Computer Engineering Program
Catalog 2008/2009 – 128 Hours

NOTE: This flow chart is only 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
Science Elective (3 hrs)
CHM 2045 (4 hrs) Gen. Chem w/Lab
PHY 2048/2048L (4 hrs) Physics I w/Lab
PHY 2049/2049L (4 hrs) Physics II with Calc/Lab

Engineering fundamentals and core courses
EGN 3615 – Engineering Economy
EGN 3443 – Engineering Statistics (Calc II pre-req)
EGN 3373 – Electrical Systems (MAP 2302 pre-req)
EEL 3394 – Electronic Materials

English – 6 Hours
ENC 1101 (3 hrs) Composition I
ENC 1102 (3 hrs) Composition II

Science – 15 hours
PHY 2048/2048L (4 hrs) Physics I w/Lab
PHY 2049/2049L (4 hrs) Physics II with Calc/Lab

Science Elective (3 hrs)
CHM 2045 (4 hrs) Gen. Chem w/Lab

COP 2510 (3 hrs) Programming Concepts
EGN 3000 (1 hr) Foundations of Engineering
COP 3514 (3 hrs) Program Design
COT 3100 (3 hrs) Discrete Structures

CDA 3103 (3 hrs) Computer Organization
COP 3331 (3 hrs) Object Oriented Design
CDA 3201/3201L (4 hrs) Computer System Design & Lab
CDA 4203/4203L (4 hrs) Computer System Design & Lab
CDA 4205 (3 hrs) Computer Architecture
CDA 4213/CIS4930* (4 hrs) CMOS VLSI Design & Lab
CIS 4910 (2 hrs) Computer Science Senior Project
CIS 4930 – VLSI Testing
CIS 4930 – Digital Circuit Synthesis
CIS 4930 – Design Automation
CIS 4930 – Embedded Systems
See undergraduate advisor for all possible elective offerings.

Possible hardware electives (3 credit hours each)
CDA 4253 – FPGA Design
CIS 4930 – VLSI Testing
CIS 4930 – Digital Circuit Synthesis
CIS 4930 – Design Automation
CIS 4930 – Embedded Systems
See undergraduate advisor for all possible elective offerings.

General Education requirements
Social Sciences – 6 hrs
Historical Perspectives – 6 hrs
Fine Arts – 3 hrs
ALAMEA – 3 hrs
Foreign Language – 8 hrs (or 2 years HS)

Social Sciences – 6 hrs

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

Departmental Electives
Hardware, Software, Theory (6 hrs)

Exit Requirements
CIS 4250 Computer Ethics (3 hrs) – Senior Standing in Dept.
ENC 3246 Communications for Engineers (3 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.

* Please see your academic advisor for required special topics course to accompany CDA 4213
(the student will be registered into CDA 4213L as listed in the catalog course descriptions)