

# TECHNOLOGY STUDIES: DATA SCIENCE, AS

**Program code:** DTAS-AS-COT

**Location:** Capital, Gateway, Northwestern, Three Rivers, Tunxis

## Program Description

As part of the Connecticut College of Technology (COT), the Technology Studies A.S. degree provides the knowledge and skills within specific high-demand technology fields. The program consists of lecture and lab course work in engineering, technology, industrial technology, mathematics, sciences, and foundational requirements that provide a solid comprehensive background for continuation in a four-year technology degree program or entry into the workforce. Upon completion of a Technology Studies A.S. degree, students can transfer to Central CT State University or the University of Hartford to complete designated B.S. degrees.

The Technology Studies: Data Science Option associate degree program prepares students primarily to transfer to complete a B.S. degree in Data Science or Technology Management. Graduates will receive a background in mathematics, science, data literacy, programming, and general education courses for transfer into a four-year program.

### Learning Outcomes

1. Apply mathematical, scientific and technological principles and concepts to identify and formulate solutions to technical problems.
2. Apply critical thinking and problem-solving skills to solve technical problems.
3. Demonstrate the ability to function on teams.
4. Recognize the need to engage in life-long learning.

### Data Science Learning Outcomes

Upon successful completion of all program requirements, graduates should be able to:

1. Transition seamlessly into a Bachelor of Science Degree Program in Data Science or Technology Management.
2. Apply appropriate mathematical and scientific principles to Data Science applications.
3. Demonstrate proficiency in technical fundamentals to analyze and resolve technology problems.
4. Apply knowledge and skills to develop, interpret, and select appropriate technological processes.
5. Demonstrate the ability to assist in research, development, design, production, testing and various other functions associated with Data Science.
6. Demonstrate a good understanding of Data Science principles/ concepts.
7. Demonstrate a good understanding of mathematical concepts.
8. Demonstrate the ability to think through a problem in a logical manner.
9. Organize and carry through to conclusion the solution to a problem.
10. Demonstrate good communication skills.
11. Demonstrate teamwork skills.

## Degree Requirements

Code	Title	Credits
<b>Technology Studies General Education Core</b>		
ENG 1010	Composition	3
MATH 1610	Precalculus	4
ART Elective (course vetted for ARHX)		3
CHEM 1110	Concepts of Chemistry	4
or CHEM 1210	General Chemistry I	
Elective HISX - Historical Knowledge Course or Elective SBSX course in ECON		3
ENG 1080	Composition II: Technical Writing	3
or COMM 1301	Public Speaking	
CCS 1001	College and Career Success	3
<b>Technology Studies Program Core</b>		
PHYS 1201	General Physics I	4
or PHYS 2201	Calculus-Based Physics I	
Elective BHEL - Behavioral Science Elective - choose an ANTH, PSY or SOC course		3
MATH 1200	Statistics I	3-4
or MATH 1201	Statistics I with Computer Applications	
<b>Data Science Courses</b>		
DTS 2290	Capstone Research	3
Math or Programming or Computer Applications Elective		3-4
MATH 2600	Calculus I	4
MATH 2200	Statistics II	3
DTS 2201	Programming in Data Science	3-4
or DTS 2203	Elements of Data Science	
DTS 2220	Introduction to Machine Learning	3
Math or Programming Elective		3-4
Math or Programming Elective		3-4
Specialization Electives		6
<b>Total Credits</b>		<b>64-69</b>

- Technology Studies: Data Science Certificate