

# Data Analytics and Decision Making, Certificate of Proficiency

Visit the Strategic Management and Operations Department page (<https://www.uvu.edu/woodbury/strategic-management/>) for more information on the program and access to advising.

## Program Description

The Certificate of Proficiency in Data Analytics and Decision Making provides a skill set of recognizing the importance of data for solving operational, tactical, and strategic level organizational problems. Students will learn how to evaluate the characteristics, capabilities, and limitations of digital data as well as understand data-related laws and ethical practices. Courses cover topics related to the data analytics process, business rule modeling, data transformation, data management, applied statistics, data visualization, storytelling, and the ethical considerations of data analytics.

## Program Requirements

Code	Title	Credit Hours
<b>Total Credit Hours</b>		<b>19</b>
Core Courses		
MGMT 1400 or MGMT 2400	Introduction to Data Analytics Data Analytics for Business	3
CS 1400 or INFO 1200	Fundamentals of Programming Computer Programming I for IS IT	3
MATH 1050	College Algebra	4
Complete one of the following:		3
MGMT 2340	Business Statistics I	
STAT 2040	Principles of Statistics	
STAT 2050	Introduction to Statistical Methods	
PSY 3110	Statistics for the Behavioral Sciences	
Elective Courses		
Choose six credits from the following: <sup>2</sup>		6
INFO 3130	Introduction to Applied Data Analytics	
INFO 4130	Data Science and Big Data Analytics	
MATH 1100	Survey of Calculus <sup>3</sup>	
MKTG 3300	Marketing Analytics	
CS 1410	Object Oriented Programming	
CS 2420	Introduction to Algorithms and Data Structures	
STAT 2050	Introduction to Statistical Methods	
BIOL 3100	Introduction to Data Analysis for Biologists	
BIOL 1011	Introduction to Bioinformatics	

<sup>1</sup> Math courses numbered higher than MATH 1050 may also be used to fulfill the requirement.

<sup>2</sup> Cannot use courses as electives that were counted in the core.

<sup>3</sup> If this course was used to fulfill the MATH 1050 requirement, a different course must be selected for this category.

Graduation requirements:

- Completion of a minimum of 19 semester credit hours.
- Overall grade point average 2.0 (C-) or above.
- Residency hours: Minimum of 5 credit hours of course attendance at UVU.

## Graduation Plan

This graduation plan is a sample plan and is intended to be a guide. Your specific plan may differ based on your Math and English placement and/or transfer credits applied. You are encouraged to meet with an advisor and set up an individualized graduation plan in Wolverine Track (<http://www.uvu.edu/wolverinetrack/>).

### First Year

Semester 1		Credit Hours
MGMT 1400	Introduction to Data Analytics	3
CS 1400	Fundamentals of Programming	3
MATH 1050	College Algebra	4
<b>Credit Hours</b>		<b>10</b>
Semester 2		
Statistics course chosen from:		3
STAT 2040	Principles of Statistics	
MGMT 2340	Business Statistics I	
STAT 2050	Introduction to Statistical Methods	
PSY 3110	Statistics for the Behavioral Sciences	
STAT 2050	Introduction to Statistical Methods	
Complete 6 credits of electives from list		6
<b>Credit Hours</b>		<b>9</b>
<b>Total Credit Hours</b>		<b>19</b>

## Program Learning Outcomes

1. Identify and apply an appropriate statistical or analytical modeling methodology to solve an analytics problem.
2. Design and deliver visualizations, professional reports and presentations that effectively communicate the results of complex analytics problems.
3. Manage, structure, query, and manipulate data.
4. Use critical thinking in identification, analysis, and decision-making in a business analytics situation, including ethical dimensions.

### Statisticians

- Total Positions 32,400
- Field Growth 11.8%
- Median Salary \$104,110
- Average Openings 2.3

### Data scientists

- Total Positions 202,900
- Field Growth 36.0%
- Median Salary \$108,020
- Average Openings 20.8

### Survey researchers

- Total Positions 9,700
- Field Growth -0.2%
- Median Salary \$60,960
- Average Openings 0.8

### Business teachers, postsecondary

- Total Positions 104,900
- Field Growth 6.7%
- Median Salary \$97,130
- Average Openings 8.7

### Mathematical science teachers, postsecondary

- Total Positions 58,500
- Field Growth 3.3%

- Median Salary\$81,020
- Average Openings4.6