Electrical Engineering Pre-Medical Track Flowchart

Crd Count

Writing and Rhetoric I
ENC 1101

First Year Experience
SLS 1501

Calculus I
MAC 2311

General Chemistry I & Lab
CHM 1045 & L

Social Science I


Writing and Rhetoric II
ENC 1102

Social Science II
(Group II)
EGS 1041
Tech, Humans, & Society

Calculus II
MAC 2312

Physics with Calculus I
PHY 2048

Engineering Orientation
EGN 1002


Humanity I
(Group I)

Multivariable Calculus
MAC 2313

Physics with Calculus II & Lab
PHY 2049 & L

Engineering Drawing
EGN 1110C
or Computer Assisted Drawing
EGN 3123


Humanity II
(Group II)
PHI 2600
Introduction to Ethics

Evaluation of Engineering Data
EIN 3235

Differential Equations
MAP 2302

Software Techniques
EEL 2880


Engineering Economy
EGN 3613

Intro to Fields & Waves
EEL 4410

Introduction to Linear Systems
EEL 3120

Public Speaking
SPC 2608


ECE Concentration Elec.
EEE/EEL XXX

Power Systems I & Lab
EEL 4213 & L

Signals & Systems
EEE 3155

Logic Design I & Lab
EEL 3712 & L


ECE Concentration Elec.
EEE/EEL XXX

Senior Design I
EEL 4920

Concentration ECE
EEE/EEL XXX

General Chemistry II & Lab
CHM 1046 & L


Legend:

Prereq (enforced)

Coreq (enforced)


Senior Design II
EEL 4921C

Concentration ECE
EEE/EEL XXX

General Chemistry II & Lab
CHM 2210 & L


Concentration ECE
EEE/EEL XXX

Concentration ECE
EEE/EEL XXX

Organic Chemistry I & Lab
CHM 2210 & L


Concentration ECE
EEE/EEL XXX

Concentration ECE
EEE/EEL XXX

Organic Chemistry II & Lab
CHM 2211 & L


Concentration ECE
EEE/EEL XXX

Concentration ECE
EEE/EEL XXX

General Biochemistry
BCH 3033


Other Requirements (Must be completed for graduation):

GWR1:_____  GWR2:_____  Foreign Language:______  9 Summer Credit Hours:_____  UCC:______  Total Credits:______/128

GL1:_____ GL2:______  ECE Concentration:_____/9crd  Pre-Med Concentration:_____/24crd  Concentration Total:_____/38crd

Check with your advisor for the new ways to meet Gordon Writing Requirement (GWR) effective Summer 2015

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

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

*Prerequisite: MAC 1105 + (MAC 1114+MAC2140) or MAC 2147

*Prerequisite: Second year high school algebra or college algebra

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.

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 corequisite will be dropped from the course without a refund.

Fall 2016 Rev 01112017 Tentative
Concentrations:
- Student must complete 9 credits and 3 courses minimum to have a concentration
- Student must complete 1 concentration
- 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.

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### 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
- EEL 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
- BME4503C Medical Instrumentation Design
- EEL 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 4789 Ethical Hacking & Countermeasures

**Cyber Security**
- EEL 4789 Ethical Hacking & Countermeasures
- 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