

## ARBE1306: Construction Management Fundamentals

Callaghan and Online  
Semester 1 - 2024



THE UNIVERSITY OF  
NEWCASTLE  
AUSTRALIA

## OVERVIEW

<b>Course Description</b>	This course explores the nature of the construction industry from a number of perspectives. Students learn the graphical drawing skills required to present building elements effectively, whilst also learning how to interpret construction drawings. The course also introduces fundamental academic and professional research and writing skills.
<b>Academic Progress Requirements</b>	Nil
<b>Requisites</b>	This course is replaces ARBE1100. If you have completed ARBE1100 you cannot enrol in this course.
<b>Contact Hours</b>	<b>Callaghan Lectorial</b> Face to Face On Campus 3 hour(s) per week(s) for 13 week(s) starting Week 1  <b>Online Lectorial</b> Online 3 hour(s) per week(s) for 13 week(s) starting Week 1 Online students complete all components online. Online students will receive equivalent instruction through online or other distance education strategies
<b>Unit Weighting Workload</b>	10 Students are required to spend on average 120-140 hours of effort (contact and non-contact) including assessments per 10 unit course.

# COURSE OUTLINE

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# CONTACTS

**Course Coordinator**     **Callaghan and Online**  
A/Pr Graham Brewer  
Graham.Brewer@newcastle.edu.au  
(02) 4921 5794  
Consultation: By prior appointment

**Teaching Staff**             Other teaching staff will be advised on the course Canvas site.

**School Office**                **School of Architecture and Built Environment**  
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Callaghan  
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# SYLLABUS

**Course Content**

- The history and development of the construction industry
- What is construction? Investigation from a number of perspectives including economical, managerial and environmental
- Construction industry stakeholder roles and functions in diverse settings
- Introduction to ethical issues: academic integrity, confidentiality, autonomy, privacy and equality
- Professional and academic writing and research skills
- Principles of graphic communication and orthographic projection in the building industry
- Principles of paraline drawings (isometric and axonometric)
- Basics of 2D technical drafting
- Freehand sketching and 2D architectural drawing
- Interpreting construction drawings
- Drawing to technical drawing standards

**Course Learning Outcomes**

**On successful completion of this course, students will be able to:**

1. Articulate the structure, behaviour and stakeholders of the construction industry from a number of perspectives
2. Utilise freehand sketching skills to represent building elements and alternatives
3. Demonstrate effective academic and professional research and writing skills
4. Develop graphic skills to represent buildings and related elements in two and three dimensions
5. Apply the principles of interpreting construction drawings and the use of national and international technical drawing standards

**Course Materials**

# SCHEDULE

Week	Week Begins	Topic	Learning Activity	Assessment Due
1	26 Feb		Introduction to the course and 'University Study 101'	
2	4 Mar		Construction Industry - History and Context	
3	11 Mar		Research and writing skills for the CM student	Assessment 1: Online Quiz 1 Closes at 11.59PM 17 March 2024
4	18 Mar		Basic drawing skills	
5	25 Mar		Technical drawing skills Technical drawing standards	Assessment 1: Online Quiz 2 Closes at 11.59PM 31 March 2024
6	1 Apr		Technical drawing skills Interpreting construction drawings	Assessment 2: Milestone Submission - Closes at 11.59PM 7 April 2024
7	8 Apr		Drawing to technical drawing standards	Assessment 1: Online Quiz 3 Closes at 11.59PM 14 April 2024
<b>Mid-Semester Recess</b>				
<b>Mid-Semester Recess</b>				
8	29 Apr		Introduction to professional practice	Assessment 2: Drawing Portfolio - Closes at 11.59PM 5 May 2024
9	6 May		Sustainable construction	
10	13 May		Economic issues	
11	20 May		Management issues	
12	27 May		Cultural issues	
13	3 Jun		Review and Wrap-Up	Assessment 3: Professional Research Report - Closes at 11.59PM 9 June 2024
<b>Examination Period</b>				
<b>Examination Period</b>				

# ASSESSMENTS

This course has 3 assessments. Each assessment is described in more detail in the sections below.

	Assessment Name	Due Date	Involvement	Weighting	Learning Outcomes
1	Online quizzes	Quiz 1 - Week 3 (5% of Course Mark) closes 11.59PM 17 March 2024 Quiz 2 - Week 5 (10% of Course Mark) closes 11.59PM 31 March 2024 Quiz 3 - Week 7 (15% of Course Mark) closes 11.59PM 14 April 2024	Individual	30%	1, 3, 5
2	Drawing portfolio	Assessment 2: Milestone Submission - Closes at 11.59PM 7 April 2024	Individual	0%	2, 4, 5
2	Drawing portfolio	Assessment 2: Drawing Portfolio - Closes at 11.59PM 5 May 2024	Individual	40%	2, 4, 5
3	Professional research report	Assessment 3: Professional Research Report - Closes at 11.59PM 9 June 2024	Individual	30%	1, 3

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<b>Late Submissions</b>	The mark for an assessment item submitted after the designated time on the due date, without an approved extension of time, will be reduced by 10% of the possible maximum mark for that assessment item for each day or part day that the assessment item is late. Note: this applies equally to week and weekend days.
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## Assessment 1 - Online quizzes

<b>Assessment Type</b>	Quiz
<b>Purpose</b>	On completion of this assignment the student should be able to: Identify the structure, behaviour and stakeholders of the construction industry from a number of perspectives; Demonstrate effective academic and professional research skills: Apply the principles of interpreting construction drawings.
<b>Description</b>	The online quizzes examine the student's understanding of structure and nature of the construction industry, research and writing skills and the interpretation of technical construction drawings. The three quizzes will be conducted fully online through the Canvas system. The number of and length of time may differ between quizzes, but in general they will be approximately 1 hour in length.
<b>Weighting</b>	30%
<b>Length</b>	N/A Online quiz
<b>Due Date</b>	Quiz 1 - Week 3 (5% of Course Mark) closes 11.59PM 17 March 2024 Quiz 2 - Week 5 (10% of Course Mark) closes 11.59PM 31 March 2024 Quiz 3 - Week 7 (15% of Course Mark) closes 11.59PM 14 April 2024
<b>Submission Method</b>	Online The quiz will be conducted online through Canvas. The quiz will be available for 7 days, and students will be able to access the quiz any time within the available period. Students are required to complete the quiz within the specified time in one sitting.
<b>Assessment Criteria</b>	N/A - Multiple choice questions
<b>Return Method</b>	
<b>Feedback Provided</b>	No Feedback - On completion.
<b>Opportunity to Reattempt</b>	Students WILL NOT be given the opportunity to reattempt this assessment.

## Assessment 2 - Drawing portfolio

<b>Assessment Type</b>	Portfolio
<b>Purpose</b>	On completion of this assignment the student should be able to: Utilise freehand sketching skills to represent building elements and alternatives; Develop graphic skills to represent buildings and related elements in two and three dimensions; Apply the principles of interpreting construction drawings and the use of national and international technical drawing standards.
<b>Description</b>	Students will be asked to submit a Milestone Submission (for group feedback), followed by a drawing portfolio and hand drawn building floor plans. Detailed Assignment 2 briefing documents will be provided prior to week 3 of Semester in Canvas.
<b>Weighting</b>	40%
<b>Due Date</b>	Assessment 2: Milestone Submission – Closes at 11:59PM 7 April 2024 Assessment 2: Drawing Portfolio - Closes at 11.59PM 5 May 2024
<b>Submission Method</b>	Online Students will be required to scan their work and submit via Canvas. Refer to the detailed briefing document for more information. All assignments are to be accompanied by the relevant individual assignment cover sheet (if applicable).
<b>Assessment Criteria</b>	Refer to marking rubric.
<b>Return Method</b>	Online
<b>Feedback Provided</b>	
<b>Opportunity to Reattempt</b>	Students WILL NOT be given the opportunity to reattempt this assessment.

## Assessment 3 - Professional research report

<b>Assessment Type</b>	Report
<b>Purpose</b>	On completion of this assignment the student should be able to: Articulate the structure, behaviour and stakeholders of the construction industry from a number of perspectives; Demonstrate effective academic and professional research and writing skills.
<b>Description</b>	You will be issued a research task, to investigate a certain aspect of the construction industry in the Australian context. The outcome will be a structured research report, appropriately referenced.  A detailed Assignment 3 briefing document will be provided prior to week 7 of Semester in Canvas
<b>Weighting</b>	30%
<b>Length</b>	1,500 words +/- 10%, excluding bibliography.
<b>Due Date</b>	Assessment 3: Professional Research Report - Closes at 11.59PM 9 June 2024
<b>Submission Method</b>	Online Via the Assignments link in Canvas. Be sure to submit a completed Assessment Item Coversheet with your submission. All work will be submitted to Turnitin text matching software.
<b>Assessment Criteria</b>	Refer to marking rubric.
<b>Return Method</b>	Not Returned
<b>Feedback Provided</b>	Online - Generally within 3 weeks of submission.
<b>Opportunity to Reattempt</b>	Students WILL NOT be given the opportunity to reattempt this assessment.

## ADDITIONAL INFORMATION

### Grading Scheme

This course is graded as follows:

Range of Marks	Grade	Description
85-100	High Distinction (HD)	Outstanding standard indicating comprehensive knowledge and understanding of the relevant materials; demonstration of an outstanding level of academic achievement; mastery of skills*; and achievement of all assessment objectives.
75-84	Distinction (D)	Excellent standard indicating a very high level of knowledge and understanding of the relevant materials; demonstration of a very high level of academic ability; sound development of skills*; and achievement of all assessment objectives.
65-74	Credit (C)	Good standard indicating a high level of knowledge and understanding of the relevant materials; demonstration of a high level of academic achievement; reasonable development of skills*; and achievement of all learning outcomes.
50-64	Pass (P)	Satisfactory standard indicating an adequate knowledge and understanding of the relevant materials; demonstration of an adequate level of academic achievement; satisfactory development of skills*; and achievement of all learning outcomes.
0-49	Fail (FF)	Failure to satisfactorily achieve learning outcomes. If all compulsory course components are not completed the mark will be zero. A fail grade may also be awarded following disciplinary action.

\*Skills are those identified for the purposes of assessment task(s).

**Communication Methods**

Communication methods used in this course include:

**Course Evaluation**

Each year feedback is sought from students and other stakeholders about the courses offered in the University for the purposes of identifying areas of excellence and potential improvement.

**Oral Interviews (Vivas)**

As part of the evaluation process of any assessment item in this course an oral examination (viva) may be conducted. The purpose of the oral examination is to verify the authorship of the material submitted in response to the assessment task. The oral examination will be conducted in accordance with the principles set out in the [Oral Examination \(viva\) Procedure](#). In cases where the oral examination reveals the assessment item may not be the student's own work the case will be dealt with under the [Student Conduct Rule](#).

**Academic Misconduct**

All students are required to meet the academic integrity standards of the University. These standards reinforce the importance of integrity and honesty in an academic environment. Academic Integrity policies apply to all students of the University in all modes of study and in all locations. For the Student Academic Integrity Policy, refer to <https://policies.newcastle.edu.au/document/view-current.php?id=35>.

**Adverse Circumstances**

The University acknowledges the right of students to seek consideration for the impact of allowable adverse circumstances that may affect their performance in assessment item(s). Applications for special consideration due to adverse circumstances will be made using the online Adverse Circumstances system where:

1. the assessment item is a major assessment item; or
2. the assessment item is a minor assessment item and the Course Co-ordinator has specified in the Course Outline that students may apply the online Adverse Circumstances system;
3. you are requesting a change of placement; or
4. the course has a compulsory attendance requirement.

Before applying you must refer to the Adverse Circumstance Affecting Assessment Items Procedure available at:

<https://policies.newcastle.edu.au/document/view-current.php?id=236>

**Important Policy Information**

The Help button in the Canvas Navigation menu contains helpful information for using the Learning Management System. Students should familiarise themselves with the policies and procedures at <https://www.newcastle.edu.au/current-students/respect-at-uni/policies-and-procedures> that support a safe and respectful environment at the University.

*This course outline was approved by the Head of School. No alteration of this course outline is permitted without Head of School approval. If a change is approved, students will be notified and an amended course outline will be provided in the same manner as the original.*

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