L'iniziativa è organizzata e promossa da:

## POLITECNICO DI MILANO



Corso in collaborazione con l'Ordine degli Architetti PPC della Provincia di Milano. Riconosciuti 20 cfp agli Architetti. Frequenza minima: 80%

Corso di formazione professionale

COBIM - COLLABORATIVE DESIGN WITH REVIT - ED1

Direttore del corso Prof. Luigi Cocchiarella

DIPARTIMENTO DI ARCHITETTURA E STUDI URBANI In caso di "accreditamento" del corso da parte dei Consigli Nazionali rappresentativi degli Ordini Professionali, i dati dei partecipanti saranno comunicati agli Ordini professionali di riferimento. Academic institution Department of Architecture and Urban Studies

**Director** Prof. Luigi Cocchiarella

**Duration** No. 32 hours

Place The course will take place online, on Microsoft Teams

**Registration** The ONLINE REGISTRATION procedure, available at the link:

https://www.polimi.it/index.php?id=5782&uid=4562

must be completed WITHIN and NOT AFTER the deadline indicated on the course registration web page  $% \left( {{\left[ {{{\rm{AFT}}} \right]_{\rm{AFT}}} \right]_{\rm{AFT}}} \right)$ 

Full registration fee: € 415

## Registration fee reduced by 15%: € 350

(access to registration with a reduced fee of 15%: members enrolled in the CNAPP / Order of Milan; participants in other / previous courses of our program, coporate and public administration groups of at least three participants; PhD students and students of the Politecnico di Milano)

# Registration fee reduced by 10%: € 370

(PhD students and students from other universities can access registration with a reduced fee of 10%) The registration fee for the course is VAT free pursuant to art. 10, DPR n. 633 of 26/10/1972 and subsequent amendments

# Administration

Dr. Marina Bonaventura tel: +39 02 2399 5165 e-mail: bimplus-dastu@polimi.it

# Policy

The organizers reserve the right not to carry out the event if the minimum number of subscribers is not reached, upon prior notice to interested parties via email.





# Permanent Training Event

coBIM:

# **COLLABORATIVE DESIGN WITH REVIT**

1<sup>ST</sup> EDITION

32 HOURS

# **Academic Institution**

Dipartimento di Architettura e Studi Urbani (DASTU)

Course in collaboration with the Order of Architects of the Province of Milan. 20 cfp awarded to architects. Minimum frequency: 80%

In case of "accreditation" of the course by the National Councils representing the Professional Orders, the data of the participants will be communicated to the Professional Orders.

Those enrolled in the Order of Architects of Milan will receive a 15% discount.

Autodesk Training Center (ATC) Certificate provided by the sponsor:





#### Participants

Architects, engineers, designers, project managers, PhD students, graduate students and students, technicians, corporate and public administration groups.

#### **Basic competences recommended**

No previous computer knowledge is required. A general knowledge of the Windows operating system and any CAD architectural design program is recommended.

#### Goal

Due to the structural change caused by digitalisation in the building industry and the evident demand for increasing productivity with simultaneous lower consumption of resources and energy as well as lower emissions, today significantly increased demands are placed on the planning and coordination services of all actors involved. Future development processes, from the planning and construction phase to the operation of the building, are therefore increasingly based on the principles of Building Information Modelling (BIM). In addition to the advantages of consistent 3D planning, this method places new demands on all project partners. BIM thus primarily causes a change in the way we work. Even though the computer is an effective interface for the cooperation of different parties in the AEC industry, the success of a project depends decisively on the socio-cultural imprints and disciplinary boundary conditions of the people involved. In addition to the technological challenges of digitalisation, the different working methods, requirements and objectives often represent a threshold to successful cooperation. During the course of the teaching activities, expert quests will be able to intervene on specific topics related to the program.

#### Programme

LECTURE 1-Inaugural lecture and introduction

Theory, context, state of art of BIM; concept of common data environment (CDE); preparation for installation and set-up of Autodesk Revit Architecture 2020; preparation for set-up of Autodesk BIM360 cloud platform

LECTURE 2–Entering Revit 2020 and BIM360 environment Introduction to Autodesk Revit 2020, settings, basic workflows; implementation of Autodesk BIM360 cloud environment

### LECTURE 3-Setting up teamwork and workflow

Introduction to the course theme (collaborative design task), set-up of project specific collaboration and definition of roles (BIM360), project organisation and settings in Revit (project information, standards, units, grid, levels, site, import formats, geo-referenced

#### location)

#### LECTURE 4–BIM component modelling 1

BIM component modelling in Revit 1 (floors, walls, columns, roofs), modification and evaluation (properties, type, material, schedules); application to collaborative project and coordination

#### LECTURE 5–BIM component modelling 2

BIM component modelling in Revit 2 (windows, doors, facades), modification and evaluation (properties, type, material, schedules); application to collaborative project and coordination

#### LECTURE 6-BIM component modelling 3

BIM component modelling in Revit 3 (stairs, ramps, specials), modification and evaluation (properties, type, material, schedules); application to collaborative project and coordination

#### LECTURE 7-Representation and documentation

Representation in Revit (visualisation, styles, templates); plan management (layout, sheets); export of various information levels (plans, schedules, images, movies); application to collaborative project and coordination

#### LECTURE 8-Finalisation, evaluation, outlook

Finalisation and evaluation of collaborative projects; outlook towards additional BIM workflows, analysis tools and collaborative methods in Revit (families, daylight analysis, energy performance with Insight, visual programming with Dynamo, GIS)

#### Activities

The course has a pretty operational character, with communications and activities led by the teacher, aiming at experimenting a methodological process and at learning principles and practices characterizing the modeling and management of information in a BIM environment.

#### Working materials

Participants will be provided with digital materials for the step-by-step development of the proposed theme, an appropriate bibliography and / or in-depth website will also be indicated.

#### Place

The course will take place remotely on the Microsoft Teams platform, room's tutor Marco Hemmerling

#### **Dates and time**

The course, lasting 32 hours, will take place on the following dates and times:

13-19 february 2021 - 13 (time: 09:00 - 13:00), 15, 16, 17, 18 (time: 09:00-12:00 and 14:00-17:00), 19 february (time: 09:00-13:00)

#### Teachers

Tobias Scheeder Marco Hemmerling (tutor)

An expert from NKE will visit the class during the course.

#### Software

During the days of the course the software BIM360 will be provided (sponsored by NKE); concerning Revit, the release 2021 is recommended, or 2020 or 2019, even trial; instructions on installation and settings of software and plugins will be provided.

The course also offers useful professional bases for obtaining software certifications related to the program topics.

