

Visual Guide to the CIS Major: Data Science Emphasis

Catalog Text: Students complete the requirements of the CIS major with one of their electives being CIS 241 and two of the remaining four electives drawn from CIS 230, CIS 245, CIS 343, or CIS 345. Students also complete MTH 205, MTH 125, or MTH 245/BIO 245. Some offerings of CIS 297 or CIS 397 may also be designated as counting towards the Data Science emphasis.

Introductory Core

CIS 100/115: IT & Society

CIS 112: Database Concepts

CIS 220: Object-Oriented Programming

CIS 271: Digital and Social Media

Electives

In addition to taking at least two Data Science electives (in bold), students must complete CIS 241, at least one course in each category shown, and at least two at the 300-level or higher.

User Needs

CIS 301: Human Computer Interaction
CIS 310: Systems Analysis

Coding and Production

CIS 265: Digital Video
CIS 275: Web Design
CIS 280: Scripting Languages
CIS 320: Data Structures

CIS 343: Adv. Data Analysis: Simulations
CIS 345: Adv. Data Analysis: Networks

CIS 361: Digital Imaging
CIS 375: Advanced Web and Mobile Development

Analysis and Modeling

CIS 230: Artificial Intelligence
CIS 241: Data Mining
CIS 245: Information Visualization
CIS 310: Systems Analysis
CIS 320: Data Structures
CIS 335: Information Security

CIS 343: Adv. Data Analysis: Simulations
CIS 345: Adv. Data Analysis: Networks

Design and Interaction

CIS 245: Information Visualization
CIS 265: Digital Video
CIS 271: Digital and Social Media
CIS 275: Web Design
CIS 301: Human Computer Interaction
CIS 361: Digital Imaging
CIS 375: Advanced Web and Mobile Development

CIS Elective

Any CIS course at any level may be used here.

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Statistics Course

Take One Of:
MTH 205: Probability & Statistics
MTH 125: Introductory Statistics
MTH 245/BIO 245: Applied Stats for Life Sciences

Capstone Experience

CIS 400: Service-Learning Project Management

Specific offerings of the topics courses CIS 297 and CIS 397 may also count towards various CIS distribution requirements.

Key

-  : Required Course
-  : Select One Course
-  : Any CIS Course