

Computer Science

First Year

Fall Semester

- 3 **ENC 1101 Composition I**
- 4 **MAC 2281 Engineering Calculus I**
- R EGN 3000 Foundations of Engineering
- 1 EGN 3000 LAB Foundations of Engineering
- 3 Natural Science Elective
- 3 FKL Social & Behavioral Science Elective

- 14 *Total Credits*

Spring Semester

- 3 **ENC 1102 Composition II**
- 4 **MAC 2282 Engineering Calculus II**
- 3 **PHY 2048 General Physics I**
- 1 **PHY 2048L General Physics I Lab**
- 3 *COP 2510 Programming Concepts

- 14 *Total Credits*

Second Year

Fall Semester

- 4 MAC 2283 Engineering Calculus III
- 3 **PHY 2049 General Physics II**
- 1 **PHY 2049L General Physics II Lab**
- 3 *COP 3514 Program Design
- 3 FKL Social & Behavioral Science Elective

- 14 *Total Credits*

Spring Semester

- 3 *CDA 3103 Computer Organization
- 3 COT 3100 Intro Discrete Structures
- 3 COP 3331 Object Oriented Design
- 3 FKL Humanities Elective

- 12 *Total Credits*

Summer School

- 3 COP 4530 Data Structures
- 3 CDA 3201 Logic Design
- 1 CDA 3201L Logic Lab
- 2 EGN 4450 Linear Systems

- 9 *Total Credits*

Third Year

Fall Semester

- 3 CDA 4205 Computer Architecture
- 3 COT 4400 Analysis of Algorithms
- 3 EGN 3443 Probability and Statistics for Engineers
- 3 CSE Software Elective
- 3 Natural Science Elective

- 15 *Total Credits*

Spring Semester

- 3 COP 4600 Operating Systems
- 3 CSE Theory Elective
- 3 CSE Software Elective
- 3 CSE Elective
- 3 ENC 3246 Communication for Engrs (WI)

- 15 *Total Credits*

Internship/Co-op

List Company/employer
 name and position

Fourth Year

Fall Semester

- 3 FKL Fine Arts Elective
- 3 FKL Human/Diversity & Global Elective
- 3 FKL Humanities Elective
- 3 CSE Elective
- 3 CSE Elective

- 15 *Total Credits*

Spring Semester

- 3 CIS 4250 Ethical Issues and Professional Conduct (WI,CD)
- 3 CSE Elective
- 3 CSE Elective
- 3 Upper Level FKL Humanities, Social Science
 or FKL Fine Arts Elective

- 12 *Total Credits*

Notes:

Courses in bold must be completed with an overall "3.00" GPA (see overleaf)

* Requires a minimum grade of a "B"

R - Required course

Entrance Requirements into the Department of Computer Science and Engineering

- **Completion of the following courses with an overall 3.00 GPA (based on best attempt in these courses) and a minimum grade of “C” in each course (grades of “C-“ are insufficient).**
 - _____ **Calculus I or Engineering Calculus I** (MAC 2311 or MAC 2281)
 - _____ **Composition I & II** (ENC 1101, 1102)
 - _____ **Calculus II or Engineering Calculus II** (MAC 2312 or MAC 2282)
 - _____ **Physics I (PHY 2048, 2048L)**
 - _____ **Physics II (PHY 2049, 2049L)**

Continuation in the Major

- Requires a minimum of a “B” in COP 2510.
- Requires completion of CDA 3103 and COP 3514 with a minimum grade of “B” in each course based on best attempts (a “B-“ is insufficient).
- *With the exception of the courses referred to in the admissions statement above, C- is the minimum acceptable grade in each math, science and engineering course. A minimum GPA of 2.00 in the following categories must be maintained at all times: Overall, USF, Math/Science, Engineering Courses and Specialization Courses.*
- *All math, science and engineering courses must be successfully completed in no more than three registered attempts. Grades of W, I, IF, U, R, and M are considered attempts. Registration that is canceled for non-payment is also considered an attempt.*

Gordon Rule (6A) is fully met through the mathematics courses above, ENC 1101, ENC 1102, ENC 3246 and CIS 4250. Gordon Rule communication requirement is met for any student entering USF with 60 or more hours.

Exit Requirements: Exit requirements must be taken at USF. The Capstone Design (CD) and Writing Intensive (WI) exit requirements are met through ENC 3246 and CIS 4250.

Course sequence: Courses in red should be taken in sequence as early as possible in preparation for your major. Foundation of Knowledge & Learning (FKL) courses may be taken in any order.

Computer Science Minor

This Computer Science minor is an 18 credit hour program that is open to all students, except for Department majors, that meet the prerequisites listed below. The Computer Science minor is expected to be very attractive to students in other Engineering departments, and to students in Mathematics and the Sciences (including Physics, Chemistry, and Biology). Students must register with the Department of Computer Science and Engineering undergraduate advisor prior to starting this minor program. Consultation with the Department undergraduate advisor will insure that students are informed of all offered courses. All catalog prerequisites and registration requirements must be met for enrollment in any of the courses required for the minor. All students desiring to pursue the minor must meet the same entry and continuation requirements as a Departmental major

Prerequisite courses:

1. Calculus I and II (MAC 2281 and MAC 2282 are recommended)
2. Physics I and II with lab (PHY 2048/2048L and PHY 2049/2049L are recommended)
3. Programming Concepts COP 2510 or other approved introductory programming course

Required Courses (12 hours)

COP 3514 Program Design	3
CDA 3103 Computer Organization	3
COP 3331 Object Oriented Design	3
COP 4530 Data Structures	3

The remaining six credit hours can be taken from electives offered by the Department. Specialty tracks in hardware, software, theory, and many other areas can be defined in consultation with the Department undergraduate advisor. A specific pre-graduate school track (requiring a total of 21 hours) intended for students planning to seek admission into the Department graduate program has been defined as follows:

COT 4400 Analysis of Algorithms	3
COP 4600 Operating Systems	3
CDA 4205 Computer Architecture	3

Successful completion of the minor requires a minimum 2.0 GPA in the above listed courses.