

COMPUTER ENGINEERING

Curriculum Guide effective Fall 2018 ~ North Dakota State University

STUDENT:

ID #:

ADVISOR:

	Fall					Spring					
	Course	Crs	Grade	Gen Ed		Course	Crs	Grade	Gen Ed		
Freshman (<27 crs)	CHEM 121	General Chemistry I	3		S	ECE 111^v	Intro to ECE	3			
	Wellness Elec	0	2	0	W	ENGL 120	College Composition II	3		C	
	ECE 173	Intro to Computing	4		S	MATH 129	Basic Linear Algebra	3			
	ENGL 110	College Composition I	4		C	MATH 166	Calculus II	4			
	MATH 165	Calculus I	4		R	PHYS 251	Univ Physics I	4		S	
			17				17				
Sophomore (27-59 crs)	EE 206	Circuit Analysis I/lab	4			COMM 110	Fund Public Speaking	3		C	
	MATH 265	Calculus III (w/vectors)	4			ECE 320	Electronics I/lab	3			
	CSCI 222	Discrete Math	3			MATH 266	Intro Differential Equations	3			
	ECE 275	Digital Design/lab	4			ECE 374	Computer Org/lab	4			
	Science Lab	0	1	0	L	CSCI 161	Computer Science II	4			
			16				17				
Junior (60 - 89 crs)	CSCI 413	Software Engineering	3			ECE 341	Random Processes	3			
	ECE 343	Signals & Systems	4			ECE 401	Design I (capstone)	1			
	CSCI 459	Computer Networks	3			ECE 376	Embedded Systems/lab	4			
	ENGR 402	Engr Ethics/Social Resp	1			CSCI 474	Operating Syst. Concepts	3			
	ECE 474	Computer Architecture	3			ECE 475	Adv. Digital Design/lab	4			
			14				15				
Senior (90 + crs)	ECE 403	Design II (capstone)	2			ECE 405	Design III (capstone)	3			
	ENGL	Upper Level Writing*	3		C	ECE Elective	or CSCI 467: Alg. Analysis	3			
	ECE Elective		3			Gen Ed Elective[†]	0	3	0	A or B	
	Tech Elective		3			Gen Ed Elective	0	3	0	A or B	
	Gen Ed Elective^x	0	3	0	A or B	Tech Elective		3			
	Gen Ed Elective[‡]	0	3	0	A or B						
			17				15				
TOTAL CREDITS								128			

General Education Electives			
<i>Approved courses listed in the registration schedule centerfold.</i>			
Gen Ed	Course	Crs	Grade
A		3	
A		3	
B		3	
B		3	
D ■	(double-count with A or B above)		
G ●	(double-count with A or B above)		
L		1	
W		2	

General Education Categories:

- A - Humanities/Fine Arts
- B - Social/Behavioral Sciences
- C - Communication
- D - Cultural Diversity ■
- F - First-Year Experience
- G - Global Perspectives ●
- L - Co-requisite Lab
- R - Quantitative Reasoning
- S - Science & Technology
- W - Wellness

[¥]Suggested to take either ECON 105, ECON 201, or ECON 202

*Select from ENGL 320, 321, 324 or 459 to satisfy the Upper Level Writing for General Education

[‡]Suggested to take ENGR 312 and ENGR 311

ECE Elective: any didactic ECE 4xx course², (not x93, 494, 496)

Tech Elective: any didactic 4xx course from ECE or CSCI², or any of the following: CSCI 336, CSCI 366, CSCI 372, ECE 311, ECE 321, ECE 351, ECE x93, ECE 494, ECE 496 (max 3 credits), ENGR 310, PHYS 252, IME 440, IME 456, IME 460, IME470

^vStudents must take ECE 111 prior to enrolling in ECE courses listed above in the Junior or Senior years; otherwise, student must take an additional ECE Elective in lieu of ECE 111

Students must earn a "C" or better in ECE 173, ECE 275, EE 206, and all required MATH courses, before enrolling in ECE courses listed above in the Junior or Senior years

¹ Students must have at least a 2.0 GPA in all required EE and ECE courses taken at NDSU, in order to graduate. Elective ECE courses are not included in this GPA requirement.

² See <http://bulletin.ndsu.edu/course-catalog/descriptions/ece/> and <http://bulletin.ndsu.edu/course-catalog/descriptions/csci/> for the full list of ECE and CSCI courses, respectively.

COMPUTER ENGINEERING ELECTIVES

1510-1530

TECH ELECTIVES: any didactic 4xx-level course from ECE or CSCI, or any of the following:

CSCI 335
CSCI 336
CSCI 366
CSCI 372
ECE 311
ECE 321**
ECE 351
ECE 494
ECE 496 (max 3 credits)
Engr 310
PHYS 252
IME 440
IME 456
IME 460
IME 470

** If you have already taken ECE 321 when it was a 5-credit course, only 3 credits are needed for CpE majors. The remaining 2 credits will count towards the 6-credit Tech Elective requirement. The new ECE 321 is 2 credits as of Fall 2014. -

ECE ELECTIVES FOR COMPUTER ENGINEERING MAJORS

Any ECE 4xx-level course, **excluding** ECE 494 and ECE 496.

Computer Engineering Curriculum Flowchart

