### Computer and Technology Majors at FSU

#### COMPUTER ENGINEERING*

**What is it?**
- The study of digital systems and how they interface with the world; including hardware, software, and algorithm design.

**What will I study?**
- How to design and interface embedded computer systems; how to design and implement digital hardware; software and algorithm development; digital systems theory

**What courses will I need before I start?**
- Calculus I
- Calculus II
- Calculus III
- Differential Equations
- Linear Algebra
- General Chemistry I w/ Lab
- General Physics A w/ Lab
- General Physics B w/ Lab

**Who can I contact for information?**
- Hillary Campbell, Mapping Coord.  
  hdcampbell@fsu.edu

#### COMPUTATIONAL SCIENCE  
*(Scientific Computing)*

**What is it?**
- The integration of mathematics and computation to solve problems in science and engineering.

**What will I study?**
- Mathematical and computational algorithms for science applications; how to translate these algorithms into one of several computer languages, including Python and C++; how to conduct scientific research using algorithms and computation

**What courses will I need before I start?**
- Calculus I
- Calculus II
- Calculus III
- Differential Equations
- Linear Algebra
- General Chemistry I w/ Lab
- General Physics A w/ Lab
- General Physics B w/ Lab

**Who can I contact for information?**
- Karey Fowler, Academic Advisor  
  advising@sc.fsu.edu

#### INFORMATION TECHNOLOGY

**What is it?**
- Designing, creating, and managing information systems to meet the needs of an organization.

**What will I study?**
- Technical communication, research and data analysis, information science, information systems and services

**What courses will I need before I start?**
- Calculus I
- Calculus II
- Calculus III
- Differential Equations
- Linear Algebra
- General Chemistry I w/ Lab
- General Physics A w/ Lab
- General Physics B w/ Lab

**Who can I contact for information?**
- CCI Advising Center  
  advising@cci.fsu.edu

#### COMPUTER SCIENCE*†

**What is it?**
- The study of software development and engineering.

**What will I study?**
- Data & instruction processing; mobile app development; programming languages including C++ and Python

**What courses will I need before I start?**
- BA degree option:
  - Calculus I
- BS degree option:
  - Calculus I & II
  - Introductory Programming
  - 2 Natural Science courses

**Who can I contact for information?**
- Kimberly Pack, Academic Advisor  
  advisor@cs.fsu.edu

#### COMPUTER PROGRAMMING AND APPLICATIONS

**What is it?**
- The introductory study of programming with a large amount of flexibility.

**What will I study?**
- Introductory programming language courses in C++, Java, and Python

**What courses will I need before I start?**
- Calculus I

**Who can I contact for information?**
- CCI Advising Center  
  advising@cci.fsu.edu

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Other majors you may want to consider: Studio Art; Information, Communication & Technology

Program information subject to change.

* denotes majors that are also available at the Panama City Campus. † denotes majors that are also available as Distance Learning.

Please refer to the FSU Academic Program Guide (academic-guide.fsu.edu) and Match Major Sheets (career.fsu.edu/resources) for specific course numbers & more information.

*Effective Summer 2017*
Computer and Technology
Majors at FSU

**COMPUTATIONAL BIOLOGY**
(Biology)

**What is it?**
- An interdisciplinary major intended to train students to develop computational models and algorithms to solve biological problems.

**What will I study?**
- Biology; genetics; scientific computing; algorithms for scientific applications

**What courses will I need before I start?**
- Calculus I
- C++ or Java programming course
- General Biology I w/ Lab
- General Biology II w/ Lab
- General Chemistry I
- General Chemistry II

**Who can I contact for information?**
- Bonnie Garcia-Gloeckner, Advisor
  bgarcia@bio.fsu.edu

**COMPUTATIONAL BIOLOGY**
(Computer Science)

**What is it?**
- An interdisciplinary major intended to develop an understanding of software development and the fundamentals of biology.

**What will I study?**
- Biology and computer science electives; genetics; programming languages

**What courses will I need before I start?**
- Calculus I
- General Biology I
- General Biology II
- General Chemistry I w/ Lab
- General Chemistry II w/ Lab

**Who can I contact for information?**
- Kimberly Pack, Academic Advisor
  advisor@cs.fsu.edu

**COMPUTER CRIMINOLOGY**

**What is it?**
- The study of how crimes are facilitated and committed through the use of computers.

**What will I study?**
- Trends in criminal activity and behavior; object-oriented programming; how to detect and combat cybercrime

**What courses will I need before I start?**
- **Computer Science degree option:**
  - College Algebra
  - Precalculus
  - Computer Programming
  
  **Criminology degree option:**
  - College Algebra
  - Precalculus
  - Computer Programming

**Who can I contact for information?**
- Computer Science: Kimberly Pack
  advisor@cs.fsu.edu
- Criminology Advisor: Rahila Arshad
  rarshad@fsu.edu

**MANAGEMENT INFORMATION SYSTEMS**

**What is it?**
- This major provides students with both business and technical knowledge allowing them to manage the design and development of systems related solutions for companies.

**What will I study?**
- Design and analysis of information systems, databases and programming language

**What courses will I need before I start?**
- Calculus for Business
- Business Statistics
- Introduction to Financial Accounting
- Introduction to Managerial Accounting
- Principles of Macroeconomics
- Principles of Microeconomics
- Microcomputer Applications for Business

**Who can I contact for information?**
- College of Business Advising
  ugprog@business.fsu.edu

* Other majors you may want to consider: Studio Art; Information, Communication & Technology

Program information subject to change.
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