BS in Information Science and Technology

BS: IST

Name: _____

GENERAL EDUCATION REQUIREMENTS		
Foundations	**Units**	**√**
ENGL 101/103H/107	3	
ENGL 102/104H/108	3	
OR ENGL 109	3	
TOTAL units required	**3-6**	
MATH: Math 124	3	
Second Language:2nd semester proficiency req		
First semester proficiency:	0-4	
Second semester proficiency:	0-4	
TOTAL units required:	**0-8**	
Tier One Requirements[2]		
TRAD/160A, 160B, 160C, or 160D	3	
TRAD/160A, 160B, 160C, or 160D	3	
INDV/150A, 150B, or 150C	3	
INDV/150A, 150B, or 150C	3	
NATS (not required for IST majors)	--	
Total Tier 1 units required	**12**	
Tier Two Requirements		
Arts	3	
Individuals & Societies	3	
Humanities	3	
Natural Sciences not required for IST majors	--	
Total Tier 2 units required	**9**	
Diversity requirement met by:		
Supporting Science Requirement[3]		
Complete TWO approved lecture/lab combos:		
Combo 1:	4	
Combo 2:	4	
Open Elective Requirements		
You must take additional electives to reach		
(a) 120 units total		
(b) 42 units of upper-division credit		

IST REQUIREMENTS		
Core Classes	**Units**	**√**
ISTA 100 (Introduction to ISTA)	3	
ISTA 116 (Statistical Foundations of ISTA)	3	
ISTA 120 (Dealing with Data)	3	
ISTA 130 (Computational Thinking and Doing)	4	
ISTA 161 (Ethics in a Digital World)	3	
ISTA 370 (Empirical Methods)	3	
Thematic Courses (6 classes, ≥18 units)[1]		
Choose 1 class from each area:	18	
Foundations, Representation and Algorithms		
Data-Intensive Computing		
Programming and Computing Tools		
Modeling		
Discipline-Focused Computing		
Society		
Major Upper Division Electives		
Choose 12 units from at least 4 courses	12	
Independent Study, Directed Research, or		
Internship		
3 units required	3	
Total units may be mixed between types.		
No more than 6 units of internship allowed		
for the BS. No more than12 units of		
independent study or directed research		
are allowed for degree.		
Senior Thesis or Project	3	
ISTA 498 or 498H		

[1] See possible classes on next page.

[2] Students must take two uniquely numbered classes within each category. I.e., under the TRAD category, students are not permitted to take two classes numbered 160A.

[3] See Supporting Science Requirements on next page.

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Supporting Science Requirement (meets UA NATS requirement. Please check catalog course description for course prerequisites and other requirements at http://catalog.arizona.edu/allcats.html)

Students must take two science courses with labs from the following:
CHEM 151 (4); CHEM 152 (4); CHEM 105A + CHEM 106A (4); CHEM 105B + CHEM 106B (4); ECOL 182* or ECOL 182R + 182L (4); ECOL 206* (4); GEOS 251* (4); GEOS 302* (4); GEOS 304* (4); MCB 181R + MCB 181L (4); MSE 110* (4); PHYS 141*× (4); PHYS 142*× (3); PHYS 161*× (4); PHYS 162*× (4); PHYS 241*× (4)

*Lab / field experience included in the course
× Physics courses must be taken within a single strand. Physics courses taken from multiple strands are considered duplicate credit and cannot be used to fulfill the science requirement. See the physics course descriptions for additional information.

Thematic Courses: At least 18 units total with 6 courses required – one course must be taken from each area. (Please note that courses listed in each area are not inclusive of all allowable courses across departments.) Feel free to consult with your advisor about alternate classes that may support your interests and goals.

Courses in italics have not yet been created.

Students must choose one class from each area.
Area 1– Foundations, Representations and Algorithms: Data from different disciplines can take similar forms—they can appear as sequences, graphs, networks, and so on. Foundations courses help students learn to work with data represented in similar ways.

- Possible courses could include: *ISTA310, ISTA311, ISTA312,* ISTA410, MATH202, MATH401B, MATH362, MATH443, MATH461, MATH468

Area 2 – Data-intensive Computing: These courses provide experience and tools for computing with large datasets.

- Possible courses could include: *ISTA320,* CSC 345, CSC460

Area 3 – Programming and Computing Tools: Students learn to program and use particular software packages or tools.

- Possible courses could include: *ISTA330,* CSC227, CSC335, LING408, ART267, ART306, ART432A, ISTA330, MUS441, MUS442

Area 4 – Modeling: These classes provide experience with fitting data to a theoretical idea or representation of reality.

- Possible courses could include: *ISTA 312, ISTA352, ISTA360,* ISTA410, CSC433, ECOL447, HWRS427, HWRS449, HWRS482, LING364, MATH479, PHIL435, ART436A, ART437A

Area 5 – Discipline-focused Computing: These classes allow students to delve into the computational needs of specific fields.

- Possible courses could include: LING438, LING478, PHYS308, MCB416

Area 6 – Society: These classes help students learn how culture, philosophy, and societal institutions influence and are influenced by the information age.

- Possible courses could include: *ISTA250, ISTA260, ISTA360*

Major Upper Division Elective Courses: A minimum of 12 units total from at least 4 courses. Select from the following list and others when approved by SISTA curriculum advisory committee:
ISTA 301: Computing and the Arts
ISTA 410: Bayesian Modeling and Inference
ISTA 450: Artificial Intelligence
ISTA 451: Game Development
ISTS 454: Informatics in Biology

Other existing courses could include: BIOC411, BIOC416, BIOC4533, BIOC496N, CSC425, CSC433, CSC437, CSC440, CSC447, ECOL335, ECOL345, ECOL418, ECOL426, ECOL447, LING322, LING364, LING388, LING408, LING439, NRSC444A, PSYC325, PSYC333, PSYC346, PSYC403C, SOC430, and others as approved.

UNIVERSITY GRADUATION REQUIREMENTS:
120 units ____ 42 Upper division units _____ 2.00+ cum.GPA ____ 2.00+ major GPA ____

30+ UA Units ____ Maximum 64 Community College Units ____ Maximum 60 Correspondence or Exam units _____