

# INFORMATION TECHNOLOGY (BSIT)

## Program Overview

The B.S. Information Technology (BSIT) program provides students with a combination of knowledge, hands-on experience, and application of theory to support their employment in the field of Information Technology. The curriculum emphasizes quantitative and communication skills as well as providing a basic foundation in understanding the business process and the role of Information Technology in supporting that process. The BSIT is also available online (<https://catalog.columbusstate.edu/academic-units/business/computer-science/information-technology-online-bsit/>).

Computer science and information technology graduates find jobs in a wide array of occupations including software engineering, application, game, and web programming, network administration and security, and database administration. Because computers are becoming more and more pervasive, computer science and information technology jobs are available in almost every field. According to the US Department of Labor, computer science and information technology job opportunities are expected to grow at approximately 22% through 2020, which is much faster than the average for all occupations.

## Career Opportunities

Business/Systems Analysts, Database Administrators, Network Manager, Network & Security Specialists

## Program of Study

Click on the Program Map tab to view a term-by-term guide for completing the program requirements.

## Core Requirements

Code	Title	Credit Hours
<b>Area A Essential Skills</b>		
ENGL 1101	English Composition I (minimum grade of C)	3
ENGL 1102	English Composition II (minimum grade of C)	3
MATH 1113	Pre-Calculus (the extra credit of MATH applies to Area G)	4
Area A Total		9
<b>Area B Institutional Options <sup>1</sup></b>		
B1: Select 3 hours of following courses:		3
COMM 1110	Public Speaking	
Any Foreign Language 1001, 1002, 2001, 2002		
B2: Select 1 hour of the following courses:		1
ITDS 1779	Scholarship Across the Disciplines	
LEAD 1705	Introduction to Servant Leadership	
PERS 1506	Perspectives 1-hour	
PERS 1507	Perspectives 2-hour	
Area B Total		4
<b>Area C Humanities/Fine Arts/Ethics</b>		
Select one of the following humanities courses:		3
ENGL 2111	World Literature I	

ENGL 2112	World Literature II	
ITDS 1145	Comparative Arts <sup>2</sup>	
ITDS 1155	The Western Intellectual Tradition	
ITDS 2125	Historical Perspectives on the Philosophy of Science and Mathematics	
PHIL 2010	Introduction to Philosophy	
Select one of the following fine arts courses:		3
ARTH 1100	Art Appreciation	
ITDS 1145	Comparative Arts <sup>2</sup>	
MUSC 1100	Music Appreciation	
THEA 1100	Theatre Appreciation	
ARTH 2125	Introduction to the History of Art I– Prehistoric through Gothic	
ARTH 2126	Introduction to the History of Art II– Renaissance through Modern	
Area C Total		6
<b>Area D Science/Math/Technology <sup>1</sup></b>		
D1: Select two of the following lab science courses:		8
ASTR 1105 & ASTR 1305	Descriptive Astronomy: The Solar System and Descriptive Astronomy Lab	
ATSC 1112 & 1112L	Understanding the Weather and Understanding the Weather Lab	
BIOL 1215K	Principles of Biology	
BIOL 1225K	Contemporary Issues in Biology with Lab	
CHEM 1151 & 1151L	Survey of Chemistry I and Survey of Chemistry I Lab	
CHEM 1152 & 1152L	Survey of Chemistry II and Survey of Chemistry II Lab	
CHEM 1211 & 1211L	Principles of Chemistry I and Principles of Chemistry I Lab	
CHEM 1212 & 1212L	Principles of Chemistry II and Principles of Chemistry II Lab	
GEOL 1121	Introductory Geoscience I: Physical Geology	
GEOL 1122 & GEOL 1322	Introductory Geo-sciences II: Historical Geology and Introductory Geo-sciences II: Historical Geology Lab	
GEOL 2225	The Fossil Record	
PHYS 1111 & PHYS 1311	Introductory Physics I and Introductory Physics I Lab	
PHYS 1112 & PHYS 1312	Introductory Physics II and Introductory Physics II Lab	
PHYS 1125 & PHYS 1325	Physics of Color and Sound and Physics of Color and Sound Lab	
PHYS 2211 & PHYS 2311	Principles of Physics I and Principles of Physics I Lab	
PHYS 2212 & PHYS 2312	Principles of Physics II and Principles of Physics II Lab	
D2: Take the following course		3
STAT 1401	Elementary Statistics	
Area D Total		11
<b>Area E Social Sciences</b>		
HIST 2111 or HIST 2112	U. S. History to 1865 or U. S. History since 1865	3
POLS 1101	American Government	3
Select one of the following behavioral science courses:		3

ECON 2105	Principles of Macroeconomics	
ECON 2106	Principles of Microeconomics	
PHIL 2030	Moral Philosophy	
PSYC 1101	Introduction to General Psychology	
SOCI 1101	Introduction to Sociology	
Select one of the following world cultures courses:		3
ANTH 1105	Cultural Anthropology	
ANTH 1107	Discovering Archaeology	
ANTH 2105	Ancient World Civilizations	
ANTH/ENGL 2136	Language and Culture	
GEOG 1101	World Regional Geography	
HIST 1111	World History to 1500	
HIST 1112	World History since 1500	
INTS 2105	Introduction to International Studies and Cross-Cultural Learning	
ITDS 1156	Understanding Non-Western Cultures	
Area E Total		12
<b>Wellness Requirement</b>		
KINS 1106	Lifetime Wellness or PHED 120 Concepts of Fitness	
Select one PEDS course ( <a href="https://catalog.columbusstate.edu/course-descriptions/peds/#peds">https://catalog.columbusstate.edu/course-descriptions/peds/#peds</a> )		
Wellness Total		3
<b>Total Credit Hours</b>		<b>45</b>

<sup>1</sup> Note: Students whose majors require 2 lab science courses in Area D complete Area B and Area D with a combined total of 15 credit hours. Any additional hours may be applied to Area F or beyond, depending on the program of study. Students should consult their advisors.

- Area B1, 3 hours;
- Area B2, 1 hour;
- Area D1, 8 hours;
- Area D2, 3 hours.

<sup>2</sup> ITDS 1145 Comparative Arts, though listed under both humanities and fine arts, may be taken only once.

## Major Requirements

Code	Title	Credit Hours
<b>Core Requirements</b>		
Complete the core requirements for this program		45
Core Total		45
<b>Area F Courses Related to Major</b>		
Minimum grade of C is required in each CPSC and CYBR course		
CPSC 1301K	Computer Science I	4
CPSC 1302	Computer Science II	3
CPSC 2105	Computer Organization	3
CYBR 2159	Fundamentals of Computer Networks	3
CYBR 2160	Intro to Information Security	3
MATH 2125	Introduction to Discrete Mathematics (one hour to Area G)	3
Area F Total		18

### Area G Required Core Courses

Minimum grade of C is required in each BUSA, CPSC and MISM course		
BUSA 2100	Introduction to Information Systems in Business or MISM 2115	3
CPSC 3118	Graphical User Interface Development	3
CPSC 3131	Database Systems I	3
CPSC 3165	Professionalism in Computing	3
CPSC 3415	Information Technology (IT) Practicum (take 3 times in 3 different approved subject areas) or CPSC 4698 Internship	3
CPSC 4205	IT Senior Capstone	3
CPSC 4000	Baccalaureate Survey	0
ENGL 5195U	Technical and Scientific Writing	3
MISM 3109	Principles of Information Technology Management for Non-Business Majors	3
MISM 4165	Project Management	3
MISM 4168	Systems Analysis & Design	3
Math from Area A		1
One hour from Area F MATH 2125		1
Area G Total		32

### Area H Program Electives

Minimum grade of C is required in each course.		
CPSC/CYBR/ MISM	Select 2 credits	2
CPSC/CYBR/ MISM	Select 12 credits at the 3000 level or above	12
Area H Total		14

### Area I General Electives

Select 14 credits, the following are recommended Courses for Business Minor: <sup>1</sup>		14
ACCT 2101	Principles of Accounting I	
BUSA 3135	International Business	
ECON 2106	Principles of Microeconomics	
MGMT 3109	Principles of Management for Non-Business Majors	
MKTG 3109	Principles of Marketing for Non-Business Majors	
Area I Total		14
<b>Total Credit Hours</b>		<b>123</b>

<sup>1</sup> Note: Students are limited to no more than 30 credits of courses from the DATCoB with the following prefixes: ACCT/BUSA/MISM/ECON/ ENTR/FINC/FTA/MGMT/MKTG.

## To Include Certificate in Cybersecurity

Code	Title	Credit Hours
<b>Core Requirements</b>		
Complete the core requirements for this program		45
Core Total		45
<b>Area F/G/I</b>		
Complete the requirements for Areas F, G and I		64
Area F/G/I total		64
<b>Area H Program Electives</b>		

Minimum grade of C is required in each CPSC, CYBR and MISM course		
CPSC/CYBR/ MISM	Select 2 credits	2
CPSC/CYBR/ MISM	Select 3 credits at the 3000 level or above	3
Select three of the following:		9
CPSC 4127	Computer and Network Security	
CYBR 3106	Cybersecurity Risk Management	
CYBR 3108	Defensive Programming	
CYBR 3119	Fundamentals of Digital Forensics	
CYBR 3128	Cybersecurity Management	
CYBR 4128	Penetration Testing and Countermeasures	
CYBR 4160	Applied Cryptography	
CYBR 4166	Intrusion Detection and Prevention	
Area H total		14
<b>Total Credit Hours</b>		<b>123</b>

### To Include Certificate in Web Development

Code	Title	Credit Hours
<b>Core Requirements</b>		
Complete the core requirements for this program		45
Core total		45
<b>Area F/G/I</b>		
Complete the requirements for Areas F, G and I		64
Area F/G/I total		64
<b>Area H Program Electives</b>		
Minimum grade of C is required in each CPSC, CYBR and MISM course		
CPSC 2125	Internet Programming	3
CPSC 3105	Digital Multimedia Development	3
CPSC 4125	Server-Side Web Development	3
CPSC 4126	Web Development Projects	3
CPSC/CYBR/ MISM	Select 2 credits at the 3000 level or above	2
Area H total		14
<b>Total Credit Hours</b>		<b>123</b>

### Program Map

Course	Title	Credit Hours
<b>First Year</b>		
<b>Fall</b>		
ENGL 1101	English Composition I (minimum grade of C)	3
MATH 1113	Pre-Calculus (minimum grade of C)	4
Area B1	COMM 1110 Public Speaking or foreign language 1001, 1002, 2001, 2002	3
CPSC 1301K	Computer Science I (minimum grade of C)	4
KINS 1106 or PHED 1205	Lifetime Wellness or Concepts of Fitness	2
<b>Credit Hours</b>		<b>16</b>

<b>Spring</b>		
ENGL 1102	English Composition II (minimum grade of C)	3
MATH 2125	Introduction to Discrete Mathematics (minimum grade of C)	3
CPSC 1302	Computer Science II (minimum grade of C)	3
CPSC 2105	Computer Organization (minimum grade of C)	3
AREA C	Fine Arts Elective	3
Area B2	ITDS 1779 (2), LEAD 1705 (2), PERS 1506 (1; may be repeated with different topic), PERS 1507 (2)	1
<b>Credit Hours</b>		<b>16</b>

#### Second Year

<b>Fall</b>		
STAT 1401	Elementary Statistics (Area D course)	3
CYBR 2159	Fundamentals of Computer Networks (minimum grade of C)	3
BUSA 2100	Introduction to Information Systems in Business	3
AREA C	Humanities Elective	3
AREA D	Science Elective with Lab	4
<b>Credit Hours</b>		<b>16</b>

#### Spring

CPSC 3118	Graphical User Interface Development (minimum grade of C)	3
CYBR 2160	Intro to Information Security (minimum grade of C)	3
MISM 3109	Principles of Information Technology Management for Non-Business Majors (minimum grade of C)	3
HIST 2111 or HIST 2112	U. S. History to 1865 or U. S. History since 1865	3
AREA E	Social Sciences Elective (World Culture)	3
CPSC 3415	Information Technology (IT) Practicum (minimum grade of C)	1
<b>Credit Hours</b>		<b>16</b>

#### Third Year

<b>Fall</b>		
CPSC 3165	Professionalism in Computing (minimum grade of C)	3
AREA I	General Elective	3
Area H	CPSC/CYBR/MISM Elective (minimum grade of C)	2
AREA E	Behavioral Science Elective	3
POLS 1101	American Government	3
CPSC 3415	Information Technology (IT) Practicum (minimum grade of C)	1
<b>Credit Hours</b>		<b>15</b>

#### Spring

CPSC 3131	Database Systems I (minimum grade if C)	3
Area H	CPSC/CYBR/MISM Upper-Division Elective (minimum grade of C)	3
Area W	PEDS Elective	1
AREA I	General Elective	3

ENGL 5195U	Technical and Scientific Writing	3
CPSC 3415	Information Technology (IT) Practicum (minimum grade of C)	1
<b>Credit Hours</b>		<b>14</b>
<b>Fourth Year</b>		
<b>Fall</b>		
MISM 4168	Systems Analysis & Design (minimum grade of C)	3
AREA H	CPSC/CYBR/MISM Upper-Division Elective (minimum grade of C)	3
Area D	Science Elective with Lab	4
AREA I	General Elective	3
AREA I	General Elective	3
<b>Credit Hours</b>		<b>16</b>
<b>Spring</b>		
CPSC 4205	IT Senior Capstone (minimum grade of C)	3
MISM 4165	Project Management (minimum grade of C)	3
CPSC 4000	Baccalaureate Survey	0
Area H	CPSC/CYBR/MISM Elective (minimum grade of C) <sup>1</sup>	3
Area H	CPSC/CYBR/MISM Elective (minimum grade of C) <sup>1</sup>	3
AREA I	General Elective	2
<b>Credit Hours</b>		<b>14</b>
<b>Total Credit Hours</b>		<b>123</b>

<sup>1</sup> Must be a pair of courses: CPSC 2125 Internet Programming-CPSC 4125 Server-Side Web Development or CPSC 3111 COBOL Programming-CPSC 3156 Transaction Processing or CYBR 3106 Cybersecurity Risk Management-CYBR 3119 Fundamentals of Digital Forensics.

## Additional Notes

This program map illustrates appropriate coursework for completing a degree within four years, provided that course grades allow for earned credit. Please consult with your advisor to determine when courses can be switched out with others and taken in a different semester or sequence than illustrated since not all courses are taught every semester.

- This map is for illustrative purposes only and does not constitute a legal contract on the part of CSU since degree requirements or course offerings could change. As always, check with your advisor.
- Students must complete "Area A" (ENGL 1101 English Composition I, ENGL 1102 English Composition II, and MATH 1001 Quantitative Skills and Reasoning or higher) prior to reaching 30 hours and earn a "C" or higher in ENGL 1101 and 1102.
- As of Fall 2013, all undergraduate students are required each semester to meet the 2.0 institutional GPA standard for satisfactory academic progress.

## Admission Requirements

There are no program specific admission requirements.

## Additional Program Requirements

Students must earn a C or better in all WBIT, CPSC and MISM courses in Areas F, G, and H.

## Program Learning Outcomes

- Apply fundamental systems analysis, project management, and end user support concepts to address real-world business problems
- Apply analytical and critical thinking skills to develop creative solutions to these problems
- Apply professional and interpersonal skills to communicate these solutions to both coworkers and management
- Assess software solution functions as a part of the overall business solution to the problem at hand