

# SCHOOL OF COMPUTING

## General Information

(251) 460-6390

School of Computing website

<https://www.southalabama.edu/colleges/soc/>

Title	Name
Dean	Dr. Todd R. Andel

## Mission Statement

The mission of the School of Computing is to prepare graduates who are professionally competent, motivated to lifelong learning, and demonstrate ethical behavior in the computing sciences; to provide an atmosphere for faculty to demonstrate research and teaching excellence; and to provide service in the computing sciences to our community and discipline.

## Accreditation

The Bachelor of Science in Computer Science, Information Systems, and Information Technology programs are accredited by the Computing Accreditation Commission of ABET, <http://www.abet.org>. For a quick understanding of what accreditation is and why an accredited program should be chosen, go to <http://www.abet.org/why-accreditation-matters/>.

## National Center of Academic Excellence in Cyber Defense (CAE-CD)

The University of South Alabama was first awarded a National Center of Academic Excellence in Information Assurance Education (CAE/IAE) designation in June 2011 and was re-designated as a National Center of Academic Excellence in Information Assurance / Cyber Defense Education (CAE-CD) by the National Security Agency and the U.S. Department of Homeland Security in 2014 and 2022, which is valid through 2027. CAE-CD designated institutions focus on preparing graduates to help reduce threats to our national infrastructure through higher education and research in cyber defense. The NCAE designation allows institutions to be able to compete for grants including the National Science Foundation's (NSF) Scholarship for Service program.

Student wishing to comply with USA's CAE/IA-CD curriculum in conjunction with their specialization must complete all required courses and must choose courses designated as IA in the specialization wherever an optional choice is presented.

## Departments of Instruction

- Computer Science (<http://bulletin.southalabama.edu/programs-az/computing/computer-science/>)
  - Artificial Intelligence Certificate Non-Degree Program (<http://bulletin.southalabama.edu/programs-az/computing/computer-science/artificial-intelligence-certificate-non-degree-program/>)
  - Computer Science (BS) (<http://bulletin.southalabama.edu/programs-az/computing/computer-science/computer-science-bs/>)
  - Computer Science (MS) (<http://bulletin.southalabama.edu/programs-az/computing/computer-science/computer-information-sciences-ms/>)
  - Computer Science Minor (<http://bulletin.southalabama.edu/programs-az/computing/computer-science/computer-science-minor/>)

- Graduate Computer Science Cybersecurity Certificate (<http://bulletin.southalabama.edu/programs-az/computing/computer-science/cyber-security-cert-non-degree/>)
- Computing (<http://bulletin.southalabama.edu/programs-az/computing/computing/>)
  - Computing (PhD) (<http://bulletin.southalabama.edu/programs-az/computing/computing/computing-phd/>)
- Information Systems And Technology (<http://bulletin.southalabama.edu/programs-az/computing/information-systems-technology/>)
  - Cybersecurity (MS) (<http://bulletin.southalabama.edu/programs-az/computing/information-systems-technology/cybersecurity-ms/>)
  - Graduate Information Systems Cybersecurity Certificate (<http://bulletin.southalabama.edu/programs-az/computing/information-systems-technology/cybersecurity-certificate/>)
  - Health Informatics (BS) (<http://bulletin.southalabama.edu/programs-az/computing/information-systems-technology/health-informatics-bs/>)
  - Health Informatics Certificate (<http://bulletin.southalabama.edu/programs-az/computing/information-systems-technology/health-informatics-certificate/>)
  - Information Systems (BS) (<http://bulletin.southalabama.edu/programs-az/computing/information-systems-technology/information-systems-bs/>)
  - Information Systems (MS) (<http://bulletin.southalabama.edu/programs-az/computing/information-systems-technology/information-systems-ms/>)
  - Information Systems Minor (<http://bulletin.southalabama.edu/programs-az/computing/information-systems-technology/information-systems-minor/>)
  - Information Technology (BS) (<http://bulletin.southalabama.edu/programs-az/computing/information-systems-technology/information-technology-bs/>)
  - Information Technology Minor (<http://bulletin.southalabama.edu/programs-az/computing/information-systems-technology/information-technology-minor/>)
  - Process Technology Certificate Non-Degree Program (<http://bulletin.southalabama.edu/programs-az/computing/information-systems-technology/process-technology-certificate/>)

## Undergraduate

### Admission to the Degree Programs and Courses

In order to be admitted as an undergraduate major in the School of Computing, a student must be "calculus ready". For a major in Computer Science, "calculus ready" means that the student is eligible to enroll in MA 125 (Calculus I). For a major in either Information Systems or Information Technology, "calculus ready" means that the student is eligible to enroll in MA 120, (Calculus and Its Applications).

## Graduate

### Requirements for Admission

Students are admitted each semester. In addition to the general admissions requirements of the USA Graduate School, admission requirements for the Master's Degree programs in Computer Science, Information Sciences, or Cybersecurity are:

1. Undergraduate or graduate degree from a regionally accredited institution of higher education.
2. An official academic transcript from each college or university attended.
3. Three letters of recommendation from persons able to speak directly to the applicant's academic abilities.
4. A written statement of purpose indicating the student's personal and academic goals.
5. A minimum grade-point average of 3.0 (4.0 scale) for either all completed post-secondary coursework or for a completed graduate program to be accepted for regular admission.
6. Official scores for the Graduate Records Examination (GRE) including the AW portion.
  - Any applicant with an undergraduate or graduate degree from a regionally accredited U.S. institution of higher education are not required to provide GRE scores.
7. For international students, an official TOEFL, IELTS, DuoLingo, iTEP, or PET score. See the policy of the Graduate School: <https://www.southalabama.edu/bulletin/current/index.html> (<https://www.southalabama.edu/bulletin/current/>).
8. A completed application for admission to the Graduate School.
3. Official scores for the Graduate Records Examination (GRE) including the AW portion.
  - Any applicant with an undergraduate or graduate degree from a regionally accredited U.S. institution are not required to provide GRE scores.
4. A statement of purpose indicating the student's personal goals and research interests. Because prospective students are matched with a faculty mentor, competitive applications align with the research areas of School of Computing graduate faculty.
5. Three letters of recommendation from persons able to speak directly to the applicant's ability to engage in advanced discovery and contribute new knowledge to the discipline.
6. Curriculum vita.
7. An official transcript from each college or university attended.
8. A completed application for admission to the Graduate School.
9. For international students, an official TOEFL, IELTS, DuoLingo, iTEP, or Pearsons (PTE Academic) score, or an equivalent level of competence as exhibited by a bachelor or graduate degree from an accredited university in the United States is required. See the policy of the Graduate School: <https://www.southalabama.edu/bulletin/current/index.html> (<https://www.southalabama.edu/bulletin/current/>)

Final admission decisions are made based upon an evaluation of the applicant's complete file which consists of all official academic transcripts; undergraduate grade-point average; GRE scores (when required); three (3) letters of reference regarding the applicant's ability to succeed in the Master of Science program in Computer Science, Information Sciences, or Cybersecurity; the applicant's statement of purpose; TOEFL, IELTS, DuoLingo, iTEP, or Pearsons (PTE Academic) scores (for international applicants); and program enrollment and availability.

### Full Load of Coursework Per Semester

Permission of the School of Computing Director of Graduate Studies is required to take more than 10 semester hours.

### International Students' Special Requirements

International students must submit documentary evidence showing IELTS test scores of at least 6.0, TOEFL test scores of at least 525 on the paper version, 197 on the computer version, or 71 on the internet version, DuoLingo score of at least 100, iTEP score of at least 3.7, a minimum score of 48 on the Pearsons (PTE Academic), or an equivalent level of competence as exhibited by a bachelor's degree from an accredited university in the United States. The School of Computing reserves the right to exclude students with more than five course failures.

## Ph.D. in Computing Program Requirements for Admission

Students are normally admitted in the fall semester and are encouraged to complete the admissions application prior to February 1st. In addition to the general admission requirements of the USA Graduate School, admission requirements for the Computing Ph.D. program are:

1. A baccalaureate or graduate degree in Computer Science, Information Systems, Information Technology, Cybersecurity or a closely related field. A graduate degree is not required for admission.
2. An undergraduate minimum GPA of 3.3 (4.0 scale) for all completed post-secondary coursework or a 3.5 overall (4.0 scale) for a completed graduate program.

Admission is competitive and the decision is based on a review of all submitted admission materials. A personal interview may be requested. Applicants are encouraged to submitted samples of prior work. All admissions materials should be submitted online at: <https://southalabama.liaisoncas.com/applicant-ux/#/login>.

Admission may be granted by the Director of Graduate Studies when supported by a vote of the Graduate Faculty in special cases where a holistic evaluation of the applicant's credentials is appropriate.

## Undergraduate

### General Requirements for the Bachelor of Science Degrees in the School of Computing

Majors in the School of Computing must complete requirements for one of the four Bachelor of Science Programs offered:

- Computer Science,
- Health Informatics,
- Information Systems, or
- Information Technology.

All undergraduate students in the School of Computing must comply with the University's general education requirements, (See Academic Policies and Procedures). Although these requirements are not specifically organized according to the four general education areas, each of the bachelor of science programs in the School of Computing, incorporates general education requirements within the published programs.

In addition to an overall grade-point average of 2.0, all courses in the major, prerequisites for courses in the major and required supporting courses for the major, must be passed with a minimum grade of "C." Any course taken at the University of South Alabama with a grade of "D" or "F" may be retaken only at the University of South Alabama.

Any courses taken at another institution to meet degree requirements must have prior approval of the School of Computing Dean. Failure to obtain prior approval may result in loss of transfer credit for the course work.

## Laptop Ownership Policy

All students enrolling in any undergraduate or graduate courses offered by the School of Computing except for CIS 101, CIS 110, CIS 150, CIS 210, CIS 211, CIS 227 and CIS 250 are required to own a personal laptop computer system that conforms to the current School's minimum published standards. This is a one-student one-machine requirement. For more information consult the Laptop Policy at <https://www.southalabama.edu/colleges/soc> (<https://www.southalabama.edu/colleges/soc/>).

## Transfer Students

Transfer students must complete at least eighteen (18) credit hours of courses at the 300-level or above of courses in their chosen program of study in the School of Computing. All undergraduate transfer students are required to satisfactorily complete CIS 300, Information Technology in Society at the University of South Alabama.

## Accelerated Bachelor's to Master's Degree Program

The School of Computing offers an accelerated Bachelor's to Master's (ABM) Program in Computer Science (CS), Information Systems (IS), and Information Technology (ITE) that provides qualified undergraduate students the opportunity to earn their master's degree within one academic year after completing their bachelor's degree. Undergraduate students with a 3.0 GPA, who meet all of the requirements for admission to the Master's degree program and have completed at least 101 credit hours towards their CS Bachelor's degree or 96 credit hours towards their IS or ITE Bachelor's degree, may apply for this program. Financial aid is available to qualified students admitted to this program.

## Choice of Bulletin Under Which a Student Graduates

Majors in the School of Computing may choose any bulletin from their entry date to their time of graduation. This applies for entering freshmen and transfer students. Students at the University of South Alabama changing their choice of major in the School of Computing, changing their major in another college to a major in one of the programs in the School of Computing or who interrupt their program of study for more than one calendar year are considered new students with respect to bulletin selection.

## Graduate

### Master's Degree Programs

#### General Information About the MS Programs

The School of Computing offers three Master of Science degree options each designed for students and professionals wishing to further their knowledge and expertise in computing:

1. **Computer Science (CSC)** for students interested in the theoretical aspects of the discipline with an emphasis on the construction of system software or the development of scientific applications using software engineering principles. For more information about the Master of Science in Computer Science, go to <https://www.southalabama.edu/colleges/soc/computerscience> (<https://www.southalabama.edu/colleges/soc/computerscience/>).
2. **Cybersecurity (CYB)** for students interested in learning how to manage, administer, and protect critical information infrastructures; defend organizations from emerging cybersecurity threats; and respond effectively to the dynamic cybersecurity landscape. For more information about the Master of Science in Cybersecurity, go to <https://www.southalabama.edu/colleges/soc/cist/>.
3. **Information Systems (ISC)** for students interested in a professional software development focused program that prepares students to enter the job market with highly marketable and in-demand skills. For more information about the Master of Science in Information Systems, go to <https://www.southalabama.edu/colleges/soc/cist/>.

### Choice of Bulletin Under Which a Student Graduates

Students entering the SoC masters program may choose any bulletin from their entry date to their time of graduation. This applies for new students and transfer students. Students at the University of South Alabama changing their graduate specialization in School of Computing, changing their major to School of Computing, or who interrupt their program for more than one calendar year are considered new students with respect to bulletin selection.

### Courses Taken Outside the School of Computing

No more than four graduate courses, maximum of twelve (12) semester hours taken outside of the School of Computing, at a regionally accredited, or approved, university may be applied toward the degree. Only grades of "A" or "B" may be accepted. Transfer credit is approved only after completion of a minimum of nine (9) semester hours of graduate credit towards the degree. A formal request for transfer credits must be made to the coordinator of the student's department (CSC or ISC). Any such transfer courses must be approved by the SoC Director of Graduate Studies and may not have been used to fulfill the requirements of another graduate degree.

### Scheduling of Courses

The graduate program courses are scheduled to accommodate full-time students (normally two or three courses per semester) and part-time students (one course per semester). Special topics, directed study, and thesis courses are available as needed.

### Time Limitation

All requirements for the Master of Science degrees in Computer Science, Cybersecurity, and Information Systems must be completed within seven (7) calendar years from the date of matriculation as a School of Computing graduate student. The seven calendar year constraint also applies to all accepted transfer courses.

### Comprehensive Examination

All School of Computing masters students must complete a comprehensive examination for the CORE courses in their Degree Program (Computer Science, Cybersecurity, or Information Systems). The comprehensive examination may be repeated no more than once. A written examination is required of students in Information Systems and those students in Computer Science and Cybersecurity who choose the Course Only Concentration. An oral examination is required of students in Computer Science or Cybersecurity who complete the Thesis or Project Concentration.

The School of Computing Comprehensive Examination Policies and Procedures document and the Comprehensive Examination Application form are available at <https://www.southalabama.edu/colleges/soc/essentialstudentlinks.html>

## Ph.D. in Computing Program

### General Information About the Ph.D. in Computing Program

The interdisciplinary Ph.D. in Computing degree program integrates coursework and research projects from three related disciplines: computer science, information systems, and information technology.

The program emphasizes advanced discovery and the development of solutions to research-focused problems in the areas of cyber assurance, risk assessment, forensics, and data analytics. Ph.D. graduates are eligible for research positions in academia, industry, and government. For more information about the Ph.D. in Computing program, go to <https://www.southalabama.edu/colleges/soc/phdprogram.html>

### **Full Load of Coursework Per Semester**

Permission of the School of Computing Director of Graduate Studies is required to take more than 10 semester hours.

### **Academic Standards**

Student must maintain a cumulative 3.0 GPA in order to be considered in good standing. Failure to maintain a cumulative 3.0 GPA will result in the student being placed on academic probation. The School of Computing Director of Graduate Programs may recommend dismissal of a student who does not maintain good academic standing or is not making sufficient progress.

### **Courses Taken Outside the School of Computing**

A maximum of 24 semester hours of graduate credit earned at a regionally accredited or approved graduate school may be counted toward the Ph.D. program. Transfer credit may be approved after the completion of twelve (12) semester hours of credit at the University of South Alabama. Transfer credit must be approved by the School of Computing Director of Graduate programs with the recommendation of the student's advisor.

### **Scheduling of Courses**

The PhD program courses are scheduled to accommodate full-time students (normally two or three courses per semester) and part-time students (one course per semester).

### **Comprehensive Exams**

Doctoral students must pass a comprehensive examination. The written content of the examination will be determined by the comprehensive examination committee. Normally the written component is based on the student's coursework in the Core PhD courses. The oral component consists of an oral defense of the student's proposed research project. Failure to pass the comprehensive examination within two attempts will result in dismissal from the program.

### **Time Limitation**

All requirements for the Ph.D. in Computing degree must be completed within ten (10) calendar years from the date of matriculation as a School of Computing Ph.D. student. This ten calendar year constraint also applies to all accepted transfer courses. After reaching candidacy, a student has a maximum of 3 years to complete the dissertation. A student may apply to the Director of Graduate programs for an extension to complete the degree.

## **General Graduate Program Policies**

### **Professional Participation**

Students are expected to take an active part in at least one (1) professional computing organization. They are expected to be aware of the social impact of computing and adhere to the ACM/AITP code of ethics. For more information consult <https://www.southalabama.edu/colleges/soc/> (<https://www.southalabama.edu/colleges/soc/>).

## **Graduate Assistantships and Fellowships**

A limited number of graduate assistantships are available on a competitive basis and are awarded on the recommendation of the School of Computing. Applications are available on-line at: <https://www.southalabama.edu/departments/eforms/graduateschool/graduateassistantapptform.pdf>. Applications must be received by April 1st for fall applicants or November 1st for spring applicants.

## **Graduate School Standards**

For all other graduate policies and procedures not specifically stated for the Master of Science in Computer Science, Cybersecurity, or Information Systems degree programs, or the Ph.D. in Computing degree program, see the School of Computing, [www.southalabama.edu/colleges/soc/](http://www.southalabama.edu/colleges/soc/) (<http://www.southalabama.edu/colleges/soc/>).