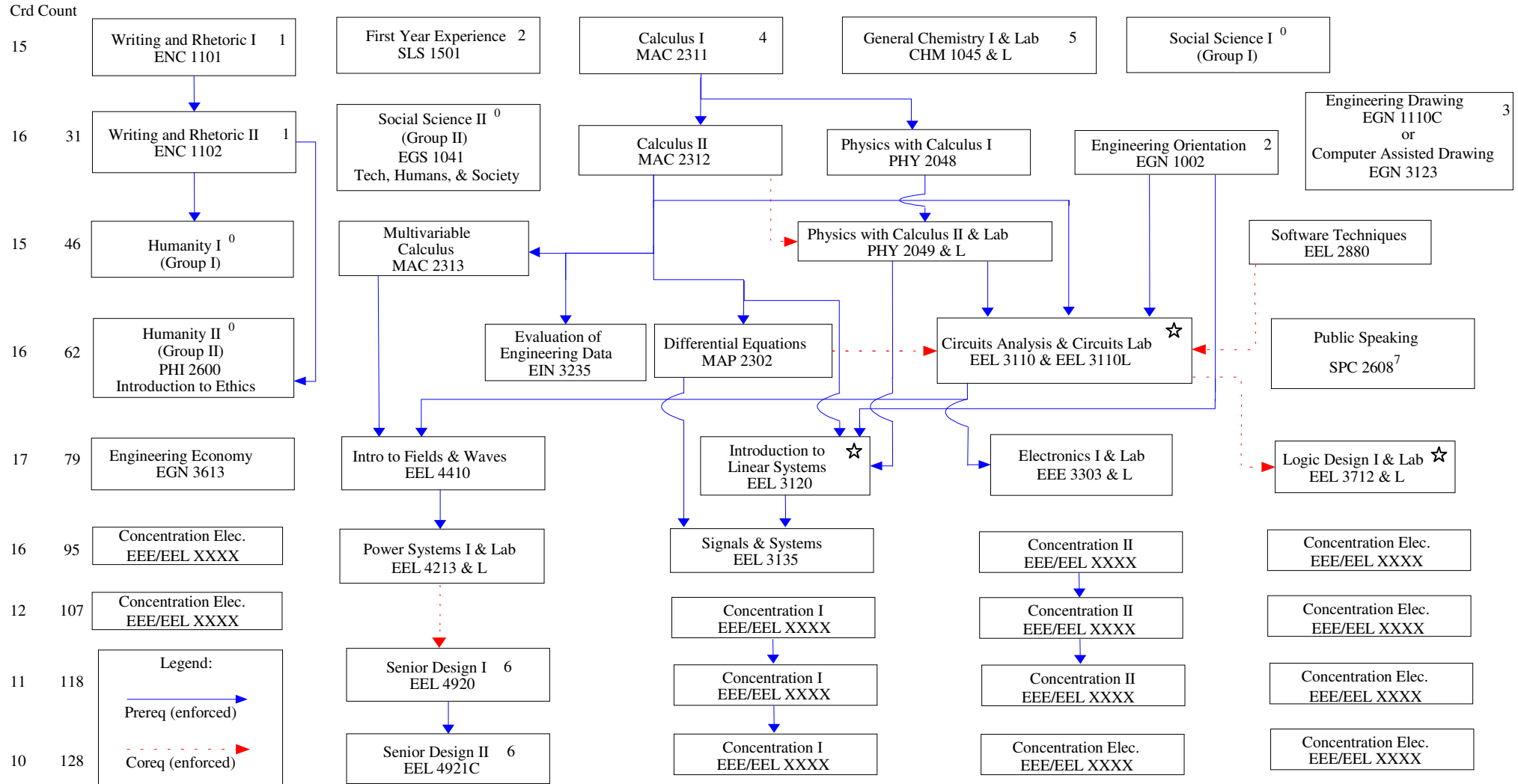


# Electrical Engineering Flowchart



**Other Requirements (Must be completed for graduation):**

GWR1: \_\_\_\_\_ GWR2: \_\_\_\_\_ Foreign Language: \_\_\_\_\_ 9 Summer Credit Hours: \_\_\_\_\_ UCC: \_\_\_\_\_ Total Credits: \_\_\_\_\_ / 128

GL1: \_\_\_\_\_ GL2: \_\_\_\_\_ Concentration I: \_\_\_\_/9crd Concentration II: \_\_\_\_/9crd Concentration Total: \_\_\_\_/38crd

<sup>0</sup>Check with your advisor for the new ways to meet Gordon Writing Requirement (GWR) effective Summer 2015

<sup>1</sup>Students w/> 30 transfer credits may be able to substitute ENC 1101 & ENC 1102 with: 1) ENC 2301 and 2) then one of the following: ENC 3211, ENC 3311 or ENC 3317

<sup>2</sup>Students w/> 30 transfer credits may be able to substitute SLS 1501 & EGN 1002 with an advisor approved 3-credit technical elective

<sup>3</sup>This is an Engineering deficiency course. Any student who took a technical drafting course in high school can submit a high school transcript in order to have this requirement considered as completed

<sup>4</sup>Prerequisite: MAC 1105 + (MAC 1114+MAC2140) or MAC 2147      <sup>5</sup>Prerequisite: Second year high school algebra or college algebra

<sup>6</sup>Students are required to complete at least 100 credits towards engineering degree, including ECE core courses and Electrical Engineering Program Core before EEL 4920 registration. EEL 4920 & EEL 4921C shall be taken during the student's last two semesters prior to graduation. EEL 4921C shall be registered the semester right after taking EEL 4920, excluding Summer terms. Neither EEL 4920 nor EEL 4921C is offered during the Summer terms. If taken on and after Fall 2012 EEL 4920 + EEL 4921C will satisfy Global Learning Course #2 (Discipline requirement).

<sup>7</sup>A minimum grade of C- is required for SPC 2608 Public Speaking.

\*Starting in Fall 2010 Freshman and Transfer Students will have to complete 6 credit hours (2 classes) that will satisfy the **Global Learning Requirement**. ☆ Indicates critical courses for progress.

**NOTE: Any student found to be taking an EEL or EEE course without its prerequisite or co-requisite will be dropped from the course without a refund.** Fall2015 Rev 05162017 Tentative

# Concentrations

## Power / Energy

- EEL 4213 Power Systems I
- EEL 4213L Energy Conversion Laboratory
- EEL 4214 Power II
- EEL 4215 Power III
- EEL 4241 Power Electronics
- EEL 5285C Sustainable and Renewable Energy Source and Their Utilization

## Control Systems

- EEL 3657 Control Systems I
- EEL 4611 Control Systems II
- EEL 4611L Systems Lab
- EEL 4658 Industrial Control Systems
- EGN 3311 Statics
- EGN 3321 Dynamics

## Integrated Nano-technology

- EEE 3303 Electronics I
- EEE 3303L Electronics I Lab
- EEE 3396 Introduction to Solid State Devices
- EEE 4304 Electronics II
- EEE 4304L Electronics II Lab
- EEE 4314 Integrated Circuits and Systems
- EEE 4314L Integrated Circuits Laboratory
- EEE 4421C Intro to Nanofabrication

## Communications

- EEL 3514 Communication Systems
- EEL 3514L Communication Lab
- EEL 4421 Introduction to RF Circuit Design
- EEL 4461C Antennas
- EEE 4510 Intro. DSP
- EEL 4515 Adv. Communication Systems
- EEL 4595C Intro. to Wireless Digital Comm.

## Bio-Engineering

- EEE 3303 Electronics I
- EEE 3303L Electronics I Laboratory
- EEL 4140 Filter Design
- BME 4503C Med. Instrumentation: App & Des
- EEE 4510 Intro. DSP
- EEE 4421C Intro to Nanofabrication

## Embedded System

- EEL 3160 Computer Applications in Electrical Engineering
- EEL 4730 Programming Embedded Systems
- EEE 4734 Embedded Operating Systems
- EEL 4740 Embedded Computing
- EEL 4831 Embedded GUI Programming

## Network Forensic & Security

- TCN 4081 Telecommunication Network Security
- TCN 4211 Telecommunication Networks
- TCN 4212 Telecommunication Network Analysis and Design
- TCN 4431 Principles of Network Management and Control Standards
- EEL 4806 Ethical Hacking & Countermeasures

## Cyber Security

- EEL 4806 Ethical Hacking & Countermeasures
- EEL 4802 Intro. Digital Forensics Eng.
- EEL 4804 Intro. Malware Reverse Eng.
- EEE 4717 Intro. to Security of IoT

## Computer Arch & Microprocessor Design

- EEE 4343 Intro. to Digital Electronics
- EEL 4709C Computer Design
- EEL 4746 Microcomputers I
- EEL 4746L Microcomputers I Laboratory
- EEL 4747 Microcomputers II (RISC)
- EEL 4747L Microcomputers II Laboratory

## Data System Software

- MAD 2104 Discrete Mathematics
- COP 2210 Programming I
- COP 3337 Programming II
- COP 3530 Data Structures
- COP 4338 Computer Programming III
- COP 4604 Unix Programming
- COP 4610 Operating Systems Principles

## Others

- EEL 4015 Electrical Design in Buildings I
- EEL 4933 Engineering Entrepreneurship

### Concentrations:

- Student must complete 9 credits and 3 courses minimum to have a concentration
- Student must complete 2 concentrations
- Electrical Engineering student must complete minimum of 38 concentration credits which cannot be from courses found in ECE Core and Electrical Engineering Program Core
- Computer Engineering student must complete minimum of 34 concentration credits which cannot be from courses found in ECE Core and Computer Engineering Program Core

**NOTE:** Any student found to be taking any EEL or EEE course without its prerequisite or co-requisite will be dropped from the course without a refund.