COMPUTER ENGINEERING

Department of Electrical and Computer Engineering

General Education (19 sh)		sh
ALL	**RHET:1030 Rhetoric**	4
F/S	**Approved Gen Ed Course**	3
ALL	**Be Creative**	3
ALL	**Approved Gen Ed Course**	3
ALL	**Approved Gen Ed Course**	3
ALL	**Approved Gen Ed Course**	3

Math & Basic Science Core (24 sh)		sh
F/S	**MATH:1550 Math I: Single Variable Calculus** *(P: ALEKS score ≥ 75 or MPT Level 3 score ≥ 9)*	4
ALL	**MATH 1560 Math II: Multivariable Calculus** *(P: MATH:1550)*	4
ALL	**MATH:2550 Math III: Matrix Algebra** *(P: MATH:1550)*	2
ALL	**MATH:2560 Math IV: Differential Equations** *(P: MATH:1560, MATH:2550)*	3
F/S	**STAT:2020 Probabilty & Statistics For Engr & Phys Sci** *(P: MATH:1560)*	3
ALL	**CHEM:1110 Principles of Chemistry I** *(P: ALEKS score ≥ 55 or MPT Level 3 score ≥ 9)*	4
ALL	**PHYS:1611 Introductory Physics I / Lab** *(C: MATH:1550)*	4

Engineering Core (7 sh)		sh
F	**ENGR:1000 Engineering Success for First-Year Students** *(First semester standing)*	1
F	**ENGR:1100 Intro to Engineering Problem Solving**	3
F/S	**ENGR:1300 Intro to Engineering Computing** *(C: MATH:1550)*	3

EE Requirements (45 sh)		sh
F/S	**MATH:3550 Math V: Vector Calculus** *(P: MATH:1560 & MATH:2550; C: MATH:2560)*	3
F/S	**PHYS:1612 Introductory Physics II / Lab** *(P: PHYS:1611: C: MATH:1560)*	4
ALL	**CS:2110 Discrete Structures**	3
ALL	**CS:2230 Computer Science II, Data Structures** *(P: ENGR 2730 ≥ C- or CS: 1210 ≥ C-)*	4
ALL	**CS:3330 Algorithms** *(P: CS:2230 ≥ C-, CS:2210 ≥ C-, & MATH 1550)*	3
ALL	**ENGR:2120 Electrical Circuits** *(P: MATH:2560)*	3
F/S	**ENGR:2730 Computers in Engineering** *(P: ENGR:1300)*	3
F/S	**ECE:2400 Linear Systems I** *(P: ENGR:2120 & MATH:2560)*	3
F/S	**ECE:2410 Principles of Electronic Instrumentation** *(P: PHYS:1612, ENGR:2120, & MATH:2560)*	4
F/S	**ECE:3300 Intro to Software Design** *(P: ENGR:2730)*	3
F	**ECE:3320 Intro to Digital Design** *(sophomore status)*	3
S	**ECE:3350 Computer Architecture and Organization** *(P: ECE:3320 & ENGR:2730)*	3
F/S	**ECE:3360 Embedded Systems** *(P: ENGR:2730 & ECE:3320; C: ECE:2410)*	3
F	**ECE:3700 Electomagnetic Theory** *(P: MATH:3550 & PHYS:1612)*	3

EE Capstone Design Courses (6 sh)		sh
F/S	**ECE:4880 Principles of ECE Design** *(senior status; P: ECE2410, & ENGR:2730)*	3
F/S	**ECE:4890 ECE Design** *(senior status, P: ECE:4880 and 3 of: ECE:3330, ECE:3350, ECE:3360, ECE:3400, ECE:3410, ECE:3500, ECE:3600, CS:3330)*	3

EE Departmental Seminars (1 sh)		sh
F	**ECE:3000 Professional Seminar** *(junior status)*	1

Focus Area (26 sh)		sh
ALL	**Elective:** Focus Area - Breadth	3
ALL	**Elective:** Focus Area - Depth	3
ALL	**Elective:** Focus Area - Technical	3
ALL	**Elective:** Focus Area - Technical	3
ALL	**Elective:** Focus Area - ECE	3
ALL	**Elective:** Focus Area - 5000 level ECE	3
ALL	**Elective:** Focus Area - 5000 level ECE	3
ALL	**Elective:** Focus Area, Minor, Certificate, etc. (minimum 2sh)	3
ALL	**Elective:** Focus Area, Minor, Certificate, etc.	3
ALL	**Elective:** Focus Area, Minor, Certificate, etc.	3
	Total Semester Hours Required:	**128**

Focus Areas:

Big Data/Data Mining/Machine Learning
Bioinformatics
Business
Computer Breadth
Computer Hardware
Computer Networks
Entrepreneurship
Individualized
Integrated Circuits
Pre-Law
Pre-Medicine
Signal & Image Processing
Software Engineering
Sustainability

last edited: 9/29/2025