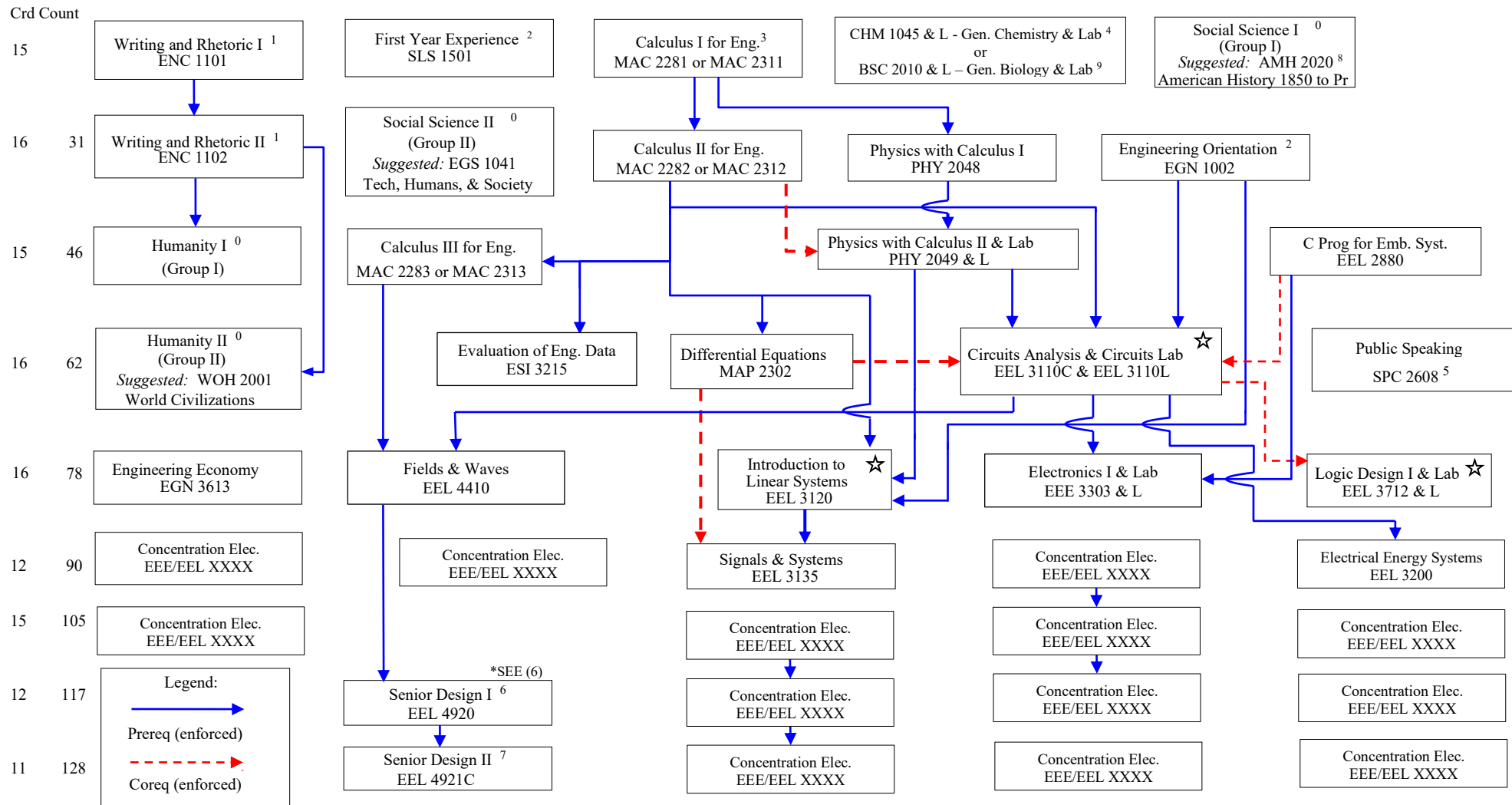


Electrical Engineering Flowchart



⁰ List of alternative courses can be found at: <https://acs.fiu.edu/offices-services/advising/university-core-curriculum-updated-6-17-20.pdf>

¹ Students w/> 30 transfer credits may be able to substitute ENC 1101 & ENC 1102 with: 1) ENC 2304 and 2) then one of the following: ENC 3213, ENC 3249, ENC 3311 or ENC 3314

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

³ Prerequisite: MAC 1105 + MAC 1147 or (MAC 1114 + MAC 1140)

⁴ Prerequisite: Second year high school algebra or MAC 1105 College Algebra

⁵ Students who transfer in a UCC Art (that is not Public Speaking) can replace one 3-credit concentration elective with SPC 2608 – Public Speaking.

⁶ Students are required to complete at least 100 credits towards engineering degree, including ECE core courses and Computer Engineering Program Core before EEL 4920 registration.

⁷ 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, including Summer terms.

⁸ Satisfies CIVICS LEARNING (CL) requirement. ⁹ Students entering FIU in Fall 2020 or later.

☆ Indicates critical courses for progress.

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

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 4005 Measurements and Instrumentation in EE - EEL 4495 Intro. to Applied Electromagnetics	Embedded System Software - EEL 3370 C++ Prog. For Embedded Systems (<i>EE Only</i>) - EEL 4730 Program. Embedded Systems (<i>EE Only</i>) - EEL 4734 Embedded Operating Systems - EEL 4740 Embedded Computing (<i>EE Only</i>) - EEL 4831 Embedded GUI Programming
Autonomous Systems, Control & Robotics - EEL 3657 Control Systems I - EEL 3664 Intro to Autonomous Systems - EEL 4611 Control Systems II - EEL 4611L Systems Lab - EEL 4658 Industrial Control Systems - EEL 4664 Sensors, Perception & Robotic Manipulation - EGN 3311 Statics - EGN 3321 Dynamics	Networking & Security - TCN 4081 Telecommunication Network Security - TCN 4211 Telecommunication Networks - TCN 4212 Telecomm. Network Analysis & Des. - EEE 4717 Intro to Security of IoT
Integrated Nano-Technology - EEE 3303C Electronics I & Lab (<i>CpE Only</i>) - EEE 3396 Intro to Solid State Devices - EEE 4304C Electronics II & Lab - EEE 4393C Wearable Electronics - EEE 4421C Intro to Nanofabrication - EEL 4005 Measurements and Instrumentation in EE - EEE 4314 & 4314L Integrated Circuits and Lab	Cybersecurity - EEL 4802 Intro to Digital Forensics Engineering - EEL 4804 Intro Malware Reverse Engineering - EEL 4806 Ethical Hacking & Countermeasures
Communications - EEL 3514 Communication Systems - EEL 3514L Communication Systems Lab - EEL 3580 Intro to Wireless Comm. Systems - EEL 4413 Wave Prop. For Wireless Communication - EEL 4421 Intro to RF Circuit Design - EEL 4461C Antennas - EEE 4510 Intro to DSP - EEL 4515 Advanced Comm. Systems - EEE 4550 Intro to Radar Systems - EEL 4583 Basics of RF Systems	Cyber Defense - TCN 4211 Telecommunication Networks - TCN 4081 Telecommunication Network Security - EEL 4802 Intro to Digital Forensics Engineering - EEL 4804 Intro Malware Reverse Engineering - EEL 4806 Ethical Hacking & Countermeasures - EEL 4730 Program. Embedded Systems (<i>EE Only</i>) - EEL 4734 Embedded Operating Systems
Bio-Engineering - EEE 3303C Electronics I & Lab (<i>CpE Only</i>) - EEL 4140 Filter Design - EEE 4393C Wearable Electronics - EEE 4421C Intro to Nanofabrication - EEE 4510 Intro to Digital Signal Processing - BME 4503C Medical Instrumentation: App & Design	Digital Forensics - EEL 4802 Intro to Digital Forensics Engineering - EEL 4804 Intro Malware Reverse Engineering - EEL 4806 Ethical Hacking & Countermeasures - EEE 4750 Intro to Image & Video Forensics - EEE 4752 Intro to Network Forensics & Incident Resp. - EEE 4754 Intro to Mobile Forensics
Computer Architecture & Microprocessor Design - EEE 4343 Intro to Digital Electronics - EEL 4709C Computer Design (<i>EE Only</i>) - EEL 4746 Microcomputers I - EEL 4746L Microcomputers I Lab - EEL 4747 Microcomputers II (RISC) - EEL 4747L Microcomputers II (RISC) Lab	Artificial Intelligence and Big Data - CNT 3143 IoT & Analytics w/ Cloud Services - CNT 4145 Sensor IoT Analytics - CNT 4147 IoT & Sensor Big Data Analytics - CNT 4149 Sensor & IoT Data Ana. w/ Deep Learning - CNT 4151 IoT & Sensor Data Visualization - CNT 4153 IoT Applied Machine Learning - CNT 4155 IoT & Sensor Programming w/ Python
Entrepreneurship - EEL 4933 Engineering Entrepreneurship - EEL 4062 Engineering Business Plan Development - EEL 4063 Introduction to Business Decisions - EEL 4090C Technical Sales for Engineers	Internet of Things - COP 4610 Operating Systems Principles - COP 4655 Mobile Application Development - EEE 4510 Intro to Digital Signal Processing - EEE 4717 Intro to Security of IoT - EEL 4740 Embedded Computing (<i>EE Only</i>) - TCN 4211 Telecommunication Networks
Other - EEL 4015 Electrical Design in Buildings - EEL 4476 Radiation Detection and Meas. in ECE	Data System Software - COT 3100 Discrete Structures (<i>EE Only</i>) (Alternative: MAD 2104 – Discrete Math (<i>EE Only</i>)) - COP 2210 Programming I - COP 3337 Programming II - COP 3530 Data Structures - COP 4338 Systems Programming - COP 4610 Operating Systems Principles - COP 4655 Mobile Application Development

Concentrations:

- Student must satisfy at least two (2) concentrations via 9 credits (or ~3 courses) minimum each.
- Electrical Engineering student must complete minimum of 39 concentration credits not found in ECE Core and Electrical Engineering Program Core.
- Computer Engineering student must complete minimum of 34 concentration credits not found in ECE Core and Computer Engineering Program Core

NOTE: Any student found to be taking any course without its prerequisite or co-requisite will be dropped from the course without a refund. **Fall 2023** Rev 04/30/2023