

# DATA SCIENCE, AS

## Program Code: Data Science-AS

### Program Description

The Associates of Science in Data Science is a general transfer degree program designed for students who are planning to transfer to a baccalaureate-level institution. This degree will also provide employment opportunities for student upon completion. The Associate of Science degree in Data Science includes skills in mathematics, science, data literacy and analysis, programming, and general education for transfer to a four-year institution.

Data Science Career Map (<https://sites.tmcc.edu/flipbook/career-maps/>)

### Recommended Course Schedule

1st semester		Units
DATA 101	Introduction to Data Science	3
MATH 126	Pre-Calculus I	3
ENG 101	Composition I	3
or ENG 100	or Composition Enhanced or Composition I for International and Multilingual Students	
or ENG 113		
Fine Arts <sup>3</sup>		3
Social Science/US & NV Constitutions <sup>3</sup>		3
<b>Semester Total</b>		<b>15</b>
2nd semester		Units
MATH 127	Pre-Calculus II	3
STAT 152	Introduction to Statistics	3
ENG 102	Composition II	3
or ENG 114	or Composition II For International and Multilingual Students	
Humanities <sup>4</sup>		3
Elective		3
<b>Semester Total</b>		<b>15</b>
3rd semester		Units
DATA 210	Introduction to SQL for Data Science (or)	3
or CIT 180	or Database Concepts and SQL	
CS 135	Computer Science I	3
MATH 181	Calculus I	4
Diversity <sup>3</sup>		3
Science <sup>3</sup>		3
<b>Semester Total</b>		<b>16</b>
4th semester		Units
DATA 220	Research Methods for Data Science	3
MATH 182	Calculus II	4
CS 202	Computer Science II	3
Science <sup>3</sup>		3
Elective		1
<b>Semester Total</b>		<b>14</b>
<b>Total Units</b>		<b>60</b>

<sup>3</sup> See approved General Education list for the AA/AS Degree. (<https://catalog.tmcc.edu/degrees-certificates/general-education/aa-as/>)

<sup>4</sup> See program recommendations or requirements.

### Program Requirements

AA/AS degrees are designed for students who plan to transfer to a four-year college or university.

To earn an AA/AS degree, students must:

1. Maintain a minimum cumulative GPA of 2.0 (see requirements for graduation.)
2. Complete a minimum of 15 units within the college.
3. Satisfy General Education requirements for the AA/AS (<http://catalog.tmcc.edu/degrees-certificates/general-education/aa-as/>).
4. Have no financial or library obligation to the college.

Code	Title	Units
<b>GENERAL EDUCATION REQUIREMENTS</b>		
<i>English</i>		3 - 6
Must include ENG 102 or ENG 114 <sup>1</sup>		
<i>Fine Arts</i>		3
Recommended:		
ART 100	Visual Foundations	
<i>Humanities</i>		3
Recommended: <sup>2</sup>		
PHIL 210	World Religions	
<i>Mathematics</i>		3
Required:		
MATH 126	Pre-Calculus I	
<i>Science</i>		6
<i>Social Science</i>		3
Recommended: <sup>2</sup>		
PSC 101	Introduction to American Politics	
HIST 111	Survey of U.S. Constitutional History	
<b>ADDITIONAL COLLEGE REQUIREMENTS</b>		
<i>Diversity</i>		[3]
Recommended:		
ENG 231	World Literature I	
PHIL 210	World Religions	
<i>U.S. and Nevada Constitutions</i>		[3]
<i>Science courses (satisfied by degree requirements)</i>		[6]
<b>DEGREE REQUIREMENTS</b>		
CS 135	Computer Science I	3
CS 202	Computer Science II	3
DATA 101	Introduction to Data Science	3
STAT 152	Introduction to Statistics	3
DATA 210	Introduction to SQL for Data Science	3
or CIT 180	Database Concepts and SQL	
DATA 220	Research Methods for Data Science	3
MATH 127	Pre-Calculus II	3
MATH 181	Calculus I	4

MATH 182	Calculus II	4
ELECTIVE REQUIREMENTS		
Select 7 units from transferable electives		7
Recommended:		
BUS 107	Business Speech Communications	
COM 113	Fundamentals of Speech Communications	
CPE 201	Digital Design	
ECON 102	Principles of Microeconomics	
MATH 283	Calculus III	
MATH 285	Differential Equations	
MATH 330	Linear Algebra	
<b>Total Units</b>		<b>60</b>

<sup>1</sup> If you place into ENG 102 or ENG 114 the additional 3 required units will become elective units. Course sequence is based on placement into ENG 102.

<sup>2</sup> Recommended courses also meet Diversity and U.S. & NV Constitution requirements.

## Program Outcomes

Students completing the degree will:

PSLO1: Apply appropriate mathematical and scientific principles to Data Science applications.

PSLO2: Demonstrate proficiency in technical fundamentals to analyze and resolve technology problems.

PSLO3: Apply knowledge and skills to develop, interpret, and select appropriate technological processes.

PSLO4: Demonstrate the ability to assist in research, development, design, production, testing and various other functions associated with Data Science.

## Transfer Agreements

AA/AS degrees are designed for students who plan to transfer to a four-year college or university. General information about general transfer agreements can be found on the Academic Advisement website (<https://www.tmcc.edu/advisement/transfer-students/transfer-agreements/>).

Students who intend to transfer to another college or university should speak with a TMCC Academic Advisor and consult with that institution.

The transfer institution determines how TMCC courses will transfer.

TMCC has agreements with the following institutions towards a bachelor's degree in the same or similar discipline.