

# HEALTHCARE FACILITY MANAGEMENT (HFL)

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## HFL 100 (3 credit hours)

### Introduction to Healthcare Facility Management

Introduces students to Healthcare Facility Leadership by presenting an overview of the history and development of healthcare engineering. The student will: learn the importance of compliance with the various codes and standards applicable to the healthcare facility environment; explore the driving factors affecting the operations and maintenance of health care facilities; review the complexity of delivering engineering in a patient centered environment; gain understanding of the complex structure and reporting relationships that exist in the healthcare industry; understand how the facility environment impacts regulatory requirements, clinical needs, and financial bottom line of healthcare; and gain an understanding of his/her role within the facility management department and the hospital setting. Lecture: 3.0 credits (45 contact hours).

**Attributes:** Technical

**Components:** LEC: Lecture

## HFL 110 (2 credit hours)

### Introduction to Healthcare Industry

Introduces students to the healthcare industry by examining healthcare reporting relationships, organizational structures, personnel, facility types, department configurations, terminology, regulatory environment, and accreditation process. The course will also examine industry shifts related to an aging population and healthcare law changes. The student will have a clearer understanding of how to navigate the healthcare industry based on size and complexity. Lecture: 2.0 credits (30 contact hours).

**Attributes:** Technical

**Components:** LEC: Lecture

## HFL 120 (2 credit hours)

### Infection Control and Prevention

Examines the historical and evolving infection control complexities from both a clinical and physical environment perspective. Reviews changes the industry has taken to address this growing healthcare industry challenge. Studies how the physical environment and engineering practices during construction and maintenance impact infection control. Reviews infection control risk assessments and prevention documentation and techniques. Lecture 2.0 credits (30 contact hours).

**Attributes:** Technical

**Components:** LEC: Lecture

## HFL 130 (3 credit hours)

### Compliance, Codes and Standards I

Introduces student to the various codes & standards, regulatory, and accreditation agencies in Healthcare. Takes into consideration local, state, and federal regulatory bodies such as Occupational Safety and Health Administration (OSHA), National Fire Protection Association (NFPA), Building Owners and Managers Association (BOMA), Center for Medicare and Medicaid Services (CMS), American Society for Heating, Refrigeration, and Air-Conditioning Engineers (ASHRAE), International Organization for Standardization (ISO), National Electrical Code (NEC), International Building Code (IBC), The Joint Commission, and the DNV. Examines the facility leader's role in coordination and participation in the accreditation and regulatory survey processes. Evaluates the role of a coordinator and participant in emergency management drill and training. Develops fire training and drill coordination documentation. Lecture: 3.0 credits (45 contact hours).

**Pre-requisite:** HFL 100.

**Attributes:** Technical

**Components:** LEC: Lecture

## HFL 140 (3 credit hours)

### Maintenance and Operations I

Examines and reviews mechanical, electrical, plumbing, medical gas, fire protection, building envelope, medical, steam, and security systems that comprise most healthcare facilities. Reviews computer systems and software such as building automation, fire systems, work order systems, and CAD/BIM used by facility engineering. Understands equipment inventory, entry control, and disposition. Develops maintenance program for buildings, equipment, utilities, and grounds. Reviews energy management and benchmarking. Lecture: 3.0 credits (45 contact hours).

**Pre-requisite:** HFL 100.

**Attributes:** Technical

**Components:** LEC: Lecture

## HFL 150 (3 credit hours)

### Planning, Design and Construction I

Covers project management delivery from concept, development, design, contracting, method, bidding, budgeting, equipment acquisition, specifications, and meeting management. Develops and reviews current Infection Control Risk Assessment (ICRA) practices and documentation. Develops and reviews Interim Life Safety Measures (ILSM) practices and documentation. Lecture: 3.0 credits (45 contact hours)

**Pre-requisite:** HFL 100.

**Attributes:** Technical

**Components:** LEC: Lecture

## HFL 230 (3 credit hours)

### Compliance, Codes and Standards II

Examines the major codes, standards and regulatory rules that apply to the healthcare industry. Examines. National Fire Protection Association (NFPA) 101, 110, 99, 25, 20, 10; Facility Guidelines Institute (FGI) Guidelines; The Joint Commission Standards for accreditation; and how to maintain standard specific documentation and checklists for accreditation surveys. Develops and maintains medical equipment and utility system programs. Develops and conducts environmental rounds and surveys. Develop standard specific policies and procedures, such as National Fire Protection Association (NFPA) 99 electrical equipment safety inspection requirements. Lecture: 3.0 credits (45 contact hours).

**Pre-requisite:** HFL 130.

**Attributes:** Technical

**Components:** LEC: Lecture

**HFL 240 (3 credit hours)**

**Maintenance and Operations II**

Examines the administration and coordination of work order processes to include preventive maintenance, corrective maintenance, moves, and projects. Applies equipment risk assessments in developing a maintenance program. Tests, monitors, and documents air quality, air exchange, and pressure relationships. Maintain control access and key control systems. Manages policies and procedures. Develops competency based training programs. Manages low voltage systems ((Nurse call, Closed Circuit Television System (CCTV), patient monitoring, Radio Frequency Identification (RFID) etc.)). Understands Performance Improvement (PI) processes. Lecture: 3.0 credits (45 contact hours).

**Pre-requisite:** HFL 140.

**Attributes:** Technical

**Components:** LEC: Lecture

**HFL 250 (3 credit hours)**

**Planning, Design and Construction II**

Examines the management, planning, monitoring, reporting, and closing out of projects. Emphasizes the management of drawing revisions, commissioning, equipment documentation, and hand off training. Details Change Order Request (COR) and Request For Information (RFI), as well as, reviewing the needs and requirements for space planning and allocation. Lecture: 3.0 credits (45 contact hours).

**Pre-requisite:** HFL 150.

**Attributes:** Technical

**Components:** LEC: Lecture

**HFL 260 (3 credit hours)**

**Healthcare Facilities Leadership Capstone I**

Examines and applies Performance Improvement (PI) activities in healthcare engineering operations, maintenance, and project environment. Develops goals using S.M.A.R.T guidelines (Specific, Measureable, Assignable, Realistic, and Time bound). Develops and manages capital budgets, operating budgets recommendations. Generates financial, productivity and performance dashboards. Develops and implements equipment and systems training programs. Develops and monitors customized measures, indicators, and trends from computerized maintenance data. Lecture: 3.0 credits (45 contact hours)

**Co-requisite:** HFL 140.

**Attributes:** Technical

**Components:** LEC: Lecture

**HFL 270 (3 credit hours)**

**Healthcare Facilities Leadership Capstone II**

Examines management of related healthcare engineering roles, such as fire safety, environment of care, waste management, emergency management, protection services, and environmental services. Examines management of Human Resource functions (e.g. competencies, disciplinary action, hiring, performance appraisals, terminations, scheduling, staff orientation, and job descriptions). Performs and participates in organizational strategic planning, SWOT (strengths, weaknesses, opportunities and threats) analysis, report writing and presentations. Examines the importance of networking and partnerships (e.g. peers, local authorities, state authorities, and industry experts). Lecture: 3.0 credits (45 contact hours).

**Pre-requisite:** HFL 260 Healthcare Facilities Leadership Capstone I.

**Co-requisite:** HFL 240.

**Attributes:** Technical

**Components:** LEC: Lecture