



MINOR CHECKLIST: INFORMATION SCIENCE, TECHNOLOGY & THE ARTS

This minor is designed to provide students in all majors experience in dealing with information - deriving it, managing it, and extracting meaning from it!

ISTA Core

- ISTA 100: Great Ideas of the Information Age _____
- ISTA 116: Statistical Foundations for the Information Age* _____
- ISTA 130: Computational Thinking and Doing _____
- ISTA 161: Ethics in a Digital World _____

Upper Division ISTA Coursework (take two)

- _____ _____
- _____ _____

Total Units __/19
 Upper Division Units __/6
 A minimum GPA of 2.0
 required for this minor.

*requires Math 107 or Math 112

A note on CSC 127A/B and CSC 110/120: CSC 110 will double-dip with ISTA 130; students can ask to double-dip CSC 127A if they have the Python experience.

ISTA advisor information:
 Laura Owen
 Undergraduate Academic Advisor
 School of Information
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 Harvill 439



Upper Division ISTA Coursework

Note: not all classes are available every semester. Some courses have prerequisite requirements.

NEW!

ISTA 495: Special Topics!

ISTA 497: Biodiversity Informatics

ISTA 431: Data Warehousing and Analytics in the Cloud

COMPUTATIONAL ARTS

ISTA 301: Computing and the Arts

ISTA 302: Technology of Sound

ISTA 303: Introduction to Creative Coding

**ISTA 130 or CSC 110 or ECE 175 required.*

. Not offered in Fall 2020

ISTA 403: Advanced Creative Coding *Not currently offered*

ISTA 401: Designing Installations *New! Available now!*

ISTA 330: Advanced Web Design *Requires ISTA 230 and ISTA 130 or CSC 110*

HUMAN-COMPUTER

INTERACTION ISTA 352: Images: Past, Present, Future *Not currently offered*

ISTA 416/516: Introduction to Human Computer Interaction

ISTA 320: Data Visualization *New! Available now!*

**Requires ISTA 116 or ESOC 214*

APPLIED DATA SCIENCE

ISTA 321: Data Mining

**Requires ISTA 116 or ESOC 214*

ISTA 331: Principles and Practices of Data Science

**Requires ISTA 131 and 116*

DEALING WITH BIG DATA

ISTA 322: Data Engineering

**ISTA 130 required*

ISTA 429: Applied Cyberinfrastructure Concepts

**No pre-requisites. Second semester programming (CSC 120 or ISTA 131) recommended but not required.*

Typically offered in Fall only.

PROBABILITY AND INFERENCE

ISTA 311: Foundations of Information and Inference

**Requires ISTA 130 and ISTA 116*

ISTA 410: Bayesian Modeling

** Requires MAT 223 and MATH 313 and MATH 464 and (ISTA 350 or CSC 345) or ISTA 421 or consent of instructor*

PROGRAMMING FOUNDATIONS

ISTA 350: Programming for Informatics Applications

**Requires ISTA 131 and 116.*

DATA SCIENCE AND MACHINE LEARNING METHODS

ISTA 355: Intro to Natural Language Processing

**Requires ISTA 350*

ISTA 439: Statistical Natural Language Processing

ISTA 455: Applied Natural Language Processing

**Requires 350. Not currently offered.*

ISTA 457: Neural Networks.

**Requires 350 or CSC 345 or ECE 275 or NSCS 344.*

ISTA 421/521: Introduction to Machine Learning

**Requires Calc I and II, Linear Algebra (MATH 313), and ISTA 311 or consent of instructor*

Typically offered in Fall only

ALGORITHM DEVELOPMENT

450/550: Artificial Intelligence ***Typically offered in Spring only***

**Requires ISTA 350 or CSC 245 or MATH 243 or consent of instructor*

GAME DEVELOPMENT AND VIRTUAL REALITY

ISTA 424: Virtual Reality

**ISTA 350 or CSC 210 required*

ISTA 425: Algorithms for Games

**ISTA 350 or CSC 210 required*

ISTA 451/551: Game Development

**ISTA 350 or CSC 210 required.*

Students can double-dip a max of 7 units (two classes) from other departments, providing the double-dipping is allowed by the other department's double-dipping policy.