

College of Engineering
The Bradley Department of Electrical and Computer Engineering (ECE)
Bachelor of Science in Computer Engineering (CpE)
For students graduating in calendar year 2008

Freshman				Sophomore			
I-Fall	GRADE	II-Spring	GRADE	I-Fall	GRADE	II-Spring	GRADE
ENGE 1024 Eng. Exploration	2	ENGE 1104 Eng. Digital Future	2	ECE 2984/2000 Eng. Prof. in ECE	2	ECE 2984/2500 Comp. Org. & Arch.	3
CHEM 1074 Gen Chem for Eng	3	ECE 1574 Prog & Prob Solv	3	ECE 2504 Intro Computer Eng	3	ECE 2004 Circuit Analysis	3
CHEM 1084 Gen Chem Lab/Eng	1	ENGL 1106 Freshman English	3	ECE 2574 Intro Data St & S.E.	3	ECE 2984 Intro to UNIX	2
ENGL 1105 Freshman English	3	MATH 1224 Vector Geometry	2	MATH 2214 Diff Equations	3	MATH 2224 Multivariable Calculus	3
MATH 1114 Linear Algebra	2	MATH 1206 Calculus II	3	PHYS 2306 Found Phys w/Lab	4	MATH 2534 Discrete Math	3
MATH 1205 Calculus I	3	PHYS 2305 Found Phys w/ Lab	4			UC (Ar. 2)	3
UC (Ar. 6)	1						
Total Sem--UG Pgm	15 15		17 32		15 47		17 64
Major Sem--UG Pgm			3 3		8 11		8 19

Junior				Senior			
I-Fall	GRADE	II-Spring	GRADE	I-Fall	GRADE	II-Spring	GRADE
ECE 3574 Software Engineering	3	CpE Tech Elective from list	3	ECE 4534 Embedded Systems	4	CpE Design Tech Elective from list	3
ECE 2204 Electronics I	3	ECE 3534 (WI) Micro Sys Design	4	CpE Design Tech Elective from list	3	CpE Tech Elective from list	3
ECE 2274 EE Circuits Lab	1	ISE 2014 Eng Economy	2	CpE Tech Elective from list	3	CpE Tech Elective from list	3
ECE 2704 Signals & Systems	3	STAT 4714 Prob & Stat for ECE	3	Eng and Science Elective from list	3	UC (Ar. 3)	3
ECE 3504 Digital Design	4	ENGL 3764 (WI) Technical Writing	3	UC (Ar. 3)	3	Free elective	3
UC (Ar. 2)	3	UC (Ar. 7)	3				
Total Sem--UG Pgm	17 81		18 99		16 115		15 130
Major Sem--UG Pgm	14 33		7 40		10 50		9 59

	Cr.	Course	Cr.	Course	Cr.	Course	Cr.	Course
CpE Technical Electives MUST include 9 hours with an ECE or CS Prefix from List (12 cr.)								
CpE Design Tech Elective from List (See note =>) (6 cr.)						CpE Design Tech Electives are designated by "DTE" on the CpE Tech Elective List.		
UC Area 1 Writing/Discourse in Major	4	ECE 3534						
UC Area 1 Writing/Discourse Additional	3	ENGL 3764						
a) UC Area 2 Ideas, Cultural Traditions, and Values (See note =>) (6 cr.)						Some Area 2 classes also count as UC in Area 7.		
b) UC Area 3 Society and Human Behavior (See note =>) (6 cr.)						Some Area 3 classes also count as UC in Area 7.		
c) UC Area 6 Creativity and Aesthetic Experience (See note =>) (1 cr.)						Art 1004 and FA 2004 are offered on a Pass/Fail basis only.		
d) UC Area 7 Critical Issues in a Global Context (See note =>) (3 cr.)						Some area 7 classes also count as UC in Areas 2 or 3.		
e) Free Electives (See note =>) (3 cr.)						Double counting for area 7 increases the number of required free electives.		
SUM of credits (a-e) must = 19								
Foreign Language Requirement (check appropriate). The language requirement does NOT satisfy graduation requirements.								
2 years 1 FL in high school OR 1 year (6 cr.) FL in college Course # _____ Cr. _____ ; Course # _____ Cr. _____								

See reverse side for curriculum notes.

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Key:

UC = University Core Requirements

Ar. = Area

First-year Engineering Core

The first-year Engineering Fundamentals/Exploration requirement can be completed through the following course combinations:

1. EF 1005 Intro to Engineering (2 cr.) + EF 1006 Intro to Engineering (2 cr.)
2. EF 1015 Intro to Engineering (2 cr.) or EF 2984 Engineering Exploration (2 cr.) + EF 1016 Intro to Engineering (2 cr.) or ENGE 1016 Intro to Engineering (2 cr.)
3. EF 1015 Intro to Engineering (2 cr.) or EF 2984 Engineering Exploration (2 cr.) + ENGE 1104 Exploration of Digital Future (2 cr.)
4. ENGE 1024 Engineering Exploration (2 cr.) + ENGE 1104 Exploration of Digital Future (2 cr.)
5. ENGE 1024 Engineering Exploration (2 cr.) + ENGE 1114 Exploration Engineering Design (2 cr.) and ENGE 1204 Transition to Digital Future (1 cr.)

The first-year Chemistry requirement can be completed through the following course combinations:

1. CHEM 2984 General Chemistry for Engineers (3 cr.) + CHEM 2984 General Chemistry Lab for Engineers (1 cr.)
2. CHEM 1074 General Chemistry for Engineers (3 cr.) + CHEM 1084 General Chemistry Lab for Engineers (1 cr.)
3. CHEM 1035 General Chemistry (3 cr.) + CHEM 1045 General Chemistry Lab (1 cr.) + CHEM 1036 General Chemistry (3 cr.) + CHEM 1046 General Chemistry Lab (1 cr.)

Note that students must complete the 4 cr. Chemistry for Engineers sequence or the 8 cr. General Chemistry sequence.

CPE Major

Admission to the CPE degree program is governed by CoE and ECE restricted majors' guidelines.

All ECE & CS courses require a C- or better in prerequisite courses.

Only free electives or Area 6 courses offered on a Pass/Fail basis only may be taken under the Pass/Fail grading option.

University Policy 91 outlines university-wide minimum criteria to determine if students are making satisfactory progress towards the completion of their degrees. The ECE Department fully supports the policy. Specific expectations for satisfactory progress for Computer Engineering majors are as follows:

- Each student must meet the minimum University-wide criteria as described in Policy 91 and summarized in the Undergraduate Course Catalog and Academic Policies catalog.
- Additionally, upon completion of 60 credits, CPE students must have satisfactorily completed (with a grade of C- or better) ECE 2984/2000, ECE 2504 or 2574, MATH 2214 and (2224 or 2534), and PHYS 2306.
- Upon completion of 90 credits, CPE students must have successfully completed 28 credits of in-major courses have 2.0 overall and in-major GPAs.

Cumulative/overall and in major GPAs of 2.0 or higher are required for graduation. In determining the CPE in major GPA, all ECPE and ECE courses, including repeats, are used. CS 1044, if taken before Fall 2004, will also count in the in major GPA calculation.

Non-degree courses are those which do not satisfy graduation requirements, including free electives. The list of non-degree courses includes all courses on the "Non-Degree Credit Courses" list which is updated annually and published on the College of Engineering Undergraduate Academic Affairs website at www.eng.vt.edu.

A total of 130 credits are required for graduation with a B.S. degree in Computer Engineering.