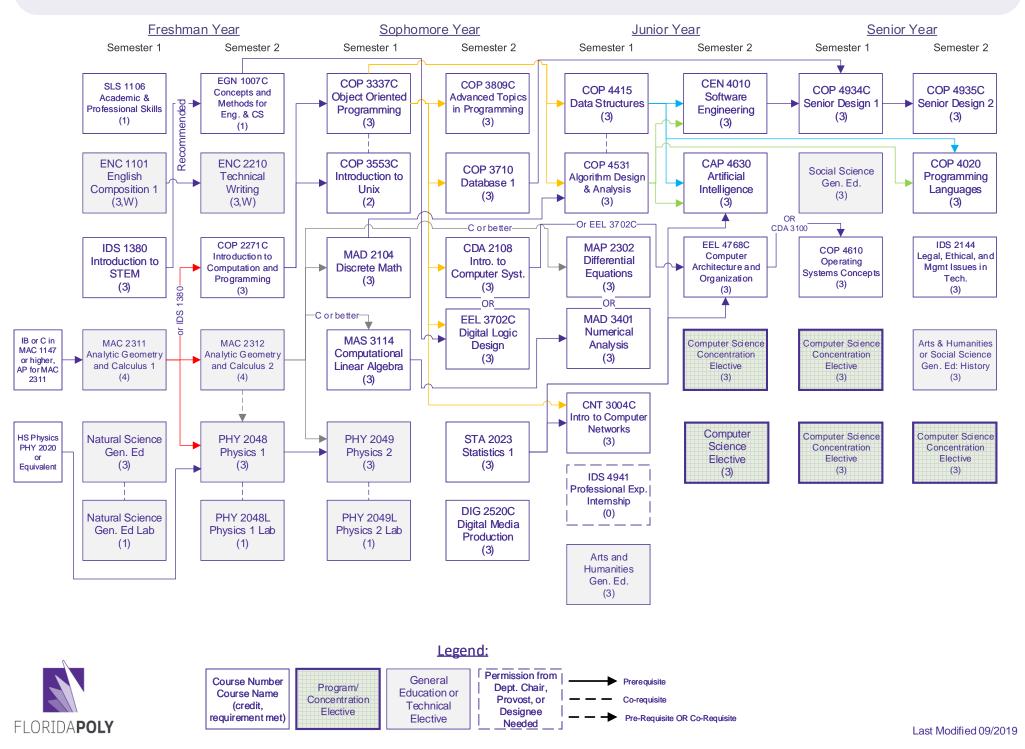
BS in Computer Science

2019-2020 Catalog



BS in Computer Science Program/Concentration Electives & General Education

2019-2020 Catalog

Program/Concentration Electives

Advanced Topics

Choose 12 credits from Big Data Analytics, Game Development & Simulation, Information Assurance & Cyber-Security, Software Engineering, Autonomous Systems, or Computer Science Electives courses.

Game Development & Simulation

- <u>CAP 4034 Computer Animation (3, COP 4415, COP 4531)</u>
- <u>CAP 4052 Game Design and Development 1 (3, COP 4730)</u>
- <u>CAP 4056 Game Design and Development 2 (3, COP 4052)</u>
- <u>CAP 4730 Computer Graphics (3, COP 4415, COP 4531)</u>

Information Assurance & Cyber - Security

- <u>CIS 4203 Digital Forensics (3, CNT 3004C / CIS 4367)</u>
- <u>CIS 4204 Ethical Hacking (3, CNT 3004C / CIS 4367)</u>
- CIS 4362 Applied Cryptography (3, STA 2023 OR STA 3032, COP 3530 OR COP 4415 and COP 4531)
- <u>CIS 4367 Computer Security (3, CIS 4362 / COP 4610)</u>

Software Engineering

- <u>CEN 4073 Software Requirements Engineering (3, CEN 4010)</u>
- <u>CEN 4065 Software Design and Architecture (3, CEN 4073)</u>
- <u>CEN 4070 Software Verification and Quality Assurance (3, CEN 4073)</u>
- <u>CEN 4724 User Interface and User Experience (3, CEN 4010)</u>

Big Data Analytics

- CAP 3774 Data Warehousing (3, COP 3710)
- <u>COP 3729C Database 2 (3, COP 3710)</u>
- CAP 4770 Data Mining & Text Mining (3, COP 2271C and COP 3337C and COP 3710 and QMB 3200)
- <u>CAP 4786 Topics in Big Data Analytics (3, COP 3710 and MAS 3114)</u>

Autonomous Systems

- COP 4421C Autonomous Systems Programming (3, COP 3337C)
- CAP 4612 Machine Learning (3, STA 2023 and MAS 3114 OR MAS 3105, COP 3530 OR COP 4415 and COP 4531)
- CAP 4613 Applied Deep Learning (3, COP 4415 and COP 4531)
- CEN 4721 human Computer Interaction (3, COP 3530, COP 4415 and COP 4531)

Computer Science (Program Electives)

- COP 2034 Intro. to Programming Using Python (3, MAC 2311)
- COP 3834C Web Application Development (3, COP 2271C)
- <u>CEN 4088 Software Security Testing (3, CEN 4010)</u>
- CEN 4213 Embedded Systems Programming (3, COP 4415, EEL 4768C)
- <u>CIS 4369 Web Application Security (3, CIS 4362)</u>
- <u>CNT 4409 Network Security (3, CIS 4362, CNT 3004C)</u>
- CAP 4410 Computer Vision (3, MAS 3114 OR MAS 3105, COP 3330C, COP 4415 and COP 4531 OR COP 3530)
- COP 4520 Intro. to Parallel and Distributed Computing (3, EEL 4768C OR CDA 3100, COP 4415, COP 4531)
- CNT 4526 Wireless and Mobile Networking (3, CNT 3004C, COP 4531)

Program/Concentration Electives

Computer Science (Program Electives)

- CAP 4612 Machine Learning (3, STA 2023, MAS 3114 <u>OR</u> MAS 3105, COP 3530 <u>OR</u> COP 4415 and COP 4531)
- COP 4620 Compilers and Interpreters (3, COP 4415)
- COP 4656 Mobile Device Applications (3, COP 2272C)
- EEL 4660C Autonomous Robotic Syst. (3, EEL 3202C <u>OR</u> CDA 2108)
- CEN 4721 Human Computer Interaction (3, COP 4415 and COP 4531)
- CAP 4830 Modeling and Simulation (3, STA 2023, COP 3330C)
- COP 4930 Special Topics (3, CEN 4010)
- CAP 4613 Applied Deep Learning (3, COP 4415 and COP 4531)

General Education

Arts & Humanities

Required one (1) from the following:

- ARH 2000 Art Appreciation (3-W)
- HUM 2020 Introduction to the Humanities (3-W)
- LIT 2000 Introduction to Literature (3)
- PHI 2010 Introduction to Philosophy (3-W)

Optional:

HUM 2022 Explorations in Humanities (3-W) IDS 2144 Legal, Ethical, and Management Issues in Technology (3, CS Req.)

Social Sciences

Required one (1) from the following:

- AMH 2020 American History Since 1877 (3-W; Civic Literacy)
- ECO 2013 Principles of Macroeconomics (3-W)
- PSY 2012 General Psychology (3-W)

Optional select from the following:

- AMH 2010 American History to 1877 (3-W)
- AMH 2930 Special Topics in American History (3-W)
- ECO 2023 Principles of Microeconomics (3-W)

Natural Science Elective

Select four (4) credits from the following:

- BSC 1010 Biology 1 (3 / BSC 1010L
- BSC 1010 Biology 1 Lab (1 / BSC 1010
- CHM 2045 Chemistry 1 (3, MAC 1147 <u>OR</u> Equivalent, or passing grade in CHM 1025 / CHM 2015L

CHM 2045L Chemistry 1 Lab (1/ CHM 2045)

Total Program Credits: 120

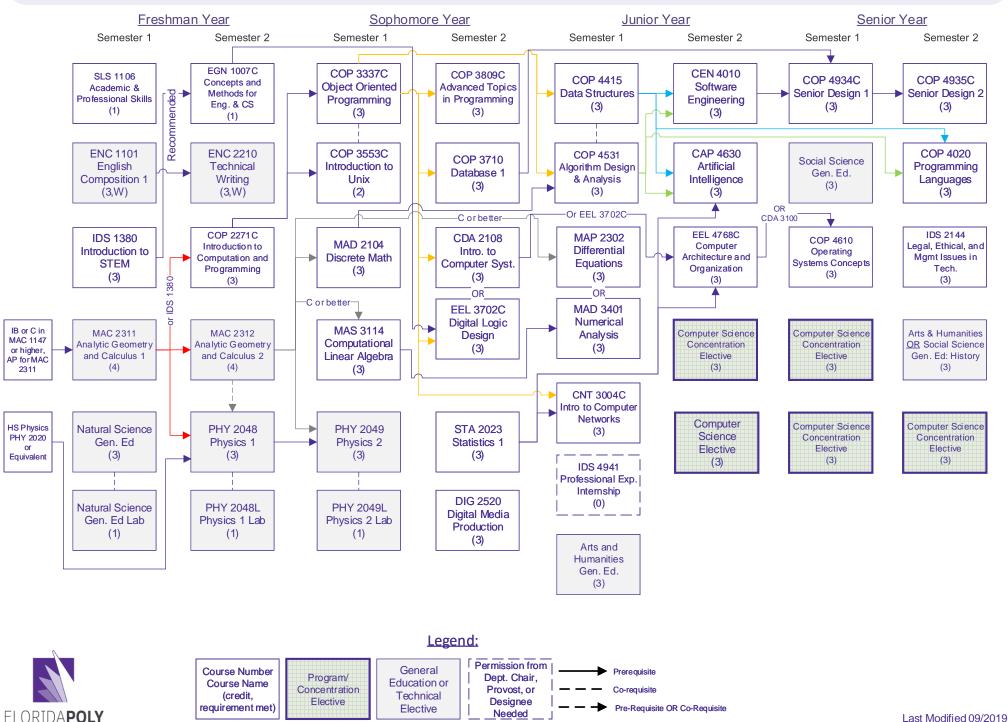
Click Here to print program planner

Click Here to view program plan of study

Click Here to access entire Florida Poly Catalog

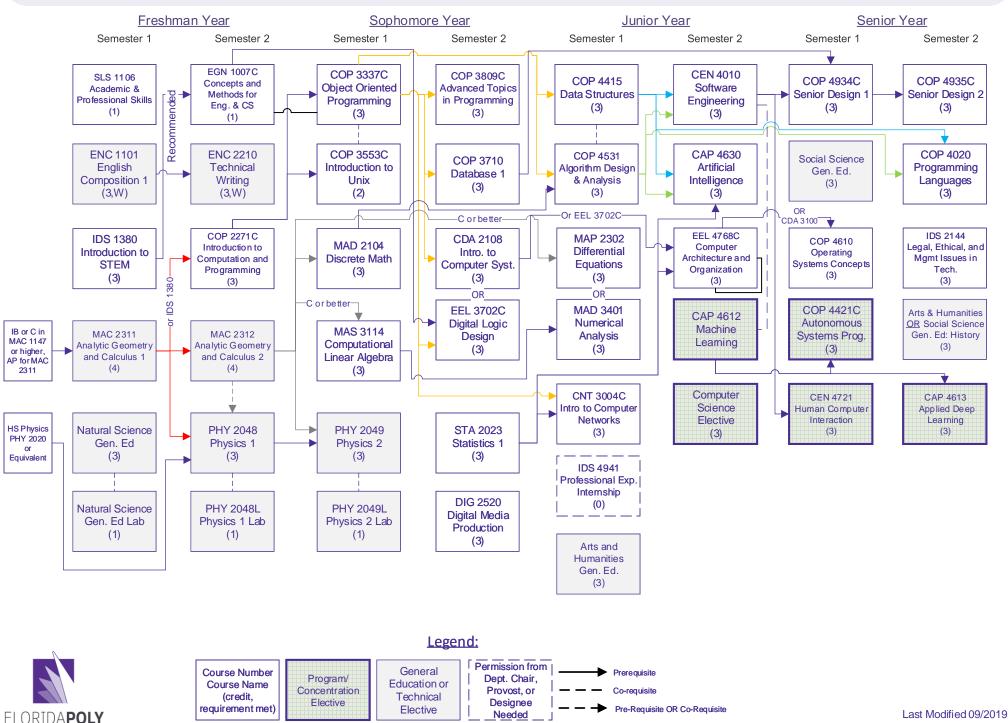


BS in Computer Science Advanced Topics

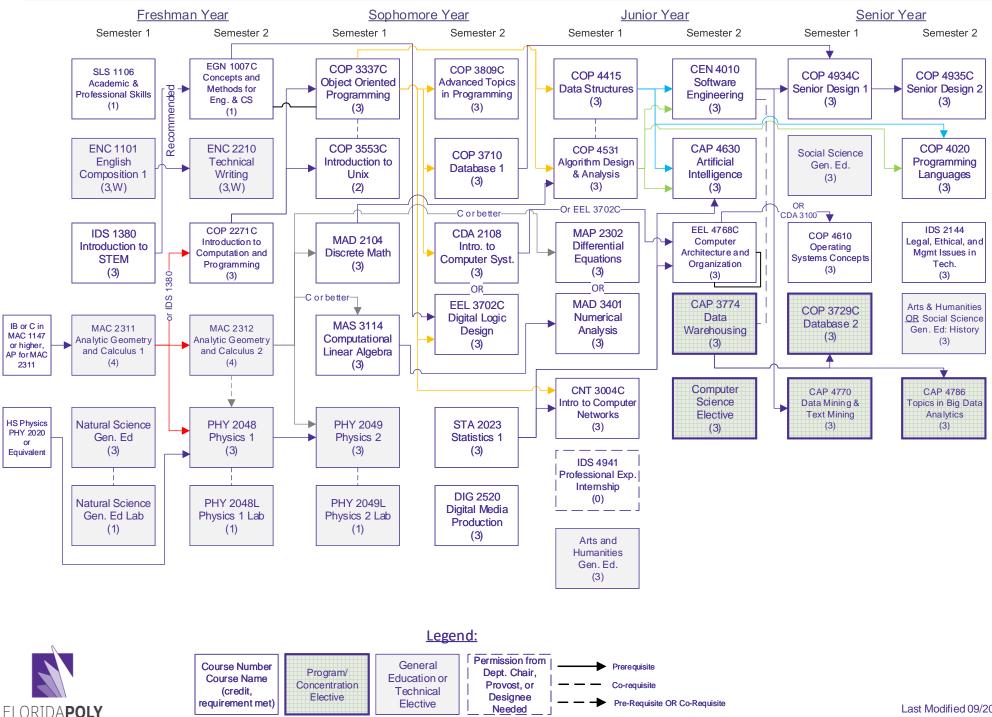


BS in Computer Science Autonomous Systems

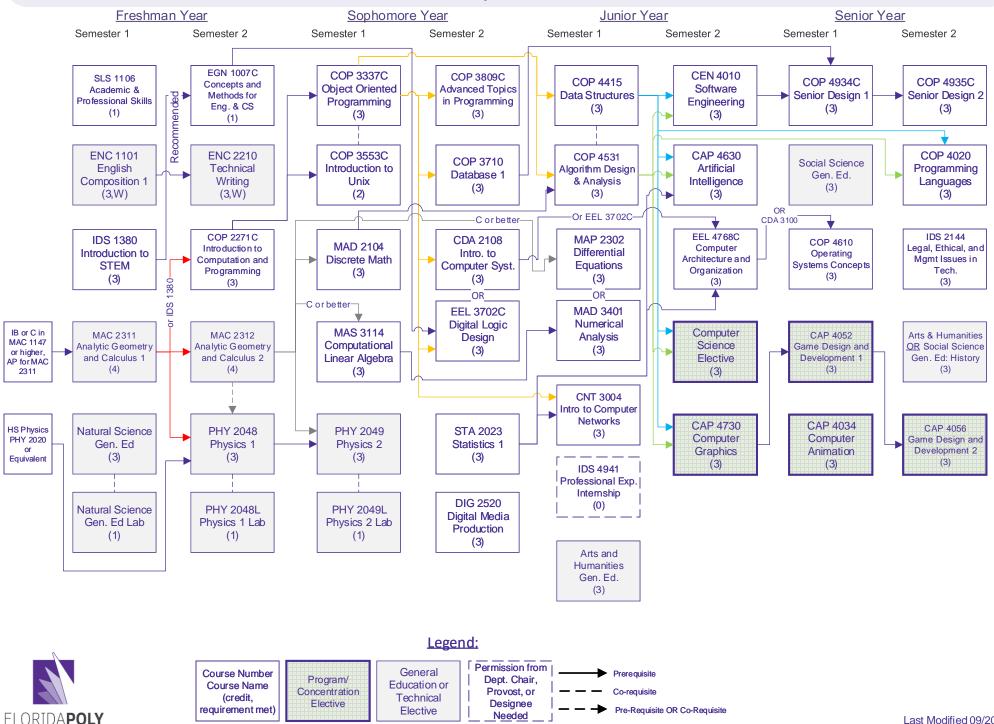




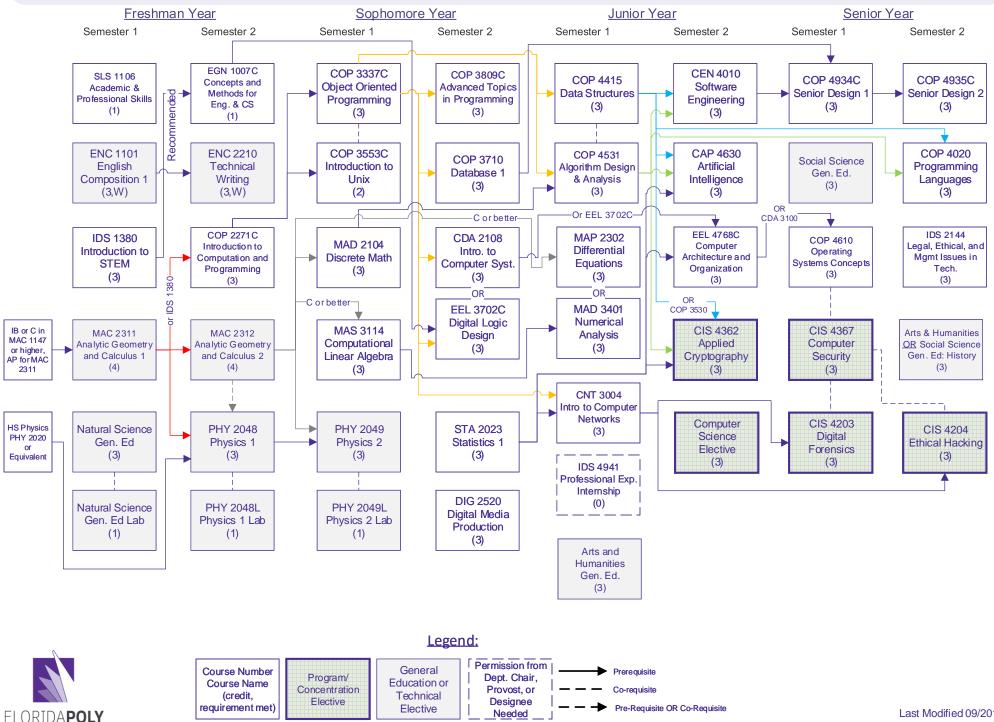
BS in Computer Science Big Data Analytics



BS in Computer Science Game Development & Simulation



BS in Computer Science Information Assurance & Cyber-Security



BS in Computer Science Software Engineering

Freshman Year Sophomore Year Junior Year Senior Year Semester 1 Semester 2 Semester 1 Semester 2 Semester 1 Semester 2 Semester 1 Semester 2 EGN 1007C COP 3337C **CEN 4010** COP 3809C SLS 1106 COP 4415 COP 4934C COP 4935C Concepts and **Object Oriented** Advanced Topics Software Academic & Methods for Data Structures Senior Design 1 Senior Design 2 Recommended Professional Skills Programming in Programming Engineering Eng. & CS (3) (3) (3) (1) (3) (3) (3) (1) COP 3553C CAP 4630 COP 4020 **ENC 1101 ENC 2210** COP 4531 Social Science COP 3710 Introduction to Artificial English **Technical** Algorithm Design Programming Gen. Ed. Database 1 Intelligence Composition 1 Writing Unix & Analysis Languages (3) (3) (3,W) (3,W) (2) (3) (3) (3) OR Or EEL 3702C C or better CDA 3100 IDS 2144 COP 2271 C EEL 4768C **IDS 1380** CDA 2108 MAP 2302 COP 4610 MAD 2104 Introduction to Computer Legal, Ethical, and Differential Introduction to Intro, to Operating **Discrete Math** Architecture and Mamt Issues in Computation and Systems Concepts STEM Computer Syst. Equations Organization Programming Tech. (3) (3) (3) (3) (3) 1380-(3) (3) (3) OR OR -Corbetter DS MAD 3401 EEL 3702C **CEN 4073 CEN 4065** Arts & Humanities Ы **Digital Logic** Numerical Software Design **OR Social Science** Software MAS 3114 IB or C in MAC 2311 MAC 2312 Requirement Eng and Architechture Gen. Ed: History Design Analysis MAC 1147 Computational Analytic Geometry Analytic Geometry (3) (3) (3) (3) (3) or higher, and Calculus 1 and Calculus 2 Linear Algebra AP for MAC (4) (4) 2311 (3) • **CEN 4072** CNT 3004C Computer **CEN 4722** Software Intro to Computer Science User Interface and Verification and Networks User Experience Elective Quality HS Physics Natural Science PHY 2048 PHY 2049 **STA 2023** (3) (3) (3) PHY 2020 (3) Gen. Ed Physics 1 Physics 2 Statistics 1 or (3) (3) (3) (3)Equivalent **IDS 4941** Professional Exp. Internship DIG 2520 (0) Natural Science PHY 2048L PHY 2049L **Digital Media** Gen. Ed Lab Physics 1 Lab Physics 2 Lab Production (1) (1) (1) (3) Arts and **Humanities** Gen. Ed. (3) Legend: Permission from General Course Number Prerequisite Dept. Chair, Program/ **Course Name** Education or Concentration Provost. or Co-requisite (credit, **Technical** Elective Designee

Needed

Pre-Requisite OR Co-Requisite

Elective

requirement met)

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Last Modified 09/2019