B.A. in Network and Digital Technology
Curriculum Chart 2011-2012

Math

- MATH 19A
  Calculus
- AMS 10*
  Math Methods for Engineers I
- AMS 20*
  Math Methods for Engineers II
- OR
- MATH 21**
  Linear Algebra
- MATH 24**
  Differential Equations
- MATH 23A
  Multivariable Calculus
- CMPE 16 or 16H
  Discrete Math

Core Courses

- CMPE 13/L*
  Computer Sys. & C
  Prog.
- CMPE 12/L*
  Computer Systems &
  Assembly Language
- CMPE 12B/M
  Data Structures
- OR
- CMPS 12A/L*
  Intro to
  Programming
- 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

Science

- PHYS 5A/L or 6A/L
  Mechanics
- PHYS 5C/N or 6C/N
  Electricity & Magnetism

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

1. __________________
2. __________________
3. __________________

Capstone*
(choose one)

- CMPS 115
  Software Methodology
- CMPE 118/L
  Introduction to Mechatronics
- CMPE 121/L
  Microprocessor System
  Design
- CMPE 158
  Network Management &
  Operations
- CMPE 125/L
  Logic w/ Verilog

Project Portfolio
http://www.ce.ucsc.edu/bandtportfolio
Exit Survey
http://ua.soe.ucsc.edu/exit-survey?Type=1

* 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.
† May substitute with CMPS 53 AND CMPS 11
● This course must be in addition to the three Electives you take.
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**Approved List of Upper Division Electives**

| AMS 147 Computational Methods and Applications | CMPS 104A Compiler Design I | CMPS 181 Database Systems II |
| CMPE 107 Probability and Statistics for Engineers | CMPS 104B Compiler Design II | EE 130/L Optoelectronics & Photonics |
| CMPE 108 Data Compression | CMPS 109 Advanced Programming | EE 135/L Electro. Fields and Waves |
| CMPE 110 Computer Architecture | CMPS 111 Operating Systems | EE 136 Engr. Electromagnetics |
| CMPE 112 Computer and Game Console Architecture | CMPS 112 Comparative Prog. Langs. | EE 145/L Properties of Materials |
| CMPE 113 Parallel Programming | CMPS 115 Software Methodology | CMPE 116 Soft. Design Project |
| CMPE 118/L Intro to Mechatronics | CMPS 116 Soft. Design Project | EE 151 Communications Systems |
| CMPE 121/L Microprocessor System Design | CMPS 122 Computer Security | EE 152 Introduction to Wireless Communications |
| CMPE 125/L Logic Design with Verilog | CMPS 129 Data Storage Systems | EE 153 Signal Processing |
| CMPE 131 Human-Computer Interaction | CMPS 130 Computational Models | EE 154 Feedback Control Systems |
| CMPE 151/L Networks Administration | CMPS 132 Computability and Complexity | EE 157/L RF Hardware Design |
| CMPE 156/L Network Programming | CMPS 140 Artificial Intelligence | EE 171/L Analog Electronics |
| CMPE 158 Network Management and Operation | CMPS 142 Machine Learning and Data Mining | EE 172/L Linear/Nonlin. Circuits |
| CMPE 167/L Sensor and Sensor Technologies | CMPS 146 Game AI | EE 175/L Energy Generation and Control |
| CMPE 177 Applied graph Theory/Alg | CMPS 161/L Visualization & Computer Animation |            |
| CMPS 101 Algorithms and Abstract Data Types | CMPS 164/L Game Engines and Game Engines Lab |            |
| CMPS 102 Analysis of Algorithms | CMPS 180 Database Systems |            |

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

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:** ___________________________