

Associate of Applied Business Degree Business

Information Technology and Computer Science

Computer Science/Programming

Computer Science/Computer Information Systems 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. Students should consult a Lakeland counselor prior to beginning this program in order to ensure maximum transferability.

First Semester:

ENGL 1110* English Composition I (A)	3
OR	
ENGL 1111 English Composition I (B)	
MATH 1700.....Trigonometry	3
SPCH 1050** Fundamentals of Public Speaking	2
OR	
SPCH 1150 Fundamentals of Interpersonal Communication (1st 8 weeks)	
ITIS 1005.....Computers and Information Processing.....	3
(2nd 8 weeks)	
ITCS 1010.....Programming Logic.....	3
ITIS 1008.....Ethics in Information Technology	1
ITON 1011.....Comparative Analysis of Microcomputer Operating Systems	2
ITON 1020 Using Microsoft Windows	1
OR	
ITON 1030 Using Microsoft Windows Vista	
	18

Second Semester:

ENGL 1120 English Composition II	3
OR	
ENGL 1121 English Composition II - Technical Focus	
ITCS 1820.....Java Programming I.....	3
ITIS 1115.....Internet Technologies and Concepts	2
MATH 2500.....Calculus and Analytical Geometry I	5
Choose course(s) from Electives Group	4-5
	17-18

Third Semester:

ITCS 2010.....Systems Analysis.....	3
ITCS 2870.....Data Structures	4
ITDB 1400.....Introduction to Oracle SQL	2
MATH 2600.....Calculus and Analytical Geometry II.....	5
Choose course(s) from Electives Group	4
	18

Fourth Semester:

BUSM 1300.....Introduction to Business	3
ITCS 1810 Visual Basic.NET Programming I	3
OR	
ITCS 1840 Visual C#.NET Programming I	
ITCS 2875.....Computer Architecture and Organization.....	3
Choose course(s) from the Arts and Humanities Electives list.	3
Choose course(s) from the Social and Behavioral Sciences Electives list.	3
Choose course(s) from Electives Group	2-3
	17-18

Program Total: 70-72

**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.*

**** Students selecting the Networking electives group must take ITON 1030.*

Electives Groups: Students must complete 10-12 credits by selecting **all** of the required courses within a pre-approved group of courses. The following groups of courses are designed to provide students with additional practical, marketable skills or to enhance transfer preparation. Courses listed as optional within each group are shown as recommendations for students who choose to take additional courses beyond the degree requirements. Other groups can be developed with permission of an IT department chair. Students should meet with a Lakeland counselor before selecting an electives group to ensure maximum transferability. (NOTE: Each electives group must include at least 3 credits from one or more approved technical courses.)

Group 1: (Internet)

Required

ITCS 1105.....Web Programming I.....	2
ITCS 2105.....Web Programming II	3
ITCS 2140.....CGI Programming	3
ITIS 1100.....Internet: Services, Tools, and Web Page Creation.....	2
ITIS 1108.....Using an HTML Editor	2
	12

Optional

ITCS 2170.....Introduction to ASP.NET	2
ITCS 2190.....Internet Specialist Capstone	4
ITIS 1130.....Introduction to Web Design	1
ITON 1205.....Network+ and Networking Essentials	2
ITON 1725.....Introduction to the Linux/Unix Operating System.....	2

Group 2: (Interactive Game Programming)

Required

ITCS 1105.....Web Programming I.....	2
ITCS 1122.....Flash ActionScript	2
ITCS 2854 Flash Game Programming I	2
OR	
ITCS 2860 Robotics for Game Programmers I	3
ITIS 1100.....Internet: Services, Tools, and Web Page Creation.....	2
ITIS 1120.....Introduction to Flash	2
	10-11

Optional

ITCS 2820.....Java Programming I.....	3
ITCS 2850.....Game Programming I	3
ITCS 2851.....Game Programming II	3
ITCS 2854.....Flash Game Programming I.....	2
ITCS 2855.....Flash Game Programming II.....	2
ITCS 2860.....Robotics for Game Programmers I	3
ITCS 2861.....Robotics for Game Programmers II	3
ITCS 2895.....Interactive Game Programming Capstone	3

Group 3: (Networking)**Required**

ITON 1205	.Network+ and Networking Essentials	2
ITON 2030	.Windows Vista Configuration	2
ITON 2234	.Windows Server 2008 Network Infrastructure Configuration	2
ITON 2236	.Windows Server 2008 Active Directory Configuration	2
ITON 2237	.Windows Server 2008 Applications Infrastructure Configuration	2

10**Optional**

ITON 2031	.Support and Troubleshoot Applications on Vista	2
ITON 2230	.Microsoft Exchange Server Implementation and Administration	2
ITON 2231	.Configuring Microsoft Office Communications Server	2
ITON 2238	.Windows Server 2008 Server Administrator	2
ITON 2239	.Windows Server 2008 Enterprise Administrator	2

Group 4: (Oracle)*(NOTE: Students will need to take required course ITDB 1400 2nd semester - 1st 8 weeks)***Required**

ITDB 1405	.Introduction to Oracle PL/SQL	2
ITDB 1410	.Introduction to Oracle Data Warehousing	3
ITDB 1420	.Develop Oracle PL/SQL Program Units	2
ITDB 2400	.Oracle Developer: Forms I	3

10**Optional**

ITDB 2405	.Oracle Developer: Forms II	2
ITDB 2490	.Oracle Database Applications Developer Capstone	4
ITON 1205	.Network+ and Networking Essentials	2

Group 5: (Oracle DBA)*(NOTE: Students will need to take required course ITDB 1400 2nd semester - 1st 8 weeks)***Required**

ITDB 1405	.Introduction to Oracle PL/SQL	2
ITDB 1420	.Develop Oracle PL/SQL Program Units	2
ITDB 1425	.Oracle Database Administration I	2
ITDB 2425	.Oracle Database Administration II	2
ITON 1205	.Network+ and Networking Essentials	2

10**Group 6: (Computer Science)****Required**

ITCS 2012	.Discrete Structures	3
ITON 1205	.Network+ and Networking Essentials	2
ITON 1725	.Introduction to the Linux/Unix Operating System	2
MATH 2700	.Calculus and Analytical Geometry III	4

11**Optional**

CHEM 1500	.General Chemistry I	5
CHEM 1600	.General Chemistry II	5
PHYS 2410	.Science and Engineering Physics I	5
PHYS 2420	.Science and Engineering Physics II	5

Group 7: (Accounting)**Required**

ACCT 1100	.Introduction to Financial Accounting	4
ACCT 1200	.Introduction to Managerial Accounting	3
ACCT 1270	.Financial Analysis Using Spreadsheets	3

10**Optional**

ACCT 2100	.Intermediate Accounting I	4
ACCT 2110	.Managerial Accounting: Cost	4
ACCT 2200	.Intermediate Accounting II	4
ACCT 2210	.Managerial Accounting: Finance	4

Group 8: (Software Engineering)**Required**

ITCS 2012	.Discrete Structures	3
ITCS 2080	.Fundamentals of Software Engineering	3
ITON 1205	.Network+ and Networking Essentials	2
ITON 1725	.Introduction to the Linux/Unix Operating System	2

10**Optional**

CHEM 1500	.General Chemistry I	5
CHEM 1600	.General Chemistry II	5
PHYS 2410	.Science and Engineering Physics I	5
PHYS 2420	.Science and Engineering Physics II	5

Arts and Humanities Electives: minimum 3 credits

ARTS 1120, 2220, 2230, 2240; ENGL 2250, 2260, 2280, 2290; HUMX 1100, 1200; MUSC 1200, 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