

Computing & Information Studies



WASHINGTON
& JEFFERSON
COLLEGE

The Computing and Information Studies Department is the home to **multiple areas of study** including Computer Science, Data Science, Digital Media, Interaction Design, and Web and Mobile Technologies. The CIS curriculum draws on all of these disciplines and **combines aspects of history, sociology, psychology, communication, art, design, science, and mathematics**. Students have **flexibility** to select from a predefined major emphasis or **customize their selection of electives to their educational and career goals** while pursuing a course of study that provides a solid grounding in effective coding and production, as well as user-focused design and interaction, and formal modeling and analysis.

Major Requirements

IT & Society (CIS 100/115)
Database Concepts (CIS 112)
Object-Oriented Programming (CIS 220)
Digital and Social Media (CIS 271)
One CIS course from each of the following groups (minimum three 300-level):

- User Needs
- Analysis and Modeling
- Coding and Production
- Design and Interaction

Two additional CIS courses at any level
Capstone Experience (CIS 400)

Major Emphases

Students have the option of declaring an emphasis within the CIS major which provides students with a more specialized major. Emphases include:

- Computer Science
- Interaction Design
- Data Science
- Web and Mobile Technologies
- Digital Media

Minors

Computing & Information Studies

Required courses include:

IT & Society (CIS 100/115)

Two courses from:

- Database Concepts (CIS 112)
- Object Oriented Programming (CIS 220)
- Web Design (CIS 275)
- Scripting Languages (CIS 280)

Three additional CIS courses including a Design and Interaction course, an Analysis and Modeling course, and a 300-level course.

Data Science

This interdisciplinary minor is available to non-CIS majors. Required courses include:

Database Concepts (CIS 112)

Intro to Data Science (CIS 241)

Statistics (MTH 205, MTH 125, or MTH 245/BIO 245)

Three additional courses from an approved list of data-focused CIS and non-CIS courses.

Department Chair

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Faculty

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Beyond the Classroom

Students have many opportunities for research, internships, conferences, and networking beyond the classroom that give them an advantage to prepare for life after W&J.

Research & Internships

The interdisciplinary nature of the Computing and Information Studies program offers students opportunities to work on interesting projects that cross disciplines and merge their interests from the multiple areas of study they are pursuing. Recent projects have included:

- Collaboration, under a partnership with Oak Ridge National Laboratory, to design and validate simulations for particle physics experiments taking place at their particle accelerator
- Development of VR simulation of the Attica Prison Riot through the NSF-funded Cyberinfrastructure Research 4 Social Change REU
- Autism research at Yale University
- Analytics on International Space Station mission data at NASA's Langley Research Center
- KPMG Embark Scholar intern at KPMG

Employment

Following graduation, CIS majors have gone on to careers in a variety of fields, including:

- Software Development
- Business Analytics
- I.T. Project Management
- Social Media and Marketing
- I.T. Consulting
- Game Design
- Web Design
- UI/UX Research
- Information Security
- Database Management

Further Education

Many CIS graduates have continued their education at Carnegie Mellon University, particularly in their Information Security Policy and Management, and Information Systems Management master's programs. As a Regional Educational Partner with the **Heinz College at Carnegie Mellon University**, W&J students receive **targeted recruiting** for their master's programs and, as a base, are **guaranteed a minimum 30% scholarship**; many receive more generous scholarship and stipend support.

Your Future. Founded here.

A full list of courses and descriptions can be found online in the College catalog.



Program Website

washjeff.edu/computing-and-information-studies-cis