

Electrical Engineering Concentration

Degree requirements - 129 credits

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

Fall		Credits
ECE102	Digital Circuit Logic (<i>F</i>)	4
CO150 ^(a)	College Composition (<i>F,S,SS</i> ; <i>CO 130 or Placement</i>)	3
Elective ^(b)	Free Elective	3 - 4
MATH160	Calculus for Physical Scientists I (<i>F,S,SS</i> ; <i>MATH124 with a minimum grade of B</i> ; <i>MATH126 with a minimum grade of B</i>)	4
University Core ^(c)	Foundations & Perspectives (<i>F,S,SS</i>)	3
Spring		
ECE103	DC Circuit Analysis (<i>F,S</i> ; <i>MATH160 with a minimum grade of C</i>)	3
CS163 <i>OR</i> CS164 <i>OR</i> CS155, CS156, CS157	Java (CS1) No Prior Programming (<i>F,S,SS</i> ; <i>MATH124 with a minimum grade of C</i>) or Java (CS1) Prior Programming (<i>F,S</i> ; <i>MATH124 with a minimum grade of C</i>) <i>OR</i> Unix, C Programming I & II (<i>F,S</i> ; <i>MATH118</i> ; <i>concurrent registration in CS155, CS156 and CS157</i>)	3 - 4
MATH161	Calculus for Physical Scientists II (<i>F,S,SS</i> ; <i>MATH124</i> ; <i>MATH161</i>)	4
PH141	Physics for Scientists and Engineers I (<i>F,S,SS</i> ; <i>MATH126</i> ; <i>MATH155, may be taken concurrently or MATH160, may be taken concurrently</i>)	5

JUNIOR YEAR - 32 credits (*semester; prerequisites*)

Fall		Credits
ECE311	Linear Systems Analysis I (<i>F</i> ; <i>ECE202 with a minimum grade of C</i> ; <i>MATH340 with a minimum grade of C or MATH345 with a minimum grade of C</i> ; <i>ECE 331, may be taken concurrently</i> ; <i>ECE 341, may be taken concurrently or ECE 451, may be taken concurrently</i>)	3
ECE331	Electronics Principles I (<i>F</i> ; <i>ECE202 with a minimum grade of C</i> ; <i>MATH340 with a minimum grade of C or MATH345 with a minimum grade of C</i> ; <i>PH142 with a minimum grade of C</i> ; <i>ECE 311, may be taken concurrently</i> ; <i>ECE 341, may be taken concurrently or ECE 451, may be taken concurrently</i>)	4
ECE341	Electromagnetic Fields & Devices I (<i>F</i> ; <i>ECE202 with a minimum grade of C</i> ; <i>MATH340 with a minimum grade of C or MATH345 with a minimum grade of C</i> ; <i>PH142 with a minimum grade of C</i> ; <i>ECE 311, may be taken concurrently</i> ; <i>ECE 331, may be taken concurrently</i>)	3
CO301B <i>OR</i> JTC300	Writing in the Disciplines-Sci (<i>F,S</i> ; <i>CO150 or HONR193</i>) <i>OR</i> Professional & Technical Communication (<i>F,S,SS</i> ; <i>CO150 or HONR193</i>)	3
Elective ^(d)	Science/Math/Engineering Elective (<i>F,S,SS</i>)	3
Spring		
ECE312	Linear Systems Analysis II (<i>S</i> ; <i>ECE311 with a minimum grade of C</i>)	3
ECE332	Electronic Principles II (<i>S</i> ; <i>ECE331 with a minimum grade of C</i>)	4
ECE342	Electromagnetic Fields & Devices II (<i>S</i> ; <i>ECE341 with a minimum grade of C</i>)	3
Elective ^(d)	Science/Math/Engineering Elective (<i>F,S,SS</i>)	3
University Core ^(c)	Foundations & Perspectives (<i>F,S,SS</i>)	3

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

(b) Students will use up to four (4) credits of free electives to reach the required total of 129 credits

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

(d) Science/Math/Engineering Electives - see list of approved courses on the ECE website:

http://www.engr.colostate.edu/ece/pdfs/current_students/ee_science_math_engineering_technical_electives.pdf(e) Technical Electives - see list of approved courses on the ECE website: http://www.engr.colostate.edu/ece/pdfs/current_students/ee_technical_electives.pdf**Every 100-, 200-, and 300-level required ECE prefix course must be passed with a minimum grade of C****SOPHOMORE YEAR** - 31 credits (*semester; prerequisites*)

Fall		Credits
ECE251	Intro to Microprocessors (<i>F</i> ; <i>ECE102 with a minimum grade of C</i>)	4
Elective ^(d)	Science/Math/Engineering Elective (<i>F,S,SS</i>)	3
MATH261	Calculus for Physical Scientists III (<i>F,S,SS</i> ; <i>MATH161</i>)	4
PH142	Physics for Scientists and Engineers II (<i>F,S</i> ; <i>PH141</i> ; <i>MATH161, may be taken concurrently or MATH255, may be taken concurrently</i>)	5
Spring		
ECE202	Circuit Theory Application (<i>S,SS</i> ; <i>ECE103 with a minimum grade of C</i> ; <i>MATH161 with a minimum grade of C</i>)	4
ECE/STAT303	Intro to Communications Principles (<i>S</i> ; <i>MATH261 with a minimum grade of C</i> ; <i>MATH340, may be taken concurrently or MATH345, may be taken concurrently</i>)	3
CHEM111	General Chemistry I (<i>F,S,SS</i> ; <i>MATH118 or MATH141 or MATH155 or MATH160 or MATH161 or MATH229 or MATH261</i> ; <i>CHEM Prep or CHEM105</i>)	4
MATH340 <i>OR</i> MATH345	Intro to Ordinary Differential Equations (<i>F,S,SS</i> ; <i>MATH255 or MATH261</i>) <i>OR</i> Differential Equations (<i>F,S</i> ; <i>MATH229 or MATH369</i> ; <i>MATH255 or MATH261</i>)	4

SENIOR YEAR - 33 credits (*semester; prerequisites*)

Fall		Credits
ECE401	Senior Design Project I (<i>ECE312 with a minimum grade of C</i> ; <i>ECE332 with a minimum grade of C</i> ; <i>ECE342 with a minimum grade of C</i>)	3
Technical Electives ^(e)	See Approved List (<i>F,S,SS</i>)	9
University Core ^(c)	Foundations & Perspectives (<i>F,S,SS</i>)	3
Spring		
ECE402	Senior Design Project II (<i>F,S</i> ; <i>ECE401</i>)	3
ECON202	Microeconomics (<i>F,S,SS</i> ; <i>MATH117 or MATH118 or MATH141 or MATH155 or MATH160</i>)	3
Technical Electives ^(e)	See Approved List (<i>F,S,SS</i>)	9
University Core ^(c)	Foundations & Perspectives (<i>F,S,SS</i>)	3