

B.S. Information Sciences + Data Science (BSIS + DS)

Guide for course planning for the BS IS + DS Major. Meet with an iSchool Advisor to confirm requirements.

<https://ischool.illinois.edu/degrees-programs/undergraduate/bs-data-science>

General Education Requirements

<input type="checkbox"/> Composition I RHET or CMN or ESL	<input type="text"/>	<input type="checkbox"/> Quantitative Reasoning I & II	<input type="text"/>	<input type="text"/>
<input type="checkbox"/> Advanced Composition Take After Comp. I (IS 312 & INFO 303 approved)	<input type="text"/>	Completed with MATH 220/221/234 & STAT 107 & STAT 207		
<input type="checkbox"/> Western 1 Course (IS 266 Approved)	<input type="text"/>	<input type="checkbox"/> Social & Behavioral Sciences	<input type="text"/>	<input type="text"/>
<input type="checkbox"/> Non-Western 1 Course	<input type="text"/>	Completed with IS 101 & IS 202		
<input type="checkbox"/> U.S. Minority 1 Course	<input type="text"/>	<input type="checkbox"/> Language other than English	<input type="text"/>	
		Third Level Required		
		■ Complete > In-Progress ^Future Registered		
<input type="checkbox"/> Humanities & the Arts 6 Hours Required (IS 312 approved; IS 142 approved for iSchool majors)	<input type="text"/>	<input type="text"/>	GenEds required of all undergraduate students at ILLINOIS, managed by each college (iSchool requirements listed) Some courses count as multiple GenEds and/or in IS Major	
<input type="checkbox"/> Natural Sciences & Tech 2 Courses Required	<input type="text"/>	<input type="text"/>		

Information Sciences Core Requirements

<input type="checkbox"/> IS 100 Exploring the iSchool with a Human-Centered Lens (First Semester) <input type="checkbox"/> IS 101 Introduction to Information Sciences <input type="checkbox"/> IS 202 Social Aspects of Info Technology (INFO 202) <input type="checkbox"/> IS 204 Research Design for Information Sciences <input type="checkbox"/> IS 206 Intro to Database Concepts & Applications INFORMATION SCIENCES & CULTURE <u>Select One:</u> <input type="checkbox"/> IS 308 Race, Gender, & Information Technology <input type="checkbox"/> IS 309 Computers & Culture <input type="checkbox"/> IS 310 Computing & Humanities <input type="checkbox"/> IS 311 Historical Foundations of the Info. Society Additional IS 308-311 may be taken to count as IS electives No substitutions in IS curriculum	INFORMATION SCIENCES ELECTIVES (24 hrs) IS/INFO Any Level (12 hr. 100 & above, may be INFO): <input type="checkbox"/> [1] IS <input type="checkbox"/> [2] IS <input type="checkbox"/> [3] IS <input type="checkbox"/> [4] IS IS Advanced (12 hr. 300/400-level, <u>must be IS</u>): <input type="checkbox"/> [5] IS <input type="checkbox"/> [6] IS <input type="checkbox"/> [7] IS <input type="checkbox"/> [8] IS DS Core Courses (listed below) do not count as IS Electives
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Data Science Core Requirements

<input type="checkbox"/> MATH 220 Calculus (or MATH 221 or MATH 234) <input type="checkbox"/> MATH 227 or 257 Linear Algebra for DS/Computational Apps. <input type="checkbox"/> STAT/IS/CS 107 Data Science Discovery <input type="checkbox"/> STAT 207 Data Science Exploration <input type="checkbox"/> CS 307 Modeling & Learning in Data Science <input type="checkbox"/> CS 277 Algorithms & Data Structures for Data Science (Sub: CS 225) <input type="checkbox"/> IS 467 Ethics & Policy for Data Science <input type="checkbox"/> IS 477 Data Management, Curation, & Reproducibility	MEANINGFUL RESEARCH OR DISCOVERY (6 hrs) Select from experiences: IS 189/389 / INFO 199/399 Independent Study; IS 249 Practicum; IS 304 Adv. Research Design; IS 400 Colloquium; IS 199 E/EE Career Explore; IS 490 PSU Professional Skills; Study Abroad (LAS 291 & LAS 292)
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Additional Requirements

123 Total Hours Remaining: In-progress: Done: Beginning Term: Expected Graduation:
 21 Adv. Hours ☐ 60 ILLINOIS Hours

Generic BSIS+DS Plan:

FA22	SP23	FA23	SP24	FA24	SP25	FA25	SP26
RHET 105→ IS 100 IS 101 IS 107 → MATH 220	IS 202 (3) IS [1] STAT 207→ ←GenEds Disc/Res.	IS 204 IS [2] GenEds	MATH 227 IS 206 IS [3] GenEds	IS 308-11 IS [4] IS [5] Adv.C GenEds	CS 277 IS 467 IS [6] Disc/Res.	CS 307 IS [7] Disc/Res.	IS 477 IS [8] Disc/Res.
~14-16 hr.	~14-17 hr.	~14-17 hr.	~14-17 hr.	~14-17 hr.	~14-17 hr.	~14-17 hr.	~14-17 hr.

Note: Some minors may require MATH 257 instead of MATH 227, but most students in +DS will take 227

Generic BSIS+DS Plan if CS Minor:

FA22	SP23		FA23	SP24		FA24	SP25		FA25	SP26
RHET 105(4) → IS 100(1) IS 101(3) IS 107(4) → MATH 220(5) ~14-16 hr.	IS 202 (3) IS [1] CS 124 ← GenEds <i>Disc/Res.</i> ~14-17 hr.		STAT 207 IS 204 IS [2] CS 128 GenEds	MATH 227 IS 206 IS [3] CS 173 GenEds		CS 307 IS 308-11 IS [4] GenEds <i>CS 225</i>	IS [5] Adv.C CS Adv. <i>Disc/Res.</i>		IS 467 IS [6] CS Adv. <i>Disc/Res.</i>	IS 477 IS [7] IS [8] <i>Disc/Res.</i>

CS Minor: Declare after 30 hours complete; Take *CS 225* (not CS 277). You are not allowed to use CS 307 as one of the CS Minor Advanced Electives 3/400 level from CS Minor list (must have 6 distinct advanced hours for CS Minor that do not count in major).

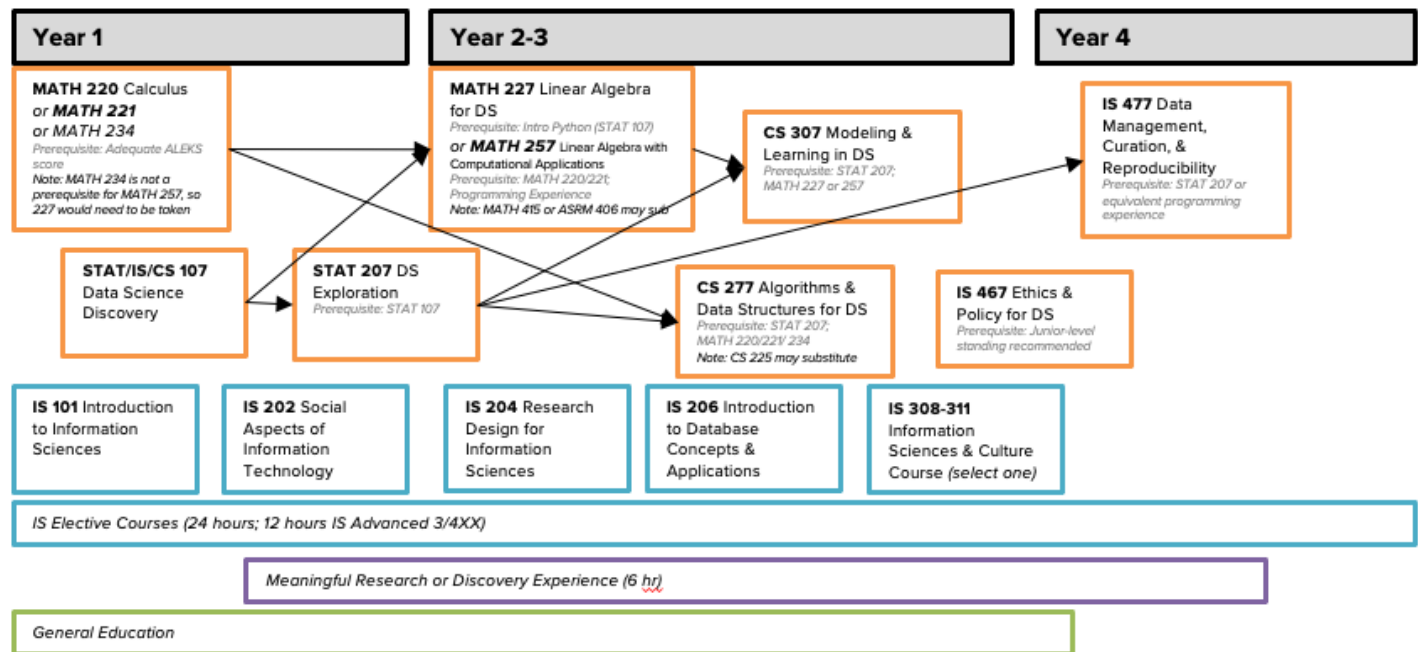
Information Sciences (IS) Electives

There are a number of IS electives (100-400 level) to fulfill the 24 hr. requirement. Electives vary each semester in availability (check the Course Explorer each semester for current offerings). View all IS Courses here: <http://catalog.illinois.edu/courses-of-instruction/is/> “Pathways” are areas of interest, & students may focus on one pathway, or across multiple. May align with careers and/or areas of interest. Students do not “declare” a pathway. <https://go.ischool.illinois.edu/BSISpathways>

Data Science Notes

Many courses require prerequisites and these should be closely followed. Please discuss course planning and degree requirements with an iSchool advisor.

IS+DS Curriculum Flow Chart



Current Course Offerings (may change over time, based on department offering course)

Course	Offering/Restrictions	Prerequisites
MATH 220 or 221 or 234	Fall & Spring (& Summer) AP or other credit & Proficiency credit good	Adequate ALEKS Score required
MATH 227 or MATH 257	MATH 227 Spring Only – Designed for DS majors (majority should take) MATH 257 Spring Better (Fall Restricted) – take 257 for some minors/dual-degrees/pre-requisites	MATH 227 Prerequisite: STAT 107 MATH 257 Prerequisite: MATH 220 or 221 & CS 101 or Equivalent programming experience
STAT/IS/CS 107	Fall & Spring	No Prerequisites
STAT 207	Fall & Spring	STAT 107

CS 307	Fall Only	STAT 207 & <i>One of:</i> MATH 227, MATH 257, MATH 225, MATH 415, MATH 416, ASRM 406
CS 277 (*CS 225 may substitute)	CS 277 Spring Only * CS 225 if <u>CS Minor</u> Fall & Spring	STAT 207; one of MATH 220, 221, or 234 <i>Do not take CS 277 & CS 225 (one or other)</i> CS 225 requires CS 124, CS 128, CS 173, & MATH 220 or 221
IS 467	Fall & Spring Major Restriction	Junior or Senior Level
IS 477	Fall & Spring Major Restriction	STAT 207 & Junior or Senior Level