Advanced MMC and Modular Building Strategies Training Course

19 - 23 Oct 2026

Tokyo

5800 € (Per Person)

Ref: #CON8638_87025

Course Introduction / Overview:

The construction industry is undergoing a paradigm shift, moving away from traditional site-intensive methods towards more efficient, sustainable, and technologically advanced solutions. Modern Methods of Construction (MMC), including modular and off-site manufacturing, are at the forefront of this revolution, offering unparalleled benefits in speed, quality, safety, and cost-effectiveness. This comprehensive program is designed to provide a deep, strategic understanding of MMC and modular building. Drawing on principles championed by industry pioneers like Dr. Mark Lawson, a leading academic in off-site construction, this course delves into the core concepts of Design for Manufacturing and Assembly (DfMA). As detailed in foundational texts on industrialized construction, the focus is on integrating design, manufacturing, and on-site assembly into a seamless workflow. BIG BEN Training Center has developed this course to equip professionals with the practical skills and strategic foresight needed to lead complex MMC projects, transforming construction challenges into opportunities for innovation and excellence. Participants will explore the entire project lifecycle, from initial feasibility and digital design using BIM to supply chain management, logistics, and final installation, ensuring they can harness the full potential of these transformative construction methods.

Target Audience / This training course is suitable for:

- Construction Project Managers.
- Architects and Design Engineers.
- Structural and Civil Engineers.
- Real Estate Developers and Investors.
- Construction and Site Managers.
- Procurement and Supply Chain Managers.
- Manufacturing and Production Managers.
- Quantity Surveyors and Cost Estimators.
- Government Officials in Urban Planning and Housing.
- Sustainability Consultants in the built environment.

Target Sectors and Industries:

- Residential and Commercial Real Estate Development.
- Public and Private Infrastructure Projects.
- Healthcare and Educational Facility Construction.
- Hospitality and Leisure Sector.
- Industrial and Manufacturing Plant Construction.
- Government agencies responsible for public works, housing, and urban development.
- Retail and Commercial Fit-Out Sector.
- Emergency and Disaster Relief Housing Solutions.

Target Organizations Departments:

- Project Management Office (PMO).
- Engineering and Design Departments.
- Operations and Construction Management.
- Procurement and Supply Chain Logistics.
- Strategic Planning and Business Development.
- Quality Assurance and Control.
- Finance and Investment Departments.
- Facilities Management.
- Health, Safety, and Environment (HSE).

Course Offerings:

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

- Analyze the seven categories of Modern Methods of Construction (MMC) and their applications.
- Implement Design for Manufacturing and Assembly (DfMA) principles in project planning.
- Integrate Building Information Modeling (BIM) with off-site manufacturing processes.
- Develop robust supply chain and logistics strategies for modular components.
- Manage the complexities of on-site assembly and integration of prefabricated elements.
- Evaluate and mitigate risks associated with MMC and modular projects.
- Assess the financial viability and create a business case for adopting MMC.
- Ensure quality control throughout the off-site manufacturing and on-site assembly phases.
- Navigate regulatory compliance and building codes for innovative construction methods.
- Lead sustainable construction initiatives by leveraging the environmental benefits of MMC.

Course Methodology:

This training course employs a dynamic and interactive learning methodology designed for maximum knowledge retention and practical application. At BIG BEN Training Center, we believe in learning by doing. The program is structured around a blend of expert-led presentations, in-depth case study analyses of successful international MMC projects, and collaborative group workshops. Participants will engage in hands-on exercises that simulate real-world challenges, such as developing a DfMA strategy for a sample project or planning the logistics for a modular installation. Interactive sessions, Q&A panels, and peer-to-peer discussions are integral to the course, fostering a rich learning environment where experiences and insights can be shared. Our approach emphasizes problem-solving and critical thinking, moving beyond theoretical knowledge to build tangible skills. Participants will receive continuous feedback from experienced instructors, ensuring they can confidently apply the learned strategies and techniques to their own professional contexts. The methodology is designed to be engaging, practical, and directly relevant to the current demands of the construction industry.

Course Agenda (Course Units):

Unit One: Foundations of Modern Methods of Construction (MMC)

- Introduction to MMC and its evolution.
- The seven official categories of MMC defined.
- Key drivers for adopting MMC: speed, quality, safety, and sustainability.
- Comparing traditional construction with off-site and modular approaches.
- Global trends and market analysis of the MMC sector.
- Understanding the terminology: prefabrication, modular, off-site, and industrialized construction.
- Initial feasibility studies and business case development for MMC projects.

Unit Two: Design for Manufacturing and Assembly (DfMA) and Digital Integration

- Core principles of Design for Manufacturing and Assembly (DfMA).
- The role of the architect and engineer in an MMC workflow.
- Introduction to Building Information Modeling (BIM) for MMC.
- Utilizing BIM for design coordination, clash detection, and fabrication data.
- Digital twins and their application in modular construction.
- Standardization, customization, and platform-based design strategies.
- Early-stage collaboration between designers, manufacturers, and contractors.

Unit Three: Off-Site Manufacturing and Supply Chain Management

- Setting up and managing an off-site manufacturing facility.
- Materials selection for prefabricated components: steel, timber, and concrete.
- Quality assurance and quality control (QA/QC) in a factory environment.
- Lean manufacturing principles applied to construction.
- Developing a resilient supply chain for MMC.
- Procurement strategies for modular components and raw materials.
- Inventory management and production scheduling for just-in-time delivery.

Unit Four: Logistics, On-Site Assembly, and Project Integration

- Transportation planning for oversized modular units.
- Logistics and sequencing for efficient site delivery.
- Health and safety protocols for on-site assembly and crane operations.
- Techniques for module connection, sealing, and structural integration.
- Managing on-site works and coordinating with traditional trades.
- Commissioning and handover processes for MMC buildings.
- Project management frameworks for MMC projects.

Unit Five: Sustainability, Regulation, and the Future of MMC

- The environmental benefits of MMC: waste reduction and energy efficiency.
- Life cycle assessment of modular buildings.
- Navigating building codes, warranties, and insurance for MMC.
- Contractual models and risk allocation in MMC projects.
- The role of automation, robotics, and 3D printing in construction.
- Future innovations and the trajectory of industrialized construction.
- Developing a strategic roadmap for MMC implementation in your organization.

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 MMC shifts construction from a site-based to a manufacturing-based process, how must traditional project management roles and risk allocation models evolve to ensure successful project delivery?

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

This course distinguishes itself through its holistic and strategic approach, moving beyond a purely technical overview of modular construction. While other programs may focus narrowly on specific software or manufacturing techniques, this training provides a comprehensive, end-to-end understanding of the entire MMC ecosystem. It uniquely integrates the critical pillars of design (DfMA), digital technology (BIM), manufacturing, logistics, and on-site execution into a cohesive strategic framework. The curriculum is built upon real-world international case studies, providing participants with practical insights into both the successes and challenges of implementing MMC projects at scale. Furthermore, the course places a strong emphasis on the commercial and managerial aspects, covering risk management, procurement strategies, and business case development, which are often overlooked. It is designed not just to inform but to empower, equipping leaders to drive change and innovation within their organizations. By focusing on the strategic integration of processes and stakeholders, the course prepares participants to lead the future of construction, not just participate in it.