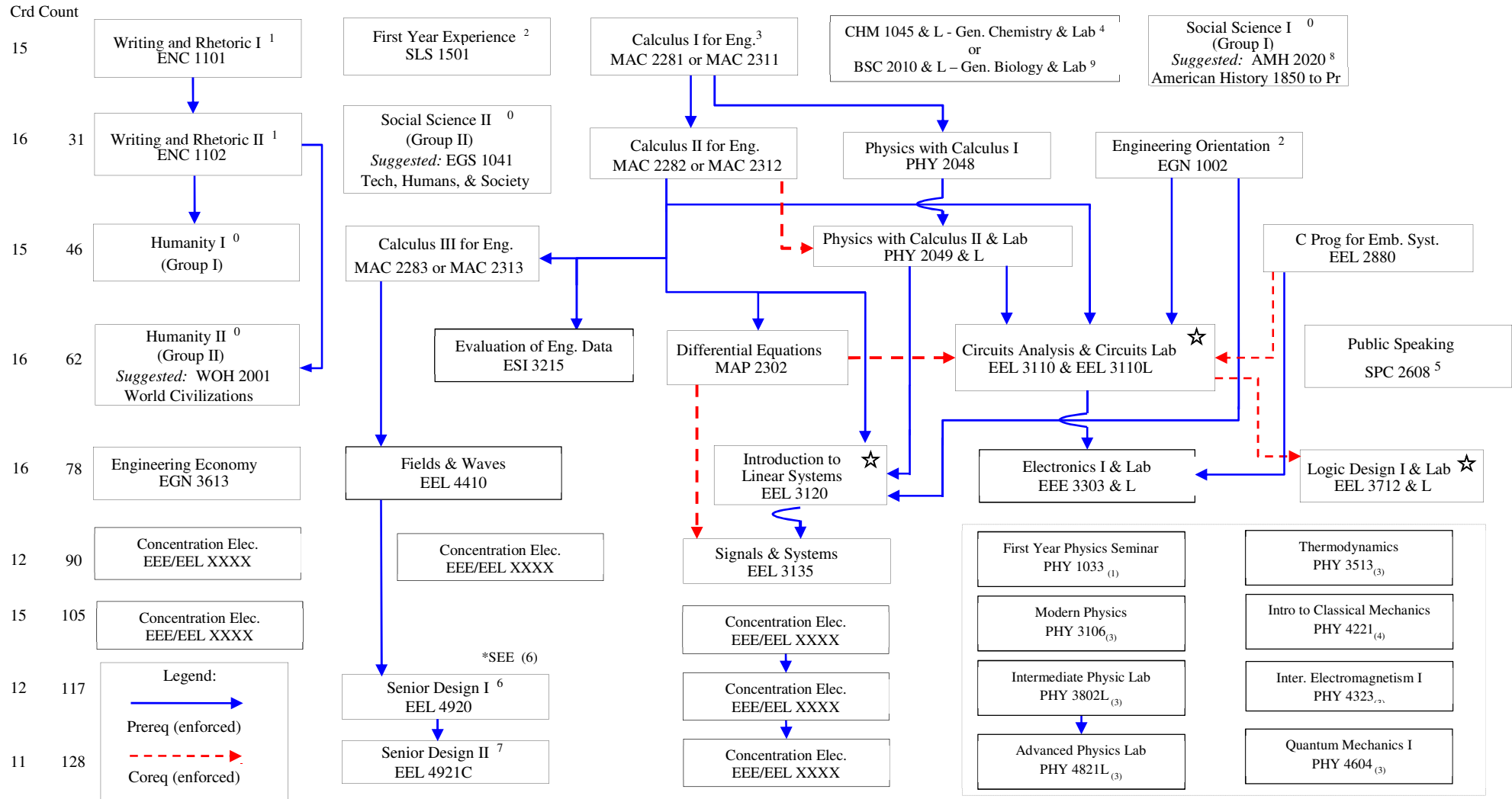


Electrical Engineering Physics Track Flowchart



Other Requirements (Must be completed for graduation):					
GRW1: _____	GRW2: _____	Foreign Language: _____	9 Summer Credit Hours: _____	UCC: _____	Total Credits: _____ / 128
GL-F: _____	GL-D: _____	Concentration I: ____/9crd	Physics Concentration: ____/23crd	Concentration Total: ____/42crd	CL: _____

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 arts (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.

*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 any course without its prerequisite or co-requisite will be dropped from the course without a refund.

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Concentrations

<p>Power / Energy</p> <ul style="list-style-type: none"> 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 	<p>Embedded System Software</p> <ul style="list-style-type: none"> 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
<p>Autonomous Systems, Control & Robotics</p> <ul style="list-style-type: none"> 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 	<p>Networking & Security</p> <ul style="list-style-type: none"> TCN 4081 Telecommunication Network Security TCN 4211 Telecommunication Networks TCN 4212 Telecomm. Network Analysis & Des. TCN 4431 Principles of Network Management and Control Standards EEE 4717 Intro to Security of IoT
<p>Integrated Nano-Technology</p> <ul style="list-style-type: none"> EEE 3303 Electronics I (<i>CpE Only</i>) EEE 3303L Electronics I Lab (<i>CpE Only</i>) EEE 3396 Intro to Solid State Devices EEE 4304 Electronics II EEE 4304L Electronics II Lab EEE 4314 Integrated Circuits & Systems EEE 4314L Integrated Circuits Lab EEE 4421C Intro to Nanofabrication 	<p>Cybersecurity</p> <ul style="list-style-type: none"> EEL 4802 Intro to Digital Forensics Engineering EEL 4804 Intro Malware Reverse Engineering EEL 4806 Ethical Hacking & Countermeasures
<p>Communications</p> <ul style="list-style-type: none"> EEL 3514 Communication Systems EEL 3514L Communication Systems Lab EEL 4421 Intro to RF Circuit Design EEL 4461C Antennas EEE 4510 Intro to DSP EEL 4515 Advanced Comm. Systems EEL 4595C Intro to Wireless Comm. w/ USRP App. 	<p>Digital Forensics</p> <ul style="list-style-type: none"> 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
<p>Bio-Engineering</p> <ul style="list-style-type: none"> EEE 3303 Electronics I (<i>CpE Only</i>) EEE 3303L Electronics I Lab (<i>CpE Only</i>) EEL 4140 Filter Design EEE 4421C Intro to Nanofabrication BME 4503C Medical Instrumentation: App & Design EEE 4510 Intro to Digital Signal Processing 	<p>Artificial Intelligence and Big Data</p> <ul style="list-style-type: none"> 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
<p>Computer Architecture & Microprocessor Design</p> <ul style="list-style-type: none"> 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 	<p>Internet of Things</p> <ul style="list-style-type: none"> 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
<p>Other</p> <ul style="list-style-type: none"> EEL 4015 Electrical Design in Buildings 	<p>Data System Software</p> <ul style="list-style-type: none"> COT 3100 Discrete Structures (<i>EE Only</i>) <ul style="list-style-type: none"> (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
	<p>Entrepreneurship</p> <ul style="list-style-type: none"> EEL 4933 Engineering Entrepreneurship EEL 4062 Engineering Business Plan Development EEL 4063 Economic Decision-making in Engineering

Concentrations:

- Student must complete at minimum 9 credits or 3 courses to satisfy an area of concentration, including any lab corequisite course as applicable
- Student must complete 2 concentrations
- Electrical Engineering student must complete minimum of 42 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 course without its prerequisite or co-requisite will be dropped from the course without a refund.