DEGREE REQUIREMENTS
BACHELOR OF SCIENCE IN COMPUTER ENGINEERING – CPE
FOR STUDENTS ENTERING CATALOG YEAR 2015 OR LATER
HERBERT WERTHEIM COLLEGE OF ENGINEERING, UNIVERSITY OF FLORIDA

CPE

GENERAL EDUCATION REQUIREMENTS (18 hours total) **+

Composition (GE-C & ENC3246)……6
Humanities (IUF1000)(GE-H) ……6
Social & Behavioral Sciences (GE-S) ……6
International & Diversity (GE-N, GE-D)*……6

*Courses selected could also fulfill the General Education requirements in Social & Behavioral Science (GE-S) or Humanities (GE-H).
**The Mathematics, Physical Sciences, & Biological Sciences requirements (18 hours) are fulfilled by departmental requirements listed below.
+Students may have to complete additional General Education courses to meet State Core requirements. See advisor for course requirements.

DEPARTMENTAL REQUIREMENTS

(Prerequisites listed in parentheses; Co-requisites underlined)

Mathematics (15 hours)

__**MAC2311 (4)** **Analytical Geometry & Calculus 1** (*ALEKS /MAC1147/placement credit*)
__**MAC2312 (4)** **Analytical Geometry & Calculus 2** (*Calc 1*)
__**MAC2313 (4)** **Analytical Geometry & Calculus 3** (*Calc 2*)
__**MAP2302 (3)** **Differential Equations** (*Calc 1*)

Physics (8 hours)

__**PHY2048 (3)** **Physics 1 w/ Calculus** (*HS Physics or PHY2020, Calc 1*; Calc 2, PHY2048L)
__PHY2048L (1) Lab for PHY2048 (PHY2048)
__**PHY2049 (3)** **Physics 2 w/ Calculus** (*PHY2048 & Calc 2*; Calc 3; PHY2049L)
__PHY2049L (1) Lab for PHY2049 (PHY2049)

Chemistry/Biology (7 hours)

__**CHM2045 (3)** **General Chemistry** (*MAC1147 and CHM1025 or passing grade on ALEKS*
__CHM2045L (1) Lab for CHM2045 (CHM2045)
__**CHM2046 (3)** **Chemistry & Qualitative Analysis** (*CHM2045*) **OR any non-CHM 2000-level Phys. or Bio. Science course w/ a GE designation of (GE-P) or (GE-B) – consult with advisor for allowable options**

Engineering Breadth Electives (minimum of 5 hours)

Take a total of two courses from 2 of the 5 groups.
See advisor and degree audit for approved list of courses.

College Writing Requirement (3 hours)

__ENC3246 Professional Communication for Engineers

Computer Engineering Core Courses (55-56 hours)

__COP3502 (3) Programming Fundamentals 1 (Java) (Calc1)
__COP3503 (3) Programming Fundamentals 2 (C++) (*COP3502 or 4-5 AP cr.*, MAC2311)
__COT3100 (3) App. of Discrete Structures (*Calc 1*; COP3503)
__CDA3101 (3) Intro to Comp. Organization (*Calc 1*, COP3503)
__COP3530 (4) Data Structures & Algorithms (*COP3503, COT3100, Calc 2*)
__CEN3031 (3) Intro to Software Engineering (*COP3530*)
__COP4600 (3) Operating Systems (*COP3530*, *CDA3101*)
__EEL3111C (4) Circuits 1 (*PHY2049, Calc 3*)
__EEL3135 (4) Signals & Systems (*Calc 2)*
__EEL3701C (4) Digital Logic & Computer Systems (*prog. experience*)
__EEL3744C (4) Microprocessor Applications (*EEL3701C*)
__EEL4712C (4) Digital Design (*EEL3701C*)
__EEL3000 (2) Intro to ECE *OR* EGS4034 (1) Prof Issues in ENG (*3EG status*) Engineering
__STA3032 (3) Statistics or STA 4321 (*Calc 1*)
__MAS3114 (3) Comp. Linear Alg. or MAS 4105 (*Calc 2 & programming language experience*)

CHOOSE ONE OF THE FOLLOWING SEQUENCES FOR JR/SR DESIGN:

__CEN3913 (3) and CEN4914 (3) (CISE DESIGN 1 & 2) (CEN3031)
__EEL3923C (3) and EEL4924C (3) (EE DESIGN 1 & 2) (*EEL3111C, EEL3701C, EEL3744C*)
__CIS4912C (3) and CIS4913C (3) (IPPD 1 & 2) (*CDA3101, COP3530, COT3100*)
__EEL4912 (3) and EEL4913 (3) (IPPD 1 & 2) (*EEE3308C, EEL3135, EEL3701C, COP3530*)

± Minimum Total Hours……126

Tech Electives* (18 hours) – Technical Elective courses must follow the guidelines below:

12 hours of any ECE or CISE at least 3000 level coursework that does not include a core requirement. **EEL3003, CGS3065, and CGS3063 CANNOT be used as a tech elective.**

In addition to the 12 hours 6 hours **can** come from the following:

- Any ECE or CISE at least 3000 level coursework that does not include a core requirement excluding EEL3003, CGS3065, and CGS3063
- Any 3000-level or higher PHY courses
- Any 4000-level or higher math or statistics courses with the prefixes of STA, MAA, MAD, MAP, MAS, or MHF not taken to fulfill any other requirement with the following exceptions:
- Take only ONE of these:
  - **COT3100, MAD4203, or MAD3107**
  - COT4501 or MAD4401; may NOT take both
  - COT4420 or MAD4504; may NOT take both
- **EEL3003, CGS3065, and CGS3063 CANNOT be used as a tech elective**
- **Any 3000-level coursework from any Herbert Wertheim College of Engineering department**
- Internship or Co-Op up to 3 hours can be used.
- Undergraduate Research or Independent Study up to 6 hours can be used.
- Any Advisor Approved Course

CpE students will have credit for two programming courses (Java and C++). One additional programming language course (not Java or C++) can count as a technical elective. COP 3275 and EEL 3834 are acceptable.

Notes:

- ✓ Students must complete all Critical Tracking courses (in bold) with a grade of C or better within two attempts (W counts as an attempt) while maintaining a 2.5 tracking GPA.
- ✓ Must maintain UF, upper-division, and major GPA of at least a 2.0 to be in good standing.
- ✓ Any student that takes COP3502 must pass the course and then take COP3503. Students cannot take COP3502 & COP3503 concurrently.
- ✓ ENC3246, CpE Design 2 (CEN 4912, EEL 4924, or CIS/EEL 4913) must be completed with a grade of C or better. A grade of C- or lower will not fulfill degree requirements and requires a retake.
- ✓ Courses in italics are pre-requisites; underlined courses are co-requisites.
- ✓ Any course that is a pre-requisite to another course in the curriculum must be completed with a grade of C or better. Concerns can be addressed with the academic advisor.
- ✓ Both University and Departmental Exit Interviews are required during the final semester. Please meet with the academic advisor for details.

Students who do not meet these requirements will be placed on academic probation and will be required to prepare a probation contract with a CpE adviser. Students are normally given two terms to remove their deficit points; however, students who do not satisfy the conditions of the first term of probation may be dismissed from the program.

TRACKING SHEET – SUGGESTED COURSE SEQUENCE
BACHELOR OF SCIENCE IN COMPUTER ENGINEERING (CPE)
FOR STUDENTS ENTERING CATALOG YEAR 2017
HERBERT WERTHEIM COLLEGE OF ENGINEERING, UNIVERSITY OF FLORIDA

FRESHMAN YEAR

Semester 1 – Fall

If you do not place out of ENC1101, take it this semester.

MAC2311 (4)	**Analytical Geometry & Calc 1 (GE-M)**
CHM2045 (3)	**General Chemistry (GE-P)**
CHM2045L (1)	General Chemistry Lab (GE-P)
COP3502 (3)	Programming Fundamentals 1
IUF1000 (3)	What is the Good Life? (GE-H)

Total: 14 credit hours

Semester 2 – Spring

MAC2312 (4)	**Analytical Geometry & Calc 2 (GE-M)**
PHY2048 (3)	**Physics with Calc 1 (GE-P)**
PHY2048L (1)	Physics with Calc 1 Lab (GE-P)
COP3503 (3)	Programming Fundamentals 2
COT3100 (3)	Applications of Discrete Structures

Total: 14 credit hours

Summer

CHM2046 (3) OR 2000-level GE-P or GE-B

Humanities (GE-H) (3)

Humanities or Social/Behavioral Science (GE-H or GE-S) (3)

Total: 9 credit hours

SOPHOMORE YEAR

Semester 3 – Fall

MAC2313 (4)	**Analytical Geometry & Calc 3 (GE-M)**
MAP2302 (3)	**Differential Equations**
PHY2049 (3)	**Physics with Calc 2 (GE-P)**
PHY2049L (1)	Physics with Calc 2 Lab (GE-P)
CDA3101 (3)	Intro to Computer Organization

Total: 14 credit hours

Semester 4 – Spring

EEL3111C (4)	Circuits 1
MAS3114 (3)	Computational Linear Algebra
COP3530 (4)	Data Structures & Algorithms

EGN Breadth course, from approved list (2-3)

Total: 13-14 credit hours

Summer

EEL3701C (4)	Digital Logic
ENC3246 (3)	Professional Comm. for Engineers

Humanities or Social/Behavioral Science (GE-H) (3)

Total: 10 credit hours

JUNIOR YEAR

Semester 5 – Fall

EEL4712C (4)	Digital Design
STA3032 (3)	Engineering Statistics
CEN3031 (3)	Intro to Software Engineering
EGS4034 (1) or EEL3000 (2)	Ethics Requirement

CpE Tech Elective (3)

Total: 14-15 credit hours

Semester 6 – Spring

EEL3744C (4)	Microprocessor Applications

CpE Tech Elective (3)

CpE Tech Elective (3)

CpE Tech Elective (3)

Social/Behavioral Science (GE-S) (3)

Total: 16 credit hours

Summer

Pursue Internship if desired

SENIOR YEAR

Semester 7 – Fall

CpE Design 1 (3)	See advisor for options
COP4600 (3)	Operating Systems
EEL3135 (4)	Signals and Systems

Social/Behavioral Science (GE-S) (3)

Total: 13 credit hours

Semester 8 – Spring

CpE Design 2 (3)	See advisor for options

CpE Tech Elective (3)

CpE Tech Elective (3)

EGN Breadth course, from approved list (3)

Total: 12 credit hours

Technical Electives

There are 18 credit hours of technical electives (TE). At least 12 hours must be 3000-level or higher courses within either the CISE or ECE department.

- Speak with advisor for list of exceptions (**EEL3003 is *not* permitted as elective**)
- One additional programming language course (not Java or C++) can count as a technical elective (e.g. COP3275 or EEL3834)
- Students can complete up to 6 hours of EGN4912/Independent Study credit

Up to six (6) credit hours may come from the following areas:

- 4000-level or higher courses in the Math department
- 4000-level or higher courses in the Statistics department
- 3000-level or higher courses in the Physics department
- 3000-level or higher courses in any department in the College of Engineering
- any advisor-approved course (may require petition process)

- **Critical tracking courses for semesters 1-3 appear in bold; these must be completed with a combined GPA of 2.5 or higher within the first 5 tracking semesters (Fall/Spring only). For additional tracking requirements, please refer to the Herbert Wertheim College of Engineering section in the Undergraduate Catalog.**
- The above course plan is a suggested sequence; students may deviate from the sequence as long as prerequisites have been met.
- ENC3246 must be successfully completed (grade of C or better) at UF.
- Students with an initial course load of 15 credits or more during Fall or Spring semester will be permitted to drop a course without penalty of using a drop provided it's done by the end of the 7th week and the total credits remaining are 12 or more. See an advisor for the details.

CpE Undergraduate Academic Advisor (230 Larsen Hall): Allison Gatsche
agatsche@ece.ufl.edu

CpE Undergraduate Coordinator (313 Benton Hall): Dr. Herman Lam
hlam@ufl.edu

Engineering Breadth Electives (minimum of 5 hours}
Choose two courses from 2 of the 5 groups.

Engineering Materials

ABE3652C	(3)	Physical and Rheological Properties of Biological Materials
CGN3501C	(4)	Civil Engineering Materials
ECH4824	(2)	Materials of Chemical Engineering
EEE3396C	(4)	Solid-State Electronic Devices
EMA3010	(3)	Materials

Statics/Dynamics

EGM2500	(3)	Mechanics of Materials
EGM2511	(3)	Engineering Mechanics: Statics
EGM3400	(2)	Elements of Dynamics
EGM3401	(3)	Engineering Mechanics: Dynamics
EML2023	(3)	Computer Aided Graphics and Design

Thermodynamics/Heat Transfer/Fluid Flow

ABE3612C	(4)	Heat and Mass Transfer in Biological Systems
CWR3201	(4)	Hydrodynamics
ECH3023	(4)	Material and Energy Balances
ECH3264	(3)	Elementary Transport Phenomena
ECH4403	(3)	Separation and Mass Transfer Operations
ECH4224L	(2)	Fluid and Energy Transfer Operations Laboratory
ECH4404L	(2)	Separation and Mass Transfer Operations Laboratory
EGN3353C	{3)	Fluid Mechanics
EML3007	(3)	Elements of Thermodynamics and Heat Transfer
EML3100	(3)	Thermodynamics

Engineering Economy/Management

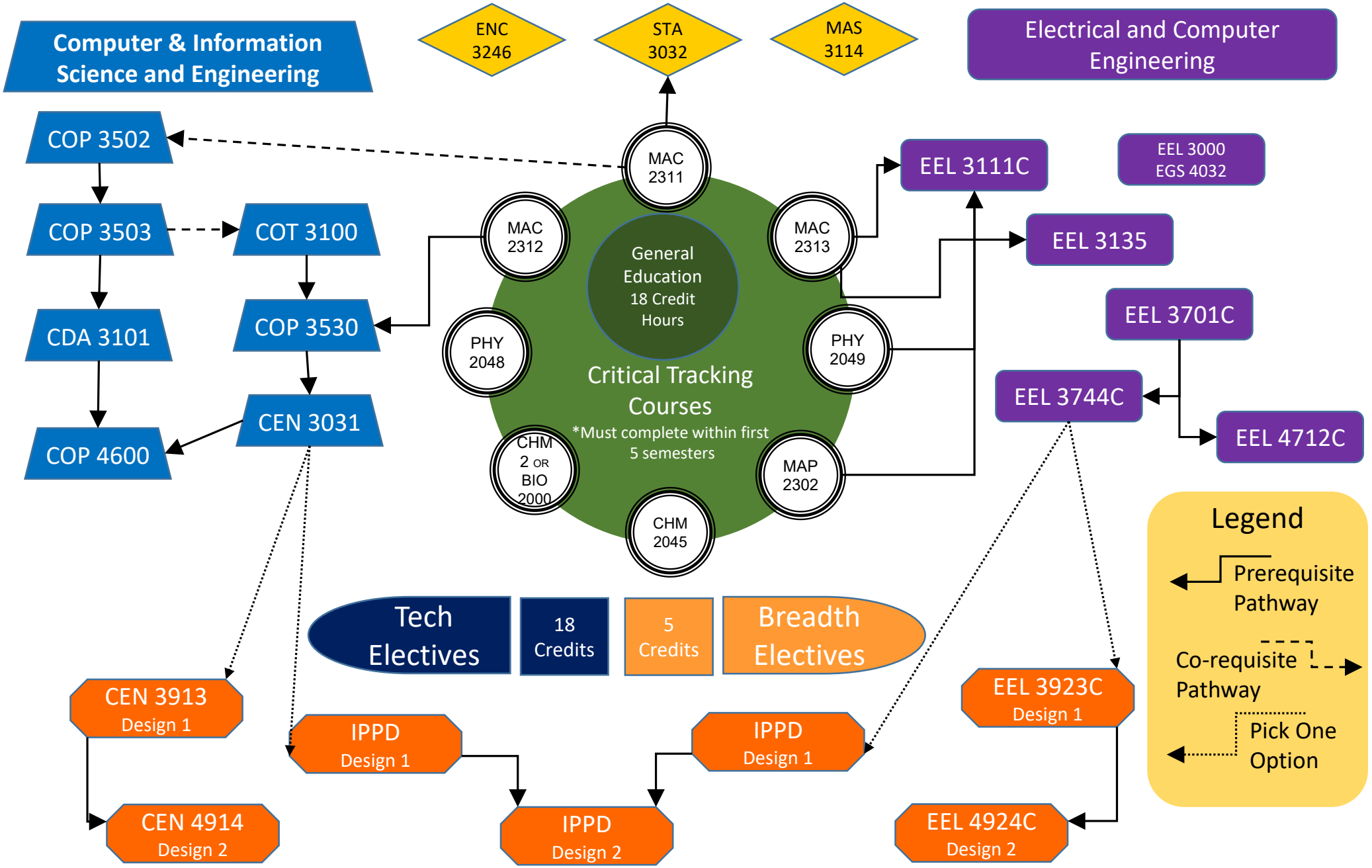
CCE4204	(3)	Construction Equipment, Methods and Management
CGN4101	(3)	Civil Engineering Cost Analysis
ECH4604	(3)	Process Economics and Optimization
EIN4354	(3)	Engineering Economy
EIN4321	(3)	Industrial Energy Management
EGS4625	(3)	Fundamentals of Engineering Project Management
ESl4221C	(3)	Industrial Quality Control
ESl4312	(4)	Operations Research 1
ES14523	(3)	Industrial Systems Simulation
ENV4601	(2)	Environmental Resources Management

Environmental/Biological Engineering

ABE2062 (3) Biology for Engineers
ABE3212C (4) Land and Water Resources Engineering
CWR4111 (3) Engineering Hydrology
CWR4812 (4) Food and Bioprocess Engineering Unit Operations
EES3000 (3) Environmental Science and Humanity
EES3008 (3) Energy and Environment
EES4021 (3) Water Chemistry
EES4050 (3) Environmental Planning and Design
EES4102 (2) Wastewater Microbiology
EES4103 (2) Applied Ecology
EES4200 (2) Environmental Chemistry of Carbon Compounds
EES4370 (3) Environmental Meteorology and Oceanography
EES4401 (3) Public Health Engineering
ENV4101(3) Elements of Atmospheric Pollution

CPE

CORE COURSE REQUIREMENTS DIAGRAM
COMPUTER ENGINEERING – CPE



Electrical and Computer Enginering Academic Success Plan Worksheet

Name:	UF ID:
Expected Graduation Term: FALL ☐ SPRING ☐ SUMMER ☐ Year: 2019	**Directions:** Please fill out the following information for all courses until you graduate.

FALL____			SPRING____			SUMMER ____		
Class No.	**Class Name**	**Credits**	**Class No.**	**Class Name**	**Credits**	**Class No.**	**Class Name**	**Credits**
Total Credits		0	**Total Credits**		0	**Total Credits**		0

FALL____			SPRING____			SUMMER ____		
Class No.	**Class Name**	**Credits**	**Class No.**	**Class Name**	**Credits**	**Class No.**	**Class Name**	**Credits**
Total Credits		0	**Total Credits**		0	**Total Credits**		0

FALL____			SPRING____			SUMMER ____		
Class No.	Class Name	Credits	Class No.	Class Name	Credits	Class No.	Class Name	Credits
Total Credits		0	Total Credits		0	Total Credits		0

FALL____			SPRING____			SUMMER ____		
Class No.	Class Name	Credits	Class No.	Class Name	Credits	Class No.	Class Name	Credits
Total Credits		0	Total Credits		0	Total Credits		0

FALL____			SPRING____			SUMMER ____		
Class No.	Class Name	Credits	Class No.	Class Name	Credits	Class No.	Class Name	Credits
Total Credits		0	Total Credits		0	Total Credits		0