Computer Engineering Program
Catalog 2011/2012 – 128 Hours

NOTE: This flow chart is provided as a guide; the catalog is the only definitive source of requirements.

Mathematics – 17 hours

MAC 2281 (4 hrs) Engineering Calculus I

MAC 2282 (4 hrs) Engineering Calculus II

EGN 4450 (2 hrs) Linear Systems

MAC 2283 (4 hrs) Engineering Calculus III

MAP 2302 (3 hrs) Diff Equations or EGN 3433 (3 hrs) Model and Analysis *

Science – 15 hours

FKL Natural Sciences Elective (3 hrs)

CHM 2045L (4 hrs) Gen. Chem w/Lab

PHY 2048/2048L Physics I w/Lab (4 hrs)

PHY 2049/2049L Physics II w/Calc/Lab (4 hrs)

EGN 3000 (1 hr) Foundations of Engineering

COP 2510 (3 hrs) Programming Concepts

COP 3514 (3 hrs) Program Design

COT 3100 (3 hrs) Discrete Structures

COP 3311 (3 hrs) Object Oriented Design

COP 4530 (3 hrs) Data Structures

COT 4400 (3 hrs) Algorithms (Theory course)

CIS 4910 (2 hrs) Computer Science Senior Project

Engineering fundamentals and core courses

EGN 3615 – Engineering Economy

EGN 3443 – Engineering Statistics (MAC 2282 pre-req)

EGN 3373 – Electrical Systems (MAP 2302 co-req)

EEE 3394 – Electronic Materials (PHY 2049 pre-req)

English – 6 Hours

ENC 1101 (3 hrs) Composition I

ENC 1102 (3 hrs) Composition II

General Education requirements

FKL Social and Behavioral Sciences – 6 hrs
FKL Humanities – 6 hrs
FKL Fine Arts – 3 hrs
Human Cultural Diversity and GC – 3 hrs
Foreign Lang – 8 hrs (or 2 years high school)

Possible hardware electives (3 credit hours each)

CDA 4253 – FPGA Design and Analysis
CIS 4930 – VLSI Algorithms
CIS 4930 – VLSI Testing
CIS 4930 – Digital Circuit Synthesis
CIS 4930 – Design Automation
CIS 4930 – Embedded Systems
CIS 4930 – Control of Mobile Robots
There may be other offerings. See Department advisor for all available options.

Exit requirements

CIS 4250 Computer Ethics (3 hrs – FKL capstone) - Senior
Standing in Department
ENC 3246 Communications for Engineers (3 hrs)

Hardware Electives (6 hrs)
(choose 2 from above list)

CDA 3030 Computer Organization

CDA 3203/3203L
(4 hrs) Computer System Design & Lab

CDA 4205 (3 hrs) Computer Architecture

CDA 4213/4213L
(4 hrs) CMOS VLSI Design & Lab

CDA 4213/4213L
(4 hrs) CMOS VLSI Design & Lab

COP 4600 (3 hrs) Operating Systems

CIS 4910 (2 hrs) Computer Science Senior Project

Departmental Electives

Hardware, Software, Theory (6 hrs)

Note

Data Structures is prerequisite for all software electives. Logic Design is prerequisite for all hardware courses. Discrete Structures and Data Structures are prerequisite for all theory courses. See catalog for specific prerequisites for elective courses.

* Taking MAP 2302 is probably best if seeking a Math minor – see the Department advisor

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