

GREEN RIVER COLLEGE BACHELOR OF APPLIED SCIENCE INFORMATION TECHNOLOGY- SOFTWARE DEVELOPMENT



180 Credits

The Bachelor of Applied Science in Information Technology-Software Development is designed to prepare students for employment in a variety of software development positions, such as software developer, web developer, systems analyst, and quality assurance analyst. Successful graduates of the program should be able to:

- Develop stable, robust, secure, and efficient code following best practices in database design and software construction.
- Communicate with technical and non-technical project stakeholders, and within project teams.
- Apply Agile practices such as maintaining a product backlog, planning sprints, participating in sprint reviews and retrospectives.
- Perform software quality assurance activities throughout the entire software lifecycle.
- Write technical documentation to support software lifecycle activities.

Students typically begin their studies in this program at third-year (junior) standing, with credits earned during their first and second year applying towards the total 180 credits.

Entry Requirements

To enter this program, students must have an associate degree or higher from a regionally accredited institution. Students must have a minimum cumulative GPA of 2.5 or a waiver from the Program Director for entry into the program. Students who have completed some college coursework but do not have an associate degree or higher are encouraged to meet with academic advisor in the Information Technology department to develop an educational plan to prepare for entry into the program.

The following courses, or equivalents, are strongly recommended before entering this program because they contain foundational knowledge upon which the upper-division courses build:

- IT 201 Database Fundamentals
- IT 206 Front-End Web Development
- IT 207 Web Programming with JavaScript
- IT 219 Programming I **or** CS& 141 Computer Science I Java
- IT 220 Programming II **or** CS 145 Java 2-Data Structures

Laptop Requirement

The BAS Software Development curriculum engages students in a hands-on learning environment to reflect modern software development practices, requiring students to collaborate in team-based workspaces with access to wireless technology. As a result, all incoming students are required to have a wireless laptop computer.

Graduation Requirements

Students must attain a cumulative GPA of 2.5.

You must apply for, and be accepted into, the program before you can register for any upper-division (300- and 400-level) courses. For more information about this degree please visit www.greenriver.edu/software or contact an Information Technology program advisor at itdegrees@greenriver.edu.

Dept./No.	Course Title	Credits
General Education Requirements (60 credits)		
Communication Skills (15 credits)		
ENGL& 101	English Composition I	5
ENGL 128 or ENGL 126 or ENGL 127 or CMST& 210 or CMST& 220 or CMST& 230	Research Writing: Science/Engineering/Business or Writing: Humanities or Writing: Social Sciences or Interpersonal Communication or Public Speaking or Small Group Communication	5
ENGL 335	Advanced Technical Writing	5
Quantitative/Symbolic Reasoning Skills (5 credits)		
QSR course	Five credits of Quantitative Skills/Symbolic Reasoning courses from AA-DTA degree (Math& 141 PreCalculus I, Math 147 Finite Mathematics, or higher recommended)	5
Humanities/Fine Arts/English (10 credits)		
CMST 338 or CMST 238	Diversity in the Workplace or Intercultural Communication or Any Humanities/Fine Arts/English course from AA-DTA degree	5
Humanities/Fine Arts/English	Any Humanities/Fine Arts/English course from AA-DTA degree	5
Social Sciences (10 Credits)		
Social Science courses	Ten credits of Social Science courses from AA-DTA degree	10
Natural Sciences (10 credits)		
Lab Science course	Five credits of Natural Science lab-List A course from AA-DTA degree	5
Natural Science course	Five credits from Natural Science List A or List B courses from AA-DTA degree	5
General Education Electives (10 credits)		
Distribution courses	Ten credits from Humanities/Fine Arts/English, Social Science, or Natural Science courses from AA-DTA degree	10
Core Requirements (55 credits)		
IT 301	Systems Programming	5
IT 305	Web Development Frameworks	5
IT 328	Full Stack Web Development	5
IT 333	Data Structures	5
IT 334	Algorithms	5
IT 355	Agile Development Methods	5
IT 372	Software Maintenance and Evolution	5

IT 378 or BUS 400	Software Development Internship or Personal and Professional Branding	5
IT 426	Design Patterns and Practices	5
IT 485	Software Development Capstone 1	5
IT 486	Software Development Capstone 2	5

Technical Electives (20 credits)

20 credits of any Computer Science (CS) courses, any Information Technology (IT) courses, or any of the following Mathematics courses:

MATH& 146 Introduction to Statistics	
MATH 210 Discrete Math	
MATH 256 Statistics for Business and Social Science	20

Electives (45 credits)

45 credits from any courses at the 100-level or higher	45
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