

FIRE TECHNOLOGY (CERTIFICATE N0486)

Technology and Health Division Certificate N0486

The Fire Science Certificate has been developed to offer pre-employment education for the undergraduate who desires to enter the field of fire science. It also provides the employed firefighter an opportunity for a professional education. Students intending to pursue a Bachelor's Degree (transfer program) should consult with a counselor or advisor to discuss transferability of courses.

Required Courses

Course Prefix	Course Name	Units
FIRE 1	Fire Protection Organization	3
FIRE 2	Fire Prevention Technology	3
FIRE 3	Fire Protection Equipment and Systems	3
FIRE 4	Building Construction for Fire Protection	3
FIRE 5	Fire Behavior and Combustion	3
FIRE 13	Principles of Fire and Emergency Services Safety and Survival	3
Choose two courses from the following:		5.5-19
FIRE 6	Hazardous Materials/ICS	
FIRE 7	Fire Fighting Tactics and Strategy	
FIRE 8	Fire Company Organization and Management	
FIRE 9	Fire Hydraulics	
FIRE 10	Arson and Fire Investigation	
FIRE 11	Fire Apparatus and Equipment	
FIRE 12	Wildland Fire Control	
FIRE 86	Basic Fire Academy	
KINF 53	Physical Training for the Basic Fire Academy	
Total Units		23.5-37

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Define fire department organization, culture, and methods of communication of entry level fire department personnel.
- Analyze and assess firefighter hazards, and demonstrate safe practices by using minimum standard safety procedures.
- Demonstrate knowledge of fire prevention efforts and a resulting reduction of life and property loss.
- Demonstrate knowledge of strategy and tactics required for the proper selection and safe use of firefighting methods, techniques, tools, and equipment.
- Identify fire chemistry and behavior for the purpose of predicting fire dynamics and flame spread characteristics.
- Identify components of built-in and portable fire protections systems and alarm and notification devices.
- Demonstrate knowledge of the 5 basic types of construction. Identify the components and hazards related to each type.
- Demonstrate knowledge of Leadership and Management concepts as they relate to emergency and non-emergency situations.

Review Student Learning Outcomes (SLOs) (<https://www.mtsac.edu/slo/>) for this program.