

# BS Computer Science - Data Science Track

---

Click on the course number to view course title and description.

Code	Title	Semester Hours
<b>BS in Computer Science with Data Science Track Degree Plan (120 hours)</b>		
<b>Core Requirements (42 hours)</b>		
First Year Seminar		3
FYE 1301	First Year Seminar	
Freshmen Composition I		3
EN 1311	Rhetoric and Composition	
or EN 1313	Rhetoric and Composition for International Students	
Literature		3
Any EN 23XX literature course		
History		3
Any 1000, 2000, or 3000-level HS course		
Social Science		6
Select two from the following: BA 1310, CJ 1301, CPH 1301, EC 2301, EC 2303, ED 2330, HU 3300, HU 3303, PO 1311, PO 1312, PO 1314, PS 1301, PS 2310, PS 2353, PS 2355, PS 2363, PS 2337, SC 1311, SC 2321, SC 2371, 3 hrs. of Communication Studies (CM 1341, CM 2333, CM 2334). CM 1341 recommended for this major.		
Mathematics		
Satisfied by MT 2412 in the courses required for this major.		
Natural or Physical Sciences		3
Select one: BL 1301, BL 1302, BL 3311, CH 1303, CH 1401, CH 1402, ES 1300, ES 1301, ES 1302, ES 1303, ES 1304, ES 1305, ES 1373, PY 1300, PY 1310, PY 1401, PY 1402		
Fine Arts		3
Select any 3 hrs. of the following: Art (AR), Drama (DM), Music (MU) or MU 1300		
Foreign Language and International Engagement		6
This requirement is satisfied through one of four ways: (1) One 3-hour course in any language at the 3000 level or above, with a grade of B or better; (2) Two courses (1311 and 1312) in a language not previously studied; (3) Two courses (2311 and 2312) in a language previously studied at the high school or college level; (4) Qualifying scores on an AP or CLEP exam, or both the ACTFL OPI and WPT exams		
Philosophy - Self		3
PL 1301	Intro to Philosophy	
Philosophy - Ethics		3
PL 2301	Foundations of Ethics	
Theology - God		3
TH 1301	Introduction to Theology	
Intermediate Theology		3
Any TH 33xx course		
<b>Computer Science Major Courses (42 hours)</b>		
CS 1310	Programming I in C	3
CS 1311	Data Structures	3
CS 2110	Sophomore CS Seminar	1
CS 2313	Object Oriented Programming I	3
CS 2315	Algorithms	3
CS 2323	Object Oriented Programming II	3
CS 2350	Computer Architecture	3
CS 3110	Junior CS Seminar	1
CS 3310	Intro to Systems Analysis and Design	3
CS 3320	Files and Database	3
CS 3330	Computer Networks	3
CS 3335	Survey of Programming Languages	3

CS 3340	Software Engineering	3
CS 3350	Operating Systems	3
CS 4110	Senior CS Seminar	1
CS 4395	Senior Project	3
<b>Mathematics Minor (17 hours)</b>		
MT 2412	Calculus I	4
MT 2318	Applied Linear Algebra	3
MT 2323	Discrete Math Structures	3
MT 2413	Calculus II	4
MT 4331	Probability Theory	3
<b>Data Science Track (9 hours)</b>		
CS 4375	Advanced Topics: Data Science	3
Data Science Electives (Select 2 courses):		6
CS 4315	Artificial Intelligence & Machine Learning	
CS 4375	Advanced Topics (AI, NLP or Large Scale Data)	
BIO 3312	Algorithms for Computational Biology	
BIO 3411	Introduction to Bioinformatics	
EG 4338	Special Topics I (Data Visualization, Data Mining, Decision Analysis, or DS Using Python and Julia)	
MT 4332	Statistics	
QM 3321	Business Analytics	
QM 4350	Blockchain and Fintech	
QM 4361	Financial Modeling	
<b>Electives (10 hours)</b>		<b>10</b>
An elective can be any course taken from any discipline. Students can use these hours to pursue certificates, minors, or second majors.		
<b>Total Semester Hours</b>		<b>120</b>

Click on the course number to view course title and description.

### First Year

Fall	Semester Spring Hours	Semester Hours
Elective	3 Literature	3
FYE 1301	3 CM 1341	3
EN 1311	3 CS 1311	3
MT 2412	4 MT 2413	4
CS 1310	3 Fine Arts	3
	<b>16</b>	<b>16</b>

### Second Year

Fall	Semester Spring Hours	Semester Hours
CS 2315	3 CS 2323	3
PL 1301	3 PL 2301	3
Foreign Language	3 CS 2350	3
CS 2313	3 Foreign Language	3
MT 2323	3 MT 2318	3
CS 2110	1	
	<b>16</b>	<b>15</b>

### Third Year

Fall	Semester Spring Hours	Semester Hours
History	3 Advanced Theology	3
CS 3110	1 CS 3330	3
CS 3310	3 CS 3340	3

CS 3320	3	CS 4375	3
TH 1301	3	Elective	3
CS 4331 Probability Theory	3		
	<b>16</b>		<b>15</b>

**Fourth Year**

<b>Fall</b>	<b>Semester Spring</b>		<b>Semester</b>
	<b>Hours</b>		<b>Hours</b>
Natural / Physical Science	3	Social Science	3
CS 3350	3	Data Science Elective	3
CS 3335	3	Elective	1
Data Science Elective	3	CS 4395	3
CS 4110	1	Elective (consider MT 2412 Calculus III)	3
	<b>13</b>		<b>13</b>

**Total Semester Hours 120**