

<b>BS Computer Engineering Major</b>	
<b>Suggested Plan of Study</b>	
<b>Department of Electrical and Computer Engineering: Phone (320) 308-3252 or <a href="mailto:ece@stcloudstate.edu">ece@stcloudstate.edu</a></b>	
<b>Electrical and Computer Engineering Department Chair</b>	
Dr. Mahbub Hossain 320-308-5319 <a href="mailto:mahbub@stcloudstate.edu">mahbub@stcloudstate.edu</a>	
First Semester	Second Semester
MATH 221 (4CR) Calculus I ECE 210 (3CR) Embedded System Design Project Management GENG 101 (3 CR) Ethics and the Engineering Profession ENGL 191 (4CR) Intro to Rhetorical and Analytic Writing <b>Total Semester Credits: 14</b>	MATH 222 (4CR) Calculus II PHYS 234 (5CR) Classical Physics I GENG 102 (3CR) Engineering Problem Solving CMST 192 (3CR) Intro to Communication Studies <b>Total Semester Credits: 15</b>
Third Semester	Fourth Semester
MATH 271 (3CR) Discrete Mathematics ECE 201 (3CR) Circuit Analysis I ECE 220 (4CR) Digital Logic Design CSCI 201 (4CR) Computer Science I GENG 380 (2CR) Engineering Communications <b>Total Semester Credits: 16</b>	PHYS 235 (5CR) Classical Physics II ECE 202 (4CR) Circuit Analysis II ECE 320 (4CR) FPGA Based Digital Circuit Design CSCI 301 (4CR) Computer Science II <b>Total Semester Credits: 17</b>
Fifth Semester	Sixth Semester
ECE 314 (4CR) Digital Electronics ECE 323 (4CR) Introduction to Microprocessors CSCI 310 (3CR) Introduction to Operating Systems MATH 327 (4CR) Differential Equations with Linear Algebra LEP Goal 7 Course (3CR) <b>Total Semester Credits: 18</b>	STAT 353 or 417 (3CR) Junior/Research Elective (3CR) ECE 301 (4CR) Signals and Systems CSCI 311 (2CR) Systems Programming CSCI 331 (3CR) Software Systems <b>Total Semester Credits: 15</b>
Seventh Semester	Eighth Semester
Computer Engineering Elective (6CR) ECE 461 or 462 (3CR) Senior Design Science Elective (3CR) LEP Course (3CR) LEP Course (3CR) <b>Total Semester Credits: 18</b>	Senior Elective (3CR) Computer Engineering Elective (6CR) ECE 461 or 462 (3CR) Senior Design LEP Course (3CR) <b>Total Semester Credits: 15</b>

**Program Requirements (85-86 credits):** GENG 101, GENG 102, ECE 201, ECE 202, ECE 210, ECE 220, ECE 301, ECE 314, ECE 320, ECE 323, GENG 380, ECE 461, ECE 462; CSCI 201, CSCI 301, CSCI 310, CSCI 311 or CSCI 312, CSCI 331; PHYS 234, PHYS 235; MATH 221, MATH 222, MATH 271, MATH 327.

**Electives (21-23 credits):**

**Statistics Elective (3 credits):** STAT 353 or STAT 417.

**Science Elective (3 credits):** Select one course from AHS 106, BIOL 101, BIOL 102, CHEM 105, PHYS 208.

**Junior Elective (3-4 credits):** Select one course from ECE 316, ECE 391, ECE 390, CSCI 330, CSCI 430, MATH 312, MATH 320, MATH 321, MATH 353, MME 420, PHYS 328, PHYS 333, PHYS 346. Some courses are 4 cr.

**Senior Elective (3-4 credits):** Select one course from any 400 level ECE course not included in the student's Computer Engineering Elective sequence, PHYS 435, PHYS 436, PHYS 445; ENGR 425, ENGR 447; MATH 411, MATH 421, MATH 423, MATH 427, MATH 452, MATH 455; MME 450, CNA 433, SE 450, or any 400 level CSCI course not included in the student's computer engineering elective sequence. Some courses are 4 credits.

**Computer Engineering Electives (12 credits):** Select 1 sequence from the following:

- 1) Hardware Systems: ECE 421, ECE 422, and ECE 423 or ECE 424, and 3 credits of 400 level CSCI coursework.
- 2) Software Systems: CSCI 411, CSCI 415, and any 3 credits of CSCI 400 level course, and 1 course from the following: ECE 421, ECE 422, ECE 423, or ECE 424.

Elective courses cannot double count.

LEP: Liberal Education Program.