XXXXX - BIM Core (Industry-ready Practitioner) - Draft

Course description

This course describes the skills and knowledge to use Building Information Modelling (BIM) technologies. The course provides an overview of the technology and explores its applications, including Autodesk Revit as BIM Model authoring tools for Architecture, Structure, and MEP Systems (Or any other tools such as ArchiCAD, Tekla, and BricsCAD).
Basic CAD software (AutoCAD/Microstation/Civil 3D) knowledge required. Basic construction knowledge and the ability to read construction drawings are required. No mandatory BIM software experience is required, but not mandatory.

Ideal for fresh graduates and professionals who are focused and destined to transition into BIM as a career starter.

Eligibility: Fresh Degree/diploma graduates of Architecture/Civil/Structural/Construction/Building engineering studies

Code and title	XXXXX **– BIM Core (Industry-ready Practitioner)**
Topics you will be learning:	**Learning Outcomes:** At the end of this course, students should be able to: 1. Understand Building Information Modelling (BIM) Technology 2. Explore dimensions and Levels of (BIM) technology adoption 3. Learn to use Revit (or any other BIM authoring tool) for authoring an Architectural or Structural or MEP Systems or Civil 3D (terrain) BIM models
What you need to bring to class:	• USB or hard drive with the current work on it. (preferably back-up your work to the cloud) • Internet access at home, installed with *Splashtop* or any other remote access tool. • Remote access to a computer with AutoCAD, Revit Suite, InfraWorks ,PDF reader (free software)
Course/s start date:	XX/06/2026
Course/s finish date:	00/00/2026
Class dates & times:	(Weekday) 6 30pm- 9 30pm (online) 7 weeks (2 session per week) Saturday 11:00am - 1:00pm - 3 weeks

Learning location:	Saturday - **Engridd** Campus/Classroom
Subject coordinator:	XXX

Learning Program	**Hours**
Timetabled classes/tutorials with a trainer/teacher	60
Timetabled in class or a timetabled workplace-based assessment	-
Timetabled online student support	-
Practical placement/ Practicum/Workplace-based training	20
Self-directed learning and assessment	40
Total Hours	120

Assessment tasks >>

Task	Description	Due Date for Assessment	Learning Outcome/s	Course/s that relate to this assessment
Assessment 1: Knowledge Test	Multiple choice and 'drag and drop' quiz.	insert	This assessment will help you to demonstrate your ability to: • Identify relevant industry and BIM technology. • Outline the benefits and key features of the BIM application. • Identify strengths and limitations of using BIM for multi-disciplinary integration • Knowledge of technical terminology of BIM and IPD	XXXXX

Task	Description	Due Date for Assessment	Learning Outcome/s	Course/s that relate to this assessment
Assessment 2: Use BIM Technology for a project	Use of Revit as a BIM authoring Tool	insert	This assessment will help you demonstrate your ability to: • Determining BIM functionality with a modelling software program such as Autodesk Revit (or any other BIM modelling tool). • Reading and accurately interpreting the AutoCAD design input, specifications, and guidelines. • Operating relevant software and building an independent 3D Model for the project, with Architectural, structural, and MEP Services disciplines. • Manipulating and operating software for a simple presentation with drawings and rendered images.	XXXXX
Assessment 3: Preparation of Revit Templates	Preparation of Revit Template with discipline-specific settings and loaded contents	insert	This assessment will help you to demonstrate your ability to build a Multi-disciplinary Project Template For this assessment task, you are required to submit the following items: • Required blank template files of Architectural, Structural and MEP services system Discipline for a multi-residential project.	XXXXX

Course schedule >>

Timing (e.g. Week/Block)	Learning Topics	Learning Activities	Assessment	Resources
Week 1 Session 1	What is BIM? Introduction to the course Advantages of BIM for a Construction Project	**Web Session 1** • Understanding of BIM • Different dimensions of BIM • BIM data and attributes • BIM maturity levels	Introduction to Assessment Task 1	Computer, with internet access. Student web resources
Week 1 Session 2	Why is BIM? Benefits of BIM for a construction project, BIM Stakeholders	**Web Session 2** • Industry trends and challenges • Current construction landscape and issues • BIM benefits • BIM adoption and delivery • BIM framework		Computer with internet access. Student web resources
Week 2 Session 1	How is BIM? Levels of BIM Adoption BIM for integrated Project Delivery	**Web Session 3** • BIM Facts • Challenges of BIM adoption • BIM implementation rules • BIM drivers of change • Learning BIM		Computer with internet access. Student web resources

Timing (e.g. Week/Block)	Learning Topics	Learning Activities	Assessment	Resources
Week 2 Session 2		**Web Session 4** • Understanding of BIM application to project • Levels of BIM • Different dimensions of BIM • Revit Work-sharing Basic	Introduction to Assessment Task 2 **Assessment 1:** Knowledge Test due by the end of week 02	Computer with internet access with Autodesk Revit software installed
Week 3 Session 1	Use BIM Technology for a multidisciplinary project	**Training Session 1:** **Autodesk Revit interface/ Verticals** • Basics of Revit Systems • Revit Interface • View Controls • General Settings		Computer with internet access. Student web resources
Week 3 Session 2		**Training Session 2:** **Autodesk Revit interface/ Verticals** • Discipline-specific Settings • System Browser • Rooms, Zones, Space • Energy analysis/ BPA		Computer with internet access. Student web resources
		Contact Session 1		

Timing (e.g. Week/Block)	Learning Topics	Learning Activities	Assessment	Resources
Week 4 Session 1	Breakout training sessions for all verticals	**Training Session 3**		Computer with internet access Autodesk Revit software installed
Week 4 Session 2	Breakout training sessions for all verticals	**Training Session 4**		Computer with internet access MS Project or similar software.
Week 5 Session 1	Breakout training sessions for all verticals	**Training Session 5**		Computer with internet access Autodesk Revit software installed
Week 5 Session 2	Breakout training sessions for all verticals	**Training Session 6**		Computer with internet access. Student web resources
		Contact Session 2	-	
Week 6 Session 1	Breakout training sessions for all verticals	**Training Session 7**	Introduction to Assessment Task 3 -	Computer with internet access Autodesk Revit software installed

Timing (e.g. Week/Block)	Learning Topics	Learning Activities	Assessment	Resources
Week 6 Session 2	Breakout training sessions for all verticals	**Training Session 8**	**Assessment 2:** Use BIM Technology for a project due by end of week 6	Computer with internet access Autodesk Revit software installed
Week 7 Session 1	Breakout training sessions for all verticals	**Training Session 9**		
Week 7 Session 2	Breakout training sessions for all verticals	**Training Session 10**	**Assessment 3:** Preparation of Revit Templates due by end of week 7	
		Contact Session 2		

Note: Details of the training topics for Training Sessions 3-10 will be provided for each vertical separately. For your personalised schedule, please refer to the online portal.

- **BIM Handbook:** A Guide to Building Information Modelling for Owners, Designers, Engineers, Contractors, and Facility Managers. *Authors: Rafael Sacks, Chuck Eastman, Ghang Lee, Paul Teicholz - Wiley Publications.*
- **BIM and Integrated Design** – Strategies for Architectural Practice. Author: Randy Deutsch
- **Tutorial/Training Book:** Mastering Autodesk Revit, Mastering Revit Structure, Mastering Revit MEP

1. Elements and performance criteria

Element	Performance criteria	Assessment task
1. **Explore applications of building information modelling (BIM) for the project**	Define BIM deliverables for the project context	AT2
	Identify benefits of BIM for the project design and specifications	AT1
	Determine the advantages and limitations of BIM for the project	AT1
	Confirm the range of relevant software programs that can operate within the BIM platform	AT2
	Confirm BIM functionality with other software programs in accordance with organisational and project requirements	AT2
2. Prepare to use building design drawing software to set up project files.	Building design drawing software is installed and configured following relevant instructions	AT2
	Information on operating building design drawing software is accessed and interpreted to prepare project files for setup.	AT2
	Support for software installation, interpretation, and application of ***s***oftware functions and operations is obtained as required.	AT2
3. Plan software drawing file requirements.	Project brief and designer's notes are reviewed, and the scope and nature of the building design project are identified.	AT2
	Naming protocols for digital drawing files are determined according to project and workplace requirements and systems.	AT2, AT3
	Types of drawings required by the client, project and relevant authorities are determined in consultation with the designer	AT2, AT3
	Title block information is confirmed with designer.	AT3
	A checklist of drawing files required for the project is prepared with file-naming protocols applied.	AT2, AT3
4. **Apply BIM technology for a project**	Communicate and collaborate with various stakeholders using a common BIM model for the duration of the project	AT3
	Manipulate, share and contribute BIM data for the project in accordance with organisational and project requirements, as appropriate	AT3
	Record and report BIM performance, project outcomes and areas for improvement, in accordance with organisational and project requirements.	AT3
	Support information for building design drawing software is used to adapt built-in templates and set up project template files.	AT2, AT3

5. Set up project templates.	Software support information is accessed to assist in creating original project template files	AT2
	Project template files are named according to file-naming protocols and saved in the project folder in the correct location.	AT2, AT3
	Files are backed up in accordance with workplace procedures.	AT2, AT3

2. Required skills/ Performance Evidence:

Within the context described above, a person must provide evidence of:	**Assessment task**
1. Communication and interpersonal skills to promote BIM and its features to project stakeholders	AT2
2. Determining BIM functionality with a range of software programs	AT2, AT3
3. Reading and accurately interpreting relevant design specifications and guidelines	AT2
4. Operating relevant information technology for the project	AT2
5. analytical and problem-solving skills for the project	AT2
6. Installing and configuring building information modelling (BIM)-capable building design drawing software	AT2
7. Planning project file creation, including confirming project details and preparing a checklist of templates and required elements	AT2
8. Applying software functions and options to create project templates for the range of drawings required for the three building design projects, including: using in-built proformas, creating original template	AT3
9. Planning project file creation, including confirming project details and preparing a checklist of templates and required elements	AT2
10. Using workplace protocols and systems to name, save and back up building design templates and files.	AT2

3. Required knowledge:

A person demonstrating competency in this unit must be able to demonstrate knowledge of:	**Assessment task**
1. Relevant industry and BIM terminology	AT1, AT2
2. Benefits and key features of BIM applications	AT1
3. BIM documentation requirements	AT1, AT2, AT3
4. strengths and limitations of using BIM	AT1
5. Project management strategies	AT2, AT3
6. construction and technical terminology required to discuss digital building design drafting project templates and files with work colleagues, designer and external personnel	AT1

7. functions and options of building design drawing software relevant to creating project templates and files	AT3
8. Strategies for developing knowledge of building design drawing software	AT2
9. Systems for naming, saving and backing up digital drawing files	AT2, AT3
10. types of digital drawing templates and files required for building design projects.	AT3