

Bachelor of Science in COMPUTER SCIENCE

with

- Business Applications Emphasis
- Electronic Control Systems Emphasis
- Engineering Applications Emphasis
- Statistics Emphasis
- Technical Communication Emphasis

2004 - 2005 Catalog

Fall Semester

Spring Semester

FRESHMAN YEAR

		Credits				Credits	
C.S.	1006	C.S./S.E. Freshman Seminar	1	C.S.	2116	Intro to Computer Sci. II	3
C.S.	2106	Intro to Computer Sci. I	3	Math	1530	Calculus II	3
Math	1520	Calculus I	3	HSS	1216	Principles of Speaking	2
Engl.	1046	English Comp.	3	*		Social Science Elective	
*		Humanities Elective					3
			3	**		Science Elective	
*		Social Science Electives					3
			3				
		Total Credits	16			Total Credits	14

SOPHOMORE YEAR

C.S.	2156	Assembly Language	3	C.S.	2656	Database Management	3
C.S.	2546	Object-Oriented Programming	3	C.S.	3166	Discrete Structures	3
Math	2510	Calculus III	4	C.S.	3316	Date Struct & Algor. I	3
Math	3256	Matrices & Lin. Algebra	3	Math	3316	Intro. Statistical Methods	3
**		Science Elective		**		Science Elective	
			3				3
		Total Credits	16			Total Credits	15

JUNIOR YEAR

S.E.	3250	Software Engineering I	3	S.E.	3360	Software Engineering II	3
C.S.	3326	Data Struct. & Algor. II	3	C.S.	3356	Programming Lang.	3
Math	2236	Differential Equations	3	C.S.	3406	Operating Systems	3
**		Science Elective		Engr	3210W	Scientific & Tech Writing	3
			3	***		Professional Elective	
***		Professional Elective					3
			3				
		Total Credits	15			Total Credits	15

SENIOR YEAR

C.S.	4386	Theory of Computation	3	C.S.	4406	Computer Architecture	3
C.S.	4526	Networking Principles	3	C.S.	4556	Artificial Intelligence	3
C.S.	4916	Internship	2	C.S.	4916	Internship	2
***		Professional Elective		C.S.	4946	Senior Seminar	1
			3	Math	4106	Numerical Computing	3
*		Humanities Elective		***		Professional Elective	
			3				3
		Total Credits	14			Total Credits	15

Minimum credits for B.S. degree in Computer Science = 120

*Electives must be chosen so that the General Education Requirements are met (6 credits in Social Sciences & 6 credits in Humanities).
 **Science electives must include a two-semester sequence of laboratory science (min. of 12 credits total): Either (1) BIOL 1086,1096, and 1116 plus 4 more science credits; (2) CHEM 1056 w/lab 1136, CHEM 1066 w/lab 1166 plus 4 more science credits; (3) GEOE 1010, GEOL 2020 plus 6 more science credits; (4) PHYS 1046, 2076 w/lab 2096, and PHYS 2086 w/lab 2106 plus 1 more science credit.(take physics sequence for the Control System Emphasis.)
 ***Professional electives are the classes that meet the Computer Science degree options. (Professional electives on other side.)
 Math 1516 Calculus I with Algebra Enhancement can replace Math 1520. HSS 1226 Pubic Speaking can replace HSS 1216. C.S. 4606 Senior Design Project can replace Intership. PTC 3216W Scientific & Technical Writing, PTC 3256W Scientific Report Writing, or PTC 3896W Business & Professional Writing can replace ENGR 3210W.

COMPUTER SCIENCE DEGREE OPTIONS

Professional Electives --- Junior and Senior Years

12 Credits for Each Option

Business Applications					
			<u>Fall</u>	<u>Spring</u>	
Junior Year					
BUS	2146	Accounting I	3		
BUS	2156	Accounting II		3	
Senior Year					
*	BUS	3416	Business Law I	3	
*	BUS	3616	Management	3	
*	BUS	3316W	Marketing		3
*	BUS	3516	Business Finance		3
* <i>select 2 courses out of 4</i>					
Electronic Control Systems					
			<u>Fall</u>	<u>Spring</u>	
Junior Year					
Engr.	2530	Intro to Electric Circuits (coreq Phys 2086)		3	
*	Engr.	2550	Electric Circuits Lab (coreq Engr 2530 & Phys 2106)		1
	Phys.	3036	Electronics (prereq Phys. 2086 and 2106)	3	
Senior Year					
*	Engr.	3270	Digital Circuit Design (prereq Phys. 3036)		3
*	Engr.	3500	Introduction to Signals, & Systems (prereq Engr 2530)	3	
*	Engr.	3560	Electric Circuits II (prereq Engr 3500)		3
*	Engr.	3570	Electronic Design (prereq Phys 3036 & Engr 3500)		3
*	Engr.	4410	Control System Theory and Design (prereq Engr 3500)	3	
*	Engr.	4450	Process Instrumentation and Control (prereq Engr 2530)	3	
*	Engr.	4460	Process Instrumentation and Control Lab (prereq Engr 2530)	1	
*	Phys.	4806	Intro to Microprocessors (prereq Phys. 3036)		3
* <i>select 2 or more courses to reach a minimum of 12 elective credits within the option.</i>					
Engineering Applications					
			<u>Fall</u>	<u>Spring</u>	
Junior Year					
Engr.	2050	Statics (prereq Phys. 1046)	3		
Engr.	2150	Engineering Computer Graphics		3	
Senior Year					
Engr.	3350	Mechanics of Materials	3		
Engr.	3150	Introductory Engineering Computer Applications		3	

Statistics

*	MATH 4316	Experimental Design (prerequisite Math 3316)	3	
*	MATH 4326	Regression and Model Building (prerequisite Math 3316)		3
<i>Junior/Senior Year</i>				
	MATH 4336	Probability Theory (prerequisite Math 3316)	3	
*	MATH 4346	Statistical Theory (prerequisite Math 4336)		3
*	MATH 4356	Statistical Computing & Exploratory Data Analysis (prerequisite Math 3316)		3
*	MATH 4356	Statistical Computing & Exploratory Date Analysis		3

Technical Communication

			<u>Fall</u>	<u>Spring</u>
<i>Junior Year</i>				
	PTC 3406	New Media Design I	3	
	PTC 3896W	Business & Professional Writing		3
<i>Senior Year</i>				
*	PTC 4406	New Media Design II	3	
*	PTC 4056	Technical Editing		3
*	PTC 4126	Advanced Writing		3
*	PTC 4426	History, Technology, & Communication		3

**select 2 courses out of 4*

Official in catalog