

# Minor in Data Science

21-23 units

The minor in data science comprises a core introductory sequence in statistics, computer science, data ethics, and data visualization, plus three elective courses to be chosen from other data-centric and computational courses across departments.

Code	Title	Units
<b>Core Requirements</b>		
MATH 130	Introduction to Statistics <sup>1</sup>	3
CS 120	Introduction to Computer Science I <sup>2</sup>	4
MATH 492	Ethics in Data Analytics	2
Select one of the following:		3
MATH 451	Data Visualization	
BUSI 244	Data Analytics, Spreadsheets, and Data Visualization	
Select three of the following: <sup>3</sup>		9-11
MATH 250	Data Analysis	
MATH 350	Statistical Models	
CS 260	Algorithms and Data Structures	
CS 430	Artificial Intelligence	
CS 432	Machine Learning	
BUSI 246	Business Programming	
BUSI 314	Big Data for Business	
PSYC 511	Experimental Research Methods	
PSYC 512	Non-Experimental Research Methods	
PSYC 518 & 518L	Analysis of Variance and Analysis of Variance Lab	
PSYC 519 & 519L	Regression and Regression Lab	
<b>Total Units</b>		<b>21-23</b>

<sup>1</sup> Meets the General Education Quantitative Literacy requirement.

<sup>2</sup> Meets a portion of the General Education Oral Communication requirement. Does not fulfill the requirement in total unless taken with CS 290 and CS 480, or ENGR 240 and ENGR 480.

<sup>3</sup> At least one course must be outside the student's home department, and at least one course must be 300-level or higher.

## Program Learning Outcomes

### Program Learning Outcomes

Students who successfully complete this program shall be able to:

- Utilize fundamentals of statistical analysis to glean insight from data.
- Utilize fundamentals of computer programming to manage and analyze data.
- Communicate data effectively via visualizations and reproducible reports.
- Engage critically with issues of data ethics from a Christian worldview.