

# Associate of Applied Business Degree Business

## Information Technology and Computer Science

### Computer Science/Programming

#### Computer Science/Software Engineering Concentration (9259)

This concentration is designed for students planning to transfer to a Computer Science or Computer Information Systems program at a four-year college. 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:

- 1) place into MATH 1700 Trigonometry **OR** complete MATH 1650 College Algebra with a grade of "C" or better.
- 2) successfully complete the CIS Tech Prep program  
**OR** have waived with equivalent high school or college coursework the following course:  
ITIS 1005 Computers and Information Processing  
**OR** complete ITIS 1005 with a grade of "C" or better

#### First Semester:

CPET 1120 . . . . .	C Programming for Engineering Technology . . . . .	3
<b>ENGL 1110*</b> . . . . .	<b>English Composition I (A)</b> . . . . .	3
<b>OR</b>		
<b>ENGL 1111</b> . . . . .	<b>English Composition I (B)</b>	
ITCS 1010 . . . . .	Programming Logic . . . . .	3
ITON 1011 . . . . .	Comparative Analysis of Microcomputer Operating Systems . . . . .	2
<b>ITON 1030</b> . . . . .	<b>Using Microsoft Windows Vista</b> . . . . .	1
<b>OR</b>		
<b>ITON 1050</b> . . . . .	<b>Using Microsoft Windows 7</b>	
MATH 1700 . . . . .	Trigonometry . . . . .	3
<b>SPCH 1050**</b> . . . . .	<b>Fundamentals of Public Speaking</b> . . . . .	2
<b>OR</b>		
<b>SPCH 1150</b> . . . . .	<b>Fundamentals of Interpersonal Communication</b>	

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#### Second Semester:

<b>ENGL 1120</b> . . . . .	<b>English Composition II</b> . . . . .	3
<b>OR</b>		
<b>ENGL 1121</b> . . . . .	<b>English Composition II - Technical Focus</b>	
ITCS 1820 . . . . .	Java Programming I . . . . .	3
<b>ITCS 1810</b> . . . . .	<b>Visual Basic.NET Programming I</b> . . . . .	3
<b>OR</b>		
<b>ITCS 1840</b> . . . . .	<b>Visual C#.NET Programming I</b>	
ITDB 1400 . . . . .	Introduction to Oracle SQL . . . . .	2
ITON 1205 . . . . .	Network+ and Networking Essentials . . . . .	2
MATH 2500 . . . . .	Calculus and Analytical Geometry I . . . . .	5

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#### Third Semester:

BUSM 1300 . . . . .	Introduction to Business . . . . .	3
ITCS 2010 . . . . .	Systems Analysis . . . . .	3
ITCS 2870 . . . . .	Data Structures . . . . .	4
MATH 2600 . . . . .	Calculus and Analytical Geometry II . . . . .	5
	Choose course(s) from the Social and Behavioral Sciences Electives list . .	3

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#### Fourth Semester:

<b>CHEM 1500</b> . . . . .	<b>General Chemistry I</b> . . . . .	5
<b>OR</b>		
<b>PHYS 2410</b> . . . . .	<b>Science and Engineering Physics I</b>	
ITCS 2012 . . . . .	Discrete Structures . . . . .	3
ITCS 2080 . . . . .	Fundamentals of Software Engineering . . . . .	3
ITCS 2875 . . . . .	Computer Architecture and Organization . . . . .	3
	Choose course(s) from the Arts and Humanities Electives list . . . . .	3

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**Program Total: 70**

*\*English course selection is based on placement test results (ENGL 1111 is 4 credits, only 3 credits apply to the degree).*

*\*\*Students may substitute either SPCH 1000 or SPCH 1100. One of these 3 credit courses may be required for students transferring to some four-year colleges.*

#### **Arts and Humanities Electives:** minimum 3 credits

ARTS 1120, 2220, 2230; ENGL 2250, 2260, 2280, 2290; HUMX 1100, 1200; MUSC 1200, 1215, 1800, 2200, 2250; PHIL 1500, 2000

#### **Social and Behavioral Sciences Electives:** minimum 3 credits

ANTH 1160; ECON 1150, 2500, 2600; GEOG 1500, 1600, 2500; HIST 1100, 1200, 2100, 2200, 2400; POLS 1300, 2500; PSYC 1500; SOCY 1150