

XXXXX - BIM for Students (Foundation Exposure) - Draft

Course description

This course describes the skills and knowledge to use Building Information Modelling (BIM) technologies. The course covers an overview of the technology, explores the applications of the technology and Autodesk Revit as one of the BIM authoring tools. No prior BIM or software knowledge required, just a basic understanding of construction drawings is sufficient.

Ideal for students exploring BIM as a career option, and for institutions introducing BIM awareness in their engineering/architecture programs.

Eligibility: Final year Degree/diploma students of Architecture/Interior Design/Civil/Structural/Construction/Building engineering studies

Code and title	XXXXX – BIM for Students	
Topics you will be learning:	Learning Outcomes: At the end of this course, students should be able to: <ol style="list-style-type: none"> 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 a BIM model 	
What you need to bring to class:	<ul style="list-style-type: none"> • USB or hard drive with the current work on it. (preferably back up your work to the cloud) • Internet access at home, installed with <i>Splashtop</i> or any other remote access tool. • Remote access to computer with AutoCAD, Revit, PDF reader (free software) 	
Course/s start date:	XX/05/2026	
Course/s finish date:	00/00/2026	
Class dates & times:	(Weekday) 6 30pm- 8 30pm (online) 10 weeks (1 session per week) Saturday 11:00am - 1:00pm - 2 weeks	
Learning location:	Saturday - Engridd Campus/Classroom	
Subject coordinator:	XXX	
Learning Program		Hours

Timetabled classes/tutorials with a trainer/teacher	20
Timetabled in class or timetabled workplace-based assessment	-
Timetabled online student support	-
Practical placement/ Practicum/Workplace based training	-
Self-directed learning and assessment	10
Total Hours	30

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	<p>This assessment will help you to demonstrate your ability to:</p> <ul style="list-style-type: none"> Identify relevant industry and BIM technology. Outline benefits and key features of BIM application. Identify strengths and limitations of using BIM 	XXXXX
Assessment 2: Simple Research Work	Research on BIM tools and preparation of Revit Template	insert	<p>This assessment will help you to demonstrate your ability to:</p> <p>For this assessment task you are required to submit the following items:</p> <ul style="list-style-type: none"> A list of 3 BIM applications, the websites and other operating material that can be utilised to help you work within a BIM application (Your teacher will provide a list of software to choose from) Required blank template files for a residential project 	XXXXX

Task	Description	Due Date for Assessment	Learning Outcome/s	Course/s that relate to this assessment
Assessment 3: Use BIM Technology for a project	Use of Revit as a BIM authoring Tool	insert	<p>This assessment will help you demonstrate your ability to:</p> <ul style="list-style-type: none"> • 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 build the 3D Model for the project. • Manipulating and operating software for a simple presentation with drawings and rendered images. 	XXXXX

Course schedule >>

Timing (e.g. Week/Block)	Learning Topics	Learning Activities	Assessment	Resources
Week 1	<p>What is BIM?</p> <p>Introduction to the course</p> <p>Advantages of BIM for a Construction Project</p>	<p>Web Session 1</p> <ul style="list-style-type: none"> • Understanding of BIM • Different dimensions of BIM • BIM data and attributes • BIM maturity levels 		<p>Computer, with internet access.</p> <p>Student web resources</p>

Timing (e.g. Week/Block)	Learning Topics	Learning Activities	Assessment	Resources
Week 2	Why is BIM? Benefits of BIM for a construction project, BIM Stakeholders	Web Session 2 <ul style="list-style-type: none"> • Industry trends and challenges • Current construction landscape and issues • BIM benefits 	Assessment 1: Knowledge Test due by the end of week 02	Computer with internet access. Student web resources
Week 3	Introduction to Assessment Task 2	Web Session 3 <ul style="list-style-type: none"> • Understanding of BIM application to project • Levels of BIM • Different dimensions of BIM 		Computer with internet access with Autodesk Revit software installed
Week 4	Use BIM Technology for a project	Training Session 1: Autodesk Revit interface <ul style="list-style-type: none"> • Basics of Revit • Revit Interface • View Controls • General Settings 	Assessment 2: Complete the research work due by the end of week 04	Computer with internet access. Student web resources
		Contact Session 1		
Week 5	Timetabled online student support	Training Session 2: Autodesk Revit 3D modelling <ul style="list-style-type: none"> • Wall Types 	-	Computer with internet access

Timing (e.g. Week/Block)	Learning Topics	Learning Activities	Assessment	Resources
		<ul style="list-style-type: none"> • Door and window Types • Floors 		Autodesk Revit software installed
Week 6	Timetabled online student support	Training Session 3: Autodesk Revit 3D modelling <ul style="list-style-type: none"> • Roof • Ceiling • Topography 		Computer with internet access MS Project or similar software.
Week 7	Introduction to Assessment Task 3	Training Session 4: <ul style="list-style-type: none"> • Schedules • Rooms • Material take-off 	Assessment 3: Use BIM Technology for a project due by end of week 10	Computer with internet access Autodesk Revit software installed
Week 8	Timetabled online student support	Training Session 4: Autodesk Revit 3D modelling <ul style="list-style-type: none"> • Standard Plumbing Fixtures/ Furniture • Materials • Rendering • Project Information 		Computer with internet access. Student web resources
		Contact Session 2	-	
Week 9	Timetabled online student support	Autodesk Revit 3D modelling <ul style="list-style-type: none"> • View/ Naming • Door/Window Tags 	-	Computer with internet access

Timing (e.g. Week/Block)	Learning Topics	Learning Activities	Assessment	Resources
		<ul style="list-style-type: none"> • Door/Window Schedules • View Templates 		Autodesk Revit software installed
Week 10	Timetabled online student support	Autodesk Revit 3D modelling <ul style="list-style-type: none"> • Sheet Organization with Name / Numbering • Title Block with Details • Project Information • Creating Project Template 	-	Computer with internet access Autodesk Revit software installed

- **Note:** 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.
- **Tutorial/Training Book: Mastering Autodesk Revit**

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	AT1
	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. Apply BIM technology for a project	Communicate and collaborate with various stakeholders using a common BIM models 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

2. Required skills/Performance Evidence:

A person demonstrating competency in this course must satisfy all of the elements, performance criteria and foundation skills of this unit, and must be able to provide evidence of the ability build a model using an authoring tool and to set up a project template file

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	AT1, AT2, AT3
3. Reading and accurately interpreting relevant design specifications and guidelines	AT3
4. Operating relevant information technology for the project	AT3
5. analytical and problem-solving skills for the project	AT3

3. Required knowledge:

A person demonstrating competency in this course 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