B.A. in Network and Digital Technology
Curriculum Chart 2013-2014

Math

MATH 19A
Calculus

MATH 19B
Calculus

AMS 10*
Math Methods for Engineers I

OR

MATH 21**
Linear Algebra

AMS 20*
Math Methods for Engineers II

OR

MATH 24**
Differential Equations

MATH 23A
Multivariable Calculus

CMPE 16 or 16H
Discrete Math

Science

PHYS 5A/L or 6A/L
Mechanics

PHYS 5C/N or 6C/N
Electricity & Magnetism

Core Courses

CMPE 12/L
Computer Systems & Assembly Language

CMPE 13/L
Computer Systems & C Programming

CMPS 12B/M
Data Structures

CMPE 100/L
Logic Design

CMPE 150/L
Intro Computer Networks

CMPS 101
Abstract Data Types & Algorithms

OR

EE 101/L
Electronics

CMPE 185#
Tech Writing

Electives
(from Approved List of Upper Division Electives on reverse)

1. _____
2. _____
3. _____

Capstone♦
(choose one)

CMPS 115
Software Engineering

CMPE 118/L
Introduction to Mechatronics

CMPE 121/L
Microprocessor System Design

CMPE 125/L
Logic w/ Verilog

CMPE 151/L
Advanced Networks

CMPE 156/L
Network Programming

Exit Survey

1. Portfolio
   https://www.soe.ucsc.edu/departments/computer-engineering/undergraduate/undergraduate-portfolio
2. Exit Survey
   https://ua.soe.ucsc.edu/exit-survey

***** Preferred
** Students who complete Math 21 and Math 24 (or the equivalents) in lieu of AMS 10 and 20 are strongly encouraged to take the Matlab self-paced tutorial http://matlab-training.soe.ucsc.edu/ , or CMPE 8, prior to enrolling into EE 101/L.
♦This course must be in addition to the three Electives you take.
Satisfies the DC requirement

NETWORK and DIGITAL TECHNOLOGY B.A.
DEGREE PLANNER

Fall _____	Winter _____	Spring _____	Summer _____

Fall _____	Winter _____	Spring _____	Summer _____

Fall _____	Winter _____	Spring _____	Summer _____

Fall _____	Winter _____	Spring _____	Summer _____

Approved List of Upper Division Electives

AMS 114 Dynamical Systems
AMS 118 Estimation&Control Stochastic Processes
♦AMS 131 Probability Theory
AMS 147 Computational Methods and Applications
CMPE 107 Probability and Statistics for Engineers
CMPE 108 Data Compression
CMPE 110 Computer Architecture
CMPE 112 Computer and Game Console Architecture
CMPE 113 Parallel Programming(or CMPS 113)
CMPS 115 Solid Mechanics
CMPE 118/L Intro to Mechatronics
CMPE 121/L Microprocessor System Design
CMPE 122 Intro to VLSI Digital System Design
CMPE 125/L Logic Design with Verilog
CMPE 131 Human-Computer Interaction
CMPE 141 Feedback Control Systems(or EE 154)
CMPE 151/L Advanced Computer Networks
CMPE 153 Digital Signal Processing(or EE 153)
CMPE 156/L Network Programming
CMPE 158 Network Management and Operation
CMPS 161 Mobile Sensing and Interaction
CMPE 167/L Sensor and Sensor Technologies
CMPE 177 Applied graph Theory/Algorithms
♦CMPE 193 Field Study
♦CMPE 198 Independent Study/Research
♦CMPS 101 Algorithms and Abstract Data Types
CMPS 102 Analysis of Algorithms
CMPS 104A Compiler Design I
CMPS 104B Compiler Design II
CMPS 109 Advanced Programming
CMPS 111 Operating Systems
CMPS 112 Comparative Prog. Langs.
CMPS 115 Software Engineering
CMPS 121 Mobile Applications
CMPS 122 Computer Security
CMPS 128 Distributed Systems and Mor
CMPS 129 Data Storage Systems
CMPS 130 Computational Models
CMPS 140 Artificial Intelligence
CMPS 142 Machine Learning and Data Mining
CMPS 146 Game AI
CMPS 160/L Computer Graphics
CMPS 161/L Visualization & Computer Animation
CMPS 180 Database Systems
CMPS 181 Database Systems II
CMPS 183 Hypermedia and the Web
CMPS 190X Methods of Cryptography
EE 103/L Signals and Systems
EE 130/L Optoelectronics & Photonics
EE 135/L Electro. Fields and Waves
EE 136 Engr. Electromagnetics
EE 145/L Properties of Materials
EE 151 Communications Systems
EE 152 Introduction to Wireless Communications
EE 171/L Analog Electronics
EE 172 Advanced Analog Circuits
EE 173/L High Speed Digital Design
EE 175/L Energy Generation and Control
TIM 206 Optimization Theory and Appl.

Or Any 5-Credit CS, CE, or EE Graduate Course

♦Requires prior approval and/or may depend on other courses completed
At most, one elective may be substituted by an upper-division individual or field study (CMPE, CMPS, EE 193 or 198) with approval.
A single course may not satisfy multiple major requirements.

STUDENT'S NAME:_____ **FACULTY ADVISOR:**_____

STAFF ADVISOR:_____