

Subject Structure and Delivery Mode

Subject Structure

This subject consists of 11 modules and 6 assessments (including one final exam) designed to be worked on throughout the Semester.

The following table provides an overview of what you can expect to cover each week for this subject.

Week	Lecture Content	Tutorial Workshops	Activities
Week 1	Module 0: Introduction and Welcome		
	Module 1: Compositions of Mixtures		Discussion: Introduce yourself (https://canvas.lms.unimelb.edu
	Module 2: Units and Dimensions		
Week 2	Module 2 continues		
	Module 3: Block Flow Diagrams and Material Balances	Exercise Sheet A: Compositions of Mixtures	
Week 3	Module 3: continues	Oral Presentations - Group formation and planning	
		Exercise Sheet B: Units and Dimensions	
Week 4	Module 4: Material Balances with Chemical Reactions	Exercise Sheet C: Block Diagrams and Material Balances	
	Module 4 continues		
Week 5	Module 5: Vapour Pressure and Humidity	Exercise Sheet D: Material Balances with Chemical Reactions 1	MATLAB Assignment 1 (https://canvas.lms.unimelb.edu
		Oral Presentations (https://canvas.lms.unimelb.edu.au/courses/211472/assignments/548798)	released

Oral Presentations

(<https://canvas.lms.unimelb.edu.au/courses/211472/assignments/548798>)

Laboratory Experiment 1

(<https://canvas.lms.unimelb.edu>)

(class allocation as per timetable)

Exercise Sheet E: Material Balances with Chemical Reactions 2

Week 6	Module 5 continues		
Week 7	Module 6: Energy, Heat Capacity, and Enthalpy	Exercise Sheet F: Vapour Pressure and Humidity	<u>Laboratory Experiment 1</u> (https://canvas.lms.unimelb.edu) (class allocation as per timetable)
Week 8	Module 7: Energy Balances	Exercise Sheet G: Energy, Heat Capacity, and Enthalpy	
Week 9	Module 8: Heats of Reactions Module 9: Energy Balances with Chemical Reactions	Exercise Sheet H: Energy Balances	<u>MATLAB Assignment 2</u> (https://canvas.lms.unimelb.edu) released <u>Laboratory Experiment 2</u> (https://canvas.lms.unimelb.edu) (class allocation as per timetable)
Week 10	Module 9 continues	Exercise Sheet I: Heats of Reactions	
Week 11	Module 10: Simultaneous Material and Energy Balances Module 11: Heats of Solution	Exercise Sheet J: Material and Energy Balances with Chemical Reactions	
Week 12	Exam revision	Exercise Sheet K: Heats of Solution	

Delivery Mode

This subject will be delivered on campus. Attendance at lab classes and delivery of the oral presentation in person is a requirement to pass those assessment items. The final exam will be in person on or near campus.

Lectures

One 2-hour and one 1-hour lectures a week (total of three hours per week) throughout the semester for a total of 36 lectures. All lectures will be recorded. In-person attendance is highly recommended.

Tutorial Workshops

One 2-hour session per week beginning in week 2. These tutorial workshops are designed to allow students to work through problems, ask questions and seek help from tutors. Only in-person sessions are offered in this subject.

Laboratory Classes

There are two laboratory classes in this subject, and all students will be scheduled to attend one of each of these sessions, through the timetabling system. Attendance at these classes is mandatory. Students who are unable to attend a laboratory class due to illness must apply for Special Consideration and if possible will be rescheduled to a later lab session.

Exercise Sheets

There are 11 Exercise Sheets for this subject. Students are expected to complete one per week.

Total Time Commitment

170 hours over the entire semester, including the non-teaching periods. This includes reviewing all lectures, workshops, and laboratory classes as well as completing the exercise sheets and assignments, revision, and preparing for the exams. This translates to a total time commitment to the subject of 10 hours per week from week 1 to the last week of the assessment period.