2009 / 2010 CURRICULUM - COMPUTER ENGINEERING

EIGHT SEMESTER PROGRAM   **Total credits:**   **136**

First (Fall) Semester	**15 credits**	**Second (Winter) Semester**	**18 credits**
CHEM 110 General Chemistry 1	(4 cr)	CHEM 120 General Chemistry 2	(4 cr)
MATH 140 Calculus 1	(3 cr, P - High school Calculus)	MATH 141 Calculus 2	(4 cr, P - MATH 139 or MATH 140 or MATH 150)
PHYS 131 Mechanics & Waves	(4 cr)		

Technical Complementaries (3 courses) 9 credits

Students following the Computer Engineering program must take 3 courses (9 credits) from the following lists. One course must be chosen from List A, and 2 courses must be chosen from List B. It is possible that not all the courses listed will be offered in any given year. Please refer to the up-to-date course assignments before selecting any course. Permission will not be granted to take Technical Complementary courses that are not on this list.

Computer Engineering Technical Complementaries - LIST A (1 Course):

Course	Course Title	Pre-Requisites and Co-Requisites
ECSE 424	Human-Computer Interaction	(3 cr, P - ECSE 322)
ECSE 428	Software Engineering Practice	(3 cr, P - ECSE 321 or COMP 335)
ECSE 431	Introduction to VLSI CAD.	(3 cr, P - ECSE 323 & ECSE 330)

Computer Engineering Technical Complementaries - LIST B (2 Courses):

Course	Course Title	Pre-Requisites and Co-Requisites
COMP 424	Topics: Artificial Intelligence 1	(3 cr, P - COMP 206, COMP 251 & COMP 302)
ECSE 404	Control Systems	(3 cr, C - ECSE 304 or ECSE 306)
ECSE 411	Communications Systems 1	(3 cr, P - ECSE 305 & ECSE 304 or ECSE 306)
ECSE 412	Discrete-Time Signal Processing	(3 cr, P - ECSE 304 or ECSE 306)
ECSE 420	Parallel Computing	(3 cr, P - ECSE 427)
ECSE 421	Embedded Systems	(3 cr, P - ECSE 322 & ECSE 323)
ECSE 422	Fault Tolerant Computing	(3 cr, P - ECSE 322)
ECSE 429	Software Validation	(3 cr, P - ECSE 321)
ECSE 436	Signal Processing Hardware	(3 cr, P - ECSE 322, ECSE 323 & ECSE 304 or ECSE 306)
ECSE 443	Numerical Methods in Elect. Eng.	(3 cr, P - ECSE 221, ECSE 330 & ECSE 351 or ECSE 353)
ECSE 450	Electromagnetic Compatability	(3 cr, P - ECSE 221, ECSE 334 & ECSE 352 or ECSE 353)
ECSE 530	Logic Synthesis	(3 cr, P - ECSE 323)
ECSE 532	Computer Graphics	(3 cr, P - ECSE 322)
ECSE 548	Introduction to VLSI Systems	(3 cr, P - ECSE 323 & ECSE 334)

Laboratory Complementary (one course) 2 credits

Students following the regular Computer Engineering program must take one course (2 credits) from the following list. It is possible that not all the courses listed will be offered in any given year. Please refer to the up-to-date course assignments before selecting any course. Permission will not be granted to take Laboratory Complementary courses that are not on this list.

Course	Course Title	Pre-Requisite and Co-Requisite Structure
ECSE 434	Microelectronics Laboratory	(2 cr, P - EDEC 206, ECSE 334)
ECSE 436	Signal Processing Hardware	(3 cr, P - ECSE 322, ECSE 323 & ECSE 304 or ECSE 306)
ECSE 487	Computer Architecture Laboratory	(2 cr, P - EDEC 206; C - ECSE 425)
ECSE 489	Telecommunication Network Laboratory	(2 cr, P - EDEC 206; C - ECSE 414 or ECSE 528)
ECSE 490	Digital Signal Processing Lab	(2 cr, P - ECSE 291 & EDEC 206; C - ECSE 412 or ECSE 512)
ECSE 491	Communications Systems Lab	(2 cr, P - EDEC 206 & ECSE 291; C - ECSE 411 or ECSE 511)
ECSE 493	Control & Robotics Lab	(2 cr, P - EDEC 206 & ECSE 291;C - ECSE 404 or ECSE 501)