

**B.S Information Science
2021 Catalog Checklist**

	120 Total Units	42 UD Units	(UD = 300-499)
Completed			
In Progress			
End of Term Needed			
Overall GPA:	Major GPA:	Minor GPA:	

UA GENERAL EDUCATION

COMPOSITION (Select one pair)

ENGL 101 & ENGL 102 or &
 ENGL 107 & ENGL 108 or &
 ENGL 109H

MATH

MATH 113, MATH 116, MATH 122B, or higher:

TIER ONE (select two courses from each category)

Individual and Societies (150)

Natural Sciences (170)

Traditions and Cultures (160)

TIER TWO (select one course from each category)

Arts: _____

Humanities: _____

Individuals & Societies: _____

Diversity: (can be fulfilled w/GE course)

SECOND LANGUAGE:

2nd semester language proficiency

School of Information website:

<https://ischool.arizona.edu/>

School of Information Advising:

<https://ischool.arizona.edu/advising>

B.S. INFORMATION SCIENCE MAJOR

ISTA CORE: (Take ALL Five - 15 units)

- ISTA 100: Great Ideas of the Information Age
- ISTA 116[^]: Statistical Foundations for the Info. Age
- ISTA 130*: Computational Thinking and Doing
- ISTA 131^a: Dealing with Data
- ISTA 161: Ethics in a Digital World

[^] ISTA 116 requires MATH 107 or 112 or higher.

* CSC 110 approved substitute for ISTA 130

^a ISTA 131 requires ISTA 130.

ESOC 302: Quantitative Methods (Take one - 3 units)

EMPHASIS (Pick One): See page 2 and/or 3.

INTERACTIVE AND IMMERSIVE TECHNOLOGIES
OR DATA SCIENCE

EMPHASIS COURSES: (Take Five - 15 units)

See page 2 and/or 3.

COMPUTATIONAL ARTS & MEDIA:

(Take One - 3 units). See Page 4.

SOCIETY:

(Take One - 3 units). See Page 4.

ENGAGEMENT, INDIVIDUAL STUDIES, INTERNSHIP & PROJECTS: (Take One - 3 units)

- ESOC 480: Digital Engagement
- INFO 392/492: Directed Research
- INFO 493: Internship
- ISTA 491: Preceptorship
- ISTA 391: Tutoring
- ISTA/INFO 499: Independent Study

SENIOR THESIS/CAPSTONE: (Take One - 3 units)

ISTA 498: Senior Capstone (3 units)

MINOR or 2nd MAJOR**ADDITIONAL ELECTIVES**
(if needed to reach 120/42 UD)

Students must choose ONE EMPHASIS: Interactive and Immersive Technologies or Data Science

It is recommended that students complete ISTA 130 and 116 before taking their EMPHASIS coursework. Some coursework also requires ISTA 131 or ISTA 350.

INTERACTIVE AND IMMERSIVE TECHNOLOGIES – EMPHASIS

(Take Five – 15 units)

ISTA 320: Data Visualization

- *Pre-Req: ISTA 116 **or** ESOC 214.*

ISTA 350: Programming for Informatics Applications

- *Pre-Req: ISTA 131 **and** 116.*

ISTA 416/516: Intro. to Human Computer Interaction

- *Can serve for IIT Emphasis **or** Computational Arts. Not both.*

ISTA 424/524: Virtual Reality

- *Pre-Req: ISTA 350 **or** CSC 210 **or** GAME 351 required.*
- *Can serve for IIT Emphasis **or** Computational Arts. Not both.*

ISTA 425/525: Algorithms for Games

- *Pre-Req: ISTA 350 **or** CSC 210 **or** GAME 351 required.*
- *Can serve for IIT Emphasis **or** Computational Arts. Not both.*

ISTA 451/551: Game Development

- *Pre-Req: ISTA 350 **or** CSC 210 **or** GAME 351 required.*
- *Can serve for IIT Emphasis **or** Computational Arts. Not both.*

CSC 337: Web Programming

- *Pre-Req: CSC 110 **or** ISTA 130.*

ISTA 330: Advanced Web Design

- *Pre-Req: ISTA 230 **and** ISTA 130/CSC 110 **or** Pre-Req: CSC 337.*
- *Can serve for IIT Emphasis **or** Computational Arts. Not both.*

ISTA 303: Introduction to Creative Coding

- *Pre-Req: ISTA 130 **or** CSC 110 **or** ECE 175.*
- *Can serve for IIT Emphasis **or** Computational Arts. Not both.*

ISTA 403: Advanced Creative Coding (*Not currently offered*)

- *Pre-Req: ISTA 303.*
- *Can serve for IIT Emphasis **or** Computational Arts. Not both.*

ISTA 495: Special Topics

LING/SLHS 478: Speech Technology

DATA SCIENCE – EMPHASIS:

(Take Five – 15 units)

ISTA 431/531: Data Warehousing and Analytics in the Cloud

ISTA/CSC 439/539: Statistical Natural Language Processing

ISTA 453: Biodiversity Informatics

GEOG/GIST/RNR 417: Geographic Information Systems for Naturals and Social Sciences

LIS 470: Database Development and Management

ISTA 311: Foundations of Information and Inference

- *Pre-Req: ISTA 130 **and** ISTA 116.*

ISTA 320: Data Visualization

- *Pre-Req: ISTA 116 **or** ESOC 214.*

ISTA 321: Data Mining

- *Pre-Req: ISTA 116 **or** ESOC 214.*

ISTA 322: Data Engineering

- *Pre-Req: ISTA 130 **or** CSC 110 **or** ECE 175.*

ISTA 331: Principles and Practices of Data Science

- *Pre-Req: ISTA 131 **and** ISTA 116.*

ISTA 350: Programming for Informatics Applications

- *Pre-Req: ISTA 131 **and** 116.*

ISTA 355: Intro to Natural Language Processing

- *Pre-Req: ISTA 131.*

ISTA 429/529: Applied Cyberinfrastructure Concepts (*Typically offered in Fall only*)

- *Second semester programming (CSC 120 **or** ISTA 131) recommended, but not required.*

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

- *Pre-Req: ISTA 350 **or** CSC 245 **or** MATH 243, **or** consent of instructor*

ISTA 455/555: Applied Natural Language Processing (*Not currently offered*)

- *Pre-Req: ISTA 350.*

ISTA 457/557: Neural Networks

- *Pre-Req: ISTA 350 **or** CSC 345 **or** ECE 275 **or** NSCS 344.*

ESOC 414: Computational Social Science (*Not currently offered*)

- *Pre-Req: ISTA 116 **or** ESOC 214.*

ISTA 456/556: Text Retrieval and Web Search (*Not currently offered*)

MATH 129: Calculus II

- *Pre-Req: MATH 122B **or** MATH 125*

MATH 313: Linear Algebra

- *Pre-Req: MATH 129*

ISTA 421/521: Introduction to Machine Learning (*Typically offered in Fall only*)

- *Pre-Req: MATH 129, MATH 313: Linear Algebra, **and** ISTA 311, **or** consent of instructor.*

ISTA 410/510: Bayesian Modeling

- *Pre-Req: MAT 223 **and** MATH 313 **and** MATH 464 **and** EITHER: ISTA 350 or CSC 345*
- *Alternate Pre-Req: ISTA 421*
- *Alternate Pre-Req: consent of instructor*

COMPUTATIONAL ARTS & MEDIA (CA):

(Take One – 3 units *)

*Strongly Recommend Upper Division 300-499 level

ISTA 230: Introduction to Web Design & Development

ISTA 301: Computing and the Arts

ISTA 302: Technology of Sound

ISTA 303: Introduction to Creative Coding

- *Pre-Req: ISTA 130 **or** CSC 110 **or** ECE 175.*
- *Can serve for IIT Emphasis **or** Computational Arts. Not both.*

ISTA 330: Advanced Web Design

- *Pre-Req: ISTA 230 **and** ISTA 130/CSC 110 **or** CSC 337.*
- *Can serve for IIT Emphasis **or** Computational Arts. Not both.*

ISTA 401/501: Designing Installations

ISTA 403: Advanced Creative Coding Not currently offered

- *Pre-Req: ISTA 303.*
- *Can serve for IIT Emphasis **or** Computational Arts. Not both.*

ISTA 416/516: Intro. to Human Computer Interaction

- *Can serve for IIT Emphasis **or** Computational Arts. Not both.*

ISTA 424/524: Virtual Reality

- *Pre-Req: ISTA 350 **or** CSC 210 **or** GAME 351 required.*
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ISTA 425/525: Algorithms for Games

- *Pre-Req: ISTA 350 **or** CSC 210 **or** GAME 351 required.*
- *Can serve for IIT Emphasis **or** Computational Arts. Not both.*

ISTA 451/551: Game Development

- *Pre-Req: ISTA 350 **or** CSC 210 **or** GAME 351 required.*
- *Can serve for IIT Emphasis **or** Computational Arts. Not both.*

ART/FA 432A: Interactivity

ART/FA 437A: Foundation Digital 3D Modeling, Rendering and Rapid Prototyping

ESOC 300: Digital Storytelling and Culture

ESOC 340: Information, Multimedia Design, and the Moving Image

LING 388: Language and Computers

SOCIETY:

(Take One – 3 units)

ESOC 313: Digital Discourse and Identity

ESOC 314: Theories of New Media

ESOC 315: From Publishing to Papyrus

ESOC 316: Digital Commerce

ESOC 317: Digital Crime

ESOC 318: Disruptive Technologies

ESOC 319: Instructional Technologies

ESOC 330: Digital Dilemmas

ESOC 418: Information Trust, Manipulation and Deception

ESOC 477/577: Information Security

ESOC 478/578: Science Information and its Presentation

ESOC 495: Special Topics