"2026 03 01 ASHRAE HFDP Exam Blueprint"

Table 1. *HFDP Exam Blueprint Weightings*

Domain	Description	Final Weightings
1	Medical Background Information	13%
2	Standards, Guidelines, and Codes for HVAC&R System Design for Healthcare Facilities	24%
3	HVAC&R System Design for Healthcare Facilities	39%
4	Unique Requirements for Healthcare Facilities	24%
TOTAL		**100%**

Table 2. *Domain 1: Medical Background Information*

Subdomain	Description	Weighting	Number of Items
1.1	Terminology	3%	3
1.2	Equipment	2%	2
1.3	Departments and Medical Procedures	3%	3
1.4	Contaminants and Common Pathogens	2%	2
1.5	Contamination of Water Supply	3%	3
TOTAL		**13%**	**13**

Table 3. *Domain 2: Standards, Guidelines, and Codes for HVAC&R System Design for Healthcare Facilities*

Subdomain	Description	Weighting	Number of Items
2.1	Standards and Guidelines	14%	14
2.2	Regulatory Codes	10%	10
	TOTAL	**24%**	**24**

Table 4. *Domain 3: HVAC&R System Design for Healthcare Facilities*

Subdomain	Description	Weighting	Number of Items
3.1	Pressure Control	11%	11
3.2	Energy Efficiency	5%	5
3.3	Room Design	14%	14
3.4	Equipment and Application	9%	9
TOTAL		**39%**	**39**

Table 5. *Domain 4: Unique Requirements for Healthcare Facilities*

Subdomain	Description	Weighting	Number of Items
4.1	Central Plants	3%	3
4.2	Medical Equipment	3%	3
4.3	Fire and Life Safety	3%	3
4.4	Operations and Maintenance	3%	3
4.5	Infection Control	4%	4
4.6	Disaster Mitigation, Management, and Recovery	3%	3
4.7	Controls and Instrumentation	3%	3
4.8	Testing, Adjusting, Balancing, and Commissioning	2%	2
TOTAL		**24%**	**24**

Table 6. HFDP *Exam Question Complexity Breakdown*

	Recall	Application	Analysis	Total
Domain 1: Medical Background Information	5	8	0	13
Domain 2: Standards and Guidelines for HVAC System Design for Healthcare Facilities	18	6	0	24
Domain 3: HVAC System Design for Healthcare Facilities	8	23	8	39
Domain 4: Unique Requirements for Healthcare Facilities	9	13	2	24
TOTAL				100

Domain 1: Medical Background Information

Blue font = new content
Red font = old content

Subdomain 1.1: Terminology
1.1a: Identify Recognize relevant medical terms (e.g., immunocompromised)
1.1b: Demonstrate understanding of various healthcare types Understand the various healthcare facility and healthcare space types and the requirements associated with each

Subdomain 1.2: Equipment
1.2a: Describe the relationship of medical equipment to HVAC&R design
1.2b: Identify basic commonly encountered medical equipment

Subdomain 1.3: Departments and Medical Procedures
1.3a: Apply understanding of medical procedures to room designs how medical procedures guide and impact room designs
1.3b: Apply HVAC design criteria to medical functional areas

Subdomain 1.4: Contaminants and Common Pathogens *(Note: two subdomains combined)*
1.4a: Distinguish between airborne and contact transmission of pathogens Understand transmission, infection, and diseases
1.4b: Understand the importance and means of contaminant control
1.4c: Identify common pathogens
1.4d: Describe Identify conditions of pathogen growth of disease organisms
1.4e: Understand modes of infection and disease transmission

Subdomain 1.5: Contamination of Domestic Water Supply
1.5a: Understand and evaluate conditions under which pathogens grow (e.g., legionella)
1.5b: Describe known amplification sites for pathogens
1.5c: Identify and apply control methods for limiting pathogen growth and transmission

Domain 2: Standards, Guidelines, and Codes for HVAC&R System Design for Healthcare Facilities

Subdomain 2.1: Standards and Guidelines
2.1a: Recognize Identify common standards from ASHRAE
2.1b: Recognize Identify common guidelines
2.1c: Recognize Identify common requirements of the appropriate accreditation organization of healthcare facility accreditation organizations

Subdomain 2.2: Regulatory Codes
2.2a: Demonstrate understanding of Understand ASHRAE energy code requirements
2.2b: Recognize the requirements of local authorities and the effect on design Understand how code requirements of local authorities having jurisdiction impact design

Domain 3: HVAC&R System Design for Healthcare Facilities

Subdomain 3.1: Static Pressure Control
3.1a: Identify types of rooms that require static pressure control pressurization and understand pressure control and pressure relationships
3.1b: Apply methods to accomplish static pressure control
3.1c: Describe methods for measurement, notification, and documentation of static pressure control

Subdomain 3.2: Energy Efficiency
3.2a: Determine inefficiencies in healthcare system design
3.2b: Apply aspects of energy efficiency specific to healthcare
3.2c: Describe exemptions from the ASHRAE energy standard
3.2d: Demonstrate knowledge of Know the limitations of energy saving strategies
3.2e: Demonstrate understanding of Understand variable volume system application
3.2f: Demonstrate understanding of Understand energy use and management
3.2g: Articulate and apply energy recovery technologies appropriate for healthcare HVAC&R systems

Subdomain 3.3: Room Design Air Distribution
3.3a: Design systems with proper air flows and pressurizations
3.3b: Calculate air flow rates to comply with room air change rates and relative pressurizations
3.3c: Demonstrate understanding of Understand the fundamentals of diffuser placement
3.3d: Diagnose improper room air distribution and pressurization
3.3e: Describe psychrometric sensor placement

Subdomain 3.4: Equipment and Application
3.4a: Demonstrate understanding of knowledge of air handling systems design and arrangement of AHU components
3.4b: Identify security concerns related to HVAC&R
3.4c: Locate equipment Recognize the restrictions and limitations with respect to HVAC&R equipment location
3.4d: Demonstrate Apply knowledge of psychometric principles to space HVAC&R design

Domain 4: Unique Requirements for Healthcare Facilities

Subdomain 4.1: Central Plants
4.1a: Recognize requirements for equipment redundancy

Subdomain 4.2: Medical Equipment
4.2a: Demonstrate understanding of Identify contribution of medical equipment to loads
4.2b: Demonstrate understanding of Describe special HVAC&R requirements of medical equipment
4.2c: Describe major diagnostic and treatment equipment
4.2d: Describe application of the function of sterilizers, required utility connections, and implications for room design

Subdomain 4.3: Fire and Life Safety
4.3a: Describe smoke management requirements for healthcare facilities
4.3b: Demonstrate understanding of Describe ventilation system requirements for medical gas storage areas
4.3c: Demonstrate understanding of Describe healthcare facility compartmentalization

Subdomain 4.4: Operations and Maintenance
4.4a: Maintain equipment accessibility
4.4b: Maintain functionality during maintenance
4.4c: Demonstrate understanding of Understand healthcare facility operations
4.4d: Describe consequences of continuity of service
4.4e: Prescribe procedures for abnormal operation conditions

Subdomain 4.5: Infection Control
4.5a: Describe the primary elements of an ICRA process
4.5b: Describe the role of the HVAC&R designer in the ICRA process
4.5c: Demonstrate understanding of Describe how the ICRA affects mechanical drawings and specifications
4.5d: Demonstrate understanding of Identify the various ICRA engineering controls used during construction
4.5e: Demonstrate understanding of Describe contamination control related to construction and renovation activities
4.5f: Describe strategies for epidemiology infection control related to HVAC&R

Subdomain 4.6: Disaster Mitigation, Management, and Recovery
4.6a: Demonstrate understanding of Summarize design contingencies following utility system failure
4.6b: Evaluate needs following catastrophic events
4.6c: Demonstrate understanding of current literature
4.6d: Demonstrate understanding of Conduct hazard vulnerability analysis

Subdomain 4.7: Controls and Instrumentation
4.7a: Demonstrate understanding of Understand HVAC&R system controls and monitoring strategies
4.7b: Demonstrate understanding of Describe room pressure control strategies
4.7c: Monitor Describe mechanical, electrical, and fire shutdown controls
4.7d: Describe temperature and humidity controls

Subdomain 4.8: Testing, Adjusting, Balancing, and Commissioning
4.8a: Demonstrate understanding of Understand requirements for measuring existing conditions prior to renovations
4.8b: Recognize performance metrics of commissioning Describe test procedures for commissioning various areas requiring unique pressure relationships
4.8c: Understand TAB reports for healthcare facilities
4.8d: Demonstrate understanding of various control sequences