

Bachelor of Science in SOFTWARE ENGINEERING

with

Name: _____

Choose One Option Sophomore Year

- | | |
|--|--|
| <input type="checkbox"/> Business Applications Option | <input type="checkbox"/> Statistical Applications Option |
| <input type="checkbox"/> Electronic Control Systems Option | <input type="checkbox"/> Technical Communications Option |
| <input type="checkbox"/> Engineering Applications Option | <input type="checkbox"/> Health Care Informatics Option |
| | <input type="checkbox"/> Game Development Option |

2012 - 2013 Catalog

Fall Semester

Spring Semester

FRESHMAN YEAR

		Credits	Sem/Gr
ESOF 194	CS&SE Freshman Seminar	1	_____
CSCI 135	Fund. of Computer Science I	3	_____
M 171	Calculus I	3	_____
WRIT 101	College Writing I	3	_____
CHMY 141	College Chemistry I*	3	_____
CHMY 142	College Chemistry I Lab *	1	_____
**	Humanities Elective		_____
		3	_____
	Total Credits	17	

		Credits	Sem/Gr
CSCI 136	Fund. of Computer Science II	3	_____
COMM 2016	Presenting Technical Information*	3	_____
M 172	Calculus II	3	_____
PHSX 234	General Physics - Mechanics	3	_____
**	Humanities Elective		_____
		3	_____
**	Social Science Elective		_____
		3	_____
	Total Credits	18	

SOPHOMORE YEAR

CSCI 232	Data Struct & Algorithms	3	_____
CSCI 246	Discrete Structures	3	_____
CSCI 255	Intro. To Embedded Systems	3	_____
M 273	Multivariable Calculus	4	_____
PHSX 235	General Physics - H, S, & O	3	_____
PHSX 236	General Physics-H, S, & O Lab	1	_____
	Total Credits	17	

CSCI 332	Design and Analysis of Algor.	3	_____
CSCI 340	Database Design	3	_____
ECNS 203	Principles of Economics	3	_____
M 274	Intro to Differential Equations	3	_____
PHSX 237	General Phys - Elect, Mag, & Wave	3	_____
PHSX 238	General Phys-Elect, Mag, & Wave Lab	1	_____
	Total Credits	16	

JUNIOR YEAR

CSCI 305	Concepts of Programming Lang	3	_____
CSCI 443	User Interface Design	3	_____
ESOF 322	Software Engineering	3	_____
★STAT 332	Statistics for Scientists & Engin	3	_____
***	Professional Elective		_____
		3	_____
	Total Credits	15	

CSCI 361	Computer Architecture	3	_____
ESOF 326	Software Maintenance	2	_____
ESOF 328	Requirements & Specifications	3	_____
WRIT 321	Adv. Technical Writing**	3	_____
***	Professional Elective		_____
		3	_____
	Total Credits	14	

SENIOR YEAR

CSCI 466	Networks	3	_____
EGEN 325	Engr. Economic Analysis	3	_____
ESOF 427	Software Design & Architecture	3	_____
ESOF 486	Software Eng. Design Project I	3	_____
***	Professional Elective		_____
		3	_____
	Total Credits	15	

Bus 3666	Operations & Prod Mgmt	3	_____
CSCI 460	Operating Systems	3	_____
CSCI 470	Web Science	3	_____
ESOF 487	Software Eng. Design Project II	3	_____
ESOF 494	Senior Seminar	1	_____
***	Professional Elective		_____
		3	_____
	Total Credits	16	

Minimum credits for B.S. degree in Software Engineering = 128

* BIOB 101 (Discover Biology) and BIOB 102 (Discover Biology Lab) or GEO 101 (Intro to Physical Geology) may be substituted for CHMY 141/142.

COMM 1216 Principles of Speaking or COMM 1226 Public Speaking can replace COMM 2016.

**Electives must be chosen to meet GER (3 credits in Social Sciences & 6 credits in Humanities).

*** Professional electives are the classes that meet the Software Engineering degree options. (Professional electives on other side.)

****WRIT 325 Writing in the Sciences, WRIT 322 Advanced Business Writing can replace WRIT 321.

★ Students in the Statistics Option need to take STAT 332 before beginning the courses in the option.

SOFTWARE ENGINEERING DEGREE OPTIONS

Professional Electives --- Junior and Senior Years
12 Credits for Each Option

Business Applications					
<i>Junior Year</i>			<u>Fall</u>	<u>Spring</u>	<u>Sem/Gr</u>
ACTG 201	Principles of Fin Acct		3		
ACTG 202	Principles of Mang Acct			3	
Senior Year					
* BMKT 325W	Principles of Marketing			3	
* BGEN 235	Business Law I		3		
* BMGT 335W	Management and Organization			3	
* BFIN 322	Business Finance		3		
* <i>select 2 courses out of 4</i>					
Electronic Control Systems					
<i>Junior Year</i>			<u>Fall</u>	<u>Spring</u>	<u>Sem/Gr</u>
PHSX 322	Electronics for Scientists (prereq PHSX 237)		3		
EELE 201	Circuits I for Engineering (coreq PHSX 237)			3	
** EELE 202	Circuits I for Engineering Lab (coreq EELE 201)			1	
Electric Circuits Sequence					
* EELE 203	Circuits II for Engineering (prereq EELE 201, 202 & M 274)		4		
* EELE 261	Intro. To Logic Circuits (prereq EELE 104, PHSX 322)			3	
* EELE 317	Electronics (prereq EELE 203 and PHSY 322)			3	
* Geop 446	Applied Linear Systems (prereq EELE 203 or M 405 or PHSX 453)			3	
Electric Control Sequence					
* EELE 423	Process Instrumentation and Control (prereq EELE 201 & 202)		3		
** EELE 424	Process Instrumentation and Control Lab(coreq EELE 423)		1		
EELE 261	Intro. to Logic Circuits (prereq EELE 104, PHSX 322)			3	
Microprocessor Sequence					
+ EELE 261	Intro. to Logic Circuits (prereq EELE 104, PHSX 322)			3	
EELE 465	Microcontroller Applications (prereq EELE 261) (even years only)		3		
*select 1 course of 3; **labs are optional; + take EELE 261 in Junior year and EELE 201 in Senior year.					
Engineering Applications					
<i>Junior Year</i>			<u>Fall</u>	<u>Spring</u>	<u>Sem/Gr</u>
* EGEN 105	Introduction to General Engineering		1		
EGEN 201	Statics (prereq Phys. 1046) (prereq PHSX 234)		3		
EGEN 215	Introduction to Computer Aided Design & Problem Solving			2	
* EGEN 202	Dynamics (prereq EGEN 201 & M 172)			3	
Senior Year					
EGEN 305	Mechanics of Materials		3		
* EGEN 306	Mechanics of Materials Lab		1		
* EGEN 318	Computer Applications for Engineering Design			2	
* ENGR 4150	Engineering Computer Applications (even years only)			3	
* <i>select 2 or more courses to reach a minimum of 12 elective credits within the option.</i>					

Statistical Applications

Junior Year			<u>Fall</u>	<u>Spring</u>	<u>Sem/Gr</u>
*	STAT 441	Experimental Design (prereq STAT 332)	3		_____
*	STAT 432	Regression and Model Building (prereq STAT 332)		3	_____
Senior Year					
	STAT 421	Probability Theory (prereq STAT 332)	3		_____
*	STAT 422	Mathematical Statistics (prereq STAT 421)		3	_____
*	STAT 435	Statistical Computing & EDA		3	_____

*select 3 courses out of 4

Technical Communication

Junior Year			<u>Fall</u>	<u>Spring</u>	<u>Sem/Gr</u>
*	PTC 3156	Digital Video Productions	3		_____
	PTC 3406W	New Media Design I	3		_____
+*	WRIT 321W	Advanced Technical Writing		3	_____
+*	WRIT 322W	Advanced Business Writing		3	_____
Senior Year					
*	CSCI 311	Advanced Web Development		3	_____
+*	WRIT 325W	Writing in the Sciences	3		_____
*	WRIT 350W	Technical Editing		3	_____
*	WRIT 412W	Advanced Writing		3	_____
*	PTC 4406	New Media Design II		3	_____
*	PTC 4426W	History, Technology, & Communication		3	_____

+only one may be used to satisfy GEN Ed 300-level writing requirement.

*select 3 courses out of 9

Health Care Informatics

Junior Year			<u>Fall</u>	<u>Spring</u>	<u>Sem/Gr</u>
	HCI 1016	Intro to Health Care Informatics	3		_____
*	HCI 2106	Health Care Ethics and Regulations (prereq HCI 1016)		3	_____
*	HCI 2256	Data, Information & Knowledge (prereq IT 2426, HCI 1016)	2		_____
*	HCI 2306	Overview of HCI Systems (prereq HCI 1016)		4	_____
*	HCI 3106	Health Care Delivery in the US I (prereq HCI 1016)	3		_____
Senior Year					
*	HCI 3126	Health Care Delivery in the US II (prereq HCI 3106)		3	_____
*	HCI 3206	Inf. Systems Security		3	_____
*	HCI 4106	Projects and Systems Management	4		_____
*	HCI 4206	Public Health Inf. (prereq HCI 3106)	3		_____

* Select 3 courses of 8; student must have the approval of the student's advisor & the HCI department

Game Development

Junior Year			<u>Fall</u>	<u>Spring</u>	<u>Sem/Gr</u>
	PTC 3306	Introduction to Game Design	3		_____
	PTC 3406W	New Media Design I	3		_____
	CSCI 441	Artificial Intelligence		3	_____
Senior					
	PTC 4406	New Media Design II		3	_____
	CSCI 441	Computer Graphics	3		_____