

MED/FIRE RESCUE

2009 – 2010

20 Months

Credits Required for A.A.S. Degree: 73

Associate of Applied Science (A.A.S.) Degree

Called to Serve

Peoples' lives can change in an instant when there is physical injury inflicted or an out of control fire imposing danger or damage. The Med/Fire Rescue Services program is designed for the individual with a strong desire to help people in these life-threatening situations. The lives of individuals often depend on the quick reaction and competent care of emergency medical technicians, paramedics and fire fighters. Individuals who feel the call to serve mankind find this career a rewarding experience.

This Is No Ordinary Job

Every day is an adventure in a Med/Fire Rescue Services career. Med/Fire Rescue Service responsibilities include controlling and extinguishing fires, protecting life and property, and administering emergency and lifesaving services. Med/Fire Rescue Service Technician responsibilities include controlling and extinguishing fires, assisting with lifesaving medical treatment both on the scene and during transportation and delivery to hospitals, assisting in the recovery from disasters, providing aircraft fire rescue, and playing an important role in the control and clean-up of spills and hazardous chemical incidents.

High Demand

According to the United States Bureau of Labor Statistics, the regional and national trends show a significant increase over the next ten years in career opportunities in the Med/Fire Rescue Services profession. Although many small med/fire rescue departments are volunteer positions, the larger areas and cities employ hundreds to thousands of technicians. More recently, these departments significantly expanded the duties performed by the Med/Fire Rescue Services personnel resulting in an increase of hiring qualified employees.

Quick Thinking...

is essential in the Med/Fire Rescue Services field. Individuals employed in this area usually respond to a 911 call and need to react quickly. These individuals deal with people in vulnerable situations and need a strong understanding of human nature. Med/Fire Rescue Service Technicians are compassionate, understanding, level-headed, and team-players. The profession requires good coordination, strength, physical stamina, and agility.

Recommended Background Courses

Although not required, the following courses would be beneficial to this course of study prior to attending Lake Area Technical Institute: Science, Biology, Anatomy, Psychology, English.

COURSE DESCRIPTIONS

AED 100 – Automated External Defibrillator (.5 credit)

To prepare individuals in the workplace to provide care for breathing emergencies, perform cardiopulmonary resuscitation (CPR), and use an automated external defibrillator (AED) for victims of sudden cardiac arrest.

ANAT 142 – Anatomy (3 credits) A study of cells, tissues and organs making up the Integumentary, Muscular, Skeletal, Nervous, Endocrine, Digestive, Respiratory, Lymphatic, and Urinary systems of the body. Emphasis is on structure and function of the systems and the relationship of the body structures (anatomy) to their function (physiology.)

CSC 100 – Microcomputer Concepts (1 credit) Using a Windows-based microcomputer and related software, you will gain an understanding and basic operational knowledge about the Windows XP operating system, Microsoft Office word processing, and spreadsheets. You will demonstrate this knowledge by scoring at least 80% on assignments, related objective, and performance tests.

HAZ 100 – Hazardous Materials Safety (.5 credit)

Identifying types of hazardous material, demonstrating personal protective equipment, and identifying blood borne pathogens.

EMT 100 – Emergency Medical Technician (EMT Basic)

(5 credits) The EMT Basic class is a South Dakota approved training course consisting of 100 hours of classroom/practical training and 20 hours of clinical observation. The training focuses on caring for life-threatening and non life-threatening situations and conditions, as well as, other issues related to the sick and injured. Ultimately, the course is designed to prepare students for successful completion of the National Registry Exam.

EMT 110 – Physiology (4 credits) Lecture, lab work, and demonstrations of human physiological processes both normal and abnormal.

EMT 115 – Pharmacology (1 credit) The study of drugs, methods of administration and dosage computation. It provides information on classifications, therapeutic action, and side effects of drugs. Students have experience giving medications throughout the program.

MA 115 – Medical Terminology (1.5 credits) Spelling, building words using prefixes, suffixes, roots, and combining forms, defining and recognizing words used in the health field.

MFR 100 – Paramedic Preparation (1.5 credits) Paramedic Preparation is an introduction into the world of advanced pre-hospital care. Topics for this class include the well-being of the paramedic, roles and responsibilities of the paramedic, illness and injury prevention, ethical and legal issues related to modern medicine and pre-hospital care.

MFR 105 – Airway/IV Management (3 credits)

This course addresses two of the more important skills required of paramedics. Students will learn the art of intravenous (IV) placement, drug therapies, medical mathematics, and drug dose calculations. Also covered in this course is advanced airway management and ventilation, where the student will learn methods used to control a patient's airway and breathe for them.

MFR 110 – Trauma Assessment and Treatment (3 credits)

This course focuses on the subject that causes an adrenaline rush in virtually every paramedic, "Trauma." If you like the CSI shows on TV, this may be your favorite class. Students will study different types and causes of injuries and their related problems, allowing them to put the pieces of the puzzle together, enabling them to administer life-saving treatments.

MFR 115 – Special Care (3 credits)

This course focuses on areas that are perhaps the most difficult for most paramedics. Topics covered in this class are related to patients that are very old (geriatrics) and the very young (neonatology/pediatrics). Also covered is the care of the chronically ill patient, patients with physical, mental, and/or cultural challenges.

MFR 120 – Clinical Observation I (1 credit)**MFR 130 – Clinical Observation II (5 credits)**

These two observation courses are designed to meet the requirements set by the State of South Dakota. This observation/interaction time will take place in an approved hospital. Students will spend about 200 hours in an Emergency Department, 50 hours in a Critical Care Unit, 50 hours in an operating room, and 20 hours in an Obstetrics unit. Students are encouraged to utilize the knowledge and skills learned thus far in the Med/Fire Rescue Services program and see first-hand how sick and injured patients benefit from high-quality medical care.

MFR 125 – Medical Assessment and Treatment (4 credits)

Focuses on problem-solving and treating those things that make people "sick." Students will study the anatomy, physiology, and pathophysiology of the human body, what makes it function and what causes it to fail. Some topics covered include cardiology, pulmonology, endocrinology, neurology, toxicology, and environmental emergencies.

MFR 200 – Med/Fire Rescue (1 credit) This course focuses on ambulance operations, incident management, crime scene awareness, and rural EMS. Since the world around us continues to become increasingly complex, this class will also address issues related to rescue awareness and operations, hazardous materials incidents, and responding to terrorist incidents.

MFR 205 – Firefighter I (5 credits)**MFR 220 – Firefighter II (5 credits)**

Through classroom and hands-on experience, students will learn the essentials of firefighting. Beginning with an overview of the proud history and traditions associated with the fire service, students will progress into developing the knowledge and skills associated with fire behavior, safety, and personal protective equipment. Next area covered will involve water supplies and equipment, building construction, ladders, and ropes. Students will then learn rescue operations, forcible entry and ventilation techniques, fire suppression, firefighter survival, fire prevention, education, and incident planning.

MFR 210 – Hazardous Materials Awareness and Compliance (3 credits)

Hazmat teams are rapidly becoming a basic component of every fire department in the United States and the initial certification required for these teams is the awareness level. This course is designed to provide the knowledge and skills required to allow students to function as an integral part of a hazmat team. Topics covered include recognition and identification, information resources, personal protective equipment, protective actions, product control and air monitoring, and terrorism awareness.

MFR 215 – Clinical Observation III (4 credits)

This observation/interaction period is designed to meet the requirements set by the state of South Dakota. This Clinical Observation will take place at an approved ACLS ambulance service. Students are advised to complete this observation at more than one approved service in order to gain an understanding of how different services meet the EMS needs of a community. Students will be working directly with ambulance crews and with the approval and guidance of those crews, students will perform all levels of patient care. Essentially, this is meant to provide students with the opportunity to utilize their acquired medical knowledge and skills in a real-life setting.

MFR 225 – Airport Rescue Firefighting (3 credits)

Every type of fire has its own characteristics, concerns, and methods of control. Building on the knowledge gained in Firefighter I and II, students will learn basic airport awareness, airplane construction and fuels, fire suppression, occupant protection and extrication, and crash truck operation and tactics.

To fulfill graduation requirements, students must select one course in each of the areas listed. Courses marked with an asterisk can be transferred directly to the university system under the terms of articulation agreements.

Behavioral Science Course

PSYC 100 – Psychology of Human Relations
PSYC 101 – General Psychology *

Communications Course (Choose 2)

COMM 101 – Contemporary Communication
ENGL 101 – Composition *
SPCM 101 – Fundamentals of Speech *

Mathematics Course

MATH 101 – Intermediate Algebra
MATH 102 – College Algebra *

Social Science Course

ECON 105 – Leadership in the Global Workplace
ECON 201 – Principles of Microeconomics I *
ECON 202 – Principles of Macroeconomics II *
SOC 100 – Introduction to Sociology *

All students are required to have a current Emergency Medical Technical certificate prior to continuing with the paramedic portion of the program. The EMT certificate can be obtained by taking the required courses at Lake Area Tech or transferring the course if it was completed at another location.

There are additional costs to complete the required EMT and Paramedic Certification exams.