



Data Analytics Program Advising Sheet

Courses required for the first year: None
Courses recommended for the first year: DATA-101
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Program Overview

Great Career Path

- There has never been a better time to learn data analytics and enter the workforce.
- Demand for data analytics professionals outweighs supply which leads to high salaries.

Multidisciplinary Program

- Data Analytics
- Computer Science
- Math
- Statistics
- Ethics

Combine with Other Majors

- Augustana's data analytics program is open to any student on campus, regardless of major area of interest.
- Any major that needs to analyze large volumes of data will be a good fit with the data analytics program.

Minor

- The minor is a great complement to other areas of study.
- The minor introduces data analytics concepts and provides opportunities to apply those concepts.

Major

- The major is primarily designed to complement other areas of study; however, it can also be a primary area of focus.
- The major includes two tracks:
 - Business Analytics - use of statistical concepts to extract insights from business data.
 - Data Science - interdisciplinary field of data inference, algorithm building, and systems to gain insights from data.

The Major in Data Analytics Business Analytics Track

Required Courses

Course Number	Course Name	Learning Perspective /Suffix	Prerequisites	Usually offered: F, J, SP, SU*	Credits
DATA-101	Introduction to Data Analysis		None	F, J, SP, SU	4
CSC-201	Introduction to Computer Science		Placement into MATH-140	F, J, SP, SU	4
Statistics	Departmental Statistics - <u>one</u> of: <u>BUSN-211</u> Business Statistics <u>MATH-330</u> Probability and Statistics <u>PSYC-240</u> Statistics <u>SOAN-227</u> Social Statistics		<u>BUSN-211</u> : BUSN Major or permission of instructor <u>MATH-330</u> : MATH-160, MATH-250 <u>PSYC-240</u> : Permission of instructor <u>SOAN-227</u> : None		4
Ethics	Ethical Issues in Data Science Elective ¹ - <u>one</u> of: <u>BUSN-307</u> Social Issues in Management <u>PHIL-330</u> Applied Ethics <u>RELG-356</u> Business Ethics		None		4
DATA-331 (Previously BUSN-351)	Introduction to Mgmt. Info. Systems		None	F	4
DATA-332 (Previously BUSN-352)	System Analysis & Design		DATA-331	S	4
DATA-340	Data Mining		CSC-201, DATA-101, DATA-331, and one of BUSN-211, MATH-130, MATH-330, PSYC-240, SOAN-227	F	4
DATA-490 ²	Senior Inquiry		DATA-101, CSC-201, and one of BUSN-211, MATH-330,	SP	4

¹ If a student is not able to get into one of the ethics courses, can substitute Moral Philosophy PHIL-320.

² An approved data analytics internship (DATA-INTR) may be substituted for DATA-490.

			PSYC-240, SOAN-227		
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Additional Recommended Courses

Course Number	Course Name	Learning Perspective/ Suffix	Prerequisites	Usually offered: F, J, SP, SU*	Credits
DATA-100	Spreadsheet Software (for students with no Excel experience)		None	Not offered in 23-24	1
DATA-350	Machine Learning		DATA-101, CSC-201, MATH-160, and either MATH-330 or BUSN-211	Offered every other year	4

The Major in Data Analytics Data Science Track

Required Courses

Course Number	Course Name	Learning Perspective/ Suffix	Prerequisites	Usually offered: F, J, SP, SU*	Credits
DATA-101	Introduction to Data Analysis		None	F, J, SP, SU	4
CSC-201	Introduction to Computer Science		Placement into MATH-140	F, J, SP, SU	4
Ethics	Ethical Issues in Data Science Elective ³ - <u>one</u> of: BUSN-307 Social Issues in Management PHIL-330 Applied Ethics RELG-356 Business Ethics		None		4
DATA-350	Machine Learning		DATA-101, CSC-201, MATH-160, and either MATH-330 or BUSN-211	SP	4
DATA-490 ⁴	Senior Inquiry		DATA-101, CSC-201, MATH-330	SP	4
MATH-250	Discrete Mathematics		MATH-160	F	4
MATH-330	Probability and Statistics		MATH-250	F	4
MATH-420	Statistical Learning		MATH-330	SP (every other starting 2022)	4

Recommended Courses

Course Number	Course Name	Learning Perspective/ Suffix	Prerequisites	Usually offered: F, J, SP, SU*	Credits
DATA-100	Spreadsheet Software <i>Recommended (but not required) for students who have not had any exposure to Microsoft Excel</i>		None	Not offered in 2023-24	1
DATA-340	Data Mining		CSC-201, DATA-101, DATA-331, Note	F	4

³ If a student is not able to get into one of the ethics courses, can substitute Moral Philosophy PHIL-320.

⁴ An approved data analytics internship (DATA-INTR) may be substituted for DATA 490.

The Minor in Data Analytics

Required Courses

Course Number	Course Name	Learning Perspective/ Suffix	Prerequisites	Usually offered: F, J, SP, SU*	Credits
DATA-101	Introduction to Data Analysis		None	F, J, SP, SU	4
CSC-201	Introduction to Computer Science		Placement into MATH-140	F, J, SP, SU	4
Statistics	Departmental Statistics - <u>one</u> of: <u>BUSN-211</u> Business Statistics <u>MATH-330</u> Probability and Statistics <u>PSYC-240</u> Statistics <u>SOAN-227</u> Social Statistics		BUSN-211: BUSN Major or permission of instructor MATH-330: MATH-160, MATH-250 PSYC-240: Permission of instructor SOAN-227: None		4
Ethics	Ethical Issues in Data Science Elective ⁵ - <u>one</u> of: <u>BUSN-307</u> Social Issues in Management <u>PHIL-330</u> Applied Ethics <u>RELG-356</u> Business Ethics		None		4
Content Elective	Content Elective - <u>one</u> of ⁶ : <u>ACCT-311</u> Accounting Information Systems <u>BUSN-325</u> Digital Marketing & Analytics <u>GEOG-273</u> Intro GIS for Natural Sciences <u>GEOG-274</u> Intro GIS for Social Sciences		ACCT-311: ACCT-200 or ACCT-201 BUSN 325: ACCT-201, BUSN-205, ECON-200 BUSN-321 GEOG-273: None GEOG-274: None	S	4
DATA-360	Practicum in Data Science		DATA-101, CSC-201, and one of BUSN-211, MATH-330, PSYC-240, SOAN-227	S	4

⁵ If a student is not able to get into one of the ethics courses, can substitute Moral Philosophy PHIL-320.

⁶ If a student is majoring in an area that does not require one of the identified content electives, other courses in their majors that included data analytics concepts will be considered as a substitution.

Recommended Course

Course Number	Course Name	Learning Perspective/ Suffix	Prerequisites	Usually offered: F, J, SP, SU*	Credits
DATA-100	Spreadsheet Software <i>Recommended (but not required) for students who have not had any exposure to Microsoft Excel</i>		None	Not offered in 2023-24	1

*Fall, J term, Spring, Summer; see [Academic Calendar](#) for specific dates

Updated February 2024