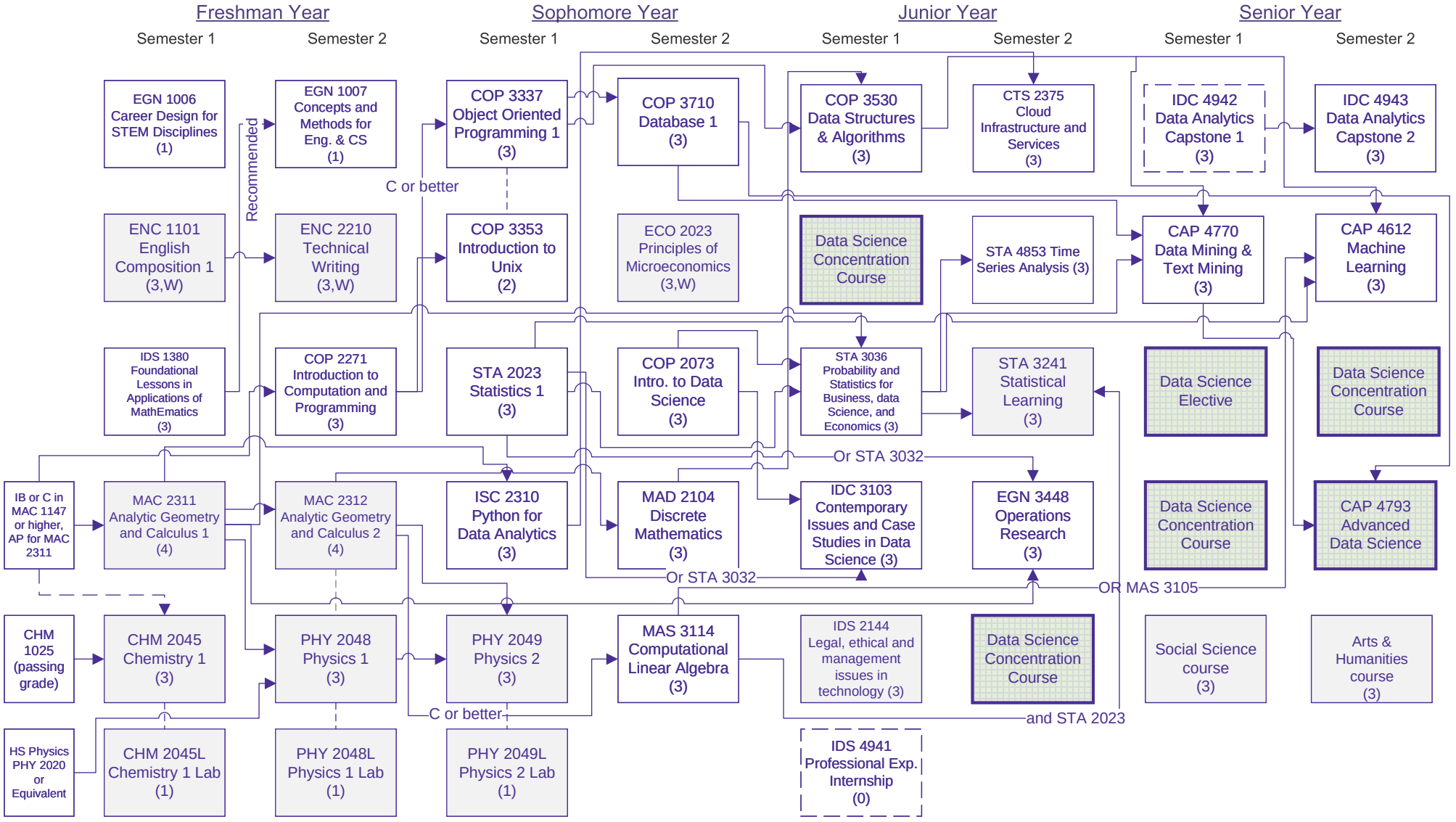
BS in Data Science

2022-2023 Catalog



Legend:

Course Number Course Name (credit, requirement met)	Program/ Concentration Elective	General Education or Technical Elective	Permission from Dept. Chair, Provost, or Designee Needed

Prerequisite

Co-requisite

Pre-Requisite OR Co-Requisite

FLORIDAPOLY

Last Modified 03/2022

BS in Data Science
Program/Concentration Electives and General Education

2022-2023 Catalog

Program/Concentration Electives

Advanced Topics

- Choose 12 credits from Data Science Concentrations or Data Science elective courses.

Big Data Analytics

- COP 3729 – Database 2 (3, COP 3710)
- CAP 4786 – Topics in Big Data Analytics (3, COP 3710 and MAS 3114)

Select 2 courses from the following:

- CAP 3774 – Data Warehousing (3, COP 3710)
- CAP 4613 – Applied Dep Learning (3, CAP 4612, ((COP 3530 or (COP 4415 and COP 4531))
- CAP 4410 – Computer Vision (3, MAS 3114 or MAS 3105) and COP 3809 and ((COP 4415 and COP 4531) or COP 3530)

Health Systems Engineering

- HIM 3490 – Introduction to Health Systems Engineering (3, MAC 2311 and STA 2023)
- HIM 3514 – Health Systems Modeling and Optimization (3, MAC 2311 and STA 2023)

Select 2 courses from the following:

- HIM 4016 – Policy Issues in Health Informatics (3)
- HIM 4644 – Implementation of EHR/EMR and Clinical Support Methods (3, COP 3710)
- EGN 3466 – Discrete Event Simulation (3, (STA 2023 or STA 3032) and COP 2271)
- ECO 4422 – Econometrics: Casual Inference, Panel and Survey Data (3, STA 3036)

Intelligent Mobility & Autonomous Systems

- ESI 4513 – Intelligent Mobility (3, COP 2271)

Select 2 or 3 courses from the following:

- ESI 3005 – Introduction to Networks and a Connected World (3, COP 2271)
- ESI 4011 – Data Analytics for Smart City & Transportation (3, ESI 3005 and CNT 3004C)
- COP 4421 – Autonomous Systems Programming (3, COP 3337)
- CAP 4613 – Applied Deep Learning (3, CAP 4612 ((COP3530 or (COP4415 and COP 4531)))

Possible elective (maximum of 1 may be taken):

- MAN 4593 – National Transportation Management (3, COP 2271)
- MAN 4594 – Reverse Logistics (3, MAN 2591 or MAN 3504 and EGN 3448)
- AVM 3012 – Air Transportation and Operations (3, MAN 2591 or MAN 3504)
- CAP 4410 – Computer Vision (3, (MAS 3114 or MAS 3105) and COP 3809C and ((COP 4415 and COP 4531) or COP 3530)
- CEN 4721 – Human Computer Interaction(3, COP 4415 and COP 4531)

Quantitative Economic & Econometrics

- ECO 4400 - Game Theory and Strategic Decisions (3, MAC 2311, STA 2023)
- ECO 4422 - Econometrics: Causal Inference, Panel and Survey Data (3, STA 3036)
- ECP 3004 - Contemporary Economic Issues (3, ECO 2023 or ECO 2013, STA 2023, MAC 2311)
- ECP 4044 - Economic Analysis for Technologists (3, ECO 2023, MAC 2311, STA 2023)

Data Science Program Electives

- COP 4520 - Introduction to Parallel and Distributed Computing (3, (EEL 4768C or CDA 3100), COP 3530)
- ENT 2112 - Entrepreneurial Opportunity Analysis (3)
- EGS 3625 – Engineering and Technology Project Management
- ECP 4031 – Benefit Cost Analysis (3, ECO 2023)
- **Any DSBA concentration course outside of a pursued concentration.**
- CAP 4630 - Artificial Intelligence (3, (STA 2023 or STA 3032), (COP 3530 or COP 4415), COP 4531)
- CNT 4403 - Data Security (3, (COP 3530 or COP 4415), COP 4531)
- CEN 4010 - Software Engineering (3, COP 3530, COP 4415, COP 4513)

Arts, Humanities, and Social Sciences

Arts & Humanities

Required one (1) from the following:

- ARH 2000 Art Appreciation (3-W)
- HUM 2020 Introduction to Humanities (3-W, ENC 1101)
- PHI 2010 Introduction to Philosophy (3-W)
- MUL2010 Music Appreciation (3)

Optional one of the following or more from Arts & Humanities required or Social Sciences:

- IDS 2144 - Legal, Ethical, and Management Issues in Technology (3-W); Already in plan of study
- HUM 2022 Explorations in the Humanities (3-W)

Social Sciences

Required one (1) from the following:

- AMH 2010 American History Since 1877 (3-W-Civic Literacy)
- PSY 2012 General Psychology (3-W)
- ECO 2013 Principles of Macroeconomics (3-W)

Required one (1) from the following:

- AMH 2020 American History to 1877 (3-W)
- AMH 2930 Special Topics (1 to 3-W)
- ECO 2023 Principles of Microeconomics (3-W); Already in plan of study

Total Program Credits: 120

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Legend: *Course name (credits-requirement met, pre-requisites/co-requisites)*

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