
Certificate Programme in Healthcare Facility Design and Layout (United Kingdom)

Sustainable And Energy Efficient Design

Aalto Studio is a method of designing healthcare facilities that focuses on patient-centered care and evidence-based design. It involves a multidisciplinary approach to design, where architects, engineers, and healthcare professionals work together to create a facility that meets the needs of patients, staff, and visitors. Related terms include lean design and quality function deployment.

Air Changes Per Hour (ACH) refers to the rate at which the air in a room or building is replaced with fresh air. In healthcare facilities, ACH is critical in preventing the spread of infections and maintaining indoor air quality. For example, operating rooms require a higher ACH than patient rooms. Related terms include ventilation and air filtration.

American Society for Healthcare Engineering (ASHE) is a professional organization that provides guidance and resources for healthcare engineers and architects. ASHE offers certification programs, conferences, and publications on topics such as sustainability and energy efficiency in healthcare facilities. Related terms include healthcare engineering and facilities management.

Anthropometric Design is a method of designing healthcare facilities that takes into account the physical characteristics of patients, staff, and visitors. It involves using data on human dimensions to design spaces that are accessible and usable for people of all ages and abilities. For example, anthropometric design can be used to design patient rooms with adjustable beds and grab bars. Related terms include universal design and inclusive design.

Architectural Barriers Act (ABA) is a law that requires federal buildings, including healthcare facilities, to be accessible to people with disabilities. The ABA sets standards for building design, including ramps, elevators, and restrooms. Related terms include Americans with Disabilities Act (ADA) and accessibility.

ASHRAE Standard 170 is a guideline for ventilation in healthcare facilities. It provides requirements for air changes per hour, air filtration, and temperature and humidity control. For example, ASHRAE Standard 170 requires that operating rooms have a minimum of 15 air changes per hour. Related terms include indoor air quality and infection control.

Bacteria is a type of microorganism that can cause infections in healthcare facilities. Bacteria can be spread through air, water, and contact with contaminated surfaces. For example, Methicillin-resistant *Staphylococcus aureus* (MRSA) is a type of bacteria that is commonly found in healthcare facilities. Related terms include infection control and sterilization.

Bio-Based Design is a method of designing healthcare facilities that incorporates natural materials and systems. It involves using plants, daylight, and natural ventilation to create a healthy and sustainable environment. For example, bio-based design can be used to design green roofs and living walls. Related terms include biophilia and sustainable design.

Building Information Modeling (BIM) is a software tool used for designing and managing healthcare facilities. BIM allows architects, engineers, and contractors to collaborate on design and construction projects. For example, BIM can be used to design patient rooms and operating rooms. Related terms include computer-aided design (CAD) and facility management.

Carbon Footprint is a measure of the environmental impact of a healthcare facility. It involves calculating

the amount of greenhouse gas emissions produced by the facility, including energy consumption and transportation. For example, a healthcare facility can reduce its carbon footprint by using renewable energy sources and energy-efficient equipment. Related terms include sustainability and energy efficiency.

Certified Healthcare Facility Manager (CHFM) is a credential offered by the American Hospital Association (AHA) to facility managers who have demonstrated expertise in healthcare facility management. CHFM certification requires education, experience, and examination. Related terms include healthcare engineering and facilities management.

Commissioning is a process of testing and verifying that a healthcare facility's systems and equipment are functioning properly. Commissioning involves checking mechanical, electrical, and plumbing systems, as well as fire safety and security systems. For example, commissioning can be used to test ventilation systems and air filtration systems. Related terms include quality control and maintenance.

Computer-Aided Design (CAD) is a software tool used for designing and drafting healthcare facilities. CAD allows architects and engineers to create 2D and 3D models of buildings and systems. For example, CAD can be used to design patient rooms and operating rooms. Related terms include building information modeling (BIM) and facility management.

Construction Management is a process of planning, coordinating, and controlling construction projects. Construction management involves overseeing contractors, subcontractors, and suppliers to ensure that projects are completed on time and within budget. For example, construction management can be used to build new hospitals and clinics. Related terms include project management and facilities management.

Daylighting is a design strategy that involves using natural light to illuminate healthcare facilities.

Daylighting can reduce the need for artificial lighting and improve mood and cognition. For example, daylighting can be used to design patient rooms and public areas. Related terms include natural ventilation and sustainable design.

Disaster Recovery is a plan for responding to and recovering from disasters such as natural disasters and power outages. Disaster recovery involves identifying risk, developing contingency plans, and implementing emergency procedures. For example, disaster recovery can be used to respond to hurricanes and floods. Related terms include emergency preparedness and business continuity.

Energy Efficiency is a measure of the ability of a healthcare facility to reduce energy consumption while maintaining performance. Energy efficiency involves using energy-efficient equipment and systems, such as LED lighting and solar panels. For example, energy efficiency can be used to reduce energy costs and greenhouse gas emissions. Related terms include sustainability and renewable energy.

Evidence-Based Design (EBD) is a method of designing healthcare facilities that involves using research and data to inform design decisions. EBD involves analyzing patient outcomes, staff satisfaction, and operational efficiency to create effective and efficient healthcare facilities. For example, EBD can be used to design patient rooms and operating rooms. Related terms include quality improvement and patient-centered care.

Facility Management is a process of managing and maintaining healthcare facilities. Facility management involves overseeing building operations, maintenance, and repair. For example, facility management can be used to maintain heating and cooling systems, as well as plumbing and electrical systems. Related terms include construction management and operations management.

Green Building is a method of designing and building healthcare facilities that reduces environmental impact. Green building involves using sustainable materials, energy-efficient systems, and water conservation measures. For example, green building can be used to design hospitals and clinics that are

energy-efficient and sustainable. Related terms include sustainable design and energy efficiency.

Hand Hygiene is a practice of washing and disinfecting hands to prevent the spread of infections. Hand hygiene is critical in healthcare facilities, where patients are vulnerable to infections. For example, hand hygiene can be used to prevent the spread of Methicillin-resistant *Staphylococcus aureus* (MRSA). Related terms include infection control and sterilization.

Healthcare-Associated Infections (HAIs) are infections that occur in healthcare facilities. HAIs can be caused by bacteria, viruses, and fungi, and can be spread through contact with contaminated surfaces, air, and water. For example, HAIs can be used to track infection rates and mortality rates. Related terms include infection control and sterilization.

Hospital-Acquired Condition (HAC) is a condition that occurs in a healthcare facility, such as a pressure ulcer or a fall. HACs can be caused by medical errors, infections, and other factors. For example, HACs can be used to track patient safety and quality of care. Related terms include patient safety and quality improvement.

Infection Control is a process of preventing and controlling the spread of infections in healthcare facilities. Infection control involves identifying risk, developing protocols, and implementing interventions to reduce infection rates. For example, infection control can be used to prevent the spread of Methicillin-resistant *Staphylococcus aureus* (MRSA). Related terms include hand hygiene and sterilization.

Indoor Air Quality (IAQ) is a measure of the quality of air inside healthcare facilities. IAQ involves monitoring air pollutants, such as particulate matter and volatile organic compounds, and implementing strategies to improve air quality. For example, IAQ can be used to reduce respiratory problems and other health issues. Related terms include ventilation and air filtration.

Lean Design is a method of designing healthcare facilities that involves eliminating waste and maximizing efficiency. Lean design involves analyzing workflows and processes to identify areas for improvement. For example, lean design can be used to design patient rooms and operating rooms. Related terms include quality improvement and patient-centered care.

Life Cycle Costing (LCC) is a method of evaluating the cost of a healthcare facility over its entire life cycle. LCC involves considering initial costs, operating costs, and maintenance costs to determine the total cost of ownership. For example, LCC can be used to evaluate the cost of energy-efficient systems and sustainable materials. Related terms include cost-benefit analysis and return on investment.

Medical Gas Systems are systems that provide medical gases, such as oxygen and nitrous oxide, to patients in healthcare facilities. Medical gas systems involve pipelines, valves, and regulators to deliver gases to patient care areas. For example, medical gas systems can be used to provide oxygen therapy and anesthesia. Related terms include medical equipment and patient care.

National Fire Protection Association (NFPA) is an organization that develops and maintains standards for fire safety in healthcare facilities. NFPA standards involve requirements for fire alarms, fire suppression systems, and emergency evacuation plans. For example, NFPA standards can be used to design fire-safe hospitals and clinics. Related terms include fire safety and emergency preparedness.

Noise Reduction is a strategy for reducing noise levels in healthcare facilities. Noise reduction involves using acoustic materials, soundproofing, and white noise to create a quieter environment. For example, noise reduction can be used to improve patient sleep and reduce stress. Related terms include acoustics and sound quality.

Operating Room (OR) is a room in a healthcare facility where surgical procedures are performed. ORs

involve specialized equipment, such as operating tables and anesthesia machines, and require strict infection control and sterilization protocols. For example, ORs can be used to perform surgical procedures and emergency interventions. Related terms include surgery and anesthesia.

Patient-Centered Care is a method of delivering healthcare that focuses on the needs and preferences of patients. Patient-centered care involves involving patients in decision-making and providing personalized care. For example, patient-centered care can be used to improve patient satisfaction and health outcomes. Related terms include quality improvement and patient safety.

Patient Room is a room in a healthcare facility where patients stay during their hospitalization. Patient rooms involve specialized equipment, such as hospital beds and medical monitors, and require strict infection control and sterilization protocols. For example, patient rooms can be used to provide rest and recovery for patients. Related terms include hospital design and patient care.

Quality Function Deployment (QFD) is a method of designing healthcare facilities that involves identifying customer needs and deploying design solutions to meet those needs. QFD involves analyzing patient needs, staff needs, and operational needs to create a high-quality healthcare facility. For example, QFD can be used to design patient rooms and operating rooms. Related terms include quality improvement and patient-centered care.

Renewable Energy is a source of energy that is sustainable and renewable, such as solar power and wind power. Renewable energy can be used to reduce greenhouse gas emissions and improve air quality. For example, renewable energy can be used to power hospitals and clinics. Related terms include sustainability and energy efficiency.

Resilient Design is a method of designing healthcare facilities that involves creating flexible and adaptable spaces that can respond to changing needs and emergencies. Resilient design involves analyzing risk and developing strategies to mitigate disasters and emergencies. For example, resilient design can be used to design hospitals and clinics that can withstand natural disasters and power outages. Related terms include disaster recovery and emergency preparedness.

Sustainability is a concept that involves reducing the environmental impact of healthcare facilities.

Sustainability involves using renewable energy sources, reducing waste, and conserving water. For example, sustainability can be used to design green buildings and energy-efficient systems. Related terms include green building and energy efficiency.

Telehealth is a method of delivering healthcare remotely through technology, such as video conferencing and phone consultations. Telehealth can be used to improve access to healthcare, reduce costs, and enhance patient engagement. For example, telehealth can be used to provide remote monitoring and consultations. Related terms include telemedicine and digital health.

Universal Design is a method of designing healthcare facilities that involves creating spaces that are accessible and usable by people of all ages and abilities. Universal design involves using principles such as flexibility and perceptibility to create inclusive environments. For example, universal design can be used to design patient rooms and public areas. Related terms include inclusive design and accessibility.

Ventilation is a system that provides fresh air and removes stale air from healthcare facilities. Ventilation involves using fans, ducts, and filters to circulate air and remove pollutants. For example, ventilation can be used to improve indoor air quality and reduce infection rates. Related terms include air filtration and indoor air quality.

Water Conservation is a practice of reducing water usage in healthcare facilities. Water conservation

involves using low-flow fixtures, greywater systems, and rainwater harvesting to reduce water waste. For example, water conservation can be used to reduce water costs and minimize environmental impact.

Related terms include sustainability and water management.

Wayfinding is a system of signs and directions that helps patients, visitors, and staff navigate healthcare facilities. Wayfinding involves using visual cues, maps, and directional signs to create a clear and intuitive navigation system. For example, wayfinding can be used to design public areas and patient rooms. Related terms include signage and navigation.