

Department of

# Chemistry

**Mark Pugh, Department Chair**

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**Introduction**

Chemistry is the study of matter, energy and their transformations. Its principles serve as a theoretical basis for a wide variety of fields such as agriculture, biology, dentistry, engineering, geology, medicine, nutrition, and physics. In addition, its analytical and logical approach to the world is excellent training for fields such as law and government.

The Department of Chemistry offers two degrees: a Bachelor's of Science in Chemistry, and a Bachelor's of Science in Chemistry Education. In addition to the courses offered for chemistry majors, the department offers service courses to support students in technical majors to meet their requirements for graduation and to satisfy the General Education requirements in Physical Science. Introductory courses are offered on several skill levels to meet the needs of incoming students with a variety of backgrounds in math and science.

Studying chemistry at Brigham Young University-Idaho is a unique and rewarding experience. The faculty are experienced and well trained. Their commitment to students and teaching, coupled with small class sizes, provide an excellent learning environment.

Further information regarding the department programs and degrees can be obtained by visiting the department web page at <http://www.byui.edu/chemistry/>.

## Chemistry

Brigham Young University-Idaho 2008-2009

### BS in Chemistry (710)

Take Required Foundation Courses

#### Major Requirements

*No Grade Less Than C- in Major Courses*

*Take these courses:*

CHEM 105	4
CHEM 106	4
CHEM 220	5
CHEM 351	4
CHEM 352	4
CHEM 461	3
CHEM 462	3
CHEM 464	2
CHEM 470	3
CHEM 471	2
CHEM 481	4
CHEM 498	1-3
PH 121	3
PH 150	1
PH 220	3
PH 250	1
	<hr style="width: 100%;"/>
	47

*Take these courses:*

MATH 113	3
MATH 341	3
	<hr style="width: 100%;"/>
	6

OR

*Take these courses:*

MATH 215	4
MATH 316	4
	<hr style="width: 100%;"/>
	8

*Program Notes:*

**Total Major Credits=53**

This major is available on the following tracks:

Fall-Winter---- YES

Winter-Spring---- YES

Spring-Fall---- YES

### BS in Chemistry Education (810)

Take Required Foundation Courses

#### Major Requirements

*No Grade Less Than C- in Major Courses*

*Education Core:*

<i>Take these courses:</i>	
ED 200	2
ED 304	3
ED 361	3
ED 461	3
ED 492	10
SPED 360	2
	<hr style="width: 100%;"/>
	23

*Take these courses:*

CHEM 105	4
CHEM 106	4
CHEM 220	5
CHEM 351	4
CHEM 405	2
CHEM 461	3
CHEM 470	3
PH 121	3
PH 220	3
	<hr style="width: 100%;"/>
	31

*Take these courses:*

MATH 113	3
MATH 341	3
	<hr style="width: 100%;"/>
	6

*Take 5 credits:*

CHEM 352	4
CHEM 462	3
CHEM 464	2
CHEM 471	2
CHEM 481	4
	<hr style="width: 100%;"/>
	5

*Take 2 credits:*

PH 123	3
PH 150	1
PH 250	1
PH 311	3
	<hr style="width: 100%;"/>
	2

*Program Notes:*

*It is recommended that students minor in either Math Ed, Physics Ed, or Physical Science Ed to stay within the 120 credit limit.*

**Total Major Credits=44**

**Education Core Credits=23**

This major is available on the following tracks:

Fall-Winter---- YES

Winter-Spring---- YES

Spring-Fall---- YES

**Minor in Chemistry (146)****Minor Requirements***No Grade Less Than C- in Minor Courses*

<i>Take these courses:</i>		<i>Take 12 credits:</i>		<i>Program Notes:</i>
CHEM 105	4	CHEM 220	5	
CHEM 106	<u>4</u>	CHEM 351	4	
	8	CHEM 352	4	
		CHEM 461	3	
		CHEM 462	3	
		CHEM 464	2	
		CHEM 470	3	
		CHEM 471	2	
		CHEM 481	<u>4</u>	
			12	

**Total Minor Credits=20**

This minor is available on the following tracks:

Fall-Winter---- YES

Winter-Spring---- YES

Spring-Fall---- YES

**Minor in Chemistry Education (172)****Minor Requirements***No Grade Less Than C- in Minor Courses*

<i>Take these courses:</i>		<i>Take 12 credits:</i>		<i>Program Notes:</i>
CHEM 105	4	CHEM 220	5	
CHEM 106	<u>4</u>	CHEM 351	4	
	8	CHEM 352	4	
		CHEM 405	2	
		CHEM 461	3	
		CHEM 462	3	
		CHEM 464	2	
		CHEM 470	3	
		CHEM 471	2	
		CHEM 481	<u>4</u>	
			12	

**Total Minor Credits=20**

This minor is available on the following tracks:

Fall-Winter---- YES

Winter-Spring---- YES

Spring-Fall---- YES

**Chemistry Pre-approved Cluster**

<b>Chemistry</b>		
<i>Take 12 credits:</i>		
CHEM 105	General Chemistry	4
CHEM 106	General Chemistry	4
CHEM 150*	Introductory Organic and Biochemistry	5
CHEM 220	Quantitative Analysis	5
CHEM 351*	Organic Chemistry	4
CHEM 352*	Organic Chemistry	<u>4</u>
	<b>Total Credits</b>	12

\*Chem 150 can't count with Chem 351 and/or 352

**Course Descriptions****Credits\*****CHEM 100 Chemistry in the Modern World****(4:3:2)**

Fullfills GE Physical Science requirement.

Prerequisite: No previous chemistry course is required. Competency with basic mathematical operations is assumed

A basic course with emphasis on the applications of chemistry in areas of food, health, consumer products, natural and synthetic resources, energy, and environment. Designed for those majors requiring only a one-semester introduction to the modern applications of chemistry and those desiring a general education course in the physical sciences. This course includes a lecture and laboratory experience.

(Fall, Winter)

**CHEM 101 Introductory General Chemistry****(4:3:3)**

Fullfills GE Physical Science requirement.

Prerequisite: Completion or concurrent enrollment in Math 108 or higher with a passing grade.

An introductory course covering basic concepts in general chemistry. The course is designed for students in home economics, nursing, agriculture, biology, and other areas that require a broad introduction to general and inorganic chemistry. It serves as a preparation for Chem. 150. This course includes a lecture and laboratory experience.

(Fall, Winter, Spring)

**CHEM 105 General Chemistry****(4:5:2)**

Fullfills GE Physical Science requirement.

Prerequisite: Students without high school chemistry or Chem 101 must have completed Math 110 or 112 or 119 with a passing grade prior to taking Chem 105. Students with high school chemistry or Chem 101 must have completed or be concurrently enrolled in Math 110 or 112 or 119.

The first semester of a year-long course designed to meet the general chemistry requirements in engineering, science, and pre-professional majors. This course includes a lecture and laboratory experience.

(Fall, Winter, Spring)

**CHEM 106 General Chemistry****(4:5:2)**

Fullfills GE Physical Science requirement.

Prerequisite: Completion of Chem 105 with a passing grade and Math 110 or 112 or 119 with a passing grade.

The second semester of a year-long course designed to meet the general chemistry requirements in engineering, science, and pre-professional majors. This course includes a lecture and laboratory experience.

(Fall, Winter, Spring)

**CHEM 150 Introductory Organic and Biochemistry****(5:5:0)**

Prerequisite: Completion of Chem 101 or Chem 105 with a passing grade

A second semester course in a sequence with Chem 101 designed for students in home economics, nursing, dental hygiene, and other majors that require a one-semester introduction to organic and biochemistry. Students who need an organic/biochemistry class with lab should concurrently register for Chem 153.

(Winter)

**CHEM 153 Introductory Organic and Biochemistry Laboratory****(1:0:2)**

Prerequisite: Concurrent registration in Chem 150. This lab cannot be taken after the completion of Chem 150.

Class focuses on organic chemistry techniques and reactions of biochemically important groups.

(Winter)

**CHEM 220 Quantitative Analysis****(5:3:6)**

Prerequisite: Completion of Chem 106 with a passing grade.

A one-semester course that stresses quantitative analytical techniques in the laboratory, an introduction to instrumental analysis, and the chemical principles on which they are based. This course includes a lecture and laboratory experience.

(Fall)

**CHEM 351 Organic Chemistry****(4:5:3)**

Prerequisite: Completion of Chem 106 with a passing grade.

The first semester of a year-long course that studies the principles and theories of organic chemistry including the properties, preparation, and reactions of organic compounds.

The course is designed for students in Chemistry, Chemical Engineering, Pre-medicine, Pre-dentistry, Pre-pharmacy, Pre-veterinary and Biology. This course includes lecture and laboratory experience.

(Fall, Winter, Spring)

**CHEM 352 Organic Chemistry****(4:5:3)**

Prerequisite: Completion of Chem 351 with a passing grade.

The second semester of a year-long course presenting the principles and theories of organic chemistry including the properties, preparation and reactions of organic compounds. The course is designed for students in Chemistry, Chemical Engineering, Pre-medicine, Pre-dentistry, Pre-veterinary and Biology. This course includes lecture and laboratory experience.

(Fall, Winter, Spring)

**CHEM 405 Chemistry Teaching Methods****(2:1:2)**

Prerequisite: Completion of Secondary Education 361 and Chem 220 or Chem 351 with a passing grade.

This course will focus heavily on preparing students to be competent in laboratory procedures, including lab safety issues. Students will learn how to set up labs, order supplies, prepare and design laboratory experiments in the sciences. In addition students will become familiar with how demonstrations can be effectively used in the classroom. Ample opportunity will be given each student to practice the skills needed to effectively teach chemistry in the secondary schools. Students will become familiar with and learn to apply the national and state science and chemistry standards for teaching chemistry at the secondary level.

(Fall)

**CHEM 461 Physical Chemistry****(3:3:0)**

Prerequisite: Completion of Math 113 or Math 215 or Math 119 with a passing grade is required. Completion of Chem 351 and Phys 220 with a passing grade or instructor permission is required. Completion of Math 316 or Math 341 is strongly recommended.

First semester of a course covering the fundamental concepts of physical chemistry. This course provides a theoretical and mathematical description of the physical behavior of chemical systems. The first semester covers quantum mechanics and spectroscopy.

(Fall)

**CHEM 462 Physical Chemistry II****(3:3:0)**

Prerequisite: Completion of Chem 461, Phys 220 and Math 341 or Math 316 with a passing grade.

Second semester of a course covering the fundamental concepts of physical chemistry. This course provides a theoretical and mathematical description of the physical behavior of chemical systems. The second semester covers statistical mechanics, thermodynamics, and kinetics.

(Winter)

**CHEM 464 Physical/Instrumental Chemistry Lab****(2:0:6)**

Prerequisite: Chem 220, Completion of or concurrent enrollment in Chem 462. Physics 250 strongly recommended.

Laboratory experience with modern instrumentation in performing physical and analytical chemistry experiments, report preparation.

(Winter)

**CHEM 470 Inorganic Chemistry****(3:3:0)**

Prerequisite: Completion of Chem 461 with a passing grade

A study of structure, reactivity patterns, and bond theory as applied to inorganic chemistry. Topics covered will include periodic relationships, group theory, molecular orbital and valence bond approaches to bonding, solid-state chemistry, and organometallic chemistry.

(Winter)

**CHEM 471 Advanced Laboratory****(2:0:6)**

Prerequisite: Concurrent enrollment in Chem 470.

Laboratory exercises in the preparation and purification of inorganic compounds. Exposure to advanced synthetic techniques including vacuum lines, Schlenk manipulations, and tube furnace reactions. Characterization by modern spectroscopic techniques such as nuclear magnetic resonance, cyclic voltammetry, UV-vis, infrared, and magnetic susceptibility.

(Winter)

**CHEM 481 Biochemistry****(4:4:0)**

Prerequisite: Completion of Chem 351 with a passing grade.

A one semester course emphasizing the structure, function, and metabolism of proteins, carbohydrates, lipids, and nucleic acids. The course is designed for students in Chemistry, Biology, and those preparing to attend graduate or professional schools.

(Fall, Winter, Spring)

**CHEM 490 Special Topics in Chemistry****(1-3:1:0)**

Prerequisite: Consent of instructor

A one-semester course emphasizing current topics in chemistry. Each class participant will select a faculty supervisor who will oversee the design and implementation of a curriculum within a specific field of chemistry.

(Fall, Winter, Spring)

**CHEM 498 Chemistry Internship****(1-3:0:0)**

Prerequisite: Completion of Chem 220, 352, 462 and 464 with a passing grade, and instructor permission.

All chemistry majors must find and experience a work internship. This would generally occur the semester after their junior year or during their senior year. The experience could involve working for a government agency, industry, an academic institution or any organization that employs laboratory chemists on their staff. The credit for the internship would count as the capstone experience required for graduation. The student will have a contract agreement with the employer and be responsible to a faculty supervisor. Upon completion of the internship, a written report and a technical presentation will be made to the BYU-Idaho chemistry department as part of the requirement.

(Fall, Winter, Spring)

Department of

# Communication



## *Ron Bennett, Department Chair*

*Brent Bean, Ron Bennett, Robyn Bergstrom, Mike Cannon, Eric Embree, Caryn Esplin, Beth Hendricks, Ward Hicks, Jeff Hochstrasser, Brian Howard, Joel Judkins, Lee Warnick, Ron Weekes, Lane Williams*

*Phyllis Thompson, Secretary (208) 496-2949*

*<http://www.byui.edu/Comm/>*

## Introduction

In a world where information is more readily available from more sources and more rapidly disseminated than ever before, the ability to communicate correctly, clearly, precisely and persuasively has never been more important. Students trained in communication are prepared to work in exciting, wide-ranging, cutting-edge careers. Our department's aim is to help prepare students to become skilled, knowledgeable, adaptable, progressive, ethical practitioners through programs addressing today's professional requirements while anticipating tomorrow's developments.

We believe all future Communication professionals should develop a broad foundation of knowledge and skills. Students should be able to write and speak confidently and well; to analyze scenarios and develop solutions; to get along and work with diverse people in many kinds of situations; to serve in or lead groups productively; to produce targeted, effectively written, spoken and visual messages in media, group and interpersonal settings.

Additionally, we believe students best learn communication by doing communication. From the students' first semester here, we encourage them to get involved with our hands-on practicums. These professionally oriented, student-operated organizations are designed to reinforce, enhance and expand upon what students learn in class. They can work with a radio or television station; forensics team; newspaper; online development staff; web-based yearbook; video production unit; or organizational, public relations or advertising "agencies." The same professors they learn with in the classroom roll up their sleeves with them in our practicums, thus completing an integrated Communication learning experience.

Students majoring in Communication can choose from four areas of emphasis: advertising, broadcasting, journalism, and public relations or they can work with their academic advisers to craft programs that meet their unique interests and needs.

## Graduation Requirements

Students must complete the prescribed course of study, including practicum requirements, and a minimum of 120 credit hours with GPA of 2.25 or above. No grades lower than C-minus in Communication courses will count toward completion of major requirements.

## Minor and Clusters

Communication is classified as an "integrated" major at BYU–Idaho. This means students must supplement their major with a concentrated, organized area of study outside of the department. This can be accomplished in one of two ways:

1. Select and complete one of the approved university minors (other than those in Communication), most of which require 20-25 credits of study. A student's choice of minor should be reviewed with his/her academic adviser.
2. Select two clusters of 12 or more credits from departments other than Communication. Selection of clusters and the courses to be included in them should be planned with his or her academic adviser and approved by the department chair from the cluster area.

## Major Requirements

1. Complete communication core courses (24 credits).
2. Complete the department practicum requirement (3 credits).
3. Complete one introductory course (3 credits) ideally by the end of the sophomore year.
4. Complete 15 additional credits from the list of recommended courses.
5. Complete either FDMAT 221 or CIT 140 (3 credits).
6. Complete the appropriate 400-level culminating class (3 credits).
7. Complete a minor or two clusters from other departments.
8. Earn grades of C-minus or higher in all Communication classes.

## Recommendations for New Communication Majors

Comm 100, Introduction to Communication Major and Professions, should be completed in a student's first semester as a Communication major. Additionally, it is recommended a student complete Comm 102, Public Speaking, and Comm 111, Writing for Communication Careers.

## Communication

Brigham Young University-Idaho 2008-2009

### BS in Communication (675)

Take required Foundations courses

#### Major Requirements

*No Double Counting of Major Courses*

<i>Take these courses:</i>		<i>Take 1 course:</i>		<i>Take 15 credits:</i>		<i>Cont from previous column</i>	<i>Take 1 course:</i>
COMM 100	1	CIT 140	3	B 247	3	COMM 340	3
COMM 102	3	FDMAT 221	<u>3</u>	B 279R	1	COMM 342	3
COMM 104	1			B 321	3	COMM 347	3
COMM 111	3			B 370	3	COMM 350	3
COMM 130	3	<i>Take 1 course:</i>		COMM 230	3	COMM 352	3
COMM 140	3	COMM 230	3	COMM 235	3	COMM 360	3
COMM 150	3	COMM 235	3	COMM 240	3	COMM 365	3
COMM 307	3	COMM 240	3	COMM 250	3	COMM 397R	1
COMM 399	1	COMM 250	3	COMM 260	3	COMM 455	3
COMM 498R	1-3	COMM 260	<u>3</u>	COMM 265	3	COMM 490	1-2
COMM 499	<u>2</u>			COMM 297R	1	COMM 497R	1
	<u>24</u>			COMM 310	3	COMM 498R	1-3
				COMM 313	3	COMM 499	2
<i>Take 3 credits:</i>				COMM 316	3	SOC 323	3
<i>(All may be repeated)</i>				COMM 320	3	SOC 340	<u>3</u>
COMM 297R	1			COMM 330	3		15
COMM 397R	1			COMM 335	3		
COMM 497R	<u>1</u>			COMM 337	3		
	<u>3</u>			COMM 338	3		
				<i>Cont next column</i>			

*Program Notes:*

**Total Major Credits=51**

This major is available on the following tracks:

Fall-Winter---- YES

Winter-Spring---- YES

Spring-Fall---- YES

### Minor in Organizational Communication (101)

#### Minor Requirements

<i>Take these courses:</i>		<i>Take 9 credits:</i>		<i>Take 1 credit:</i>		<i>Program Notes:</i>
COMM 102	3	B 275	3	COMM 297R	1	
COMM 150	3	B 321	3	COMM 397R	1	
COMM 250	3	B 370	3	COMM 497R	1	
COMM 350	3	COMM 352	3	COMM 498R	<u>1-3</u>	
COMM 450	<u>3</u>	COMM 455	3		1	
	<u>15</u>	SOC 323	3			
		SOC 340	<u>3</u>			
			<u>9</u>			

**Total Minor Credits=25**

This minor is available on the following tracks:

Fall-Winter---- YES

Winter-Spring---- YES

Spring-Fall---- YES





# Communication

Brigham Young University-Idaho 2008-2009

## Communication Pre-approved Clusters

Advertising		
<i>Take this course:</i>		
COMM 230	Introduction to Advertising	3
<i>Take 9 credits:</i>		
COMM 330	Advertising Concepting and Copywriting	3
COMM 337	Media Research Methods	3
COMM 338	Media Strategy and Planning	3
COMM 430	Advertising Campaigns	<u>3</u>
	<b>Total Credits</b>	<b>12</b>
Journalism		
<i>Take these courses:</i>		
COMM 111	Writing for Communication Careers	3
COMM 240	Introduction to Journalism	3
<i>Take 6 credits:</i>		
COMM 316	Photojournalism	3
COMM 340	Advanced Media Writing	3
COMM 342	Editing for Print Media	3
COMM 347	Advanced Visual Media	3
COMM 397R	Communication Practicum II (Rixida or Scroll)	<u>1</u>
	<b>Total Credits</b>	<b>12</b>
Visual/Digital Media:		
<i>Take this course:</i>		
COMM 130	Visual Media	3
<i>Take 9 credits:</i>		
CIT 140	Micro-Applications for Business	3
COMM 310	Creating Online Media	3
COMM 313	Multimedia Production	3
COMM 316	Photojournalism	3
COMM 347	Advanced Visual Media	3
COMM 397R	Communication Practicum II (Rixida or Scroll)	<u>1</u>
COMM 497R	Special Topic Practicum	<u>1</u>
	<b>Total Credits</b>	<b>12</b>
Interpersonal Communication		
<i>Take these courses:</i>		
COMM 102	Public Speaking	3
COMM 150	Interpersonal Theory and Practice	3
COMM 350	Group Dynamics	3
<i>Take one course:</i>		
COMM 352	Persuasion	3
COMM 450	Conflict Management	<u>3</u>
	<b>Total Credits</b>	<b>12</b>

Broadcasting		
<i>Take this course:</i>		
COMM 260	Introduction to Broadcasting	3
<i>Take 9 credits:</i>		
COMM 265	Beginning Television Production	3
COMM 310	Creating Online Media	3
COMM 313	Multimedia Production	3
COMM 360	Broadcast Reporting and Announcing	3
COMM 365	Television News and Program Producing	3
COMM 460	Documentary and Corporate Video Production	<u>3</u>
	<b>Total Credits</b>	<b>12</b>
Public Relations		
<i>Take these courses:</i>		
COMM 235	Introduction to Public Relations	3
COMM 335	Public Relations Writing and Production	3
<i>Take 6 credits:</i>		
COMM 337	Media Research Methods	3
COMM 338	Media Strategy and Planning	3
COMM 340	Advanced Media Writing	3
COMM 435	Public Relations Campaigns	<u>3</u>
	<b>Total Credits</b>	<b>12</b>
Organizational Communication		
<i>Take this course:</i>		
COMM 250	Introduction to Organizational Communication	3
<i>Take 9 credits:</i>		
COMM 150	Interpersonal Theory and Practice	3
COMM 350	Group Dynamics	3
COMM 352	Persuasion	3
COMM 450	Conflict Management	3
COMM 455	Organizational Consulting	<u>3</u>
	<b>Total Credits</b>	<b>12</b>

**Course Descriptions**

**Credits\***

**COMM 100 Introduction to Communication Major and Professions (1:1:0)**

Prerequisite: Communication major or minor or consent of Instructor; intended to be completed before or concurrently with enrollment in Comm 111, Writing for Communication Careers.

This course gives the background and future of the different areas of study found in the Communication Department. Practicum options are discussed as well as general advising, interviewing skills, and resume planning.  
(Fall, Winter, Spring)

**COMM 102 Public Speaking (3:3:0)**

Fulfills GE Basic Skills requirement.  
Fee: \$9.00

Study and practice of informative and persuasive public speaking, public self-confidence, message structure, presentation strategies and audience adaptation. Practical approach to communication skills needed for success in professional settings, including interviews, proposals and presentations, conducting and moderating meetings, and use of visual media to enhance presentations.  
(Fall, Winter, Spring)

**COMM 104 Language Review (1:1:0)**

Prerequisite: Communication major or minor or consent of Instructor; intended to be completed before or concurrently with enrollment in Comm 111, Writing for Communication Careers.

A structured, self-paced online review of fundamental grammar, punctuation and style designed to prepare Communication majors for the writing demands of college-level courses and practicums.  
(Fall, Winter, Spring)

**COMM 111 Writing for Communication Careers (3:3:0)**

Fulfills GE Reading & Writing requirement.

Builds basic media writing competence and other writing skills needed for today's mass media careers.  
(Fall, Winter, Spring)

**COMM 130 Visual Media (3:3:0)**

Prerequisite: Communication major or minor or consent of Instructor.

Principles of visual communication and typography are learned and reinforced through a series of projects requiring the use of digital graphics and digital layout tools. Although projects are print-based, principles and skills have broad application in all forms of visual media.  
(Fall, Winter, Spring)

**COMM 140 Mass Media and Society (3:3:0)**

Prerequisite: Communication major or minor or consent of Instructor.

Surveys historical and contemporary mass media and explores their current issues, with particular emphasis on societal impacts of and on the media.  
(Fall, Winter, Spring)

**COMM 150 Interpersonal Theory and Practice (3:3:0)**

Fulfills GE Basic Skills requirement.

Examines basic elements and theory of human communication in a practical, relevant setting. Explores varied facets of interpersonal process, with emphasis on improving communication skills.  
(Fall, Winter, Spring)

**COMM 230 Introduction to Advertising (3:3:0)**

Prerequisite: COMM 111, B 220, 300 level English writing class or consent of Instructor.

Covers fundamentals and principles of effective advertising and promotion and the integration of advertising with other elements of marketing communication. Related projects are provided for individuals to demonstrate and apply those principles using various media. Associated economic, social, and ethical issues are also discussed.  
(Fall, Winter, Spring)

**COMM 231A Basic Advertising Skills: Creative Development (1:1:0)**

Fee: \$12.00

Prerequisite: B 301, B 321, B 341, B 361 with C- or higher and acceptance to Business Management Integrated Emphasis program. Apply online on the Business Management homepage. Must contact Business Department.

For non-communication majors. The student will learn how to develop creative concepts that accomplish advertising objectives and convey brand positions to the target audience through various media.

This course is part of the Business Management Integrated Emphasis program. Students must apply for the program via the Business Management homepage. If they are accepted to the program, the department will register the student for the class.  
(Fall, Winter, Spring)

**COMM 235 Introduction to Public Relations (3:3:0)**

Prerequisite: Comm 111, B 220, or 300-level English writing class.

Explores the history, philosophy, and practices of public relations in business, government, education and other organizations.  
(Fall, Winter, Spring)

**COMM 240 Introduction to Journalism (3:3:0)**

Prerequisite: COMM 111 or consent of Instructor.

History of American journalism; orientation to print journalism careers; information-gathering strategies and techniques, including human source, library, database and Internet searching; proper use of varied source and data information; interviewing and reporting techniques. Introduction to beat reporting and the values that undergird journalism in American society.  
(Fall, Winter, Spring)

**COMM 250 Introduction to Organizational Communication (3:3:0)**

Prerequisite: COMM 150

Analysis of communication principles and practices in organizations from a theoretical perspective, methods to improve communication practices and review of career opportunities in the field.  
(Fall, Winter, Spring)

**COMM 260 Introduction to Broadcasting (3:3:0)**

Prerequisite: Comm 111, or 300-level English writing course. For Broadcasting emphasis majors or minors, or consent of Instructor.

Orientation to radio, television and other electronic media careers. Hands-on and interactive lab assignments provide introduction to basic radio and television production techniques.  
(Fall, Winter, Spring)

**COMM 265 Beginning Television Production (3:3:0)**

Prerequisite: COMM 260, or consent of Instructor. Concurrent registration with COMM 260 permissible.

Study and practice of television production techniques, with particular emphasis on news and commercial material. Involves operation of equipment as well as performance opportunities.  
(Fall, Winter, Spring)

**COMM 297R Communication Practicum I (1:1:0)**

Prerequisite: COMM 100. Communication major or minor or consent of Instructor.

Non-affiliated practicum gives students experience in communication by applying lessons/knowledge learned in class to real-life projects.  
(Fall, Winter, Spring)

**COMM 307 Media Law & Ethics (3:3:0)**

Prerequisite: COMM 111 or COMM 140.

Course surveys theories and cases on free speech and free press in Anglo-American society; examines significant ethics principles and moral/ethical issues confronting media professionals and organizations.  
(Fall, Winter, Spring)

**COMM 310 Creating Online Media (3:3:0)**

Prerequisite: COMM 130 or consent of Instructor

Technical, contextual and communication-directed introduction to user-centered web design and production. Training in creating web pages, designing graphics and writing copy for online distribution. Overview of the history, current function and future possibilities of the web.  
(Every other semester)

# Communication

Brigham Young University–Idaho 2008-2009

<b>COMM 313 Multimedia Production</b> (3:3:0) Prerequisite: COMM 130 or consent of Instructor. Introduction to the process, principles, challenges, skills and tools needed for successful multimedia production, focusing on media convergence in web formats. Those media of primary interest include photography, writing, sound, animation and video. The primary authoring environment used in the class will be Macromedia Flash, chosen for its ability to bring multiple communication channels together. Basic computer programming will be used to explore the challenges of human-computer interaction and multimedia extensibility. Students of diverse backgrounds and talents are encouraged to work together to contribute and deepen their individual expertise and to add breadth to their knowledge of other areas. (Every other semester)	<b>COMM 347 Advanced Visual Media</b> (3:3:0) Prerequisite: COMM 130 The advanced practice of design principles for digital, publication, video, and web applications are reinforced through a series of projects, case studies, and hands-on learning activities requiring the use of digital graphics, layout, web design, and video editing tools. Advanced projects with realistic situations have broad application in all forms of visual media. (Fall, Winter, Spring)
<b>COMM 316 Photojournalism</b> (3:3:0) Prerequisite: Must supply own digital camera. Examines functions of pictures in the print and online media, how to maximize their effectiveness, and provides experience in picture taking and digital enhancement procedures. Students must supply their own digital cameras. (Fall, Winter, Spring)	<b>COMM 350 Group Dynamics</b> (3:3:0) Fee: 18.00 Prerequisite: COMM 150 or permission of Instructor. Analysis of theory and practice of human communication in a small group setting, focusing on leadership, participation and evaluation, with emphasis in group norms, roles, cohesion and conflict. (Fall, Winter, Spring)
<b>COMM 320 Media Management</b> (3:3:0) Prerequisite: COMM 140 Explores the nature of media firms and how they are led and managed. Introduces basic management concepts and business principles. (Every other semester)	<b>COMM 352 Persuasion</b> (3:3:0) Prerequisite: COMM 102 Study and application of the principles of attitude change through persuasion. Examination of historical and contemporary theories of the persuasive process, applied through classroom presentations by students. (Fall, Winter, Spring)
<b>COMM 330 Advertising Concepting and Copywriting</b> (3:3:0) Prerequisite: COMM 230 Examines and provides practice of how advertisers must condense all that can be said about a product into a few, pertinent, succinct, compelling points. Studies historic cases of advertising copywriting issues and challenges confronting business, government, education, for-profit and not-for-profit entities. The responsibilities of an account planner will also be examined. (Fall, Winter, Spring)	<b>COMM 360 Broadcast Reporting and Announcing</b> (3:3:0) Prerequisite: COMM 260, COMM 265 This course teaches principles and techniques of news and information gathering, interviewing, writing, and visual storytelling for electronic media. The course introduces students to announcing, news reading, and voice diction techniques. Students get hands-on experience using digital video, audio equipment, and nonlinear editing for producing news stories for i-Comm and the campus video network. (Every other semester)
<b>COMM 335 Public Relations Writing and Production</b> (3:3:0) Prerequisite: COMM 111 and COMM 235 Emphasis is on developing the understanding, skills, and discipline needed to produce professional-caliber public relations work. (Fall, Winter, Spring)	<b>COMM 365 Television News and Program Producing</b> (3:3:0) Prerequisite: COMM 360 or consent of Instructor. This course has two focus areas: producing television news, and producing educational and public affairs programming. Students plan, write, and prepare weekly newscasts for i-Comm and the student video network. Students also produce a variety of educational programming targeted for air on BYU-Television. Student assignments include producing, shooting video, video editing, writing, and crewing for studio productions. (Fall, Winter, Spring)
<b>COMM 337 Media Research Methods</b> (3:3:0) Prerequisite: COMM 230 or COMM 235. Development and design of comprehensive research programs for advertising, public relations, and journalism professionals, including data sources, design of questionnaires, data collection, field investigation, audience analysis (including focus groups) and surveying, and content analysis. Basic statistical functions will be explained and utilized. (Fall, Winter, Spring)	<b>COMM 397R Communication Practicum II</b> (1:0:3) Prerequisite: Communication major or minor or consent of Instructor. Specialized practicum gives students experience in communication by applying lessons/knowledge learned in class to real-life projects. (Fall, Winter, Spring)
<b>COMM 338 Media Strategy and Planning</b> (3:3:0) Prerequisite: Comm 230 or Comm 235 & COMM 337 Students learn how to strategically plan communication campaigns and how to use media to effectively accomplish and implement objectives, strategies and tactics. Understanding basic communication research is a prerequisite. (Fall, Winter, Spring)	<b>COMM 399 Career Preparation</b> (1:1:0) Prerequisite: Junior Standing Students will research career and internship opportunities in their chosen field, and learn about professional behavior and expectations. Students will develop tools that will aid them in job and internship search. (Fall, Winter, Spring)
<b>COMM 340 Advanced Media Writing</b> (3:3:0) Prerequisite: COMM 111 Teaches journalistic modes of media writing beyond skills taught in COMM 111. (Fall, Spring)	<b>COMM 430 Advertising Campaigns</b> (3:3:0) Prerequisite: COMM 330 and COMM 338 Explores problem solving, targeting diverse markets, assessing competition, planning strategy and writing for all major media types. Attention will be placed on the creative person, then on strategy and problem solving, copywriting, design and layout to create winning advertising. (Fall, Winter, Spring)
<b>COMM 342 Editing for Print Media</b> (3:3:0) Prerequisite: COMM 111 or a 300-level English course Principles of improving written copy, including sentence structure, agreement, case, voice, punctuation, spelling, clarity, conciseness, coherence, accuracy, sensitivity and style. Both micro- and macro-editing of copy will be considered. (Every other semester)	<b>COMM 435 Public Relations Campaigns</b> (3:3:0) Prerequisite: COMM 235, COMM 335, COMM 337 and COMM 338. Consent of instructor. A capstone experience designed to pull together and draw upon all academic learning and experiences related to public relations. (Fall, Winter, Spring)

# Communication

Brigham Young University–Idaho 2008-2009

<b>COMM 440 Advanced Reporting</b> (3:3:0) Prerequisite: COMM 240 or consent of Instructor. Computer-assisted reporting, development of information sources, investigative and other advanced journalistic reporting and research techniques. (Fall, Winter, Spring)	<b>SIGN 101 American Sign Language I</b> (3:3:0) Prerequisite: Beginning students. Development of basic conversational-level skills, general overview of the deaf culture and current issues of interest to the deaf community. (Fall, Winter)
<b>COMM 450 Conflict Management</b> (3:3:0) Prerequisite: COMM 150. COMM 250 recommended. Examines the theories and dynamics of conflict styles in a variety of contexts. Topics include conflict management strategies, negotiation, third party intervention, and relevant settings for conflict such as workplace, families and interpersonal relationships. (Fall, Winter, Spring)	<b>SIGN 102 American Sign Language II</b> (3:3:0) Prerequisite: SIGN 101 or consent of Instructor. Continuation of SIGN 101. Teaches increased conversational skills and further knowledge of culture of the deaf. (Fall, Winter)
<b>COMM 455 Organizational Consulting</b> (3:3:0) Fee: \$18.00 Prerequisite: COMM 250, COMM 350, and COMM 450 or concurrently enrolled. Students will comprise an actual, functioning organizational consulting firm, working in teams with clients and offering services such as organizational culture communication assessment, organizational design, and training. (Every other semester)	
<b>COMM 460 Documentary and Corporate Video Production</b> (3:3:0) Prerequisite: Comm 360 or COMM 365. This course cannot be taken earlier than the second semester of the junior year. Theories and techniques of documentary and corporate video production, including budgeting, script writing, shooting and post-production. Students will be required to produce broadcast-quality projects in the course. (Fall, Winter, Spring)	
<b>COMM 490 Directed Studies/Projects</b> (1-2:0:0) Prerequisite: Senior standing or permission of Instructor. Individual major projects or research. (Fall, Winter, Spring)	
<b>COMM 497R Special Topics Practicum</b> (1:1:0) Prerequisite: COMM 100 or consent of Instructor. Specialized practicum to give students experience in targeted skill sets. Practicum topics vary by semester. (Fall, Winter, Spring)	
<b>COMM 498R Communication Internship</b> (1-3:0:0) Prerequisite: Completion of lower-division Communication core and entry-level area of study course. Proposed internship must be approved by designated department faculty member before registering. Extended or full-time experience in a professional media or communication organization and position. (Fall, Winter, Spring)	
<b>COMM 499 Case Studies in Communication</b> (2:2:0) Fee: \$12.00 Prerequisite: Senior standing. Case-based, integrated consideration of contemporary issues in communication careers. Students from across the emphasis areas will research and discuss case studies in a problem-solving environment. Class emphasizes effective group interaction, presentation, writing, and analysis. (Fall, Winter, Spring)	
<b>FDCOM 200 Professional Communication</b> (2:0:2:0) Fulfills Foundation requirement. Prerequisite: FDENG 101 Professional communication is a course designed to help you succeed in your families, careers and communities by improving your communication skill. It uses cases, projects, discussions and readings to help you understand this vital success skill. The class focuses on managing conflict, on improving listening skills, on developing written communication competence, on persuading through logic and integrity, on presenting effective speeches and presentations, on enhancing your appreciation for your role as an audience member and on understanding the power and role of communication in leadership and life. (Fall, Winter, Spring)	

Department of

# Computer Information Technology



## *Kent Jackson, Department Chair*

*Bradley Armstrong, Lee Barney, Rex Barzee, Art Ericson, Kent Jackson, Michael McLaughlin, Mark Olaveson, Steven Rigby, Blaine Robertson, Randy Somsen  
Denise Rydalch, Secretary (208) 496-2048  
<http://www.byui.edu/CIT/>*

## Introduction to Computer Information Technology

Take a look at Information Technology (IT). A world of opportunity awaits you.

A career in Information Technology (IT) allows you to create solutions for real problems that trouble real people. As you create this solution with your team, you may be creating something new that has never been seen before or assembling pre-existing components. You will be making significant contributions in the organizations you work for, and the every day lives of people.

There is high demand for BYU-Idaho Computer Information Technology (CIT) graduates all over the country in all segments of the economy in both small and large companies. Careers in IT pay higher than average salaries. From major financial, accounting, aviation, agriculture, medicine, retailing, software companies to federal research facilities, you and your BYU-Idaho CIT degree are wanted.

Your career in CIT can be very dynamic. Working in a team; you will interact cooperatively with the management of your organization and your potential clients to determine what the solution needs to do, what it needs to look like, and how it should work. One day you may be designing software and the next designing a database. The day after that you may be involved in designing a complex network to allow your organization to communicate more effectively using video, phones, and computers and then the next day maybe you are setting up a clustered set of web servers. CIT is a very interactive career to work in.

In short, Information Technology is the use and study of computers, networks, computer languages, and databases within an organization to solve real problems.

A minimum average GPA of 2.7 (B-) is required in major courses to graduate. Any major course with less than C- must be retaken.



## Minor in Computer Information Technology (157)

### Minor Requirements

*No Grade Less Than C- for Minor Courses*

<p><i>Take these courses:</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>CIT 203</td><td style="text-align: right;">3</td></tr> <tr><td>CIT 210</td><td style="text-align: right;">3</td></tr> <tr><td>CIT 230</td><td style="text-align: right;">3</td></tr> <tr><td>CIT 240</td><td style="text-align: right;">3</td></tr> <tr><td>CIT 320</td><td style="text-align: right;">3</td></tr> <tr><td>CIT 380</td><td style="text-align: right;">3</td></tr> <tr><td></td><td style="text-align: right; border-top: 1px solid black;">18</td></tr> </table>	CIT 203	3	CIT 210	3	CIT 230	3	CIT 240	3	CIT 320	3	CIT 380	3		18	<p><i>Take 2 courses:</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>CIT 235</td><td style="text-align: right;">3</td></tr> <tr><td>CIT 310</td><td style="text-align: right;">3</td></tr> <tr><td>CIT 335</td><td style="text-align: right;">3</td></tr> <tr><td>CIT 355</td><td style="text-align: right;">3</td></tr> <tr><td>CIT 370</td><td style="text-align: right;">3</td></tr> <tr><td>CIT 385</td><td style="text-align: right;">3</td></tr> <tr><td>CIT 410</td><td style="text-align: right;">3</td></tr> <tr><td>CIT 425</td><td style="text-align: right;">3</td></tr> <tr><td>CIT 430</td><td style="text-align: right;">3</td></tr> <tr><td>CIT 440</td><td style="text-align: right;">3</td></tr> <tr><td>CIT 485</td><td style="text-align: right;">3</td></tr> <tr><td></td><td style="text-align: right; border-top: 1px solid black;">6</td></tr> </table>	CIT 235	3	CIT 310	3	CIT 335	3	CIT 355	3	CIT 370	3	CIT 385	3	CIT 410	3	CIT 425	3	CIT 430	3	CIT 440	3	CIT 485	3		6	<p><i>Program Notes:</i></p>
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**Total Minor Credits=24**

This minor is available on the following tracks:

Fall-Winter---- YES Winter-Spring---- YES Spring-Fall---- YES

## Minor in Informatics (197)

### Minor Requirements

*No Grade Less Than C- for Minor Courses*

<p><i>Take these courses:</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>CIT 203</td><td style="text-align: right;">3</td></tr> <tr><td>CIT 320</td><td style="text-align: right;">3</td></tr> <tr><td>CIT 355</td><td style="text-align: right;">3</td></tr> <tr><td>CIT 380</td><td style="text-align: right;">3</td></tr> <tr><td>CIT 385</td><td style="text-align: right;">3</td></tr> <tr><td>CIT 420</td><td style="text-align: right;">3</td></tr> <tr><td>CIT 425</td><td style="text-align: right;">3</td></tr> <tr><td>CIT 485</td><td style="text-align: right;">3</td></tr> <tr><td></td><td style="text-align: right; border-top: 1px solid black;">24</td></tr> </table>	CIT 203	3	CIT 320	3	CIT 355	3	CIT 380	3	CIT 385	3	CIT 420	3	CIT 425	3	CIT 485	3		24	<p><i>Program Notes:</i></p>
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CIT 320	3																		
CIT 355	3																		
CIT 380	3																		
CIT 385	3																		
CIT 420	3																		
CIT 425	3																		
CIT 485	3																		
	24																		

**Total Minor Credits=24**

This minor is available on the following tracks:

Fall-Winter---- YES Winter-Spring---- YES Spring-Fall---- YES

Computer Information Technology Pre-approved Clusters

Generic CIT		
<i>Take these courses:</i>		
CIT 203	Introduction to Programming	3
CIT 230	Page Layout and Graphics	3
CIT 235	Web Page Development	3
CIT 240	Networking	<u>3</u>
	<b>Total Credits</b>	<b>12</b>
Programming		
<i>Take these courses:</i>		
CIT 203	Introduction to Programming	3
CIT 210	Object Oriented Programming I	3
CIT 310	Object Oriented Programming II	3
CIT 320	Database Design and Development	<u>3</u>
	<b>Total Credits</b>	<b>12</b>
Networking		
<i>Take these courses:</i>		
CIT 240	Networking	3
CIT 330	Operating Systems	3
CIT 340	Network Design	3
CIT 370	Systems Security	<u>3</u>
	<b>Total Credits</b>	<b>12</b>

Web		
<i>Take these courses:</i>		
CIT 230	Page Layout and Graphics	3
CIT 235	Web Page Development	3
CIT 320	Database Design and Development	3
<i>Take 1 course:</i>		
COMM 130	Visual Media	3
CS 371	Human-Computer Interaction	<u>3</u>
	<b>Total Credits</b>	<b>12</b>
Project Lifecycle		
<i>Take these courses:</i>		
CIT 203	Introduction to Programming	3
CIT 320	Database Design and Development	3
CIT 380	Project Management	3
CIT 485	Enterprise Applications	<u>3</u>
	<b>Total Credits</b>	<b>12</b>
CIT/ACCOUNTING		
<i>Take these courses:</i>		
CIT 203	Introduction to Programming	3
CIT 320	Database Design and Development	3
ACCTG 333	Advanced Spreadsheet Applications	3
ACCTG 356	Accounting Information Systems	<u>3</u>
	<b>Total Credits</b>	<b>12</b>

<b>Course Descriptions</b>	<b>Credits*</b>	
<b>CIT 138 Microapplications A</b> Introduction to the use of microcomputer applications in business including the use of basic operating systems, functions, and spreadsheets. (Fall, Winter, Spring)	<b>(1:1:0)</b>	<b>CIT 310 Object Oriented Programming II</b> <b>(3:2:3)</b> Prerequisite: CIT 210 This is a continuation of CIT 210 (Object Oriented Programming I). This class will focus on the design and use of classes to develop applications using an object oriented programming language. Unified Modeling Language (UML), and design patterns will be introduced. Exception handling, event handling, threads, data structures, database access, file I/O, socket and security classes will be covered.. (Fall, Winter, Spring)
<b>CIT 139 Microapplications B</b> Introduction to the use of microcomputers in business. Emphasis is on learning how to use spreadsheet, and database applications to solve business problems. (Fall, Winter, Spring)	<b>(2:2:0)</b>	<b>CIT 320 Database Design and Development</b> <b>(3:2:3)</b> Prerequisite: CIT 210 or CS 165 Emphasis will be placed on logical and physical database design and implementation. SQL (Structured Query Language) will be introduced. Other major topics include: database design, data modeling, enterprise database processing, multi-user database processing, and object-oriented database processing. (Fall, Winter, Spring)
<b>CIT 140 Microapplications C</b> Fullfills GE Basic Skills requirement. This course covers microcomputer applications commonly used in business including the use of the operating systems, spreadsheets, the world wide web, and development of basic web pages. (Fall, Winter, Spring)	<b>(3:3:0)</b>	<b>CIT 330 Operating Systems I</b> <b>(3:3:0)</b> Prerequisite: CIT 240 This course covers basic network operating system principals and Linux commands. At the conclusion of this course the students should understand how to install, configure, and maintain the Linux operating systems and general operating system concepts. (Fall, Winter, Spring)
<b>CIT 203 Introduction to Programming</b> Prerequisite: CIT 140 or permission of the instructor An introduction to the basic concepts, problem solving strategies, and processes used to develop software applications. Topics include basic computer architecture and terms, computer number systems, set theory, the software development process, programming constructs, algorithm development, coding, and unit testing. (Fall, Winter, Spring)	<b>(3:3:0)</b>	<b>CIT 335 Web Server Development</b> <b>(3:3:0)</b> Prerequisite: CIT 235, 320 This course introduces web architecture, design, development, deployment, and security. It introduces students to the concept of server side includes (SSI) and the dynamics of stateless and state-aware computing paradigms. This course also introduces AJAX computing principals and approaches. Topics include learning how to build web applications with one or more scripting languages, and a relational database on the server tier. (Fall, Winter, Spring)
<b>CIT 210 Object Oriented Programming I</b> Prerequisite: CIT 203 This is an introductory course in object-oriented programming using the Java programming language. Programs will be written using the base data types, classes, and control structures of Java. An Interactive Development Environment (IDE) will be used to code and test programs. (Fall, Winter, Spring)	<b>(3:2:3)</b>	<b>CIT 340 Network Design</b> <b>(3:3:0)</b> Prerequisite: CIT 240 Principles of network design standards and architectures. Configuration and use of networking devices including repeaters, hubs, bridges, switches and routers to create enterprise networks. (Fall, Winter, Spring)
<b>CIT 230 Web Design/Layout</b> Prepares students for web development through a study of basic web page design, layout, and development following Human Computer Interface (HCI) and usability principles. In addition; creation, manipulation and optimization of web-compliant graphics, Cascading Style Sheet (CSS) language, and web-applicable legal issues are studied. (Fall, Winter, Spring)	<b>(3:3:0)</b>	<b>CIT 345 Wireless Networking</b> <b>(3:3:0)</b> Prerequisite: CIT 240 This is an introductory course on Wireless Local Area Networking. The course encompasses the design, planning, implementation, operation and troubleshooting of Wireless LANs. The material gives a comprehensive overview of technologies, security, and design best practices, while the practical side has particular emphasis on hands on skills. (Winter, Spring)
<b>CIT 235 Web Page Development</b> Prerequisite: CIT 230 This course focuses on developing web based materials to meet current and emerging standards, including XHTML, XML, CSS, and JavaScript. Focuses include construction of XHTML and database driven dynamic web pages that adhere to human-computer interface (HCI) and usability guidelines. Code-based development is emphasized while both GUI and code-based interfaces are used. (Fall, Winter, Spring)	<b>(3:3:0)</b>	<b>CIT 350 IT Operations Management</b> <b>(3:3:0)</b> Prerequisite: CIT 240, 330 This course introduces the IT organization, qualifying the business analysis, development, infrastructure, operations, and support roles running small to large enterprises. It introduces students to the matrix organization structure required to manage projects concurrently with day-to-day tasks. It reviews issues with applied micro-economics; software licensing; hardware obsolescence; strategic, tactical, and operational planning; outsourcing; performance metrics; and inter-organizational service-level agreements. This course teaches the management aspects of economics, organizational dynamics, and operational control of IT organizations in modern corporations. (Fall, Winter)
<b>CIT 240 Networking</b> This course teaches general networking principles to provide an understanding of data communication protocols, transmission systems, mediam, and software. (Fall, Winter, Spring)	<b>(3:3:0)</b>	<b>CIT 355 Decision Support Systems</b> <b>(3:3:0)</b> Prerequisite: CIT 203, Junior standing. This course introduces business decision making software and applications. It introduces students to the architecture, design, development, and deployment of frameworks for decision making. It discusses Decision Support Systems (DSS), Executive Information Systems (EIS), Expert Systems (ES), and Management Information Systems (MIS). This course teaches the student how to build analytical models using non-procedural development environments; like Microsoft Excel. Topics include learning how to build what-if, sensitivity, single and multiple goal seeking analysis models, like min-max inventory models. (Fall, Winter)
<b>CIT 298 Introductory Internship</b> Prerequisite: CIT 140, 210, 230, 240, minimum grade of C- in all CIT classes, permission of the instructor. The internship experience is an introductory experience for Computer Information Technology majors and is intended to integrate practical work experience with the cumulative knowledge and skills obtained during your education. It is expected that you will develop personal, professional and additional academic competencies during the internship. In order to accomplish this, you will need to go beyond the common experiences of a normal employee. Study, reasoning, reflection and theoretical/conceptual exploration will be required for you to develop new skills and knowledge to get the most of the internship experience. (Fall, Winter, Spring)	<b>(1-3:0:0)</b>	

<p><b>CIT 370 Systems Security</b> (3:3:0)                      Prerequisite: CIT 240                      The purpose of this course is to provide fundamental understanding of computer security principles. You will learn about confidentiality, integrity, availability, authentication, and the types of attacks and malicious code that may be used against your network. Remote access, email, and protocols will also be discussed. A variety of security topologies are discussed including secure communications channels, secure internetworking devices, and network medium. You will also learn about intrusion detection system, firewalls, and physical security concepts. In addition, security policies, disaster recovery, and computer forensics are covered. Aside from learning the technologies involved in security, you will get to understand the daily tasks involved with managing and troubleshooting those technologies. you will have a variety of hands-on labs to reinforce the concepts discussed in the class.                      (Fall, Winter, Spring)</p>	<p><b>CIT 440 Network Design II</b> (3:3:0)                      Prerequisite: CIT 340                      This course teaches general networking principles to provide an understanding of the basic switching, WAN technologies, and intermediate routing skills. Students will learn how to install and configure switches and routers in multiprotocol internetworks using LAN and WAN interfaces, improve network performance and security, perform entry-level tasks in the planning, design, installation, operation, and troubleshooting of Ethernet and TCP/IP networks.                      (Fall, Spring)</p>
<p><b>CIT 380 Project Management</b> (3:3:0)                      Prerequisite: Junior Standing                      This course introduces project management concepts in focusing on project management issues, approaches, and tools. It introduces how a manager can plan, organize, implement, and control non-routine activities to achieve cost, schedule and performance objectives. Topics include project life cycle, scope design and control, work breakdown structures and scheduling systems. Tools include planning and PERT/CPM, Gantt, earned value control methods in the context of PC and enterprise project management tools.                      (Fall, Winter, Spring)</p>	<p><b>CIT 455 Mobile Application Development</b> (3:3:0)                      Prerequisite: CIT 203, 210                      This course covers the concepts, architecture and implementation of Mobile Applications. The Microsoft.Net architecture will be used to develop and deploy applications on a variety of mobile devices.                      (Fall, Spring)</p>
<p><b>CIT 385 Business Process Design and Management</b> (3:3:0)                      This course introduces systems and process engineering concepts – focusing on project life-cycle management, business process engineering, gap analysis, statistical process controls (SPC), simulation and applied activity based costing. Topics include: Total Quality Management (TQM) approaches using daily process and integrated process management techniques against long- and short-range objectives; exploration of business processes and workflows using the Oracle E-Business Applications Suite and PeopleSoft ERP applications; project costing methods; and discrete simulation.                      (Fall, Winter)</p>	<p><b>CIT 460 Web Programming</b> (6:5:3)                      Prerequisite: CIT 310, 320                      Covers the design and development of the N-tier applications. An overview of the architecture for N-tier applications is covered with a focus 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. This class includes 5 hours of lecture and 3 hours of programming lab per week.                      (Fall, Winter)</p>
<p><b>CIT 410 Systems Analysis and Design</b> (3:3:0)                      Prerequisite: CIT 240, 310, 320                      This course 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. Each phase of the SDLC process is then examined in depth and real experience gained through an actual project. Computer aided Software (CASE) tools will be used to design, and document an information system/project.                      (Fall, Winter, Spring)</p>	<p><b>CIT 470 System Security II</b> (3:3:0)                      Prerequisite: CIT 370                      The purpose of this Lab based course is to teach students techniques for securing the entire network architecture both internal and external. 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.                      (Winter, Spring)</p>
<p><b>CIT 420 Database II</b> (3:3:0)                      Prerequisite: CIT 310, 320                      This course is a continuation if CIT 320 and 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 use an Integrated Development Environment (IDE) to write and test programs against database.                      (Fall, Winter)</p>	<p><b>CIT 480 Enterprise Integration</b> (3:3:0)                      Prerequisite: CIT 310, 320                      This course will help the learner understand how risk management plays a critical role in protecting an organization from IT-related risk. Risk management is essential in protecting the mission, as well as the assets of the organization. The core concepts of risk management, threat identification, risk assessment, risk mitigation, and evaluation and assessment will be covered.                      (Winter, Spring)</p>
<p><b>CIT 425 Data Warehousing</b> (3:3:0)                      Prerequisite: CIT 320                      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.                      (Winter, Spring)</p>	<p><b>CIT 485 Enterprise Applications</b> (3:3:0)                      Prerequisite: CIT 320, 330                      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)</p>
<p><b>CIT 430 Operating Systems II</b> (3:3:0)                      Prerequisite: CIT 240, 330                      The purpose of this course is to provide an advanced understanding of computer operating systems and services.                      (Fall, Winter)</p>	<p><b>CIT 490 Senior Project</b> (3:0:0)                      Prerequisite: Senior standing and permission of the instructor.                      This is a capstone class designed to apply all of the skills gained by the student in the development of an information system. Students will work together in a team to design and implement an information system.                      (Fall, Winter, Spring)</p>
	<p><b>CIT 495 Senior Research Paper</b> (1:1:0)                      Prerequisite: Senior Standing and permission of Instructor                      This is a capstone experience for the Computer Information Technology, Business, and Accounting majors. A research paper will be written and presented on a relevant Information Technology topic. It's purpose is to expand on knowledge outside of the required curriculum, and to develop professional writing and presentation skills.                      (Fall, Winter, Spring)</p>

**CIT 498 Internship**

**(3:0:0)**

Prerequisite: Senior standing and permission of the instructor.

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

(Fall, Winter, Spring)

**CIT 499 Special Topics**

**(3:3:0)**

Prerequisite: Permission of the instructor.

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

(Fall, Winter, Spring)