Medical Equipment Planning and Technology Assessment Training Course



21 - 25 Dec 2026

Kuala Lumpur

5200 € (Per Person)

Ref: #HSM2861_106233

Course Introduction / Overview:

This comprehensive course provides a deep dive into the critical processes of medical equipment planning and Health Technology Assessment (HTA). In today's rapidly evolving healthcare landscape, the ability to strategically plan, assess, procure, and manage medical technology is paramount for delivering safe, effective, and cost-efficient patient care. This program is meticulously designed to equip professionals with the interdisciplinary skills needed to navigate the complexities of the entire medical equipment lifecycle. Drawing on principles outlined by leading experts like Dr. Binseng Wang and concepts from foundational texts such as "Medical Equipment Management", the curriculum integrates clinical needs analysis, financial planning, regulatory compliance, and project management. Participants will move beyond basic procurement to master strategic technology management. At BIG BEN Training Center, we provide a robust framework for making informed decisions that align technological investments with organizational goals, ensuring that healthcare facilities are equipped for both current needs and future innovations. This course is the definitive guide for professionals seeking to lead in the field of healthcare technology management.

Target Audience / This training course is suitable for:

- Clinical Engineers.
- Biomedical Engineers and Technicians.
- Healthcare Administrators and Hospital Managers.
- Procurement and Purchasing Managers in Healthcare.
- Healthcare Project Managers.
- Heads of Medical and Clinical Departments.
- Healthcare Facility Planners and Architects.
- Capital Planning and Finance Officers in Hospitals.
- Medical Equipment Planners and Consultants.
- Quality Assurance and Regulatory Affairs Professionals.

Target Sectors and Industries:

- Hospitals and Healthcare Systems.
- Ambulatory Care Centers and Specialized Clinics.
- Medical Device Manufacturing and Distribution Companies.
- Healthcare Consulting and Advisory Firms.
- Governmental bodies such as Ministries of Health and regulatory agencies.
- Public Health Organizations and Non-Governmental Organizations.
- Healthcare Construction and Architecture Firms.
- Third-party Medical Equipment Service Organizations.

Target Organizations Departments:

- Clinical Engineering and Biomedical Engineering Departments.
- Procurement and Supply Chain Management.
- Hospital Administration and Executive Management.
- Finance and Capital Budgeting Departments.
- Facilities Management and Planning.
- Information Technology (IT) and Health Informatics.
- Quality Management and Patient Safety Departments.
- Clinical Operations and Departmental Management.
- Project Management Office (PMO).

Course Offerings:

By the end of this course, the participants will have able to:

- Develop a comprehensive medical equipment plan for new and renovated healthcare facilities.
- Conduct a systematic Health Technology Assessment (HTA) to evaluate new medical devices.
- Master the principles of the entire medical equipment lifecycle from planning to disposal.
- Create detailed technical specifications and requests for proposals (RFPs).
- Analyze various financial models for technology acquisition, including leasing and purchasing.
- Manage the procurement process, including vendor negotiation and contract management.
- Oversee the installation, commissioning, and acceptance testing of medical equipment.
- Implement effective maintenance and asset management strategies.
- Ensure compliance with international and local medical device regulations and safety standards.
- Formulate a strategic technology roadmap aligned with clinical and business objectives.

Course Methodology:

The training methodology at BIG BEN Training Center is designed to be highly interactive, practical, and engaging, ensuring that participants can immediately apply their learning in a professional context. We move beyond traditional lectures to a blended learning approach that combines expert-led presentations with hands-on, collaborative activities. The course heavily features real-world case studies, challenging participants to solve complex equipment planning scenarios for different clinical environments, such as an operating theatre or a diagnostic imaging center. Group workshops and team-based exercises will be used to simulate technology assessment committee meetings, allowing participants to practice evaluation and decision-making skills in a supportive environment. Interactive sessions, Q&A panels, and open discussions are integral to the program, fostering knowledge sharing and peer-to-peer learning. We focus on providing practical tools, templates, and frameworks that participants can adapt for their own organizations. This immersive approach ensures a deep understanding of both the theory and the practical application of medical equipment planning and management.

Course Agenda (Course Units):

Unit One: Foundations of Healthcare Technology Management

- Introduction to Healthcare Technology Management (HTM) and Clinical Engineering.
- The role of medical equipment in the healthcare delivery system.
- Conducting a comprehensive clinical needs assessment.
- Overview of the medical equipment lifecycle.
- Key stakeholders in the equipment planning process.
- Introduction to international standards and regulatory bodies (e.g., FDA, CE, ISO).
- Ethical considerations in technology selection and management.

Unit Two: Health Technology Assessment (HTA)

- Principles and frameworks of Health Technology Assessment (HTA).
- Evaluating clinical effectiveness and patient safety.
- Conducting economic evaluations and cost-benefit analysis.
- Assessing the organizational and operational impact of new technology.
- Horizon scanning for emerging medical technologies.
- Developing evidence-based criteria for technology selection.
- The role of the technology assessment committee.

Unit Three: Strategic Procurement and Financial Planning

- Developing detailed technical specifications for medical equipment.
- Crafting effective Request for Proposals (RFP) and tender documents.
- Strategies for vendor evaluation, selection, and negotiation.
- Understanding total cost of ownership (TCO).
- Capital budgeting and financial analysis for equipment acquisition.
- Exploring acquisition models: purchasing, leasing, and managed equipment services.
- Contract management and legal considerations in procurement.

Unit Four: Implementation, Installation, and Commissioning

- Integrating equipment planning with facility design and construction.
- Developing site readiness plans and architectural requirements.
- Project management for medical equipment installation.
- The process of factory and site acceptance testing.
- Coordinating with vendors, contractors, and clinical staff.
- Developing and executing comprehensive user training programs.
- Documentation, asset tagging, and inventory management.

Unit Five: Lifecycle Management and Emerging Trends

- Developing a strategic maintenance plan (preventive, corrective, predictive).
- Managing service contracts and in-house service teams.
- Monitoring equipment performance and utilization.
- Planning for technology replacement and upgrades.
- End-of-life management: decommissioning, resale, and safe disposal.
- The impact of AI, IoT, and telehealth on equipment planning.
- Sustainability and green practices in medical technology management.

FAQ:

Qualifications required for registering to this course?

There are no requirements.

How long is each daily session, and what is the total number of training hours for the course?

This training course spans five days, with daily sessions ranging between 4 to 5 hours, including breaks and interactive activities, bringing the total duration to 20 - 25 training hours.

Something to think about:

As healthcare moves towards personalized medicine and AI-driven diagnostics, how must traditional medical equipment planning models evolve to accommodate rapid, data-intensive technological shifts while ensuring patient safety and financial sustainability?

What unique qualities does this course offer compared to other courses?

This course distinguishes itself by adopting a holistic, strategic lifecycle perspective on medical technology, moving far beyond the conventional focus on procurement and maintenance. While other programs may address technical aspects in isolation, our curriculum integrates the critical domains of clinical needs analysis, financial strategy, regulatory compliance, and facility planning into a single, cohesive framework. We emphasize the development of interdisciplinary decision-making skills, preparing participants to function as strategic advisors who can balance clinical efficacy with financial stewardship. The content is heavily rooted in real-world application, utilizing complex case studies and simulation exercises that mirror the challenges professionals face, such as planning for a hybrid operating room or evaluating competing robotic surgery systems. Rather than just teaching how to buy a machine, this course teaches how to build a sustainable technology ecosystem. The focus is on mastering the strategic foresight required to not only meet current healthcare demands but also to anticipate and plan for the technological innovations of the future, ensuring long-term value and improved patient outcomes.