

Bachelor of Science in Engineering Physics
Design Option in Digital Electronic Systems
(128 hours total)

Common Core (70 hours)

PHYSICS (26 hours)		CHEMISTRY (5 hours)	
PHSX 211 or 213 General Physics I ¹	4	CHEM 184 Foundations of Chem. I	<u>5</u>
PHSX 212 or 214 General Physics II ¹	4		5
PHSX 313+316 General Physics III	4		
EPHX 516 Physical Meas.	4	ENGLISH (6 hours)	
EPHX 521 Mechanics I	3	ENGL 101 Composition	3
EPHX 531 Electricity & Magnetism	3	ENGL 102 Critical Reading & Writing	<u>3</u>
EPHX 601 Dsgn. Phys. & Elec Syst.	<u>4</u>		6
	26		
MATHEMATICS (18 hours)		GENERAL EDUCATION RQMTS. (15 hours)²	
MATH 121 Calculus I	5	Economics elective	3
MATH 122 Calculus II	5	Ethics elective	3
MATH 223 Vector Calculus	3	Communication elective	3
MATH 290 Elementary Linear Algebra	2	Environmental Concern elective	3
MATH 220 or 320 Differential Equations	<u>3</u>	Contemporary Issues elective	<u>3</u>
	18		15

Requirements Specific to this Option (58 hours)

ELEC. ENGR. & COMP. SCI. (55 hours)			
EECS 140 Intro to Digital Logic Design	4 ³	EECS 443 Digital Syst. Dsgn.	4
EECS 168 Programming I	4	EECS 448 Software Engr. I	3
EECS 211 Circuits I	3	EECS 461 Probability & Statistics	3
EECS 212 Circuits II	4	EECS 470 Elec. Dev. & Prop. of Mat.	3
EECS 268 Programming II	4	EECS 541 Comp. Syst. Dsgn. Lab I	3
EECS 312 Electronic Circ. I	3	EECS 542 Comp. Syst. Dsgn. Lab II	3
EECS 360 Sign. & Syst. Anal.	4	EECS 645 Computer Architecture	3
EECS 388 Comp. Syst. & Assm. Lang.	<u>4</u>	EECS Elective	<u>3⁴</u>
	30		25
		Physics (3 hours)	
		EPHX 611 Intro. Quantum Mechanics	<u>3</u>
			3

Notes:

¹ -- Majors are encouraged to take PHSX 213 and 214, the Honors sections of 211 and 212.

² -- See the list of courses allowed as General Education Component Electives.

³ -- There is also an honors version of this course, EECS 241 (fall semester, 2004)

⁴ - Allowed courses are EECS 546, 644, 670, 690 and 713.

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Suggested Schedule

Fall Semesters

CHEM 184 *Found. Chem. I*
 ENGL 101 *Composition*
 MATH 121 *Calculus I*
 General Education Elective

5
 3
 5
 3^a
16

Spring Semesters

PHSX 211 or 213 *General Physics I*
 ENGL 102 *Critical Reading & Writing*
 MATH 122 *Calculus II*
 EECS 168 *Programming I*

4^b
 3
 5
 4
16

Freshman Year

Sophomore Year

EECS 211 *Circuits I*
 EECS 140 *Intro. To Digital Logic Design*
 PHSX 212 or 214 *General Physics II*
 MATH 220 or 320 *Differential Eqns*
 MATH 290 *Elem. Linear Algebra*

3
 4
 4^b
 3
 2
16

EECS 212 *Circuits II*
 EECS 268 *Programming II*
 MATH 223 *Vector Calculus*
 PHSX 313 *General Physics III*
 PHSX 316 *Inter. Physics Lab*

4
 4
 3
 3
 1
15

Junior Year

EECS 312 *Electronic Circuits I*
 EECS 360 *Signal & System Analysis*
 EECS 388 *Comp. Syst. & Assembly Lang.*
 EPHX 521 *Mechanics I*
 General Education Elective

3
 4
 4
 3
 3^a
17

EECS 443 *Digital Systems Design*
 EECS 448 *Software Engineering I*
 EECS 461 *Probability & Statistics*
 EPHX 611 *Intro. Quantum Mechanics*
 General Education Elective

4
 3
 3
 3
 3^a
16

Senior Year

EECS 470 *Elec. Devices & Prop of Matls.*
 EECS 541 *Comp. Syst. Design Lab. I*
 EECS Elective
 EPHX 516 *Physical Meas.*
 EPHX 531 *Electricity & Magnetism*

3
 3
 3^c
 4
 3
16

EECS 542 *Comp. Syst. Design Lab. II*
 EECS 645 *Computer Architecture*
 EPHX 601 *Dsgn Phys & Elec. Syst.*
 General Education Electives

3
 3
 4
 6^a
16

Total 128

Notes:

^a – See the list of courses allowed as General Education Component Electives. One course from each of the five areas, Economics, Ethics, Communication, Environmental Concern, and Contemporary Issues, is required.

^b -- Majors are encouraged to take PHSX 213 and 214, the Honors sections of 211 and 212.

^c - Allowed courses are EECS 546, 644, 670, 690 and 713.