

# COMPUTER SCIENCE - GENERAL (BACHELOR OF SCIENCE)

The Computer Science major emphasizes the development of large software systems. It consists of prescriptive courses and elective courses.

| Course                               | Title | Credits |
|--------------------------------------|-------|---------|
| Jax MIX General Education Curriculum |       | 41      |

| Course                                   | Title                                       | Credits |
|--|---|---------|
| <b>Prescriptive Courses</b>              |   |         |
| CS 230                                   | Fundamentals of Computing                   | 3       |
| CS 231                                   | Computer Programming I                      | 3       |
| CS 232                                   | Computer Programming II                     | 3       |
| CS 234                                   | Discrete Computational Structures           | 3       |
| CS 304                                   | Technical Writing for Computer Science (WI) | 3       |
| CS 310                                   | Software Engineering I                      | 3       |
| CS 331                                   | Data Structures and Algorithms              | 3       |
| CS 333                                   | Computer Organization and Architecture      | 3       |
| CS 350                                   | Fundamentals of Computer Operating Systems  | 3       |
| CS 450                                   | Computer Networking                         | 3       |
| CS 462                                   | Ethics and Legal Issues (WI)                | 3       |
| CS 488                                   | Database Systems                            | 3       |
| CS 491                                   | Software Engineering II                     | 3       |
| <b>General</b>                           |   |         |
| Computer Science Approved 300+ courses   |   | 6       |
| Computer Science Approved 400+ Electives |   | 6       |

Courses in the major may not be taken until all prerequisites are completed with a grade of "C" or better.

In addition to the major courses, support courses required are:

| Course | Title                              | Credits |
|--------|------------------------------------|---------|
| MS 125 | Calculus I                         | 4       |
| MS 126 | Calculus II                        | 4       |
| MS 302 | Applied Probability and Statistics | 3       |
| MS 352 | Linear Algebra                     | 3       |

*Note:* This schedule reflects the computer science program beginning with MS 125 (<https://catalog.jsu.edu/search/?P=MS%20125>) Calculus I (4). Freshman computer science majors needing additional preparation before beginning calculus will be placed in the appropriate algebra or precalculus courses that provide this preparation. See advisor.

*In addition to courses noted below, candidates for graduation must successfully complete all JSU Academic Regulations. More information about Jax MIX requirements (<https://catalog.jsu.edu/undergraduate/jax-mix-requirements/>) and Alabama Transfers equivalents (<https://catalog.jsu.edu/undergraduate/alabama-transfers-equivalents/>) can be found in their respective section of the catalog.*

|  |   |              |
|--|---|--------------|
| <b>Freshman</b>  |   |              |
| <b>Fall</b>  |   | <b>Hours</b> |
| Jax MIX Communication: EH Composition Sequence           |   | 3            |
| Jax MIX Inquiry: Science Sequence                        |   | 4            |
| CS 201   | Introduction to Information Technology      | 3            |
| CS 230   | Fundamentals of Computing                   | 3            |
| SSC 101  | First Year Experience                       | 0            |
| <b>Hours</b>   |   | <b>13</b>    |
| <b>Spring</b>  |   |              |
| Jax MIX Communication: EH Composition Sequence           |   | 3            |
| EH 141   | Speech (Jax MIX Communication)              | 3            |
| Jax MIX Inquiry: Science Sequence                        |   | 4            |
| CS 231   | Computer Programming I                      | 3            |
| CS 234   | Discrete Computational Structures           | 3            |
| <b>Hours</b>   |   | <b>16</b>    |
| <b>Sophomore</b>   |   |              |
| <b>Fall</b>  |   |              |
| Jax MIX Expression: Fine Arts                            |   | 3            |
| MS 125   | Calculus I (Jax MIX Communication)          | 4            |
| Jax MIX Experience: History                              |   | 3            |
| CS 232   | Computer Programming II                     | 3            |
| CS 304   | Technical Writing for Computer Science (WI) | 3            |
| <b>Hours</b>   |   | <b>16</b>    |
| <b>Spring</b>  |   |              |
| MS 126   | Calculus II                                 | 4            |
| Jax MIX Experience (History if sequence) <sup>1</sup>    |   | 3            |
| CS 310   | Software Engineering I                      | 3            |
| CS 331   | Data Structures and Algorithms              | 3            |
| CS 333   | Computer Organization and Architecture      | 3            |
| <b>Hours</b>   |   | <b>16</b>    |
| <b>Junior</b>  |   |              |
| <b>Fall</b>  |   |              |
| Jax MIX Expression: Literature                           |   | 3            |
| Jax MIX Experience: Social/Behavioral Science            |   | 3            |
| CS 488   | Database Systems                            | 3            |
| Computer Science Electives <sup>2</sup>                  |   | 3            |
| MS 302   | Applied Probability and Statistics          | 3            |
| <b>Hours</b>   |   | <b>15</b>    |
| <b>Spring</b>  |   |              |
| Jax MIX Expression (Literature if sequence) <sup>1</sup> |   | 3            |
| Jax MIX Experience: Social/Behavioral Science            |   | 3            |
| CS 350   | Fundamentals of Computer Operating Systems  | 3            |
| CS 491   | Software Engineering II                     | 3            |
| MS 352   | Linear Algebra                              | 3            |
| <b>Hours</b>   |   | <b>15</b>    |
| <b>Senior</b>  |   |              |
| <b>Fall</b>  |   |              |
| CS 450   | Computer Networking                         | 3            |
| Computer Science Electives <sup>2</sup>                  |   | 3            |
| Electives  |   | 8            |
| <b>Hours</b>   |   | <b>14</b>    |
| <b>Spring</b>  |   |              |
| CS 462   | Ethics and Legal Issues (WI)                | 3            |
| Computer Science Electives <sup>2</sup>                  |   | 3            |
| Computer Science Electives <sup>2</sup>                  |   | 3            |
| Electives  |   | 6            |
| <b>Hours</b>   |   | <b>15</b>    |
| <b>Total Hours</b>                                       |   | <b>120</b>   |

2 Computer Science - General (Bachelor of Science)

<sup>1</sup> Either a history sequence or a literature sequence is required.

<sup>2</sup> Computer Science Electives should have two courses numbered 300+ and two courses numbered 400+.