

Department of

Computer Information Technology



Rex Barzee, Department Chair

Bradley Armstrong, Lee Barney, Jason Blazzard, Kory Godfrey, Kent Jackson, Michael McLaughlin, Craig Lindstrom, Brent Moring, Mark Olaveson, Steven Rigby, Blaine Robertson, Randy Somsen, Shane Thompson

Science and Technology Center (STC) 320A
<http://www.byui.edu/CIT/>

Introduction to Computer Information Technology

Take a look at Computer Information Technology (CIT). It includes the design, development, and management of systems within an organization to solve real-world problems. A world of opportunity awaits you!

A career in CIT allows you to create solutions for real problems that effect real people. As you help solve these problems with your team, you may be creating new and exciting solutions that change the everyday lives of individuals. You will be making a real difference that impacts the growth and success of an organization.

There is high demand for BYU-Idaho CIT graduates all over the world in all segments of the economy in both small and large companies. Careers in CIT pay higher-than-average salaries. You can work in major financial, accounting, agriculture, manufacturing, medicine, retailing, or software companies, in education or government agencies, or for non-profit organizations.

Careers in CIT are dynamic. New challenges and opportunities await you every day. Working in a team, you will interact cooperatively with the management, customers, clients, and other information technology professionals to determine what the solution needs to do, what it needs to look like, and how it should work. One day, you may be meeting with customers and clients, the next designing software, and the next designing a database. The next day you may be involved in designing a complex network to allow your organization to communicate more effectively using the web, mobile devices, and computers. The next day you may be setting up a clustered set of web servers. CIT is a very interactive and interesting career in which to work.

General Advisement questions should be directed to the College of Business and Communication Advisement Center, Smith 227, (208) 496-1411 or cbcadvising@byui.edu.

Online students can contact (208) 496-9900 or cbconline@byui.edu.

A minimum GPA of 1.7 (C-) is required in all major courses.

Accessibility of Computer Information Technology Courses

CIT 110, CIT 111, CIT 160, CIT 240, CIT 270, and CIT 380 are available to all students.

Web Design and Development

Introduction to Web Design and Development

The internet and emerging technology have transformed many areas of our lives including business, entertainment, education, and the Church's reach to members and non-members alike around the world. Within industry, there is a great need for professionals who can effectively use the latest technologies to design and develop professional, interactive web sites.

Combining the interdisciplinary resources of the Art, Business Management, Communication, Computer Information Technology, and Computer Science department, students may choose from a variety of integrated web design and development programs.

General advisement questions should be directed to the College of Business and Communication Advising Center, Smith 227, (208) 496-1411 or cbcadvising@byui.edu

Online students can contact (208) 496-9900 or cbconline@byui.edu

The following majors are available to choose from:

- AAS in Web Design and Development, Emphasis in Web Design
- AAS in Web Design and Development, Emphasis in Web Development
- BS in Web Design and Development, Emphasis in Web Design
- BS in Web Design and Development, Emphasis in Web Development

The following minors are available to choose from for Web Design and Development students:

- Minor in Web Design for Students in Development Emphasis
- Minor in Web Development for Students with Design Emphasis

The following minors are available to choose from for Non-Web Design and Development students:

- Minor in Web Technology (for students who want an overview of web technology)
- Minor in Web Design (for students who want an overview of web design principles)
- Minor in Web Development (for students who want an overview of web development principles)

AAS in Computer Information Systems (375)

CIT Core <i>Complete three emphases from the following for a minimum of 45 credits*:</i> Programming CIT 160 3 CIT 260 3 CIT 261 3 CIT 301C (.NET) 3 CS 101 2 <hr/> 14	Database <i>Take these courses:</i> CIT 111 3 CIT 160 3 CIT 225 3 CIT 325 3 CIT 425 3 <hr/> 15	Analytics ACCTG 180 3 CIT 110 3 CIT 111 3 CIT 381 3 MATH 221A 3 <hr/> 15	Web Backend CIT 160 3 CIT 230 3 CIT 261 3 CIT 336 3 CIT 301C (JavaScript) 3 <hr/> 15	Program Notes: •No Grade Less Than C- in Major Courses *If a class is used in more than one certificate, add any BYU-Idaho course to meet the 45-credit requirement. •Programming students should take the CIT 301C .NET section. •Web Frontend students should take the CIT 301B CSS section. •Web Backend students should take the CIT 301C JavaScript section.
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Credit Requirements:

Foundations	17
Major	<u>45</u>
Total	62

Tracks Available:

Fall-Winter	Yes
Winter-Spring	Yes
Spring-Fall	Yes
Online	Yes

AAS in Web Design and Development Web Design Emphasis (390-113)

Core Courses <i>Take these courses:</i> B 250 3 CIT 160 3 CIT 230 3 CIT 260 3 CIT 336 3 COMM 130 3 COMM 310 3 CS 371 3 WDD 100 1 <hr/> 25	<i>Take these courses:</i> ART 130 3 ART 230 3 ART 235 3 ART 337R 3 <hr/> 12	<i>cont. from previous column</i> ART 438R 3 CIT 260 3 COMM 273 3 COMM 300 3 COMM 305 3 COMM 315 3 COMM 322 3 COMM 397R 1 COMM 462 3 COMM 497R* 1 <hr/> 6	Program Notes: •No Double Counting of Major Courses •No Grade Less Than C- in Major Courses •*If Students take Comm 497R twice, select from "After Effects" and "Final Cut." •Please check online website (www.byui.edu/online) for course availability for online sections. •Recommended that students take B 320 for Foundations English requirement.
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Credit Requirements:

Foundations	17
Major	<u>43</u>
Total	60

Tracks Available:

Fall-Winter	Yes
Winter-Spring	Yes
Spring-Fall	Yes
Online	Yes

AAS in Web Design and Development Web Development Emphasis (390-114)

Core Courses <i>Take these courses:</i> B 250 3 CIT 160 3 CIT 230 3 CIT 336 3 COMM 130 3 COMM 310 3 CS 371 3 WDD 100 1 <hr/> 22	<i>Take these courses:</i> CIT 225 3 CIT 260 3 CS 313 3 <hr/> 9	<i>Take 9 credits:</i> CIT 261 3 CIT 262 3 CIT 301B* 2 CIT 301C* 3 CS 308 3 CS 364 4 <hr/> 9	Program Notes: •No Double Counting of Major Courses •No Grade Less Than C- in Major Courses •Recommended that students take B 320 for Foundations English requirement. •Please check online website (www.byui.edu/online) for course availability for online sections. *Students should complete CSS section for CIT 301B and JavaScript section of CIT 301C.
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Credit Requirements:

Foundations	17
Major	40
Elective	<u>3</u>
Total	60

Tracks Available:

Fall-Winter	Yes
Winter-Spring	Yes
Spring-Fall	Yes
Online	Yes

BS in Web Design and Development
Web Design Emphasis (590-110)

<p>Core Courses <i>Take these courses:</i></p> <table> <tr><td>B 250</td><td>3</td></tr> <tr><td>CIT 160</td><td>3</td></tr> <tr><td>CIT 230</td><td>3</td></tr> <tr><td>CIT 336</td><td>3</td></tr> <tr><td>COMM 130</td><td>3</td></tr> <tr><td>COMM 310</td><td>3</td></tr> <tr><td>CS 371</td><td>3</td></tr> <tr><td>WDD 100</td><td>1</td></tr> <tr><td>WDD 398</td><td>3</td></tr> <tr><td>WDD 499</td><td><u>2</u></td></tr> <tr><td></td><td>27</td></tr> </table>	B 250	3	CIT 160	3	CIT 230	3	CIT 336	3	COMM 130	3	COMM 310	3	CS 371	3	WDD 100	1	WDD 398	3	WDD 499	<u>2</u>		27	<p><i>Take these courses:</i></p> <table> <tr><td>ART 130</td><td>3</td></tr> <tr><td>ART 230</td><td>3</td></tr> <tr><td>ART 235</td><td>3</td></tr> <tr><td>ART 337R</td><td><u>3</u></td></tr> <tr><td></td><td>12</td></tr> </table> <p>Supplemental Courses <i>Take 15 credits:</i></p> <table> <tr><td>ART 331R</td><td>3</td></tr> <tr><td>ART 335R</td><td>3</td></tr> <tr><td>ART 430R</td><td>3</td></tr> <tr><td>ART 436R</td><td>3</td></tr> <tr><td>ART 437R</td><td>3</td></tr> </table> <p><i>cont. next column</i></p>	ART 130	3	ART 230	3	ART 235	3	ART 337R	<u>3</u>		12	ART 331R	3	ART 335R	3	ART 430R	3	ART 436R	3	ART 437R	3	<p><i>cont. from previous column</i></p> <table> <tr><td>ART 438R</td><td>3</td></tr> <tr><td>CIT 260</td><td>3</td></tr> <tr><td>COMM 273</td><td>3</td></tr> <tr><td>COMM 300</td><td>3</td></tr> <tr><td>COMM 305</td><td>3</td></tr> <tr><td>COMM 315</td><td>3</td></tr> <tr><td>COMM 322</td><td>3</td></tr> <tr><td>COMM 397R*</td><td>1</td></tr> <tr><td>COMM 462</td><td>3</td></tr> <tr><td>COMM 497R*</td><td><u>1</u></td></tr> <tr><td></td><td>15</td></tr> </table>	ART 438R	3	CIT 260	3	COMM 273	3	COMM 300	3	COMM 305	3	COMM 315	3	COMM 322	3	COMM 397R*	1	COMM 462	3	COMM 497R*	<u>1</u>		15	<p>Program Notes:</p> <ul style="list-style-type: none"> • No Double Counting of Major Courses • No Grade Less Than C- in Major Courses • Please check online website (www.byui.edu/online) for course availability for online sections. • Recommended that students take B 320 for Foundations English requirement. • Students may choose three different COMM 397R/497R one-credit practicum courses to total three credits.
B 250	3																																																																		
CIT 160	3																																																																		
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Elective	<u>26</u>	Spring-Fall	Yes																																																																
Total	120	Online	Yes																																																																

BS in Web Design and Development
Web Development Emphasis (590-111)

<p>Core Courses <i>Take these courses:</i></p> <table> <tr><td>B 250</td><td>3</td></tr> <tr><td>CIT 160</td><td>3</td></tr> <tr><td>CIT 230</td><td>3</td></tr> <tr><td>CIT 336</td><td>3</td></tr> <tr><td>COMM 130</td><td>3</td></tr> <tr><td>COMM 310</td><td>3</td></tr> <tr><td>CS 371</td><td>3</td></tr> <tr><td>WDD 100</td><td>1</td></tr> <tr><td>WDD 398</td><td>3</td></tr> <tr><td>WDD 499</td><td><u>2</u></td></tr> <tr><td></td><td>27</td></tr> </table>	B 250	3	CIT 160	3	CIT 230	3	CIT 336	3	COMM 130	3	COMM 310	3	CS 371	3	WDD 100	1	WDD 398	3	WDD 499	<u>2</u>		27	<p><i>Take this course:</i></p> <table> <tr><td>CIT 260</td><td><u>3</u></td></tr> <tr><td></td><td>3</td></tr> </table> <p><i>Take 24 credits:</i></p> <table> <tr><td>CIT 225</td><td>3</td></tr> <tr><td>CIT 261</td><td>3</td></tr> <tr><td>CIT 262</td><td>3</td></tr> <tr><td>CIT 270</td><td>3</td></tr> <tr><td>CIT 301B*</td><td>2</td></tr> <tr><td>CIT 301C*</td><td>3</td></tr> <tr><td>COMM 315</td><td>3</td></tr> <tr><td>CS 308</td><td>3</td></tr> <tr><td>CS 313</td><td>3</td></tr> <tr><td>CS 364</td><td><u>4</u></td></tr> <tr><td></td><td>24</td></tr> </table>	CIT 260	<u>3</u>		3	CIT 225	3	CIT 261	3	CIT 262	3	CIT 270	3	CIT 301B*	2	CIT 301C*	3	COMM 315	3	CS 308	3	CS 313	3	CS 364	<u>4</u>		24	<p>Program Notes:</p> <ul style="list-style-type: none"> • No Double Counting of Major Courses - • No Grade Less Than C- in Major Courses • Recommended that students take B 320 for Foundations English requirement. • Please check online website (www.byui.edu/online) for course availability for online sections. • Students should take the CSS section of CIT 301B and the JavaScript section of CIT 301C.
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BS in Computer Information Technology (681)				
CIT Core <i>Take these courses:</i>	<i>cont. from previous column</i>	CIT Electives <i>Take 6 additional credits of any CIT courses 200-level or higher not used as part of CIT core:</i>	CIT Capstone <i>Take 1 course:</i>	Program Notes: • No Double Counting of Major Courses • No Grade Less Than C- in Major Courses • Please check online for course availability. Some courses are not offered every semester.
CIT 160 3	CIT 262 3	CIT 270 3	CIT 490 3	
CIT 225 3	CIT 325 3	CIT 352 3	CIT 498 3	
CIT 230 3	CIT 353 3	6	3	
CIT 240 3	CIT 360 3		<i>Take this course:</i>	
CIT 241 3	CIT 380 3		CIT 495 1	
CIT 260 3	COMM 175 2		1	
<i>cont. in next column</i>	41			
Credit Requirements:			Tracks Available:	
Foundations	40		Fall-Winter	Yes
Major	51		Winter-Spring	Yes
Elective	29		Spring-Fall	Yes
Total	120		Online	Yes

BS in Business Analytics (686)				
Information Systems Core Courses <i>Take these courses:</i>	<i>cont. from previous column</i>	<i>Take 1 course:</i>		Program Notes: • No Double Counting of Major Courses • No Grade Less Than C- in Major Courses • <i>FDMAT 108 is not required for this major because ECON 215 fulfills the Foundations of Math requirement.</i> *ECON 215 must be taken to fulfill the Foundations of Math requirement.
CIT 111 3	ECON 215* 4	CIT 499R 1-3		
CIT 160 3	ECON 255 3	B 411 3	1	
CIT 225 3	ECON 278 3			
CIT 380 3	ACCTG 201 3			
CIT 381 3	ACCTG 202 3			
CIT 425 3	B 211 3			
ECON 150 3	B 410 3			
ECON 151 3	CIT 498 3			
<i>cont. in next column</i>	52			
Credit Requirements:			Tracks Available:	
Foundations	40		Fall-Winter	Yes
Major	53		Winter-Spring	Yes
Elective	27		Spring-Fall	Yes
Total	120			

Minor in Computer Information Technology (202)				
Required Courses <i>Take these courses:</i>	Elective Courses <i>Take 6 additional credits of any CIT courses 200-level or higher not used as part of CIT core:</i>	Program Notes: • No Double Counting of Minor Courses • No Grade Less Than C- for Minor Courses		
CIT 111 or 225 3				
CIT 160 3				
CIT 230 3				
CIT 240 3				
CIT 260 3	6			
CIT 380 3				
18				
Credit Requirements:			Tracks Available:	
Total	24		Fall-Winter	Yes
			Winter-Spring	Yes
			Spring-Fall	Yes
			Online	Yes

Minor in Web Design	
For Students Who Want an Overview of Web Design Principles (215)	
(For Non-Web Design and Development Students)	
Core Courses <i>Take these courses:</i> ART 130 3 ART 230 3 B 250 3 CIT 230 3 CIT 336 3 COMM 125 3 COMM 300 or 273 3 COMM 462 or 322 3 <hr style="width: 100%;"/> 24	Program Notes: <ul style="list-style-type: none"> • <i>No Grade Less Than C- for Minor Courses</i> • <i>For Non-Web Design and Development Students</i> • <i>Please check online website (www.byui.edu/online) for course availability for online sections</i>
Credit Requirements: Total 24	Tracks Available: Fall-Winter Yes Winter-Spring Yes Spring-Fall Yes Online Yes

Minor in Web Development	
For Students Who Want an Overview of Web Development Principles (216)	
(For Non-Web Design and Development Students)	
Core Courses <i>Take these courses:</i> B 250 3 CIT 225 3 CIT 230 3 CIT 260 3 CIT 261 3 CIT 336 3 COMM 125 3 COMM 310 3 <hr style="width: 100%;"/> 24	Program Notes: <ul style="list-style-type: none"> • <i>No Grade Less Than C- for Minor Courses</i> • <i>For Non-Web Design and Development Students</i>
Credit Requirements: Total 24	Tracks Available: Fall-Winter Yes Winter-Spring Yes Spring-Fall Yes Online Yes

Minor in Web Design			
For Students in Development Emphasis (223)			
(For Web Design and Development Students)			
Core Courses <i>Take these courses:</i> ART 130 3 ART 235 3 ART 337R 3 <hr style="width: 100%;"/> 9	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; vertical-align: top;"> Take 15 credits: ART 331R 3 ART 335R 3 ART 337R 3 ART 430R 3 ART 436R 3 ART 437R 3 ART 438R 3 COMM 273 3 COMM 300 3 <i>cont. next column</i> </td> <td style="width: 50%; vertical-align: top;"> cont. from previous column COMM 305 3 COMM 315 3 COMM 322 3 COMM 360 3 COMM 397R 1 COMM 462 3 COMM 497R* 1 CS 371 3 <hr style="width: 100%;"/> 15 </td> </tr> </table>	Take 15 credits: ART 331R 3 ART 335R 3 ART 337R 3 ART 430R 3 ART 436R 3 ART 437R 3 ART 438R 3 COMM 273 3 COMM 300 3 <i>cont. next column</i>	cont. from previous column COMM 305 3 COMM 315 3 COMM 322 3 COMM 360 3 COMM 397R 1 COMM 462 3 COMM 497R* 1 CS 371 3 <hr style="width: 100%;"/> 15
Take 15 credits: ART 331R 3 ART 335R 3 ART 337R 3 ART 430R 3 ART 436R 3 ART 437R 3 ART 438R 3 COMM 273 3 COMM 300 3 <i>cont. next column</i>	cont. from previous column COMM 305 3 COMM 315 3 COMM 322 3 COMM 360 3 COMM 397R 1 COMM 462 3 COMM 497R* 1 CS 371 3 <hr style="width: 100%;"/> 15		
Program Notes: <ul style="list-style-type: none"> • <i>No Grade Less Than C- for Minor Courses</i> • <i>For Web Design and Development Students</i> • <i>If Students take Comm 497R twice, select from "After Effects" and "Final Cut"</i> 			
Credit Requirements: Total 24	Tracks Available: Fall-Winter Yes Winter-Spring Yes Spring-Fall Yes Online Yes		

Minor in Web Development For Students with Design Emphasis (230) (For Web Design and Development Students)		
Core Courses <i>Take these courses:</i> CIT 225 3 CIT 260 3 CIT 261 3 CIT 270 3 CS 308 3 CS 313 3 CS 364 4 CS 371 3 <hr style="width: 100%;"/> 25	Program Notes: • <i>No Grade Less Than C- for Minor Courses</i> • <i>For Web Design and Development Students</i>	
Credit Requirements:		Tracks Available:
Total 25		Fall-Winter Yes Winter-Spring Yes Spring-Fall Yes Online Yes

Minor in Business Analytics (246)		
Required Courses <i>Take these courses:</i> CIT 111 3 CIT 160 3 CIT 225 3 CIT 381 3 ECON 150 3 ECON 255 3 <hr style="width: 100%;"/> 18	Take 1 course: ECON 215 4 FDMAT 112 4 <hr style="width: 100%;"/> 4 Take 1 course: ECON 278 3 MATH 221A 3 <hr style="width: 100%;"/> 3	Program Notes: • <i>No Double Counting of Minor Courses</i> • <i>No Grade Less Than C- for Minor Courses</i>
Credit Requirements:		Tracks Available:
Total 25		Fall-Winter Yes Winter-Spring Yes Spring-Fall Yes

Computer Information Technology Concentration (D 122)		
Required Courses <i>Take these courses:</i> CIT 110 3 CIT 111 3 CIT 160 3 CIT 230 3 CIT 240 3 CIT 261 3 CIT 270 3 CIT 336 3 CIT 380 3 CIT 381 3 <hr style="width: 100%;"/> 30	Interdisciplinary Courses <i>Take these courses:</i> IDS 398R 1-3 IDS 499 2 <hr style="width: 100%;"/> 3	Program Notes: • <i>No Double Counting of Concentration Courses</i> • <i>No Grade Less Than C- for Minor Courses</i>
Credit Requirements:		Tracks Available:
Total 33		Fall-Winter Yes Winter-Spring Yes Spring-Fall Yes Online Yes

Web Media Certificate (C 103)	
Required Courses <i>Take 5 courses:</i> ART 130 3 B 250 3 CIT 160 3 CIT 230 3 COMM 125 3 WDD 100 1 <hr style="width: 100px; margin-left: 0;"/> 13	Program Notes: <ul style="list-style-type: none"> •Grade of C- or higher required in all Certificate Courses •Certificates are not available to DAY students.
Credit Requirements:	
Total 13	

Computer Information Technology Certificate (C 108)	
Core Courses <i>Take 5 courses:</i> CIT 110 3 CIT 111 3 CIT 160 3 CIT 230 3 CIT 240 3 CIT 260 3 <hr style="width: 100px; margin-left: 0;"/> 15	Program Notes: <ul style="list-style-type: none"> •Grade of C- or higher required in all Certificate Courses •Certificates are not available to DAY students.
Credit Requirements:	
Total 15	

Web Frontend Development Certificate (C 113)	
Required Courses <i>Take these courses:</i> ART 130 3 CIT 230 3 CIT 301B* 2 COMM 125 3 COMM 310 3 WDD 100 1 <hr style="width: 100px; margin-left: 0;"/> 15	Program Notes: <ul style="list-style-type: none"> •Grade of C- or higher required in all Certificate Courses •This certificate is designed to provide Web Frontend Development skills to Online and Pathway students. •Certificates are not available to DAY students. <p><i>*Students should take CSS section of CIT 301B</i></p>
Credit Requirements:	
Total 15	

Web Backend Development Certificate (C 114)	
Required Courses <i>Take these courses:</i> CIT 160 3 CIT 230 3 CIT 261 3 CIT 336 3 CIT 301C* 3 <hr style="width: 100px; margin-left: 0;"/> 15	Program Notes: <ul style="list-style-type: none"> •Grade of C- or higher required in all Certificate Courses •This certificate is designed to provide Web Backend Development skills to Online and Pathway students. •Certificates are not available to DAY students. <p><i>*Students should take JavaScript section of CIT 301C</i></p>
Credit Requirements:	
Total 15	

System Administration Certificate (C 115)

Required Courses

<i>Take these courses:</i>	
CIT 240	3
CIT 241	3
CIT 270	3
CIT 352	3
CIT 353	3
	<hr/>
	15

Program Notes:

- Grade of C- or higher required in all Certificate Courses
- This certificate is designed to provide Systems Administration skills to Online and Pathway students
- Certificates are not available to DAY students

Credit Requirements:

Total 15

Database Certificate (C 116)

Required Courses

<i>Take these courses:</i>	
CIT 111	3
CIT 160	3
CIT 225	3
CIT 325	3
CIT 425	3
	<hr/>
	15

Program Notes:

- Grade of C- or higher required in all Certificate Courses
- This certificate is designed to provide Database skills to Online and Pathway students
- Certificates are not available to DAY students

Credit Requirements:

Total 15

Data Analytics Certificate (C 117)

Required Courses

<i>Take these courses:</i>	
ACCTG 180	3
CIT 110	3
CIT 111	3
CIT 381	3
MATH 221A	3
	<hr/>
	15

Program Notes:

- Grade of C- or higher required in all Certificate Courses
- This certificate is designed to provide Data Analytics skills to Online and Pathway students
- Certificates are not available to DAY students

Credit Requirements:

Total 15

Programming - Computer Information Systems Certificate (C 122)

Required Courses

<i>Take these courses:</i>	
CIT 160	3
CIT 260	3
CIT 261	3
CIT 301C*	3
CS 101	2
	<hr/>
	14

Program Notes:

- Grade of C- or higher required in all Certificate Courses
- This certificate is designed to provide Programming skills to Online and Pathway students
- Certificates are not available to DAY students

*Students should take .NET section of CIT 301C

Credit Requirements:

Total 14

Computer Information Technology Predefined Clusters

Generic CIT		2500
<i>Take these courses:</i>		
CIT 160	Introduction to Programming	3
CIT 230	Web Frontend Development	3
CIT 240	Networking	3
CIT 336	Web Backend Development	3
Total Credits		12

Programming		2501
<i>Take these courses:</i>		
CIT 111	Introduction to Databases	3
CIT 160	Introduction to Programming	3
CIT 230	Web Frontend Development	3
CIT 260	Object-Oriented Programming	3
Total Credits		12

Networking		2502
<i>Take these courses:</i>		
CIT 240	Networking	3
CIT 241	Network Design I	3
CIT 270	Systems Security I	3
CIT 353	Operating Systems II	3
Total Credits		12

Web		2503
<i>Take these courses:</i>		
CIT 111	Introduction to Databases	3
CIT 230	Web Frontend Development	3
CIT 336	Web Backend Development	3
<i>Take 1 course:</i>		
COMM 125	Visual Fundamentals	3
CS 371	Human-Computer Interaction	3
Total Credits		12

Project Lifecycle		2504
<i>Take these courses:</i>		
CIT 111	Introduction to Databases	3
CIT 160	Introduction to Programming	3
CIT 225	Database Design and Development	3
CIT 380	Project Management	3
Total Credits		12

Course Descriptions

Credits*

CIT 101A Discovering Computing - Survey (1:1:0:0)

Repeatable Course: May earn maximum of 3 credits
Special-topics course related to new and emerging technologies.
(Fall, Winter, Spring)

CIT 101B Discover Computing - Exploration (2:2:0:0)

Repeatable Course: May earn maximum of 4 credits
Special-topics course related to new and emerging technologies
(Fall, Winter, Spring)

CIT 101C Discovering Computing (3:3:0:0)

Repeatable Course: May earn maximum of 6 credits
Special-topics course related to new and emerging technologies.
(Fall, Winter, Spring)

CIT 110 Introduction to Excel (3:3:0:0)

This course is an introduction to the use of spreadsheets in business. Emphasis is on learning spreadsheet literacy concepts and a popular spreadsheet application to solve business problems.
(Fall, Winter, Spring)

CIT 111 Introduction to Databases (3:3:0:0)

This course covers the basic elements of database management systems. It introduces students to the concepts of logical and physical relationships in a data model and the concepts of inner and outer joins. Students will use a computer aided software engineering (CASE) tool to design, create, and query a database.
(Fall, Winter, Spring)

CIT 160 Introduction to Programming (3:3:0:0)

This course is an introduction to the basic concepts of computers and information technology. Students will learn the basics of computer hardware and the binary and hexadecimal number systems, design algorithms to solve simple computing problems, and will write computer programs using Boolean logic, control structures, and functions.
(Fall, Winter, Spring)

CIT 225 Database Design and Development (3:2:3:0)

Prerequisites: CIT 160 or CS 124
The course deals with concepts and principles of database theory, application and management technologies. It focuses on the logical and physical database design and implementation. The course covers the use of UML semantic to describe Entity Relationship Designs (ERDs) and SQL to implement relationships between entities. SQL will be used to query and transact against a sample database.
(Fall, Winter, Spring)

CIT 230 Web Frontend Development (3:3:0:0)

This course focuses on the planning and development of web sites using HTML, CSS, JavaScript and PHP with attention to usability principles.
(Fall, Winter, Spring)

CIT 240 Networking (3:3:0:0)

This course teaches general networking principles to provide an understanding of data communication protocols, transmission systems, media, and software.
(Fall, Winter, Spring)

CIT 241 Network Design I (3:3:0:0)

Prerequisite: CIT 240
This course teaches the principles of network design standards and architectures. Students will learn the configuration of use and networking devices including repeaters, hubs, bridges, switches, and routers to create enterprise networks.
(Fall, Winter, Spring)

CIT 260 Object-Oriented Programming (3:2:3:0)

Prerequisite: CIT 160
This course is an introduction to object oriented programming using the Java programming language. Students will write computer programs using primitive data types, control structures, Java Swing classes, and objects. Students will read and draw UML class diagrams and will use Java swing to write programs with a graphical user interface.
(Fall, Winter, Spring)

CIT 261 JavaScript Mobile Software Development (3:3:0:0)

Prerequisites: CIT 160 or CS 213
This course is designed to give students the skills required to create mobile device applications for modern mobile devices. Because of this, the course focuses on how to solve larger, ill-structured business problems by designing and creating applications using a framework that lets you install cross platform JavaScript applications on the devices.
(Fall, Winter, Spring)

CIT 262 System Analysis and Design (3:3:0:0)

Prerequisite: CIT 260
Teaches the concepts of systems analysis and design for those desiring to work in the field of information technology. Initially, an overview of an information system and the software development life cycle (SDLC) processes are covered. Students will gain an in depth, real experience through each phase of the SDLC process. Computer aided Software (CASE) tools will be used to design and document an information system/project.
(Fall, Winter, Spring)

CIT 270 Systems Security I (3:3:0:0)

Formerly: CIT 370
This course provides students with an overview of the field of Information Security and Assurance. Students will be exposed to the spectrum of security activities, methods, methodologies, and procedures. This course offers a comprehensive guide for anyone wishing to take the CompTIA Security SY0-301 Certification Exam. It also provides an introduction to the fundamentals of network security, including compliance and operational security; threats and vulnerabilities; application, data, and host security; access control and identity management; and cryptography. This course will cover new topics in network security, including psychological approaches to social engineering attacks, web application attacks, penetration testing, data loss prevention, cloud computing security, and application programming development security.
(Fall, Winter, Spring)

Computer Information Technology
Brigham Young University–Idaho 2016-2017

CIT 298R Introductory Internship (1:3:0:0)

Formerly: CIT 298

Internship Fees: \$81.50 (LDS) \$163 (non-LDS) per credit

Exempt from tuition, but charged this independent course fee

Repeatable Course: May earn up maximum of 3 credits or maximum of 3 enrollments

Prerequisites: CIT 110 and CIT 240 and CIT 260

This course is designed as a CIT sophomore-level capstone experience where a student applies the skills previously learned in computer information technology/information systems in a real-world environment.

(Fall, Winter, Spring)

CIT 301A Current Technologies - Survey (1:1:0:0)

Repeatable Course: May earn maximum of 3 credits

Special-topics course related to new and emerging technologies.

(Fall, Winter, Spring)

CIT 301B Current Technologies - Exploration (2:2:0:0)

Repeatable Course: May earn maximum of 4 credits

Special-topics course related to new and emerging technologies.

(Fall, Winter, Spring)

CIT 301C Current Technologies - Integration (3:3:0:0)

Repeatable Course: May earn maximum of 6 credits

Special-topics course related to new and emerging technologies.

(Fall, Winter, Spring)

CIT 325 Database Administration (3:3:0:0)

Prerequisites: CIT 225

This course focuses on the development of stored functions, libraries, objects, procedures, and packages. Students will design and write stored database program units in PL/SQL. Students will also use an Integrated Development Environment (IDE) to write and test programs against database.

(Fall, Winter, Spring)

CIT 336 Web Backend Development (3:3:0:0)

Prerequisite: CIT 230

This programming course focuses on constructing dynamic web sites using PHP with databases and design patterns. The concepts introduced in the Web Frontend Development course are expected to be continued and implemented..

(Fall, Winter, Spring)

CIT 341 Network Design II (3:3:0:0)

Prerequisite: CIT 241

This course focuses on advanced router configuration, Cisco IOS Software management, routing protocol configuration, TCP/IP and advanced routing protocols such as EIGRP and Frame Relay. Students will develop skills on how to configure a router, managing Cisco IOS Software, and configuring routing protocols on routers.

(Fall, Winter, Spring)

CIT 345 Wireless Networking (3:3:0:0)

Prerequisite: CIT 240

This is an introductory course in Wireless Networking. The course encompasses the design, planning implementation, operation, and troubleshooting of wireless communication. The material covers a comprehensive overview of technologies, security, and design practices.

(Fall, Winter, Spring)

CIT 352 Operating Systems I (3:3:0:0)

This course provides a fundamental understanding of computer operating systems focusing on Linux.

(Fall, Winter, Spring)

CIT 353 Operating Systems II (3:3:0:0)

Prerequisite: CIT 240

This course provides students with the administration skills to plan, install/configure, manage, and troubleshoot a Windows Server Environment.

(Fall, Winter, Spring)

CIT 360 Object-Oriented Programming II (3:2:3:0)

Prerequisite: CIT 260

This course allows students to experience a work-like environment. The course pulls together Software Engineering and Object Oriented Programming techniques learned in previous courses. Based on customer requirements, students will learn to find, evaluate, and select solutions to problems that have many right solutions. Students will also learn new Object Oriented and software production techniques.

(Fall, Winter, Spring)

CIT 380 Project Management (3:3:0:0)

Course Requirements: Junior and Senior Standing Only

This course introduces concepts, issues, approaches, tools, techniques, and technologies applicable to the management of projects. Projects can be defined as any temporary endeavor undertaken to create unique product, service, or result. The course explores how a manager can plan, organize, implement and control non-routine activities to achieve cost, schedule and performance objectives

(Fall, Winter, Spring)

CIT 381 Business Intel and Analytics (3:3:0:0)

Prerequisite: CIT 111 or CIT 160

This course provides an introduction to Business Intelligence, including the processes, methodologies, infrastructure, and current practices used to transform business data into useful information and support business decision-making and strategy. Business Intelligence requires foundational knowledge in data storage and retrieval, thus this course will review logical data models for both database management systems and data warehouses. Students will learn to extract and manipulate data from these systems and assess security-related issues. Data mining, visualization, and statistical analysis along with reporting options such as management dashboards are addressed. This course also provides an introduction to Analytics, or the automation of analysis, including an overview of qualitative and quantitative analysis methods and methods used to automate these processes for speed, interactivity, and quality (reliability and validity). Several examples of modern types of analytics will be introduced and explored such as descriptive, diagnostic, discovery, predictive, and prescriptive approaches.

(Fall, Winter, Spring)

CIT 425 Data Warehousing (3:3:0:0)

Prerequisite: CIT 225

This course defines the theory and practice of data analysis. The course will compare and contrast the operational and analytical database models. Students will learn how to define, implement, and query a database warehouse by leveraging sample data warehouses built from Enterprise Resource Planning (ERP) and Customer Resource Management (CRM) solutions.

(Fall, Winter, Spring)

CIT 460 Enterprise Development (3:2:3:0)

Prerequisites: CIT 225 and CIT 360

This course covers the architecture for N-tier applications by focusing on the use of effective design patterns. Different technologies to implement the MVC control pattern will be explored. The J2EE architecture will be covered in depth including Servlets, Java Server Pages, and Enterprise Java Beans. Applications that implement all parts of the MVC pattern will be designed, implemented, and deployed.

(Fall, Winter, Spring)

CIT 465 iOS Application Development (3:3:0:0)

Prerequisites: CS 165 or CIT 260

This course is designed to give you experience with syntactical and advanced development techniques within the iOS development ecosystem. These techniques are used to solve ill-structured problems like those encountered in businesses and consulting firms.

(Fall, Winter, Spring)

CIT 470 System Security II (3:3:0:0)

Prerequisites: CIT 240 and CIT 352 and CIT 270

The purpose of this lab based course is to teach students techniques for securing the entire network architecture both internally and externally. Students will learn how to configure and use firewalls and intrusion detection/prevention systems. In addition, students will learn how to harden operating systems and secure remote access.

(Fall, Winter, Spring)

CIT 485 Enterprise Applications (3:3:0:0)

Prerequisites: CIT 225 and CIT 352

This course is a capstone class that integrates design, analysis, database concepts, and programming. The course will present product integration, configuration management, and implementation concepts. Students will learn how to install, maintain, and integrate a suite of products to deliver complex Enterprise Resource Planning (ERP) and Customer Resource Management (CRM) solution.

(Fall, Winter, Spring)

CIT 490 Senior Project (3:3:0:0)

Course Requirements: Junior and Senior Standing and Instructor Approval Required

This course is designed to allow each student to design, build, and implement a project of their own choosing to further and accelerate individual learning and career goals. Students will identify an area of interest and propose a project plan to pursue and achieve those goals primarily through analysis, design, development, testing, implementation, and maintenance activities in a variety of project management styles and formats or pursuit of and completion of professional-level and industry-recognized certifications. Students will work with the faculty and mentors from professional industry for support and approval in achieving project objectives. Students may work individually or within teams, but must be able to account for personal contributions and growth.

(Fall, Winter, Spring)

CIT 495 Senior Practicum (1:1:0:0)

Course Requirements: Seniors Only and Instructor Approval Required

This is a capstone experience for the Computer Information Technology major. There are two options available: A research paper on a relevant Information Technology topic or participate in service learning. The purpose of this course is to build on the knowledge that students have learned in the Computer Information Technology major.

(Fall, Winter, Spring)

CIT 498 Internship (3:0:0:0)

Internship Fees: \$81.50 (LDS) \$163 (non-LDS) per credit

Exempt from tuition, but charged this independent course fee

Course Requirement: 60 credits

This course is designed to be a capstone experience where a student applies the skills they have learned in information systems in a real world environment.

(Fall, Winter, Spring)

CIT 499R Special Topics (1-3:1:0:0)

Repeatable Course: May earn maximum of 12 credits and 4 enrollments

This is a special topics course to address the latest advancements in information technology.

(Fall, Winter, Spring)

WDD 100 Introduction to Web Design and Development (1:1:0:0)

This course introduces students to the World Wide Web and to careers in web site design and development. The course is hands on with students actually participating in simple web designs and programming. It is anticipated that students who complete this course will understand the fields of web design and development and will have a good idea if they want to pursue this degree as a major.

(Fall, Winter, Spring)

WDD 398 Internship (3:0:0:0)

Internship Fees: \$81.50 (LDS) \$163 (non-LDS) per credit

Exempt from tuition, but charged this independent course fee

In this course students will be employed full-time as a web designer or developer for one semester.

(Fall, Winter, Spring)

WDD 499 Capstone (2:2:0:0)

In this course students will be employed full-time as a web designer or developer for one semester.

(Fall, Winter, Spring)