

# School of Computing

## Comprehensive Examination Policy

### USA Graduate School Degree Requirement

1.5 “Each student will be evaluated to ensure achievement of program outcomes. This evaluation may be in the form of a comprehensive exam or other measurement tools. If unsatisfactory, after corrective action, the evaluation may be repeated once. The comprehensive exam committee must be comprised of at least 3 graduate faculty members. For details see specific programs.”

<http://www.southalabama.edu/bulletin/current/colleges-schools/graduate-school/index.html>

All School of Computing graduate students are required to pass a comprehensive exam. The policies for the Computer Science, Cybersecurity, and Information Systems degree programs are specified below. Any exceptions to these policies require prior approval of the School of Computing Director of Graduate Programs.

School of Computing MSCSC, MSCYB, and MSISC master’s students comply with this requirement by achieving a PASS of a Comprehensive Examination for the CORE courses in their specific degree program, within the seven-year time limit for completing the requirements for the master’s degree.

In the School of Computing master’s degree programs (MSCSC, MSCYB, and MSISC) two Comprehensive Examination formats are used.

- A Written Comprehensive Examination is required of students who choose the Course Only Concentration.
  - For School of Computing master’s degree students requiring the written comprehensive examination, it is offered on the first Friday after classes begin in the fall and spring semesters. Students wishing to sit for the written comprehensive examination should apply online to the SOC Graduate Director by **July 31**, for a Fall offering, or **December 15**, for a Spring offering. The site for the online application may be found by following the “Current Students” → “Essential Student Links” selection on the SoC website or key in the following link:  
<http://www.southalabama.edu/colleges/soc/gradcompexamapplication.html>
  - A student is allowed to retake the written comprehensive examination one time – **for a total of two attempts at the written comprehensive examination**. A student who fails to pass the comprehensive exam within a seven (7) year period will be dismissed from the program.
- An Oral Comprehensive Examination is required of students who complete either the Thesis Concentration or Project Concentration.

## MSISC Program – Information Systems

### Course-only Option – Written Comprehensive Exam

A student is required to pass four (4) written comprehensive exams. There are two required courses: ISC 501 Programming, ISC 507 – Database Concepts, ISC 561 IS Database Management and ISC 565 IS Project and Change Management.

For the core courses required for the comprehensive exam, if the student earned an “A” or “B” grade on a course final exam, the final exam evaluation will be used to satisfy the evaluation requirement specified in the Graduate School Degree Requirement (1.5) and the student will be recorded as having “passed” the Information Systems Comprehensive Exam for that course.

For a course or courses for which the student did not earn at least a “B” grade on the final exam, the student will be required to sit for the written comprehensive examination.

### Performance Assessment:

1. Examinee responses to the written exams are distributed among SoC IST graduate faculty to assess for Pass or Fail. An assessment of Fail by the graduate faculty member requires a second graduate faculty member’s review to either confirm the failure or override the result to a Pass.
2. The SoC Comprehensive Examination Committee will report final results to the examinee, the Director of SoC Graduate Studies, and the Dean of the Graduate School.
3. A student’s written comprehensive examination result is determined according to the number of Passes and Fails of examination items.
  - a. For **all required written area passes**, the result is a **PASS of the comprehensive examination**.
  - b. For **2 or more required written area fails**, the result is a **FAIL of the comprehensive examination**. The student will need to retake all required written comprehensive exams.
  - c. For **1 written area fail**, the examinee will be scheduled for an **Oral Subject Examination** by a committee of three (3) SoC IST graduate faculty.
    - i. The Chair of the Oral Subject Examination will schedule a date, time, and place convenient for the examinee and Oral Subject Examination committee members.
    - ii. The Oral Subject Examination will be scheduled 2-3 weeks after the date of the written exam.
    - iii. At the conclusion of the oral examination, the examinee will be asked to exit the examination room. Each committee member will vote for Pass or Fail of the Oral Subject Examination. Once the majority result has been determined, the committee will inform the examinee, the SoC Graduate Director, and the Dean of the Graduate School of the committee’s decision.
    - iv. If the student passes the oral exam(s), the student will be recorded as having “passed” the Information Systems Comprehensive Exam. If the student does not pass the oral exam, they must retake the required written exam(s) again the following semester.
    - v. *Note: The Oral Examination Committee may optionally prescribe some remediation activities for an examinee before rendering its final decision.*

Details regarding the date, time, format, and processes governing the written and oral exams will be provided to students prior to the scheduled exams.

## **MSCYB – Cybersecurity**

### **Course-only Option – Written Comprehensive Exam**

A student is required to pass four (4) written comprehensive exams. There are two required courses: CIS 530 – Information Assurance and Audit and CYB 570 – Cybersecurity Ethics. A student must select two (2) courses from the list of optional core courses (see bulletin).

For the courses selected by the student for the comprehensive exam, if the student earned an “A” or “B” grade on a course final exam, the final exam evaluation will be used to satisfy the evaluation requirement specified in the Graduate School Degree Requirement (1.5) and the student will be recorded as having “passed” the Cybersecurity Comprehensive Exam for that course.

For a course or courses for which the student did not earn at least a “B” grade on the final exam, the student will be required to sit for the written comprehensive examination.

### **Performance Assessment:**

1. Examinee responses to the written exams are distributed among SoC IST graduate faculty to assess for Pass or Fail. An assessment of Fail by the graduate faculty member requires a second graduate faculty member’s review to either confirm the failure or override the result to a Pass.
2. The SoC Comprehensive Examination Committee will report final results to the examinee, the Director of SoC Graduate Studies, and the Dean of the Graduate School.
3. A student’s written comprehensive examination result is determined according to the number of Passes and Fails of examination items.
  - a. For **all required written area passes**, the result is a **PASS of the comprehensive examination**.
  - b. For **2 or more required written area fails**, the result is a **FAIL of the comprehensive examination**. The student will need to retake all required written comprehensive exams.
  - c. For **1 written area fail**, the examinee will be scheduled for an **Oral Subject Examination** by a committee of three (3) SoC IST graduate faculty.
    - i. The Chair of the Oral Subject Examination will schedule a date, time, and place convenient for the examinee and Oral Subject Examination committee members.
    - ii. The Oral Subject Examination will be scheduled 2-3 weeks after the date of the written exam.
    - iii. At the conclusion of the oral examination, the examinee will be asked to exit the examination room. Each committee member will vote for Pass or Fail of the Oral Subject Examination. Once the majority result has been determined, the committee will inform the examinee, the SoC Graduate Director, and the Dean of the Graduate School of the committee’s decision.

- iv. If the student passes the oral exam(s), the student will be recorded as having “passed” the Information Systems Comprehensive Exam. If the student does not pass the oral exam, they must retake the required written exam(s) again the following semester.
- v. *Note: The Oral Examination Committee may optionally prescribe some remediation activities for an examinee before rendering its final decision.*

Details regarding the date, time, format, and processes governing the written and oral exams will be provided to students prior to the scheduled exams.

### **Thesis/Project Option – Oral Comprehensive Exam**

For a student in the Thesis or Project option, an oral comprehensive exam will be conducted by the student’s committee immediately following the successful thesis or project defense.

### **MSCSC - Computer Science**

In the MSCIS Computer Science program the Written or Oral Comprehensive Examination addresses the four core courses for the MSCIS Computer Science program.

#### **Course-Only Option – Written Comprehensive Exam**

A student is required to pass four (4) comprehensive exams on CSC 522, Performance Evaluation of Algorithms, either CSC 527, Software Engineering Principles or ISC 560 Analysis and Design, CSC 520, Computer Architecture, and CSC 526, Data Mining.

In the case the student took CSC 426-Data Mining as an undergraduate course co-listed with CSC 526, the student will be required to take CSC 532 Distributed Systems in their coursework and used in place of CSC 526 for the comprehensive requirement.

For each of these four courses, if the student earned an “A” as the final course grade, the final course grade evaluation will be used to satisfy the evaluation requirement specified in the Graduate School Degree Requirement (1.5) and the student will be recorded as having “passed” the Computer Science Comprehensive Exam for that course.

For a course or courses for which the student did not earn at least an “A” as the final course grade, the student will be required to sit for the written comprehensive examination.

### **Written Comprehensive Examination**

1. Since each session is three hours long and there are two examination items in each, there is an average of 1½ hours for each part. Each examinee must decide how to manage the three hours to prepare the two required responses.
2. There will be no formal break during the examination.

- a. Some or all of the examination items may be presented in electronic form. Examinees may be required to post, to a secured server, their response to some or all of the examination items.
- b. Examinees are responsible for abiding by the examination and response protocols and for adhering to SoC and University of South Alabama academic integrity policies.
- c. Examinees are instructed to label each page with the minimum information needed to evaluate the response. Names should not appear on any page. For Example: The fourth page of examinee J00123456's response to item 2 for the CSC 527 part would be labeled: **CSC 527-Item 2, Page 4, J00123456**
- d. **Morning Session**
  - v. Morning Session:
    - i. Morning Session: Examinees should arrive no later than 8:15 am, present their photo ID (USA Jaguar photo ID will suffice) to the examiner, and sign the attendance roster.
    - ii. The administration of the Written Comprehensive Examination begins promptly at 8:30 am and ends promptly at 11:30 am—THERE ARE NO EXCEPTIONS!
    - iii. Each examinee will submit up to two responses—one for each core course portion of the session.
    - iv. CSC morning session core courses will be CSC 527, Software Engineering Principles, and CSC 522, Performance Evaluation of Algorithms.
    - v. At 11:30 am, the examiner will instruct examinees to stop work immediately and to submit their two responses to the examiner.
- e. **Afternoon Session**
  - i. Examinees should arrive no later than 12:15 pm., present their photo id to the examiner, and sign the attendance roster.
  - ii. The administration of the Written Comprehensive Examination begins promptly at 12:30 pm and ends promptly at 3:30 pm—THERE ARE NO EXCEPTIONS!
  - iii. CSC afternoon session core courses will be CSC 520, Computer Architecture, and CSC 526, Data Mining.
  - iv. Each examinee will submit up to two responses—one for each core course part of the session.
  - v. At 3:30 pm, the examiner will instruct examinees to stop work immediately and to submit their two responses to the examiner.
- f. **Performance Assessment**
  - i. Examinee responses to the four core course areas will be distributed among SoC graduate faculty to assess for Pass or Fail. An assessment of Fail by the graduate faculty member requires a second graduate faculty member's review to either confirm the failure or else override the result to a Pass.
  - ii. The SoC Comprehensive Examination Committee will report final results to the examinee, the Director of SoC Graduate Studies, and the Dean of the Graduate School.
  - iii. A student's comprehensive examination result is determined according to the number of Passes and Fails of examination items.
    - a. For **all required written area passes**, the result is a **PASS of the comprehensive examination**.

- b. For **2 or more required written area fails**, the result is a **FAIL of the comprehensive examination**.
- c. For **1 required written area fail**, the examinee will be scheduled for an **Oral Subject Examination** by a committee of three (3) SoC CSC graduate faculty.
  - i. The Chair of the Oral Subject Examination will schedule a date, time, and place convenient for the examinee and Oral Subject Examination committee members.
  - ii. The Oral Subject Examination will be scheduled 2-3 weeks after the date of the written exam.
  - iii. Although the Oral Subject Examination will focus initially on the core course material for which a Fail was given, the Oral Examination Committee may ask questions regarding other core courses in the examinee's major.
  - iv. At the conclusion of the oral examination, the examinee will be asked to exit the examination room. Each committee member will vote for Pass or Fail of the Oral Subject Examination. Once the majority result has been determined, the committee will inform the examinee, the SoC Graduate Director, and the Dean of the Graduate School of the committee's decision.
  - v. *Note: The Oral Examination Committee may optionally prescribe some remediation activities for an examinee before rendering its final decision.*

### **Thesis/Project Option – Oral Comprehensive Exam**

#### **1. Eligibility**

- a. All students in the **Thesis Concentration** or **Project Concentration** must pass an oral comprehensive examination.
  - b. Students must have completed all core courses for the major with a minimum grade of B, CIS 518 with a minimum grade of C, and must have successfully defended the thesis/project.
2. Oral Comprehensive Examinations are administered on an individual basis during any semester.
3. **Performance Assessment** - The thesis/project committee is assigned the responsibilities for conducting the Oral Comprehensive Examination, assessing the examinee's performance on the Oral Comprehensive Examination, and reporting the result to the SoC Comprehensive Examination Committee.
- a. Although the Oral Comprehensive Examination will focus initially on the relation between the thesis/project and the core course material for the examinee's major, the Oral Comprehensive Examination Committee may ask questions regarding other core courses in the examinee's major.
  - b. At the conclusion of the Oral Comprehensive Examination, the examinee will be asked to exit the examination room. Each committee member will vote for Pass or Fail of the Oral Comprehensive Examination. Once the majority result has been determined, the committee will inform the examinee, the SoC Graduate Director, and the Dean of the Graduate School of the committee's decision.