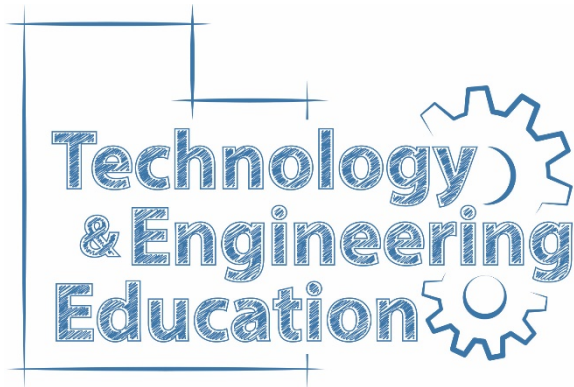


STRANDS AND STANDARDS

TRANSPORTATION TECHNOLOGY



Course Description

An introductory course that focuses on the world of transportation technology. Students will gain an understanding of how transportation technologies impact politics, the environment, society, and the economy. Students will develop a foundation in essential abilities and attitudes that will in turn expand their occupational opportunities in the world of transportation.

Core Code	38.03.00.00.070
Concurrent Enrollment Core Code	None
Units of Credit	0.5
Intended Grade Level	9
Prerequisite	None
Skill Certification Test Number	None
Test Weight	None
License Type	Secondary Education 6-12
Required Endorsement(s)	Technology & Engineering, or Technology

STRAND 1

Students will follow safety practices.

Standard 1

Identify potential safety hazards and follow general laboratory safety practices.

- Assess workplace conditions regarding safety and health.
- Identify potential safety issues and align with relevant safety standards to ensure a safe workplace/jobsite.
- Locate and understand the use of shop safety equipment.
- Select appropriate personal protective equipment.

Standard 2

Use safe work practices.

- Use personal protective equipment according to manufacturer rules and regulations.
- Follow correct procedures when using any hand or power tools.
 - Ref: <https://schools.utah.gov/cte/tech/publicationsresources> under the Safety Program and Management tab.

Standard 3

Complete a basic safety test without errors (100%) before using any tools or shop equipment.

STRAND 2

Students will develop an understanding of and be able to select and use transportation technologies.

Standard 1

In order to select, use, and understand transportation technologies, students should learn that:

- Transporting people and goods involves a combination of individuals and vehicles.
- Transportation plays a vital role in the operation of other technologies, such as manufacturing, construction, communications, health & Safety, and agriculture.
- Intermodalism is the use of different modes of transportation, such as highways, railways, and waterways as a part of an interconnected system that can move people and goods easily from one point to another.
- Transportation systems are made up of subsystems, such as structural, propulsion, suspension, guidance, control, and support, which function together for a system to work effectively.
- Government regulations often influence the design and operation of transportation systems.
- Processes such as receiving, storing, loading, moving, delivering, unloading, evaluating, marketing, managing, communicating, and using conventions are necessary for the entire transportation system to operate efficiently.
- Transportation services and methods have led to a population that is regularly on the move.

- The design of intelligent and nonintelligent transportation systems depends mainly on many processes and innovative techniques.

STRAND 3

Students will develop an understanding of the cultural, social, economic, and political effects of technology, the effects of technology on the environment, the role of society in the development and use of technology, and the influence of technology on history.

Standard 1

In order to be aware of the history of technology, students should learn that:

- Many inventions and innovations have evolved by using slow and methodical processes of tests and refinements.
- The specialization of function has been at the heart of many technological improvements.
- In the past, an invention or innovation was not usually developed with the knowledge of science.

Standard 2

In order to realize the impact of society on technology, students should learn that:

- Throughout history, new technologies have resulted from the demands, values, and interests of individuals, businesses, industries, and societies.
- The use of inventions and innovations has led to changes in society and the creation of new needs and wants.
- Social and cultural priorities and values are reflected in technological devices.
- Meeting societal expectations is the driving force behind the acceptance and use of products and systems.

Standard 3

In order to understand the effects of technology on the environment, students should learn that:

- The management of waste produced by technological systems is an important societal issue.
- Technologies can be used to repair damage caused by natural disasters and to break down waste from the use of various products and systems.
- Decisions to develop and use technologies often put environmental and economic interests in direct competition with one another.

STRAND 4

Students will demonstrate basic measurement principles that incorporate applied math applications related to transportation practices.

Standard 1

Make measurements using common devices.

Standard 2

Gain an understanding of global positioning systems and the types of maps commonly used in the transportation industry.

STRAND 5

Students will demonstrate an understanding of the benefits and limitations of transportation design.

Standard 1

Identify design factors related to energy consumption, geography, and material availability.

Standard 2

Select a destination that is over 500 miles away and calculate distance, transport time, and fuel costs for a variety of transportation systems.

STRAND 6

Students will investigate career opportunities in the transportation industry.

Standard 1

Identify occupations related to the transportation industry.

Standard 2

Identify different types of occupational training.