

## Information Technology - Network Administration and Security Emphasis, B.S.

### Requirements

Every organization uses some form of information technology to perform its operations. The Bachelor of Science in Information Technology (IT) degree prepares students to install, manage, and maintain the computing infrastructure on which organizational systems run. The Network Administration and Security emphasis prepares students to work as data communication consultants, information security analysts, and network administrators. The core of the BS IT program prepares students to have a strong foundation in computer architecture, data communication, information security, networks, and system administration.

#### Total Program Credits: 123

General Education Requirements:		38 Credits	
	<a href="#">ENGL 1010</a>	Introduction to Writing	3
	<a href="#">ENGL 2010</a>	Intermediate Writing--Humanities/Social Sciences	3
or	<a href="#">ENGL 2020</a>	Intermediate Writing--Science and Technology (3.0)	
	<a href="#">MATH 1050</a>	College Algebra	4
or	<a href="#">MATH 1055</a>	College Algebra with Preliminaries (5.0)	
Complete one of the following:		3	
	<a href="#">HIST 2700</a>	US History to 1877 (3.0)	
and	<a href="#">HIST 2710</a>	US History since 1877 (3.0)	
	<a href="#">HIST 1700</a>	American Civilization (3.0)	
	<a href="#">HIST 1740</a>	US Economic History (3.0)	
	<a href="#">POLS 1000</a>	American Heritage (3.0)	
	<a href="#">POLS 1100</a>	American National Government (3.0)	
Complete the following:			
	<a href="#">PHIL 2050</a>	Ethics and Values	3
	<a href="#">HLTH 1100</a>	Personal Health and Wellness	2
or	<a href="#">PES 1097</a>	Fitness for Life (2.0)	
Distribution Courses:			
	Biology Distribution		3
	Physical Science Distribution		3
	<a href="#">PHYS 2010</a>	College Physics I (fulfills Additional Biology or Physical Science Distribution)	4
and	<a href="#">PHYS 2015</a>	College Physics I Lab	1
	Fine Arts Distribution		3
	<a href="#">ENGL 2310</a>	Technical Communication (fulfills Humanities Distribution)	3
	Social/Behavioral Science Distribution		3
Discipline Core Requirements:		64 Credits	
Math Requirement:			
	<a href="#">STAT 2050</a>	Introduction to Statistical Methods (4.0)	
or	<a href="#">MGMT 2340</a>	Business Statistics I	3
IT Core Requirements:			
	<a href="#">INFO 1120</a>	Information Systems and Technology Fundamentals	3
	<a href="#">INFO 1200</a>	Computer Programming I for IS/IT	3

	<a href="#">IT 1510</a>	Introduction to System Administration--Linux/UNIX	3
	<a href="#">IT 1600</a>	Computer Architecture and Systems Software	3
	<a href="#">INFO 2410</a>	Database Fundamentals	3
	<a href="#">IT 2530</a>	Introduction to System Administration--Windows Client	3
	<a href="#">IT 2600</a>	Data Communication Fundamentals	3
or	<a href="#">CS 2600</a>	Computer Networks I (3.0)	
	<a href="#">IT 2700</a>	Information Security Fundamentals	3
	<a href="#">COMP 301R</a>	Digital Lecture Series	1
	<a href="#">INFO 3420</a>	Web Systems Development	3
	<a href="#">INFO 3430</a>	Systems Analysis and Design	3
	<a href="#">IT 3510</a>	Advanced System Administration--Linux/UNIX	3
	<a href="#">IT 3530</a>	Advanced System Administration--Windows Server	3
	<a href="#">IT 3600</a>	Internetworking and Router Management	3
	<a href="#">IT 3700</a>	Information Security--Network Defense and Countermeasures	3
	<a href="#">INFO 405G</a>	Global Ethical and Professional Perspectives in IS and IT	3
	<a href="#">INFO 4430</a>	Systems Design and Implementation	3
	<a href="#">IT 4600</a>	Enterprise Architectures and Virtualization	3
	<a href="#">IT 4700</a>	Enterprise Information Security Management	3
IT Application Domain Requirement:		6	
Two specified courses to provide students with knowledge of an application domain of their choice and interest. (See department advisor for list of approved courses.) For the Computer Forensics and Security emphasis, the following 2 courses are required: CJ 1330 and CJ 1340.			
Some possible application domains are:			
	Accounting/IT Auditor		
	Business		
	Communications		
	Computer Science		
	Construction		
	Criminal Justice (Choose this domain for Computer Forensics and Security emphasis)		
	Forensics		
	Geographic Information Systems		
	Health professions		
	Hospitality Management		
	Manufacturing/Production		
	Military Science		
	Multimedia/Digital Media		
	Physical Sciences		
	Social Sciences		
Emphasis Requirements:		9 Credits	
	<a href="#">IT 2400</a>	Voice and Data Cabling Fundamentals	3
	<a href="#">IT 4750</a>	Network Security and Operations Capstone	3
	<a href="#">INFO 4425</a>	Web Application Security	3

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Emphasis Elective Requirements:		12 Credits
Choose 12 credit hours from the following: (3 credits must be 3000 or higher)		12
INFO 2200	Computer Programming II for IS/IT (3.0)	
INFO 2420	Web Application Design (3.0)	
INFO 3410	Database Systems and Warehousing (3.0)	
INFO 3422	PHP Web Application Development (3.0)	
INFO 4135	Data Security Analytics (3.0)	
INFO 4410	Database Administration (3.0)	
INFO 4415	Database Security and Auditing (3.0)	
INFO 459R	Current Topics in Information Systems (3.0)	
IT 1200	Scripting for Administrators (3.0)	
IT 2800	Computer Forensic Fundamentals (3.0)	
or FSCI 3800	Computer Forensics and Cyber Crime (3.0)	
IT 3350	Intellectual Property and Cyber Law (3.0)	
IT 3540	Mac OS and Server Support (3.0)	
IT 3650	Information Storage and Management (3.0)	
IT 459R	Current Topics in Information Technology (3.0)	
IT 481R	Internship (1.0)	
Other approved upper-division Information Technology and Information Systems courses		

### **Graduation Requirements:**

1. Completion of at least 123 semester credits required in the BS degree; at least 40 credit hours must be upper-division courses.
2. Overall grade point average 2.0 or above with a minimum of 2.5 GPA in all discipline core, specialty core, and elective courses with no grade lower than a "C-."
3. Residency hours: Minimum of 30 credit hours through course attendance at UVU, with at least 10 hours earned in the last 45 hours.
4. Completion of GE and specified departmental requirements. Students are responsible for completing all prerequisite courses.
5. Completion of GE global intercultural requirement. INFO 405G satisfies this requirement.
6. Successful completion of at least one Global/Intercultural course.

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**Graduation Plan**

This graduation plan is a sample plan and is intended to be a guide. Your specific plan may differ based on your Math and English placement and/or transfer credits applied. You are encouraged to meet with an advisor and set up an individualized graduation plan in [Wolverine Track](#).

Milestone courses (pre-requisites for a course in one of the subsequent semesters) are marked in red and *Italicized*.

Semester 1	Course Title	Credit Hours
<i>ENGL 1010</i>	Introduction to Writing	3
HLTH 1100 or PES 1097	Personal Health & Wellness or Fitness for life	2
Social/Behavioral Distribution		3
<i>INFO 1120</i>	Information Systems and Technology Fundamentals	3
<i>IT 1510</i>	Introduction to System Administration--Linux/UNIX	3
<i>IT 1600</i>	Computer Architecture and Systems Software	3
Semester total:		17
Semester 2	Course Title	Credit Hours
<i>ENGL 2010</i> or <i>ENGL 2020</i>	Intermediate Writing	3
<i>MATH 1050</i> or <i>MATH 1055</i>	College Algebra or College Algebra with Preliminaries	4
<i>INFO 1200</i>	Computer Programming I for IS/IT	3
IT 2400	Voice and Data Cabling Fundamentals	3
<i>IT 2530</i>	Introduction to System Administration--Windows Client	3
Semester total:		16
Semester 3	Course Title	Credit Hours
Biology Distribution		3
<i>INFO 2410</i>	Database Fundamentals	3
<i>IT 2600 (recommended)</i> or <i>CS 2600</i>	Data Communication Fundamentals or Computer Networks I	3
Domain		3
Elective	<i>INFO 2200</i> Computer Programming II for IS/IT recommended	3
Semester total:		15
Notes: (1) Must take <i>IT 2600</i> this semester to be able to take <i>IT 2700</i> and <i>IT 3510</i> next semester. (2) Should take <i>INFO 2200</i> the semester immediately after taking <i>INFO 1200</i> . <i>INFO 2200</i> is recommended as an elective if completed for AAS degree. (3) Can take <i>PHYS 2010</i> and <i>2015</i> instead of Biology distribution this semester. (4) Select a domain from the list of approved domains. Choose one class in that domain. You will take another class in the SAME domain Semester 4.		
Semester 4	Course Title	Credit Hours
<i>ENGL 2310</i>	Technical Communication (fulfills Humanities Distribution)	3
MGMT 2340	Business Statistics I	3
<i>IT 2700</i>	Information Security Fundamentals	3
<i>IT 3510</i>	Advanced System Administration--Linux/UNIX	3

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Domain		3
	Semester total:	15
Notes: (1) IT majors must take ENGL 2310 for the Humanities Distribution. (2) Select a domain from the list of approved domains. Choose one class in that domain. You should have taken another class in the SAME domain Semester 3.		
Semester 5	Course Title	Credit Hours
PHIL 2050	Ethics and Values	3
PHYS 2010	College Physics (fulfills additional Biology or Physical Science Distribution)	4
PHYS 2015	College Physics Lab	1
COMP 301R	Digital Lecture Series	1
<i>IT 3530</i>	Advanced System Administration--Windows Server	3
<i>IT 3600</i>	Internetworking and Router Management	3
	Semester total:	15
Notes: (1) Take Biology distribution if completed PHYS 2010 and PHYS 2015 in Semester 3. (2) Take IT 3600 before you take IT 3700.		
Semester 6	Course Title	Credit Hours
American Institutions		3
Physical Science Distribution		3
INFO 3420	Web Systems Development	3
<i>IT 3700</i>	Info Security--Network Defense and Countermeasures	3
Elective		3
	Semester total:	15
Notes: (1) Electives: Choose an elective from the approved list. (2) Electives: INFO 3422 and INFO 4415 are offered in Spring semesters only. (3) Electives: INFO 4135 is offered in Fall semesters only. (4) Electives: IT 3350 is offered Fall and Summer semesters. (5) Elective INFO 4410 is offered Fall and Spring semesters as long as sufficient demand exists; otherwise it will be offered Fall semester only.		
Semester 7	Course Title	Credit Hours
<i>INFO 3430</i>	Systems Analysis and Design	3
INFO 405G	Global Ethical and Professional Perspectives in IS and IT	3
IT 4600	Enterprise Architectures and Virtualization	3
IT 4700	Enterprise Information Security Management	3
Elective		3
	Semester total:	15
Notes: (1) Must take INFO 3430 the semester before taking INFO 4430. (2) Electives: Choose an elective from the approved list. (3) Electives INFO 3422 and INFO 4415 are offered in Spring semesters only. (4) Elective INFO 4135 is offered in Fall semesters only. (5) Electives IT 3350 is offered Fall and Summer semesters. (6) Elective INFO 4410 is offered Fall and Spring semesters as long as sufficient demand exists; otherwise it will be offered Fall semester only.		
Semester 8	Course Title	Credit Hours
Fine Arts Distribution		3
INFO 4425	Web Application Security	3
INFO 4430	Systems Design and Implementation	3
IT 4750	Network Security and Operations Capstone	3
Elective		3

	Semester total:	15
Notes: (1) Take INFO 4430 the semester after taking INFO 3430. (2) INFO 4425 is offered Spring semesters only.		
	Degree total:	123