

Computer Engineering Degree - Use if you are certain you will be majoring in Computer Engineering

Degree requirements - 129 credits

FRESHMAN YEAR - 31-34 credits (*semester; prerequisites*)

Fall		Credits
ECE102	Digital Circuit Logic (F)	4
CO150 ^(a)	College Composition (F,S,SS; CO 130 or Placement)	3
CS163 OR CS164	Java (CS1) No Prior Programming (F,S, SS; MATH124 with a minimum grade of C) OR Java (CS1) Prior Programming (F,S; MATH118 with a minimum grade of C)	4
Elective ^(b)	Free Elective	0-3
MATH160	Calculus for Physical Scientists I (F,S,SS; MATH124 with a minimum grade of B; MATH126 with a minimum grade of B)	4
Spring		
ECE103	DC Circuit Analysis (F,S; MATH160 with a minimum grade of C)	3
CS165	Java (CS2) Data Structures and Algorithms (F,S; CS163 with a minimum grade of C or CS164 with a minimum grade of C; MATH160, may be taken concurrently)	4
MATH161	Calculus for Physical Scientists II (F,S,SS; MATH124; MATH160)	4
PH141	Physics for Scientists and Engineers I (F,S,SS; MATH126; MATH155, may be taken concurrently or MATH160, may be taken concurrently)	5

SOPHOMORE YEAR - 32-34 credits (*semester; prerequisites*)

Fall		Credits
ECE251	Intro to Microprocessors (F; ECE102 with a minimum grade of C)	4
CS220	Algorithms & Data Structures (F,S; CS165 with a minimum grade of C; MATH160 with a minimum grade of C)	4
MATH261	Calculus for Physical Scientists III (F,S,SS; MATH161)	4
PH142	Physics for Scientists and Engineers II (F,S; PH141; MATH161, may be taken concurrently or MATH255, may be taken concurrently)	5
Spring		
ECE202	Circuit Theory Application (S,SS; ECE103 with a minimum grade of C; MATH161 with a minimum grade of C)	4
ECE/STAT303	Intro to Communications Principles (S; MATH261 with a minimum grade of C; MATH340 or MATH345, may be taken concurrently)	3
CS253	Problem Solving with C++ (F,S; CS220 with a minimum grade of C; CS270 with a minimum grade of C or ECE251 with a minimum grade of C)	4
MATH340 OR MATH345 and MATH229	Intro to Ordinary Differential Equations (F,S,SS; MATH255 or MATH261) OR Differential Equations (F,S; MATH229 or MATH369; MATH255 or MATH261) AND MATH229 (F,S; MATH141 or MATH155 or MATH160)	4 - 6

JUNIOR YEAR - 29-30 credits (*semester; prerequisites*)

Fall		Credits
ECE311	Linear Systems Analysis I (F; ECE202 with a minimum grade of C; MATH340 with a minimum grade of C OR MATH345 with a minimum grade of C; ECE 331, may be taken concurrently; ECE 341, may be taken concurrently or ECE 451, may be taken concurrently)	3
ECE331	Electronics Principles I (F; ECE202 with a minimum grade of C; MATH340 with a minimum grade of C or MATH345 with a minimum grade of C; PH142 with a minimum grade of C; ECE 311, may be taken concurrently; ECE 341, may be taken concurrently or ECE 451, may be taken concurrently)	4
ECE450	Digital Systems Design Lab (F; concurrent registration in ECE451)	1
ECE451	Digital Systems Design (F; ECE102 with a minimum grade of C; ECE 202 with a minimum grade of C; concurrent registration in ECE450)	3
CS370	System Architecture & Software (F,S; CS 165 with a minimum grade of C; CS 220 with a minimum grade of C; CS 155 with a minimum grade of C; CS 156 with a minimum grade of C; ECE 251 with a minimum grade of C) or (CS 253 with a minimum grade of C or CS 270 with a minimum grade of C)	3
Spring		
ECE312	Linear Systems Analysis II (S; ECE311 with a minimum grade of C)	3
ECE332 ^(c) OR CS320	Electronic Principles II (S; ECE331 with a minimum grade of C) OR Algorithms - Theory & Practice (F,S; CS165 with a minimum grade of C; CS220 with a minimum grade of C; MATH161 with a minimum grade of C; MATH229 with a minimum grade of C or MATH369 with a minimum grade of C)	3 - 4
ECE452	Computer Organization & Architecture (S; ECE251 with a minimum grade of C)	3
CO301B OR JTC300	Writing in the Disciplines-Sci (F,S; CO150 or HONR193) OR Professional & Technical Communication (F,S,SS; CO150 or HONR193)	3
University Core ^(d)	Foundations & Perspectives (F,S,SS)	3

SENIOR YEAR - 34 credits (*semester; prerequisites*)

Fall		Credits
ECE401	Senior Design Project I (F,S; ECE312 with a minimum grade of C; ECE332 with a minimum grade of C or CS320 with a minimum grade of C; ECE452 with a minimum grade of C)	3
ECON202	Microeconomics (F,S,SS; MATH117 or MATH118 or MATH141 or MATH155 or MATH160)	3
Technical Electives ^(e)	See Approved List (F,S,SS)	6
University Core ^(d)	Foundations & Perspectives (F,S,SS)	6
Spring		
ECE402	Senior Design Project II (F,S; ECE401)	3
ECE456	Computer Networks (S; ECE251 with a minimum grade of C; ECE/STAT303 with a minimum grade of C; CS155 with a minimum grade of C; CS156 with a minimum grade of C; CS157 with a minimum grade of C) or (CS163 with a minimum grade of C or CS 164 with a minimum grade of C)	4
Technical Electives ^(e)	See Approved List (F,S,SS)	6
University Core ^(d)	Foundations & Perspectives (F,S,SS)	3

(a) Intermediate Writing must be completed within the first 60 (CSU and transfer) credits taken

(b) Students will use up to three (3) credits of free electives to reach the required total of 129 credits

(c) ECE332 is recommended for students interested in specializing in VLSI

(d) University Core - see Category 3 for explanation: select from categories B, D, or E

(e) Technical Electives - see list of approved courses on the ECE website: http://www.engr.colostate.edu/ece/pdfs/current_students/ce_technical_electives.pdf**Every 100-, 200-, and 300-level required ECE prefix course must be passed with a minimum grade of C**

All prerequisites for CS courses are determined and enforced by the Computer Science department