

# Computer Engineering

128 credits, 2019/2020 Catalog

## First Year

### Fall Semester

<b>4</b>	<b>MAC 2281 or MAC 2311 Calculus I</b>
<b>3</b>	<b>ENC 1101 Composition I</b>
3	CHS 2440 or CHM 2045 Chemistry I
1	CHS 2440L or CHM 2045L Chemistry I Lab
R	EGN 3000 Foundations of Engineering
<u>3</u>	EGN 3000L Foundations of Engineering Lab (TGEC)
<b>14</b>	<b>Total Credits</b>

### Spring Semester

<b>4</b>	<b>MAC 2282 or MAC 2312 Calculus II</b>
<b>3</b>	<b>ENC 1102 Composition II</b>
3	<b>PHY 2048 General Physics I</b>
1	<b>PHY 2048L General Physics I Lab</b>
<u>3</u>	<b>*COP 2510 Programming Concepts</b>
<b>14</b>	<b>Total Credits</b>

## Second Year

### Fall Semester

<b>4</b>	<b>MAC 2283 or MAC 2313 Calculus III</b>
<b>3</b>	<b>PHY 2049 General Physics II</b>
<b>1</b>	<b>PHY 2049L General Physics II Lab</b>
<b>3</b>	<b>*COP 3514 Program Design</b>
<u>3</u>	** St. Gen. Ed. Core Social Science Elective
<b>14</b>	<b>Total Credits</b>

### Spring Semester

3	MAP 2302 Differential Eq or EGN 3433 Modeling & Analysis of Eng Systems
<b>3</b>	<b>*CDA 3103 Computer Organization</b>
3	COT 3100 Intro Discrete Structures
3	COP 3331 Object Oriented Design
<u>3</u>	St. Gen. Ed. Core Humanities Elective
<b>15</b>	<b>Total Credits</b>

### Summer

3	COP 4530 Data Struct.
3	CDA 3201 Logic Design
1	CDA 3201L Logic Lab
<u>2</u>	EGN 4450 Linear Syst.
<b>9</b>	<b>Total Credits</b>

## Third Year

### Fall Semester

3	CDA 4205 Computer Architecture
3	EEE 3394 Electronic Materials
3	EGN 3373 Electrical Systems I
3	COT 4400 Analysis of Algorithms
<u>3</u>	CSE Hardware Elective
<b>15</b>	<b>Total Credits</b>

### Spring Semester

3	CDA 4203 Computer System Design
1	CDA 4203L Computer Syst Design Lab
3	EGN 3615 Engineering Economics (TGED)
3	COP 4600 Operating Systems
3	CSE Hardware Elective
<u>3</u>	Gen. Ed. Natural Science Elective
<b>16</b>	<b>Total Credits</b>

### Internship/Co-op

List
Company/employer name and position (see advisor for credit options – CIS 4940)

## Fourth Year

### Fall Semester

3	CDA 4213 CMOS-VLSI Design
1	CDA 4213L CMOS-VLSI Design Lab
3	EGN 3443 Probability and Statistics for Eng. (TGEI)
3	ENC 3246 Communication for Engineers
3	CSE Elective
3	** General Elective
<u>1</u>	Apply for Graduation
<b>16</b>	<b>Total Credits</b>

### Spring Semester

3	CIS 4910 Comp. Sci. & Eng. Project (HIP)
3	CIS 4250 Ethical Issues & Professional Conduct (ERCE)
3	CSE Elective
3	** General Elective
<u>3</u>	** General Elective
<b>15</b>	<b>Total Credits</b>

**Notes:** Courses in bold must be completed with a competitive GPA, see overleaf for details.

R - Required course

\* - Requires a minimum grade of a "B"

\*\* Students must meet the Civic Literacy requirement with credit for AMH 2020, POS 2041 or passing the Civic Literacy test.

TGE = Tampa General Education; C = Creative Thinking, I = Information & Data Literacy, D = Human & Cultural Diversity

ERCE = Ethical Reasoning & Civic Engagement HIP = High Impact Practice Capstone

## Entrance Requirements: Department of Computer Science & Engineering

- Admission requires a minimum grade of “B” in COP 2510 Programming Concepts (a “B-” is insufficient), **and**
- Completion of the following courses with a minimum grade of C and an cumulative **3.1 GPA\*** (based on best attempt) for the following courses:

- \_\_\_\_\_ **Calculus I or Engineering Calculus I (MAC 2311 or MAC 2281)**
- \_\_\_\_\_ **Composition I & II (ENC 1101 and ENC 1102)**
- \_\_\_\_\_ **Calculus II or Engineering Calculus II (MAC 2312 or MAC 2282)**
- \_\_\_\_\_ **Physics I (PHY 2048 and 2048L)**
- \_\_\_\_\_ **Physics II (PHY 2049 and 2049L)**

\* Minimum GPA for entry into the department for fall 2019 is 3.1. This GPA is subject to change in future years; check the department website.

## Continuation in the Major

- Requires completion of **CDA 3103 and COP 3514 with a minimum grade of “B”** (a “B-” is insufficient) in each course based on best attempt.
- Unless otherwise stated, the minimum acceptable grade in all BSCP required math, science, and engineering courses is a C or higher (C- is insufficient). The minimum acceptable grade in specialization courses is a C-, except as stated in the program admission and continuation requirements.*
- 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 required math, science, engineering, and major/specialization courses must be successfully completed in no more than **two** 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.*

## Course Equivalencies

Courses at USF	Courses at a Florida State Institution
MAC 2281 Engineering Calculus I or MAC 2311 Calculus I	MAC X311 or MAC X281
MAC 2282 Engineering Calculus II or MAC 2312 Calculus II	MAC X312 or MAC X282
MAC 2283 Engineering Calculus III or MAC 2313 Calculus III	MAC X313 or MAC X283
MAP 2302 Differential Equations or EGN 3433 Modeling Analysis of Eng Systems	MAP X302 or MAP X305
CHM 2045/CHM 2045L General Chemistry I with Lab Or CHS 2440/2440L General Chemistry for Engineers with lab	CHM X045/X045L or CHM X045C or CHM X041/X045L or CHS X440/X440L
PHY 2048/2048L General Physics I with PHY 2048L	PHY X048/X048L or PHY X048C or PHY X043/X048L
PHY 2049/2049L General Physics II or PHY 2061 Enriched Physics II with PHY 2049L	PHY X049/X049L or PHY X049C or PHY X044/X049L