

DEGREE REQUIREMENTS⁺
BACHELOR OF SCIENCE IN COMPUTER ENGINEERING (CEN)
FOR STUDENTS ENTERING CATALOG YEAR 1999 OR LATER
COLLEGE OF ENGINEERING, UNIVERSITY OF FLORIDA

GENERAL EDUCATION***

Composition (ENC 3254).....	3	Humanities*.....	6-9
Social and Behavioral Sciences*.....	6-9	International and Diversity Studies**.....	6

- * Both categories combined must total 15 hrs with no fewer than six hours taken in either category.
 ** These courses may be selected from courses that simultaneously fulfill the general education area requirement in social and behavioral science (S) and humanities (H).
 *** The mathematics, physical and biological science requirements are covered by the departmental requirements below.

DEPARTMENTAL REQUIREMENTS

Mathematics (21/22)

__MAC 2311 Analytic Geometry & Calculus 1	4
__MAC 2312 Analytic Geometry & Calculus 2	4
__MAC 2313 Analytic Geometry & Calculus 3	4
__MAP 2302 Elementary Differential Equations (Cal 2)	3
__MAS 3114 Comp. Linear Algebra (Cal 2 & prog. lang.exp.)	3
OR __MAS 4105 Linear Algebra 1 (Cal 3)	4
__STA 3032 Engineering Statistics (Cal 1)	3

Physics (8)

__PHY 2048 Physics w/Cal 1 (HS Physics, Cal 1; Cal 2, PHY2048L)	3
__PHY 2048L Lab for PHY 2048 (PHY 2048)	1
__PHY 2049 Physics w/Cal 2 (PHY 2048; Cal 3, PHY 2049L)	3
__PHY 2049L Lab for PHY 2049 (PHY 2049)	1

Chemistry/Biology (7)

__CHM 2045 General Chemistry (CHM 1025; or passing grade on chem. readiness exam; CHM 2045L)	3
__CHM 2045L Lab for CHM 2045 (CHM 2045)	1
__CHM 2046 Chemistry & Qualitative Analysis (CHM 2045)	
OR PHY 2464, or any 3000-level PHY, or any non-CHM 2000-level course with a Gen. Ed. Designation of (P) or (B) ..	3

__ **Engineering Core (5/6)**--Take a course from 2 of the 5 groups: See CISE advisor for approved list of courses

Computer Engineering Major Courses (48/49)

__CIS 3020 Adv Prgm Fund for CIS Majors (Cal 1, prgm exp.)	3
OR __CIS 3023 Programming for CIS Majors II (CIS 3022)	3
__COT 3100 App. of Discrete Structures (Cal 1, CIS 3020 or CIS 3023) ..	3
__COP 3530 Data Struct & Algorithms (CIS 3020/23, COT 3100, Cal 2)	4
__CDA 3101 Intro to Comp Organization (Cal 1, CIS 3020/23)	3
__CEN 3031 Intro to Software Engineering (COP 3530)	3
__COP 4600 Operating Systems (COP 3530, CDA 3101)	3
__CEN 4500C Comp. Network Fund. (COP 4600)	4
__CIS 4914 Sr. Project or CIS 4913C-IPPD 2 (4EG)	3
__COT 4501 Numerical Analysis (CIS 3020/23, MAS3114)	3
__EEL 3304C Electronics Circuits 1 (EEL 3111C)	4
OR __EEL 3135 Discrete-Time Signals & Syst. (Cal 3, CIS 3020, MAP 2302) ..	3
__EEL 3111C Circuits 1 (PHY 2049, Cal 3)	4
__EEL 3701C Digital Logic & Computer Systems (CIS 3020/23)	4
__EEL 4712C Digital Design (EEL 3701C)	4
__EEL 4744C Microprocessor Applications (EEL 3701C)	4

Ethics (1)

__EGN 4034 Professional Issues in Engineering (4EG)	1
__CGS 3065 Legal & Social Issues in Computing	3

Technical Electives* (18)--12 hrs must be CISE courses**

__CAP 4410 Digital Image Processing (COP 3530)	3
__CAP 4621 Artificial Intelligence & Heuristics (COP 3530)	3
__CAP 4680 Knowledge-Based Syst.: Theory & Pract. (CAP 4621)	3
__CAP 4730 Comp. Structures in Computer Graphics (COP 3530)	3
__CAP 4800 Systems Simulation (COP 3530)	3
__CAP 4403 Aesthetic Computing (COP 3530)	3
__CDA 4102 Computer Architecture (CDA 3101, COP 3530)	3
__CEN 4012 Software System Development (CEN 3031)	3
__CEN 4072 Software Testing & Verification (CEN 3031)	3
__CGS 3065 Legal & Social Issues in Computing	3
__CIS 4301 Info & DB Sys Design & Dev 1(3020/3023, 3100)	3
__CIS 4905 Independent Study	1-4
__CIS 4912C IPPD 1 (CDA 3101, COP 3530, consent of instr.) ..	3
__CIS 4930 Special Topics (advisor approval)	3
__CIS 4940 Internship (advisor approval)	1
__CIS 4949 Co-op (advisor approval)	1
__COP 4020 Programming Language Concepts (COP 3530)	3
__COP 4331 Object-oriented Programming (COP 3530)	3
__COP 4343 UNIX System Administration (COP 4600)	3
__COP 4620 Translators & Translator Writing Sys. (COP 3530) ..	3
__COP 4720 Info & DB System Design & Dev. 2 (CIS4301, COP 3530) ..	3

*All electives must be 3000-level or above. Electives may be any CISE, ECE or PHY course not taken to fulfill some other requirement, excluding EEL 3003, EEL 4834, and most CGS courses. They may also be any 4000-level math or statistics course with the prefix STA, MAA, MAD, MAP, MAS OR MHF not taken to fulfill any other requirement with the following exceptions:

- Take only **ONE** of these: **COT 3100**, **MAD 4203**, or **MAD 3107**.
- **COT 4501** and **MAD 4401** may not both be taken
- **COT 4420** and **MAD 4504** may not both be taken

__EIN 4354 Engineering Economy (Jr. Standing)
 (EIN 4354 can be used as a technical elective outside the CISE Department or as an Engineering Core. It cannot count in both areas.)

****CIS 3022, CGS 3460, and CGS 3464 are considered programming language courses. At most, 3 credits of a programming language course may count towards technical elective credit. See Advisor for approval**

NOTES:

- CIS 3020 is not equivalent to CIS 3023. Any student who takes CIS 3022 **must** then take CIS 3023. If a student takes CIS 3022/3023 sequence, then they do not have to take CIS 3020.
- ENC 3254, EEL 3701C, CIS 3020, and CIS 3023 must be completed with a C or better.
- Courses in parenthesis are prerequisites.
- Underlined courses are co-requisites.
- An Exit Interview is required during your last semester. Please see one of the department academic advisors.
- Students entering catalog year 2002 or later must complete all tracking courses with a C or better within two attempts (W counts as an attempt), while maintaining a 2.5 tracking GPA.
- Students pursuing a math minor may substitute MAD4401 for COT4501.