

## **Course Adjustments for Dual Majoring in EEE/SCS or SCS/EEE Class of 2011 and Beyond**

There is no guarantee that a schedule will be possible for the courses in the matrix. You are encouraged to validate or take courses early.

### **Core and Division Courses**

- Both majors have the following courses in common from the core: the plebe year, NN200, NE203, SP211, SP212, NL310, NS300, HH215X, HH216, NL400, NS42X, ES300, Hum/SS1 and Hum/SS2.
- Both EEE/SCS and SCS/EEE then take the division requirements for EEE and the additional math courses that are pre-requisites for the major courses in either major.
  - SM221 (replaces SM223 for SCS)
  - SM212 (replaces Free Elective for SCS)
  - SM242 (replaces SM313 for EEE)
  - ES410 (replaces ES360 for SCS)
  - The fluids-thermo sequence: EM316 and EM317 [EM316+EM317+completion of a Division I major replaces EM300+EA/N4XY for SCS]
  - Should an SCS/EEE candidate fail to complete the EEE major, he/she must complete EM300 and EA/4XY and may not count EM316 and EM317 towards these requirements. However, EM317 + EM300L can count towards EM300.

### **Courses Adjustments in the SCS/EEE discipline**

- Both majors take the following courses which replace courses in either the SCS or EEE matrix.
  - IC210 replaces SI204 (Intro to Computing) for EEE
  - EE221 (Intro to EE I) replaces EE301 for SCS (SCS core)
  - EE354 (Modern Communications Systems) replaces EE303 for SCS (SCS core)

### **Required courses for Dual Major**

- Students in both majors will be required to take the following courses:
  - IC211 – Object Oriented Programming
  - IC220 – Computer Architecture and Organization
  - IC221 – Systems Programming
  - IC312 – Data Structures
  - IC322 – Computer Networks
  - SI340 – Theory of Computing
  - SI335 – Computer Algorithms
  - IC470 – Software Engineering
  - SI413 – Programming Languages
  - EE242 – Digital Systems
  - EE241 – Electronics I
  - EE320 – Intro to Electrical Engineering II
  - EE322 – Signals and Systems
  - EE361 – Microcomputer Based Design
  - EE372 – Engineering Electromagnetics
  - EE411 – Electrical and Computer Engineering Design
- Students will take the following courses based on their primary major
  - EEE/SCS will take EE414 (Capstone) which will replace IC480
  - SCS/EEE will take IC480 (Capstone) which will replace EE414

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- Students will take two SCS major electives (one of which is a restricted elective), two EEE major electives, and one major elective that will count for both majors. The following courses can be used to satisfy the one common major elective.
  - EE432 – Digital Signal Processing
  - EE435 – Biometric Signal Processing
  - EE462 – Microcomputer Interfacing
  - EE464 – Intro to Computer Networks
  - SI411 – Operating Systems
  - SI452 – Advanced Architecture
  - SI455 – Advanced Computer Networks
  - SI460 – Computer Graphics
  - SI475 – Intelligent Robotics
  - EE/SI485/486 with permission of both department Senior Academic Advisor
  - EE/SI487/488 with permission of both department Senior Academic Advisor

EEE/SCS SCS/EEE	4/c F	4/ S	3/c F	3/c S	2/c F	2/C S	1/c F	1/c S
Core	NS101,2	NN101,2	NN200,2	NE203,3		NL310,3	NL400,2	NS42X,1
	SC111,4	SC112,4	SP211,4	SP212,4		NS300,1 Moved from 2/cF		ES300,3
	SM121,4 (validate)	HE112,3						
	SM122,4 (validate)							
	HE111,3 HH104,3	FP130,3 NL110,2		HH215,3		HH216,3	Hum/SS 1,3	Hum/SS2,3
Division I	SM221,4 (SM223,4)	SM212,4 (Free Elective)					ES410, 4 (ES360)	
Division II			SM242,4 [SM313,3]				EM316,3 (EM300,4) See Note 1.	EM317,3 (EA/N4XY,4)
SCS/EEE overlap / common courses			IC210,4 [SI204,4]			CS/EE MJ EL 1, 3		IC480,3 or EE414,2 based on primary major. See Note 2.
						EE354,4 (EE303)		
			EE221,4 (EE301,4)					
SCS				IC211,3	IC312,3	SI335,3	SI413,3	CS MJ EL3,3
				IC220,3	IC322,3	CS MJ EL2,3	IC470,3	
				IC221,3	SI340,3			
EEE			EE242,4	EE241,4	EE320,3	EE372, 4	EE411,3	EE MJ EL3,3
					EE322,4		EE MJ EL2,3	
					EE361,4			
Credits	16	18	22	23	20	24	24	18/19

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[Red] = courses from the EEE matrix that are replaced by the substitute shown in the same cell

[Blue] = courses from the SCS matrix that are replaced by the substitute shown in the same cell

Note 1: The sequence EM316 and EM317 from the EEE matrix replaces the sequence EM300 and EA/N4XY from the SCS matrix. Failure to complete the EEE major will result in having to take EM300L and EA/4XY.

Note 2: Where two credit totals are given as n/m, n applies when EEE is the primary major and m when SCS is the primary major.