

International BIM Manager - digital construction management in a multinational environment

Form of study: online part-time

1 semester 2 semesters IN OCTOBER English

Key program features

- **BIM – introduction to basics – Lecture – 9h**
- History and current state of BIM methodology.
- The role of BIM in the investment process.
- BIM Model as a main project information container.
- BIM as an information modelling process throughout all stages of the project lifecycle.
- Digital construction and key aspects of BIM methods.
- International standards.

- **BIM implementation strategy – Lecture – 9h**
- BIM as a standardisation and managerial process.
- The human aspect in the implementation of BIM in multinational teams.
- The role of a manager in international design and construction of project setup.
- Introduction to working in an international environment –g. cultural differences in the BIM Manager’s role.

- **BIM as a standardisation subject – Lecture – 9h**
- Areas and scope of standardisation.
- BIM in accordance with ISO 19650.
- Procuring and executing projects following ISO 19650.
- Practical terms of standards implementation.
- BIM Management as an additional managerial layer of the projects.

- **Advanced aspects of BIM implementation – Lecture – 9h**
- Implementing Appointing Party’s BIM following Penn State BIM Guide for owners.
- BIM process in investment.
- Asset Breakdown Structure.

Dane zamieszczone w niniejszej karcie kierunku mają charakter wyłącznie informacyjny. Dane te nie stanowią oferty zawarcia umowy w rozumieniu art. 66 i nast. kodeksu cywilnego. Zgodnie z art. 160 ust. 3 ustawy z dnia 27 lipca 2005 roku Prawo o szkolnictwie wyższym, umowa między a studentem zawierana jest w formie pisemnej.

- Information Requirements.
 - Implementation strategy – key aspects for Appointing Party.
 - Legal aspects of BIM in contracts.
 - Information protocol as a foundation in the process.
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- **Specifics of BIM implementation in an international environment – Lecture – 9h**
 - Role of a BIM team in the company.
 - Roles and responsibilities in various, new positions.
 - Basic processes of model creation and maintenance.
 - Documents and data sources for projects in BIM.
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- **BIM vs modern project management – Lecture – 9h**
 - BIM manager's role in the international and native process of project management.
 - Lean and Agile Construction Management – how this goes with BIM – tools and practices.
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- **Model standardisation – Laboratory – 9h**
 - Parameterization and standardisation of library components.
 - Quality assurance process. LOD/LOI, MIDP and MPDT.
 - IFC exports.
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- **BIM in design team – Laboratory – 9h**
 - Design team with BIM – organisation and management.
 - CAD/BIM Standards and configuration of the environment.
 - Software ecosystem.
 - Competencies and scope of responsibilities for BIM team members.
 - Responsibilities Matrix RACI.
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- **BIM Open formats – Laboratory – 9h**
 - Basics of OpenBIM. IFC – definition, geometry properties and data.
 - Benefits and use.
 - Classes, Hierarchy, Schemes, Formats of IFC.
 - Mapping tables.

- Exporting to and importing from IFC. Viewers – capabilities and capacities, benefits and drawbacks. MVD – definition, practical examples.
- BCF – project information exchange format.

- **Model coordination – Laboratory – 9h**

- Internal and external coordination and interoperability of BIM models.
- Auditing process and verification methods.
- Basic coordination workflows for checking position, clash detection, information quality.
- Clash reports – avoiding, preventing, searching, resolving.

- **Design process management using CDE – Laboratory – 9h**

- Processes in CDE – from WIP to Shared.
- Administrating, configuring, managing, and supervising CDE.
- Creating roles and assigning responsibilities for groups.
- Functions of CDE – file registry, communication, coordination, management.
- Tracking changes using CDE.
- Naming convention – linking with MIDP and TIPD.

- **Investment process management using CDE – Laboratory – 9h**

- Advanced CDEs and their functions.
- Files registry, mailing, communication, processes management.
- Administrating the platform.
- Additional functions – costs, models, bids, reports, data mining, business analytics.
- Different platforms comparison.

- **BIM models on site – Laboratory – 9h**

- Use of BIM Models in the construction process.
- Information source for 4D and 5D.
- Classification for systems, products and components.
- Project lifecycle.
- Quantity and Time schedules as Model exports.

- **BIM models for Facility Management – Laboratory – 9h**

- Asset Information Management.
- Practical terms for using COBie standard.
- Export, management and data verification.
- Use of business analysis.
- National BIM Object Standard.
- NBS BIM Toolkit for facility management.
- Information processes organisation on mega-projects.

- **Advanced Techniques of BIM Management – Laboratory – 9h**
- Processes standardisation as per case studies.
- Mapping processes, setting up and prioritizing goals and BIM purposes.
- BIM/GIS Activators.

- **Appointing party BIM – Laboratory – 9h**
- BIM goals vs appointment description in international contracts.
- AIR, OIR, PIR in international projects.
- Contract changes considering BIM aspect.
- EIR case study.
- Role of communication in international BIM – exercising

- **Appointed Party BIM – designer and contractor – Laboratory – 9h**
- Pre and Post contractual BEP Role, form, goals, responsibilities, technical details of and in BEP.
- BIM Manager and BIM Coordinator as described in BEP.
- PIM and CDE setup.
- MPDT and Content Plan.

- **Advanced techniques of information model creation – Laboratory – 9h**
- Model creation processes.
- Designer's and contractor's documents.
- Data sources and modern technologies.
- Automation and parameterization.
- Working with libraries and components.
- Agreeing parameterization in international projects.
- Mapping global standards to efficient market standards.



Number of months of
studying: **9**



Number of hours: **162**



Number of meetings: **10**



Number of semesters: **2**

<https://www.merito.pl/english/poznan/our-offer/postgraduate-studies/programs/international-bim-manager-digital-construction-management-in-a-multinational-environment>