

# HARRIET L. WILKES HONORS COLLEGE

---

## Curriculum Overview

[Advising](#)[Core Requirements](#)[Courses & Schedules](#)[Faculty & Staff](#)[Forms](#)[Graduation](#)[Honor Code](#)[Honors Theses](#)[Internship](#)[Major Concentrations](#)[Minor Concentrations](#)[Pathways](#)[Prestige Scholarships](#)[Publications External](#)[Publications Internal](#)[Research Day](#)[Student Awards](#)[Study Abroad](#)[Undergraduate Research](#)

## CONCENTRATION IN DATA ANALYTICS

Students must earn a "C" or better in each course taken to fulfill a concentration requirement.

### Program Overview



Data science is a broad, interdisciplinary field, and data scientists may have particular expertise in *statistics*, in *programming*, or in understanding of problems and data structures in particular areas of study. Students concentrating in Data Science at the Wilkes Honors College should manifest *proficiency* in all three areas, together with *fluency* or *leadership* in at least one of these.

Data Analytics is part of Data Science. In the Data Analytics concentration, students will be expected to attain fluency in computational skills, and proficiency in both statistical knowledge and domain expertise. This track was developed in collaboration with faculty from the College of Engineering and Computer Science (COECS).

## Advisory Board:

[Dr. Andia Chaves-Fonnegra](#) | [Dr. Yaouen Fily](#) | [Dr. Terje Hill](#) | [Dr. Kevin Lanning](#) | [Dr. Warren McGovern](#) | [Prof. Annina Ruest](#)

Courses indicated with a \* are taken in the COECS and are typically available online.

## I. DATA LITERACY AND QUANTITATIVE REASONING (6 CREDITS)

Course	Title	Prerequisites	Credit
STA 2023	Honors Introduction to Statistics		3
COP 3076	Honors Introduction to Data Science	STA 2023	3
Mathematical foundations (7 credits)			
MAC 2311	Honors Calculus with Analytic Geometry I	MAC 1147/ placement	4
MAD 2104	Honors Discrete Mathematics	MAC 1105/ permission	3

*Recommended:*

MAC 2312 Honors Calculus w/ Analytic Geometry II (Prerequisite MAC 2311): 4 credits

## II. FOUNDATIONS OF COMPUTER PROGRAMMING (9-10 CREDITS)

Course	Title	Prerequisites	Credit
<b>One</b> of the following:			
COP 2000	Honors Foundations of Computer Programming		3
COP 2220	Introduction to Programming in C*		3
IDS 3932	Honors Beginner's Programming for Biologists		3
ART 3657C	Honors Introduction to Programming for Visual Arts		4
<b>Both</b> of the following:			

Course	Title	Prerequisites	Credit
COP 3014	Foundations of Computer Science*	COP 2220, COP 2000, IDS 3932—Programming , OR Art 3657C	3
COP 3530	Data Structures and Algorithm Analysis*	COP 3014 and MAD 2104	3

### III. DATA PROFICIENCY (9 CREDITS)

Course	Title	Prerequisites	Credits
COP 3540	Introduction to Database Structures*	COP 3530	3
CEN 4400	Introduction to Computer Systems Performance Evaluation*	COP 3014	3
CAP 4770	Introduction to Data Mining and Machine Intelligence*	COP 3530	3

*Recommended:*

STA 4821—Stochastic Models for CS (Prerequisite: MAC 2312 or MAC 2282): 3 credits.

COP 4703—Applied Database Systems (Prerequisite, COP 3540): 3 credits

### ADDITIONAL CLASSES IN INTELLIGENT SYSTEMS (6 CREDITS)

Course	Title	Prerequisites	Credits
<i>Two</i> of the following			
CAP 4613	Introduction to Deep Learning*		3
CAP 4630	Introduction to Artificial Intelligence*	COP 3530 or OSM 4234	3
CAP 5615	Introduction to Neural Networks*	COP 3530	3

**Honors thesis (IDS 4970, taken twice for a total of 6 credits)**

**Total credits: 43-44 credits**



Florida Atlantic University  
777 Glades Road  
Boca Raton, FL 33431

**Campuses**

- Boca Raton
- Dania Beach
- Davie
- Fort Lauderdale
- Harbor Branch
- Jupiter

**Resources**

- Academic Calendar
- Employment Opportunities
- Program Search
- Parking
- Report a Concern
- Transcripts

**Info**

- Contact Us
- Directory
- Emergency & Safety
- FAU Schools
- Media

**Social**

- 
- 
- 
- 
- 

[SEARCH PROGRAMS](#)

[REQUEST INFO](#)

[VISIT OUR CAMPUSES](#)

If you are experiencing difficulty accessing information on the Florida Atlantic University website due to a disability, visit the website accessibility page.

Florida Atlantic University embodies a culture of strategic and collaborative community engagement that results in mutual benefit to the institution and the diverse internal and external communities that it serves.

- [PRIVACY POLICY](#)
- [REGULATIONS & POLICIES](#)
- [CONSUMER INFORMATION](#)
- [GET HELP](#) [SITE INDEX](#)
- [STUDENT ACCESSIBILITY](#)
- [PUBLIC RECORDS](#)

© 2024 Florida Atlantic University