

Computer Science/Software Engineering Concentration (9259)

Associate of Applied Business Degree

This concentration is designed for students planning to transfer to a bachelor degree program in computer science or computer information systems. In addition to being a transfer program, this program will help students who are interested in game and entertainment programming acquire the fundamental skills to get started. Students should consult a Lakeland counselor prior to beginning this program in order to ensure maximum transferability.

NOTE: Students must fulfill the following requirements for this program:


- Place into MATH 1700 Trigonometry OR complete MATH 1650 College Algebra (A) with a “C” grade or higher

NOTE: Students planning to transfer to a four-year college are encouraged to take ENGL 1120 English Composition II in addition to the following requirements.

| Course | Title | Credit Hours |
|--|--|--------------|
| First Semester | | |
| ENGL 1110 or ENGL 1111 | English Composition I (A) ¹ or English Composition I (B) | 3 |
| FYEX 1000 | First Year Experience | 1 |
| ITCS 1010 | Programming Logic | 3 |
| ITCS 1011 | History of Computing | 2 |
| ITIS 1007 | Principles of Information Technology and Computer Science | 3 |
| MATH 1700 | Trigonometry | 3 |
| Credit Hours | | 15 |
| Second Semester | | |
| BUSM 2400 | Business Communication | 3 |
| CPET 1120 | C Programming for Engineering Technology | 3 |
| ITCS 1820 | Java Programming I | 3 |
| ITCS 1870 | Python Programming I | 3 |
| MATH 2500 | Calculus and Analytical Geometry I | 5 |
| Credit Hours | | 17 |
| Third Semester | | |
| CHEM 1500 or PHYS 2410 | General Chemistry I ² or Science and Engineering Physics I | 5 |
| ITCS 2080 | Fundamentals of Software Engineering | 3 |
| ITCS 2870 | Data Structures | 4 |
| MATH 2600 | Calculus and Analytical Geometry II | 5 |
| Credit Hours | | 17 |
| Fourth Semester | | |
| ITCS 2012 | Discrete Structures | 3 |
| ITCS 2875 | Computer Architecture and Organization | 3 |
| ITDB 1401 | SQL Programming and Database Design | 3 |
| ITIS 2890 | Information Technology and Computer Science Capstone | 2 |
| ITON 1205 | Network+ and Networking Essentials | 2 |
| Select course(s) from the Arts and Humanities Electives list | | 3 |
| Credit Hours | | 16 |
| Total Credit Hours | | 65 |

¹ English course selection is based on placement test results (ENGL 1111 English Composition I (B) is 4 credits, only 3 credits apply to the degree).

² Students should discuss the choice of science courses with their advisor.

 This course is designated as a technical course in the program. Students must earn a "C" grade or higher in the course to fulfill the college's graduation requirements policy.

Electives

| Course | Title | Credit Hours |
|----------------------------|---|--------------|
| Arts and Humanities | | |
| ARTS 1120 | Art Appreciation | 3 |
| ARTS 2220 | Survey of Art I | 3 |
| ARTS 2230 | Survey of Art II | 3 |
| ENGL 2250 | Survey of American Literature I | 3 |
| ENGL 2260 | Survey of American Literature II | 3 |
| ENGL 2280 | Survey of British Literature I | 3 |
| ENGL 2290 | Survey of British Literature II | 3 |
| HUMX 1100 | Introduction to Humanities | 3 |
| HUMX 1200 | The American Experience in the Arts | 3 |
| MUSC 1200 | Music Appreciation | 3 |
| MUSC 1215 | World Music | 3 |
| MUSC 1800 | Popular Music: Rock, Jazz, Country, and Hip-Hop | 3 |
| MUSC 2200 | Music History and Literature I | 3 |
| MUSC 2250 | Music History and Literature II | 3 |
| PHIL 1500 | Introduction to Philosophy | 3 |
| PHIL 2000 | Comparative Religion | 3 |
| PHOT 1000 | History of Photography | 3 |