Bachelor's-Master's of Science
in Computer Science
Revised January 29, 2020

Overview of Degree

The combined Bachelor's-Master's of Science (B.S./M.S.), also known as **Double Dawgs,** degree in Computer Science at The University of Georgia is a comprehensive program of study intended for motivated students to obtain their B.S. and M.S. degrees in a five year time frame, with 12 hours of coursework counting for both degrees. An undergraduate student will complete the requirements for the B.S. degree, but take 12 hours at the 6000 graduate level rather than the 4000 undergraduate-level. The M.S. requirements then largely follow the department's M.S. Non-Thesis degree.

Excellent opportunities exist for students graduating with both bachelor's and master's degrees in Computer Science. The master's level provides several important advantages. First, the Project Course, CSCI 7200, allows students to work closely with a faculty member on a significant project. Such experience is highly valued by industry and will be helpful in interviews. Second, master's graduates will be in a better position to assume leadership positions in the computer and information technology fields. Positions include Team Leader, Project Leader, all the way up to Chief Information Officer (CIO). Third, the additional advanced coursework (several of which cover material that is in high demand) will provide advantages for career advancement. Fourth, for those students wishing to pursue a doctoral degree in a highly competitive department, having a five-year dual bachelor's-master's degree will certainly be an advantage. Further, the project work may result in a publication that will also help in the application process. Finally, on payscale.com the average starting salary for Software Developers (SD), Software Engineers (SE), and Senior Software Engineers (SSE) increases by an average of 15%, 10%, and 10%, respectively.

The combined degree program will give students a thorough foundation in the theory, methodology, and techniques of Computer Science. Students who successfully complete this program of study will have a grasp of the principles and foundations of Computer Science. This degree program is designed for graduate students seeking careers in industry or government after graduation. The students will obtain skills and experience in up-to-date approaches to analysis, design, implementation, validation, and documentation of computer software and hardware. With these skills they will be well qualified for technical, professional, or managerial positions in government, business, industry, and education.

Prospective students are advised to consult The University of Georgia Bulletin for institutional information and requirements.

Admission to Program

A student wishing to pursue the dual degree must first submit an application to be admitted to the **program pathway**. For the dual program, students must have completed **60 - 90 credit hours** and have completed the following courses with a **grade of C or better**.

MATH 2250	Calculus I (Differential Calculus)
CSCI 1301	Introduction to Computing and Programming
CSCI 1302	Software Development
CSCI 1730	Systems Programming
CSCI/MATH 2610	Discrete Mathematics for Computer Science
CSCI 2670	Introduction to Theory of Computing
CSCI 2720	Data Structures
CSCI 3030	Computing, Ethics and Society

In addition, the student must have a cumulative **GPA of 3.0 or higher** at the time of application.

Acceptance to the pathway does not guarantee acceptance into the graduate program. For that, a separate application to the Graduate School is needed. It is recommended that students apply to the **pathway** in the **spring semester of their third year** and to the **graduate program** in **their fourth year.**

To apply to the program pathway, students should complete the Pathways application.

Deadlines

March 20: Deadline for application to program pathway and to graduate program for students wishing to start in the **Fall Semester**.

October 20: Deadline for application to program pathway and to graduate program for students wishing to start in the **Spring Semester**.

Admission Requirements

1. Admission to this program is selective; students with a record of academic excellence have a better chance of acceptance.

2. Graduate Record Examination (GRE) test scores are required for admission consideration. A GRE score of 285 or higher (Verbal Reasoning + Quantitative Reasoning) is required.

3. Three letters of recommendation are required, preferably written by university professors familiar with the student's academic work and potential. If the student has work

experience, one letter may be from his/her supervisor. Letters should be sent directly from the letter writer.

4.   A one or two page personal statement outlining the student's background, achievements, and future goals is required.

5.   A student may include a recent copy of his/her resume as part of the application packet; however, this is not required.

Graduate School Requirements

Additional requirements are specified by the Graduate School (application fee, general application forms, all transcripts, etc.). Please see the University of Georgia Bulletin for further information. Detailed admissions information may be found at Graduate School Admissions. Printed information may be obtained by contacting the

University of Georgia Graduate School
Terrell Hall
210 S. Jackson St.
Athens, GA 3 0602

phone: 706-542-1739
fax: 706-425-3094
e-mail: gradadm@uga.edu

Curriculum

The Double Dawgs curriculum consists of satisfying the requirements for both the B.S. in Computer Science and for the M.S. in Computer Science with the Non-Thesis Option. The M.S. curriculum consists of at least **32 credit hours** of resident graduate coursework. This includes the following three items:

1. at least 1**2 credit hours** of Core CSCI graduate coursework at the 6000-level (see "Core Curriculum" below);

2. at least **16 credit hours** of Advanced CSCI graduate coursework at the 6000/8000-level (see "Advanced Coursework" below); the above (items 1 & 2) must include 12 credit hours of coursework open only to graduate students, exclusive of 6950 and 8990, as per Graduate School policy;

3. at least **4 credit hours** of Project coursework (CSCI 7200).

Typically, full-time students will take 9 to 15 hours per semester. See the CSCI section of the University of Georgia Bulletin for course descriptions. A program of study should be a coherent and logical whole; it requires the approval of the student's Major Professor/Project Advisor (see below) and the departmental graduate coordinator.

Note: **no course with a grade of C+ or lower may be included on the student's Program of Study** (see the Graduate Bulletin for other GPA constraints).

Core Curriculum (Item #1)

Graduate-level courses that may be used to satisfy undergraduate and graduate program requirements. At least one course from each of the following three groups must be taken:

Group 1: Theory
>>> CSCI 6470 Algorithms
>>> CSCI 6480 Approximation Algorithms
>>> CSCI 6610 Automata and Formal Languages

Group 2: Software Design
>>> CSCI 6050 Software Engineering
>>> CSCI 6370 Database Management

Group 3: System Design
>>> CSCI 6720 Computer Systems Architecture

The core curriculum consists of a total of **12 credit hours**.

Additional core related requirement that is unique to this Double Dawgs program: Students must take one of the following courses:

- CSCI 4570/6570   Compilers
- CSCI 4730/6730   Operating Systems
- CSCI 4760/6760   Computer Networks

If taken at the 4000-level, the course will count in the B.S. degree, while at the 6000-level it will count in the M.S. degree.

Core Competency

Foundational computer science knowledge (core competency) in the core areas (Groups 1, 2, and 3, above) must be exhibited by each student and certified by the department. This takes the form of achievement in core curriculum. A grade average of at least 3.30 (e.g., B+, B+, B+) must be achieved for the three core courses. Students below this average may take an additional core course and achieve a grade average of at least 3.15 (e.g., B+, B+, B, B).

Core competency is certified by the student's Major Professor/Project Advisor (see below) with the approval of the Graduate Coordinator. The student's Major Professor/Project Advisor manages the core competency in cooperation with the student. Students are expected to meet the core competency requirement within their first two enrolled academic semesters (excluding summer semester). **Core Competency Certification must be completed before approval of the Program of Study.**

Note: a course used to fulfill part of the core requirement (Item #1) may not be used to also fulfill part of the advanced coursework requirement (Item #2). A student may fulfill their core requirement (12 core hours) and then take another (different) graduate student only course from the core list to count toward their advanced coursework requirement. In no case shall a course used to fulfill part of the core course requirement count toward the core requirement AND the advanced coursework requirement.

Advanced Coursework (Item #2)

Students must take at least **16 credit hours** of advanced CSCI graduate-level coursework. This includes at least **12 credit hours at the 8000-level** (thus fulfilling the Graduate School requirement of at least 12 hours of graduate only coursework). If taken at the 6000-level, the course taken for the *additional core related requirement* (see above) will satisfy 4 of the 16 hours, otherwise an additional 6000/8000 level course will need to be taken.

In no case shall a 6000-level course used to fulfill part of the advanced coursework requirement count toward the advanced coursework requirement AND the core curriculum requirement.

Master's Project and Report (Item #3)

To satisfy this requirement, **4 credit hours** of CSCI 7200 Master's Project must be taken, typically spread over the student's final two semesters. The CSCI 7200 course involves an applied research project under the direction of the student's Major Professor/Project Advisor (see below). As part of the requirements, a **comprehensive report** must be prepared detailing the student's procedures and findings regarding the completed project work.

Non-Departmental Requirements

Non-departmental requirements are set forth by the Graduate School (see the Graduate Bulletin). They concern residence, time limits, programs of study, acceptance of transfer credits, minimum GPAs, thesis, and final examination.

Graduation Requirements

Before the end of the second semester in residence, a student must begin submitting forms to the Graduate School, through the Graduate Coordinator, including a Program of Study Form. The Major Professor/Project Advisor must come from the Computer Science Faculty (Professors/Lecturers). The Program of Study Form indicates how and when degree requirements will be met and must be formulated in consultation with the student's Major Professor/Project Advisor. An Application for Graduation Form must also be submitted directly to the Graduate School.

Forms and Timing must be submitted as follows:

1. Core Competency Form (Departmental) - semester before the student's last semester
2. Program of Study Form (G138) - semester before the student's last semester
3. Application for Graduation Form - beginning of last semester

See "Important Dates and Deadlines" on the Graduate School's website.