

# ADVANCED DIPLOMA IN FIRE TECHNOLOGY

## Qualification code: ADFI20 - NQF Level 7 (120 credits)

SAQA ID: 111619, CHE NUMBER: H/H16/E070CAN

Campus where offered: Arcadia Campus

### REMARKS

- a. *Admission requirement(s):*  
A National Diploma: Fire Technology, **or** a Diploma in Fire Technology **or** a relevant bachelor's degree, **or** an equivalent qualification at NQF Level 6 with a minimum of 360 credits.
- Holders of any other equivalent South African or international qualification may also be considered, see Chapter 1 of Students' Rules and Regulations.
- b. *Selection criteria:*  
Admission is subject to selection. Prospective students will be evaluated based on the marks obtained in the previous qualification and/or work experience.
- Acceptance is subject to available capacity according to the Student Enrolment Plan (SEP). Applicants will be informed of their status per official letter from the Office of the Registrar, alternatively, they can check their application status on the TUT website, [www.tut.ac.za](http://www.tut.ac.za).
- c. *Recognition of Prior Learning (RPL), equivalence and status:*  
See Chapter 30 of Students' Rules and Regulations.
- d. *Intake for the qualification:*  
January only.
- e. *Presentation:*  
Block-mode classes.
- f. *Minimum duration:*  
One year.
- g. *Exclusion and readmission:*  
See Chapter 2 of Students' Rules and Regulations.

### CURRICULUM

#### ATTENDANCE

| CODE                            | MODULE                  | NQF-L | CREDIT |
|---------------------------------|-------------------------|-------|--------|
| <b>FIRST SEMESTER</b>           |                         |       |        |
| EMG117V                         | Emergency Management IV | (7)   | (18)   |
| FMG117V                         | Financial Management II | (7)   | (18)   |
| FPH117V                         | Fire Physics IV         | (7)   | (24)   |
| TOTAL CREDITS FOR THE SEMESTER: |                         |       | 60     |
| <b>SECOND SEMESTER</b>          |                         |       |        |
| FCH117V                         | Fire Chemistry IV       | (7)   | (24)   |
| FTE117V                         | Fire Technology IV      | (7)   | (18)   |

|   |     |      |
|---|-----|------|
| PES117V Psychology: Emergency Services II | (7) | (18) |
| TOTAL CREDITS FOR THE SEMESTER:           |     | 60   |
| TOTAL CREDITS FOR THE QUALIFICATION:      |     | 120  |

## MODULE INFORMATION (OVERVIEW OF SYLLABUS)

The syllabus content is subject to change to accommodate industry changes. Please note that a more detailed syllabus is available at the Department or in the study guide that is applicable to a particular module. At time of publication, the syllabus content was defined as follows:

### E

#### **EMERGENCY MANAGEMENT IV (EMG117V)** *(Module custodian: Department of Physics)*

**1 X 3-HOUR PAPER**

Introduction and unit overview of management theories of employee motivation in management, motivation processes and application of motivational theories. Contemporary management framework of management practices based on recent trends. Managers and managing, Leadership vs. management, organisational performance management, efficiency and effectiveness, levels of managers, the roles of managers and diversity management. Disaster management and the key components of emergency management. Fire service operations incident command, fire and rescue service incident command doctrine, organisation on the incident ground, and incident risk management and command within the resilience framework. (Total tuition time: ± 180 hours)

### F

#### **FINANCIAL MANAGEMENT II (FMG117V)** *(Module custodian: Department of Finance and Investment)*

**1 X 3-HOUR PAPER**

Environment for Managerial Finance; Time Value of Money; Risk and Return; Financial Statements and Analysis; Capital Budgeting and Cash Flows; Working Capital and Current Asset Management as well as Cost-Volume-Profit (CVP) Analysis. (Total tuition time: ± 180 hours)

#### **FIRE PHYSICS IV (FPH117V)** *(Module custodian: Department of Physics)*

**1 X 3-HOUR PAPER**

Diffusion flames and fire plumes; Steady burning of liquids; Steady burning of solids; Ignition: the initiation of flaming combustion; Spread of flame; Spontaneous ignition within solids and smoldering combustion; The pre-flashover compartment fire; The post-flashover compartment fire; and The production and movement of smoke. (Total tuition time: ± 240 hours)

#### **FIRE CHEMISTRY IV (FCH117V)** *(Module custodian: Department of Chemistry)*

**1 X 3-HOUR PAPER**

Flammable gases and flammable liquids; Hazardous simple organic materials; Hazardous complex organic compounds; and Polymeric materials. (Total tuition time: ± 240 hours)

#### **FIRE TECHNOLOGY IV (FTE117V)** *(Module custodian: Department of Physics)*

**1 X 3-HOUR PAPER**

Introduction to fire origin and cause provides an introduction in fire origin and cause determination. Fire behaviour; Determining the area of fire origin. Determining and classifying the cause of fires and explosions; Fire setters; and Preserving physical scene evidence. The purpose of this module is to provide a guide for emergency response personnel (ERP) who are charged with trying to determine the origin and cause of a fire. Fire origin and cause is designed to train fire officers beyond the certification level and make them better qualified. The module addresses key sections of NFPA® 1001 (2013 edition) and NFPA® 1021 (2009 edition) that focus on a fire service responder's responsibility to begin the process of fire investigation. (Total tuition time: ± 180 hours)

**PSYCHOLOGY: EMERGENCY SERVICES II (PES117V)****1 X 3-HOUR PAPER****(Module custodian: Department of Biomedical Sciences)**

Health care system; The health care professionalism; Developmental psychology; Understanding abnormal behaviour; Understanding the concept of pain; Understanding phases of life; and Stress and approaches to the study of stress. (Total tuition time: ± 180 hours)

