Syllabus:
Emergency Vehicle Operations Course

Subject Code: 172801
Course Number: PS5310
CIP Code: 43.0203
SOC Code: 33-2011

C-TEC of Licking County
150 Price Road
Newark, Ohio 43055
Program Director:
- Earl Miller

Instructor Contact:
- C-TEC 150 Price Road Newark, Ohio 43055
- Appointments as scheduled
- Office Telephone (740) 364-2298
- C-TEC Telephone (740) 364-2333
- Email Address: emiller@c-tec.edu

Class Meeting Times:
- Monday and Wednesday 6:00 p.m. – 10:00 p.m.
- Saturdays 8:00 a.m. – 5:00 p.m. as scheduled

Class Location:
- Classroom 7003

Program Hours:
- 16 Hours

Course Prerequisites:
- Individuals shall demonstrate a pre-determined level of cognitive proficiency by one of the following methods: through successful completion of a cognitive-based pre-admission assessment of test such as the ACT, SAT, WorkKeys, Compass, Accuplacer, TABE, or equivalent; documentation of high school or college GPA.
- Individuals shall be at least eighteen years of age, except that a chartered fire training program may admit a student who is 17 years old provided that the student has graduated or is enrolled in the twelfth or final grade in a secondary school program. A chartered fire training program may admit a student into a secondary school Firefighter I course who is sixteen years old provided that the student is enrolled in the eleventh grade or twelfth grade in a secondary school public safety program.
- Individuals shall meet all admission requirements established by the chartered fire training program.
- Individuals shall possess a valid Ohio Driver License.
- Individuals shall meet “NFPA 1001” chapter 4 entrance requirements
  - Minimum educational requirements as established by the Authority Having Jurisdiction (AHJ).
  - Age requirements as established by the AHJ.
  - Essential Job Tasks of NFPA 1582, Standard on Comprehensive Occupational Medical Program for Fire Departments, Chapter 5, Subsection 5.1.1, as determined by the medical AHJ.
  - Fitness Requirements. Physical fitness requirements for entry-level personnel as developed and validated by the AHJ.
  - Emergency Medical Care training as developed and validated by the AHJ to include infection control, CPR, bleeding control, and shock management.
Course Requirements:
- Capable of strenuous physical activity
- No facial hair (mustache acceptable)
- Must be at least 17 years old and a high school senior
- Must be in department uniform or navy blue shirt and pants with black shoes. Refer to the EMT and Firefighter Student Handbook.
- All required forms and schedules are on the C-TEC website http://www.c-tec.edu/cms/One.aspx?portalId=76736&pageId=95922. Click on either Firefighter training or Emergency Medical Technician. All forms shall be printed prior to the first class.

Required and Recommended Texts and Resources:
There are no required texts for this course. Classroom materials will be provided.

Course Description:
The Emergency Vehicle Operation Course is designed to fulfill the OAC 4765-20-02 “Successful completion of an emergency vehicle operator course” as stated in the ODPS division of EMS Firefighter I Certification requirements. EVOC includes classroom instruction, and laboratory practical application in: laws and liabilities; 49 CFR 383, 2003 Commercial Motor Vehicle Safety Act; Emergency and Non-emergency Response; defensive driving, crash and injury prevention; driver and operator responsibilities; identifying apparatus that are prone to rollover; safe operations at highway incidents; crash review; vehicle and apparatus care as specified in NFPA 1451 Chapter 10.2 and NFPA 1002.4; preventive maintenance as specified in NFPA 1451 Chapter 10.2; driving and operating vehicles and apparatus; potential hazards of off-road driving and conditions that justify driving on other than paved or hard surface roads; operating apparatus in inclement weather conditions, and handling apparatus with auxiliary braking devices in inclement weather conditions; apparatus safety features and proper application thereof. (ABS, Engine/transmission retarders)

Upon successful completion of the EVOC course of study the student will meet the OAC 4765-20-02 – Successful completion of an emergency vehicle operator course as stated in the ODPS division of EMS Firefighter I Certification requirements.

Course Objectives/Outcomes/Sequence:
The course objectives include:
- Preparing students for post-program success, both in the work force and in their educational pursuits.
- Preparing students to process information using higher order thinking skills and to engage in sound decision-making.
- Providing a rich learning environment utilizing research-based methods of instruction, and current resources and materials.
- Maintaining high expectations for all students regardless of educational needs and providing support necessary for achievement.
Providing a challenging, worthwhile curriculum based on current industry/academic expectations. Specifically and upon successful completion of the program/course for Firefighter 1 the students will be able to demonstrate proficiency with the following content:

- Identifying the minimum requirements for a fire and emergency service organization (FESO) vehicle operations training program.
- Identifying Emergency Vehicle Operator Basic Training knowledge and skill requirements.
- Familiarization with laws and liabilities.
- Identifying key components of Emergency Response.
- Discussing and reviewing principles of crash avoidance and injury prevention.
- Discussing, identifying and explaining Driver/Operator responsibilities.
- Identifying apparatus that prone to rollover and special considerations for their safe operation.
- Outlining and explaining safe operations at highway incidents.
- Identifying procedures for crash investigation.
- Identifying and performing procedures for vehicle care and maintenance.
- Driving and operating apparatus.

Grading:
Course completion is determined on a PASS / FAIL basis. Pupil performance of EVOC objectives are evaluated as the student navigates a predetermined driving course. All objectives must be successfully demonstrated by the student and are verified and documented by an instructor on the skills evaluation form. Remediation for any failed objectives will be provided to students as needed. Retesting of failed objectives will occur upon completion of remediation.

CLASSROOM AND LABORATORY EXPERIENCE EVALUATION RULES AND REQUIREMENTS:

You are expected to come to all classes/laboratories prepared to participate with assigned materials reviewed prior to class. Texts, and handouts must be brought to class.

To successfully complete classroom/laboratory experiences, you must:

1. SATISFACTORILY MEET COURSE OBJECTIVES. Your practical skills will be evaluated throughout the course based upon program objectives developed by The Ohio Dept. of Public Safety. Successful completion of the EVOC is required prior to application for Firefighter I certification, but not more than twelve months prior to the firefighter training course start date.

2. CLASS PARTICIPATION and ATTENDANCE IS MANDATORY. Students must be present for the entire 16 hour EVOC training.

Certifications and Credentials:
Upon successful completion of the EVOC course of study the students will have fulfilled the OAC 4765-20-02 – Successful completion of an emergency vehicle operator course as stated in the ODPS division of EMS Firefighter I Certification requirements.
Course Policies:

- **Disruptive Behavior** – Disruptive behavior of any type is NOT permitted and may result in dismissal from the program. Sleeping during class, tardiness to class, excessive talking during class and disrespectful behavior are examples of disruptive behavior.

- **Plagiarism** – Submitting plagiarized work for an academic requirement is considered academic misconduct. Plagiarism is the representation of another’s work or ideas as one’s own; it includes the unacknowledged word-for-word use and/or paraphrasing of another person’s work, and/or inappropriate unacknowledged use of another person’s ideas.

- **Diversity** - It is the responsibility of the instructor and the students to foster and maintain a harmonious, non-threatening and non-discriminating environment in the classroom. Therefore, all individuals are to be respected as equal and contributing partners of our society.

- **Attendance:** Must maintain at least 100% rate of attendance. You are required to attend all classes. Any absences must be made up in both time and content and documented on the appropriate form.

- **Make-Up Hours**
  In the event that a student would miss any mandatory class as established by the Program Coordinator, the student will be afforded the opportunity to make-up missed hours at his or her personal expense.*  As established by the Ohio Division of EMS, “All make-up hours must be completed by the last day of class and prior to the State of Ohio Firefighter I certification examinations.

  The requirements for make-up hours state that “hour-for-hour make-up may be conducted one-on-one by the same instructor who taught the topic in the student’s original school. Make-up hours for a topic taught by an instructor other than the original instructor cannot be made hour-for-hour. The entire topic must be made up.” In order to make-up hours for the EMT or FF 1 & 2 course, the Program Coordinator or his designee, such as the High School Instructor, will work with the student and the original instructor to set a date, time, and location to complete the instruction outside of normal school hours and will complete the required make-up documentation. Transportation to and from the site for the student is the personal responsibility of the student. The student is responsible for individual instruction makeup fees at the rate of $28.00/hour and are due prior to the start of the makeup session. Failure to complete any missed instruction time will result in not meeting the required attendance as set forth in the Ohio Administrative Code and failure to complete the course.

*NOTE* Some Laboratory classes (i.e. FF 1 & 2 Live Fire evolutions, Ladder Maze, Rescue class and others) cannot be made up. It will be at the discretion of the Firefighting Program coordinator as to whether a Laboratory class can logistically be made up even at the student’s expense.
COURSE DISCIPLINARY ACTION/DISMISSAL POLICY

Disciplinary action and/or dismissal from any phase of any C-TEC Public Safety program may be initiated for the following types of behavior:

- Cheating
- Failure to meet course objectives and/or requirements related to academic standing, skills performance, clinical performance, health, attitude and/or conduct.
- Repeated tardiness
- Absenteeism
- Sleeping during class or during clinical sessions
- Lack of engagement and/or participation in class
- Failure or refusal to follow course instructions
- Falsification of records and/or documents
- Improper conduct toward faculty, classmates, patients or employees of program facilities
- Failure to follow C-TEC Public Safety Dress Code
- Theft or destruction of property
- Leaving without permission (this includes classroom and clinical sites)
- Not following rules/regulations in the classroom and clinical phase of training.
- During any classroom, laboratory or clinical session, consumption of or being under the influence of, any of the following shall be prohibited:
  - Alcoholic beverages
  - Illegal drugs
  - Prescription drugs that alter a student’s ability to perform skills objectives safely

*In the interest of the overall safety and health of the class and the individual students, any instructor may exclude any student(s) on the suspicion of consumption or being under the influence of any of the preceding listed items.

RIGHT OF APPEAL

As a student, you have the right of appeal. You must present an appeal in writing to the Public Safety Service Coordinator within five days of notification of disciplinary action. The Public Safety Service Coordinator shall within ten days of receipt of notification of appeal, schedule a meeting with the student, Director of Adult Education, Public Safety Service Coordinator and instructor. For more information, contact:

C-TEC Adult Education, Earl Miller 740-364-2298 emiller@c-tec.edu

Sequence:

Basic Training Requirements
- Identify the potential hazards of off road driving and conditions that justify driving on other than paved or hard surface roads.
- Outline the potential hazards of driving unconventional or specialized units and conditions that justify responding to the scene of an emergency.
Discuss inclement weather driving conditions with emphasis on handling of vehicles, particularly where auxiliary braking devices are to be used.

Describe the potential hazards of retarders, such as engine, transmission, driveline retarders, antilock braking system (ABS) brakes, vehicle stability system, and traction control systems.

List the proper use and limitations of the electronics provided.

Explain the engine regeneration process specific to the vehicle.

Discuss lessons learned from vehicle crash scenarios.

**Laws and Liabilities**
- Identify the type of laws that apply to emergency vehicle operations.
- Identify state laws and local laws, standards and requirements that effect emergency vehicle driver training and operation.
- Discuss the requirements of 49 CFR 383, 2003 Commercial Motor Vehicle Safety Act, and its relevance to the state requirements for obtaining a commercial driver’s license (CDL) and to the requirements of the authority having jurisdiction.

**Emergency and Non-emergency Response**
- Explain the reasons that written SOP/SOG’s are important to the operation of an effective vehicle driver’s training program.
- Describe the importance of maintaining proficiency through an ongoing training program based on the authority having jurisdiction and the written SOP/SOG’s for personnel and vehicle changes.
- Define the term “due regard” and identify negative right of way situations.
- Outline response safety procedures regarding railroad crossings.
- Describe safe traveling and following distances.
- Discuss written SOP/SOG’s which impact emergency vehicles.
- Identify that emergency response driving is a complex process.

**Crash and Injury Prevention**
- Identify unsafe vehicle conditions that should be corrected immediately and the process of reporting the condition to the proper personnel.
- Describe the hazards associated with operating a vehicle in reverse.
- Outline criteria for drivers / operators to discontinue the use of manual brake limiting valves (frequently labeled “wet/dry road switch”) and requiring that the valve / switch remain in the “dry road” position, where provided on vehicles.
- Describe the process of adjusting mirrors to provide the optimal field of vision.
- Identify pinch or crush points.
- Discuss the importance of chocking the wheels of the vehicle after applying the parking brake.
- Explain when and how to use an auxiliary braking device during slippery conditions.

**Apparatus Prone to Rollover**
- Identify the recommended best practices to maintaining control of high center of gravity vehicles.
- List the primary considerations to avoid a rollover crash.

**Safe Operations at Highway Incidents**
- Explain procedures for safe positioning of emergency apparatus while operating in or near moving traffic.
• Outline the actions necessary to ensure safety of personnel when operating in or near moving traffic.
• Explain the ten best practices to ensure roadway safety.

**Crash Review**
• Identify the procedures for crash investigation.

**Vehicle and Apparatus Care**
• Identify the value and importance of regular inspections and documentation of the inspections on emergency vehicles.
• Identify the various classes of preventive maintenance and the importance of a preventive maintenance program for emergency vehicles.
• Identify the component of an inspection and maintenance program.
• Discuss how to perform pre and post trip inspections.
• Identify the role of the driver in inspections and maintenance.
• Identify the importance of keeping accurate and complete maintenance and inspection records.

**Preventive Maintenance**
• Perform routine tests, inspections, and servicing functions on the systems and components specified in the following list, given a fire department vehicle, its manufacturer’s specifications, and policies and procedures of the jurisdiction, so that the operational status of the vehicle is verified.
  • Battery (ies)
  • Braking system
  • Coolant system
  • Electrical system
  • Fuel
  • Hydraulic fluids
  • Oil
  • Tires
  • Steering system
  • Belts
  • Tools, appliances, and equipment
• Document the routine tests, inspections, and servicing functions, given maintenance and inspection forms, so that all items are checked for operation and deficiencies are reported.
• Discuss manufacturer specifications and requirements, policies, and procedures of the jurisdiction.
• Demonstrate the ability to use hand tools and equipment and complete all related departmental forms.
• Demonstrate the ability to recognize system problems and limitations of the electronics provided.
• Demonstrate the ability to document any deficiency noted according to policies and procedures.
• List routine tests, inspection, and servicing functions given maintenance and section forms, so that all items are checked for operation, and deficiencies are reported.

**Driving / Operating**
• Operate a fire department vehicle, given a vehicle and a predetermined route on a closed course or public way that incorporates the maneuvers and features, specified in the following
list, that driver/operator is expected to encounter during normal operations, so that the vehicle is operated in compliance with all applicable state and local laws, departmental rules and regulations, and the requirements of NFPA 1500, Section 4.2

- Recognizing the importance of donning passenger restraint devices and ensuring crew safety.
- Identifying the common causes of fire apparatus accidents and recognizing the driver’s/ operator’s responsibility for the safe and prudent operation of the vehicle under all conditions.
- Identifying the effects on vehicle control of liquid surge, braking reaction time, and load factors.
- Identifying the effects of high center of gravity on roll-over potential, general steering reactions, speed, and centrifugal force.
- Identify applicable laws and regulations.
- Explain the principles of skid avoidance, night driving, shifting, and gear patterns.
- Identify safe driving techniques for negotiating intersections, railroad crossings, and bridges.
- Identify weight and height limitations for both roads and bridges;
- Identifying auto gauges and their operational limits.
- Properly operate all passenger restraint devices.
- Demonstrate safe following distances.
- While driving a given piece of apparatus, maintain control of the vehicle during acceleration, deceleration, and turning for given environmental and various driving surface conditions.

• Demonstrate backing a vehicle from a roadway into restricted spaces on both the right and left sides of the vehicle, given a fire apparatus, a spotter, and restricted spaces 12 feet in width, requiring 90-degree right-hand and left-hand turns from the roadway, so that the vehicle is parked within the restricted areas without having to stop and pull forward and without striking obstructions.

• Maneuver a vehicle around obstructions on a roadway while moving forward and in reverse, given a fire apparatus, a spotter for backing, and a roadway with obstructions, so that the vehicle is maneuvered through the obstructions without stopping to change the direction of travel and without striking the obstructions.

• Demonstrate turning a fire apparatus 180 degrees within a confined space, given a fire apparatus, a spotter for backing up, and an area in which the vehicle cannot perform a U-turn without stopping and backing up, so that the vehicle is turned 180 degrees without striking obstructions within the given space.

• Maneuver a fire apparatus in areas with restricted horizontal and vertical clearances, given a fire apparatus and a course that requires the operator to move through areas of restricted horizontal and vertical clearances, so that the operator accurately judgments the ability of the vehicle to pass through the openings and so that no obstructions are struck.

• Operate a vehicle using defensive driving techniques, given an assignment and a fire apparatus, so that control of the vehicle is maintained.

• Operate all fixed systems and equipment on the vehicle not specifically previously addressed, given systems and equipment, manufacturer’s specifications and instructions, and departmental policies and procedures for the systems and equipment, so that each system or piece of equipment is operated in accordance with eh applicable instructions and policies.
EVOC (16 HR)  EVOC (16 HR)

Mondays & Wednesdays 1800 – 2200  or as scheduled
Saturdays  as scheduled

EVOC (16 HR COURSE)

| EVOC DAY 1 | DRIVING (EVOC) | 4 |
| 1800 – 2200 | OBJECTIVES: (NFPA 1002 & NFPA 1451) |
| (M) | LAB: Truck & Small Equipment Checks |
| | VFIS Curriculum |

| EVOC DAY 2 | DRIVING (EVOC) | 4 |
| 1800 – 2200 | OBJECTIVES: (NFPA 1002 & NFPA 1451) |
| (W) | VFIS Curriculum |

| EVOC DAY 3 | DRIVING (EVOC) | 8 |
| 0800 – 1630 | OBJECTIVES: (4.3.1-4.3.7) |
| (Sat) | OBJECTIVES: (NFPA 1451) |
| | LAB: Driving & Pump Ops |
| | Quiz (Driving Evaluation) |