies related to modern big-data applications.

MS In Data Science and Engineering
Graduate Certificate in DSE (in 2022)
Live Virtual Information Sessions
Join the director of graduate programs as we lead you in live discussions on the landscape of graduate studies at Auburn University.
Learn more.

Prospective Students

Letter to Prospective Students
Take a minute to read a welcome letter from our director of graduate programs.

Admission Application Procedure
Find information and resources for applicants considering graduate studies in our department.

Admission Requirements
Check requirements to make sure you are eligible for the graduate program of your choice.

Graduate Assistantships
Inquire about graduate assistantship and fellowship opportunities at Auburn University.

GRE Waiver
Due to current GRE exam testing difficulties amid the COVID-19 pandemic, the graduate degree programs in our department are waiving the GRE requirement for applicants seeking Summer 2021 and Fall 2021 admission.
Current Students

Course Offerings and Syllabi
Browse the course offerings and syllabi before registering for courses that best meet your needs.

Guidelines and Policies
Follow the guidelines to manage tuition fellowships, register for research courses, file CPT/OPT/Gold Forms.

Training Sessions and Workshops
Participate in training workshops to gain the skills and confidence to land dream jobs.

PhD Qualifying Exams
Demonstrate knowledge of computer science fundamentals by passing qualifying exams.

Getting Started
Learn the introduction to the CSSE graduate programs and start your education journey now.

New Student Orientation
Bolleplate Plans of Study
Materials and Deadlines

1. Resume
2. Standardized Tests
3. Statement of Purpose
4. Recommendation Letters
5. Official Transcripts
6. Deadline for Funding: May 1
   Final: June 15