SOFTWARE ENGINEERING, B.S.

"What courses will I get to take?"

If Florida Tech is about anything, it's exciting, hands-on degree programs that prepare you for the career of your dreams. The following curriculum, direct from the official Florida Tech catalog, shows you exactly what to expect in your field of choice—requirements and electives, course by course.

Once you've reviewed this curriculum, you may want to visit the Florida Tech catalog to learn more. There, you will also find short descriptions of each course, as well as more information about your intended college and its faculty. The Florida Tech catalog may be accessed anytime at floridatech.edu/catalog.

Thank you for your interest in Florida Tech. We look forward to your application.

OFFICIAL COURSE LISTING

FLORIDA TECH

FLORIDA'S **STEM** UNIVERSITY®
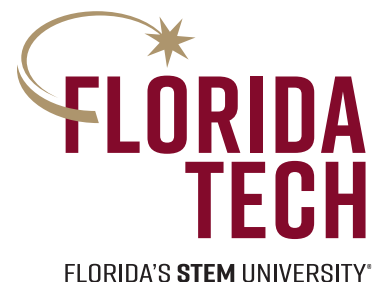
Software Engineering, B.S.

Major Code: 7075

Degree Awarded: Bachelor of Science

Delivery Mode(s): Classroom

Admission Status: Undergraduate

Location(s): Main Campus - Melbourne

The software engineering major prepares students for careers as practicing professionals in software architecture, design, implementation, testing and evolution, or for graduate study. The engineering of software is multidisciplinary, spanning computer science, engineering economics, engineering problem solving, epistemology, human factors management, mathematics, quality control and safety.

The educational objectives of the bachelor of science degree program are to prepare students so that within a few years after graduation they will be leaders in the development of software where their primary role may be in requirements elicitation, software design, application development, software testing or software evolution; they will be actively engaged in continual professional development; and will be using their technical knowledge, interpersonal and personal skills and professional attitude to advance their careers, the careers of others and the organizations for which they work.

Candidates for a Bachelor of Science in Software Engineering must complete the minimum course requirements outlined in the following curriculum.

Curriculum

Freshman Year

Fall (16 credit hours)

- COM 1101 Composition and Rhetoric
- CSE 1001 Fundamentals of Software Development 1
- CSE 1101 Computing Disciplines and Careers 1
- CSE 1400 Applied Discrete Mathematics

  or

- MTH 2051 Discrete Mathematics

- FYE 1000 University Experience

- MTH 1001 Calculus 1

or

- MTH 1010 Honors Calculus 1

Spring (18 credit hours)

- COM 1102 Writing About Literature
- CSE 1002 Fundamentals of Software Development 2
- CSE 2120 Computer Organization and Machine Programming

- MTH 1002 Calculus 2

or

- MTH 1020 Honors Calculus 2

- Restricted elective (laboratory science*) credit hours: 4

Sophomore Year

Fall (17 credit hours)

- CSE 2400 Applied Statistics

or

- MTH 2401 Probability and Statistics
- COM 2223 Scientific and Technical Communication
- CSE 2010 Algorithms and Data Structures
- Restricted elective (laboratory science*) credit hours: 4

Select first HUM core course:

- HUM 2051 Civilization 1: Ancient Through Medieval
- HUM 2053 Introduction to Asian Civilization
- HUM 2141 World Art History 1: Pre-History to Early Global Awareness

- HUM 2211 British Literature and Culture

- HUM 2212 British and American Literature 1

- HUM 2331 American History: Pre-Columbian to Civil War Era

- HUM 2551 Survey of Ancient and Medieval Philosophy

Spring (15 credit hours)

- CSE 2050 Programming in a Second Language

- CSE 2410 Introduction to Software Engineering

- MTH 3102 Introduction to Linear Algebra

- Humanities elective (HU) 3000-level or higher recommended credit hours: 3

Select second HUM core course:

- HUM 2052 Civilization 2: Renaissance Through Modern

- HUM 2054 Introduction to Asian Civilization 2

- HUM 2142 World Art History 2: Early Modern to Post-Colonial

- HUM 2212 British and American Literature 1 (may not be repeated for credit)

- HUM 2213 British and American Literature 2

- HUM 2332 American History: From Reconstruction to the Present

- HUM 2552 Survey of Modern and Contemporary Philosophy

Junior Year

Fall (15 credit hours)

- CSE 4001 Operating Systems Concepts

- CSE 4020 Database Systems

- CSE 4250 Programming Language Concepts

- CSE 4610 Requirements Engineering

- Restricted elective (MTH or science) credit hours: 3

Spring (16 credit hours)

- CSE 3421 Software Design Methods

- CSE 4083 Formal Languages and Automata Theory

- Restricted elective (CSE) 3000 level or higher credit hour: 3

- Restricted elective (MTH or science) credit hours: 3

- Restricted elective (social science) credit hours: 3

Senior Year

Fall (15 credit hours)

- [CSE 4201 Software Development Projects 1](#) (Q)
- [CSE 4410 Software Project Management](#)
- [CSE 4425 Software Testing](#)
- Free elective credit hours: 3
- Technical elective credit hours: 3

Spring (15 credit hours)

- [CSE 4202 Software Development Projects 2](#) (Q)
- [CSE 4683 Formal Methods](#)
- Free elective credit hours: 3
- Restricted elective (CSE) credit hours: 6

Total Credits Required: 127

*Students select one laboratory science sequence ([BIO 1010 Biological Discovery 1](#)/[BIO 1030 Introduction to Biotechnology](#) and [BIO 1020 Biological Discovery 2](#)/[BIO 1040 Introduction to Biodiversity and Physiology](#); [CHM 1101 General Chemistry 1](#)/[CHM 1111 General Chemistry Laboratory 1](#) and [CHM 1102 General Chemistry 2](#)/[CHM 1112 General Chemistry Laboratory 2](#); or [PHY 1001 Physics 1](#)/[PHY 2091 Physics Laboratory 1](#) and [PHY 2002 Physics 2](#)/[PHY 2092 Physics Laboratory 2](#)). Students who complete the physics sequence may apply two credits toward the Restricted Elective (Science) requirement.

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