

CHM210 Inorganic Chemistry

School: School of Science, Technology and Engineering

2026 | Trimester 2

UniSC Sunshine Coast
UniSC Moreton Bay

**BLENDED
LEARNING**

Most of your course is on campus but you may be able to do some components of this course online.

Please go to unisc.edu.au for up to date information on the teaching sessions and campuses where this course is usually offered.

1. What is this course about?

1.1. Description

Inorganic chemistry explores the diversity of the periodic table and the applications of its elements from power generation, to new materials for lighting and metal-based drugs. In this course you will learn about the chemistry of the Transition Metals with a focus on coordination compounds, and selected Main Group Elements, and how they influence everyday life.

1.2. How will this course be delivered?

ACTIVITY	HOURS	BEGINNING WEEK	FREQUENCY
BLENDED LEARNING			
Learning materials – Learning Materials are available online and delivered asynchronously. Learning Materials consist primarily of formative quizzes and interactive screencasts. Other available materials include simulations and on-line demonstrations.	2hrs	Week 1	12 times
Tutorial/Workshop 1 – Tutorials are delivered face-to-face on-campus. Tutorials consist of focus questions and group work.	2hrs	Week 1	6 times
Laboratory 1 – Laboratory work is conducted face-to-face on-campus. Each practical session is thematically linked to theoretical material covered in preceding weeks. Students are expected to work in teams during practical sessions.	3hrs	Week 1	6 times

1.3. Course Topics

1. Redox chemistry
2. Valence bond theory
3. Molecular orbital theory
4. Coordinate bonding
5. Ligands and nomenclature
6. Geometry and Isomerism
7. Crystal field theory
8. Nuclear chemistry
9. Representative elements
10. Solubility

2. What level is this course?

200 Level (Developing)

Building on and expanding the scope of introductory knowledge and skills, developing breadth or depth and applying knowledge and skills in a new context. May require pre-requisites where discipline specific introductory knowledge or skills is necessary. Normally, undertaken in the second or third full-time year of an undergraduate programs.

3. What is the unit value of this course?

12 units

4. How does this course contribute to my learning?

COURSE LEARNING OUTCOMES	GRADUATE QUALITIES
On successful completion of this course, you should be able to...	Completing these tasks successfully will contribute to you becoming...
1 Analyse inorganic chemistry information.	Creative and critical thinker
2 Demonstrate and apply knowledge of inorganic chemistry.	Empowered
3 Communicate effectively.	Empowered Engaged

5. Am I eligible to enrol in this course?

Refer to the [UniSC Glossary of terms](#) for definitions of "pre-requisites, co-requisites and anti-requisites".

5.1. Pre-requisites

SCI105

5.2. Co-requisites

Not applicable

5.3. Anti-requisites

CHM212

5.4. Specific assumed prior knowledge and skills (where applicable)

Not applicable

5.5. Microcredential Information

Not applicable

6. How am I going to be assessed?

6.1. Grading Scale

Standard Grading (GRD)

High Distinction (HD), Distinction (DN), Credit (CR), Pass (PS), Fail (FL).

6.2. Details of early feedback on progress

There is a set of questions and answers for each week's learning module, providing feedback for that material. These questions will form the basis of the final exam.

There is a set of on-line questions for each practical, providing feedback on progress. These questions will form the basis of the practical quizzes.

6.3. Assessment tasks

DELIVERY MODE	TASK NO.	ASSESSMENT PRODUCT	INDIVIDUAL OR GROUP	WEIGHTING %	WHAT IS THE DURATION / LENGTH?	WHEN SHOULD I SUBMIT?	WHERE SHOULD I SUBMIT IT?
All	1	Oral	Individual	20%	Up to 1000 words/6 minutes.	Week 6	Online Assignment Submission with plagiarism check
All	2	Oral	Individual	40%	Up to 1000 words/6 minutes	Week 12	Online Assignment Submission with plagiarism check
All	3	Examination - Centrally Scheduled	Individual	40%	2 hours (1500 words)	Exam Period	Exam Venue

All - Assessment Task 1: Analysis of a scientific paper

GOAL:	Analyse a paper from the primary literature dealing with the preparation of a transition metal complex and effectively communicate your findings.						
PRODUCT:	Oral						
AUTHORSHIP STATEMENT:							
FORMAT:	Recorded video presentation						
CRITERIA:	No.						Learning Outcome assessed
	1	An analysis of a paper from the primary literature dealing with the preparation of a transition metal complex.					1 3
GENERIC SKILLS:	Communication, Applying technologies, Information literacy						

All - Assessment Task 2: Laboratory Presentation

GOAL:	Understand the theory behind the laboratory work using quizzes, produce data arising from participation in the laboratory, and communicate an effective understanding.						
PRODUCT:	Oral						
AUTHORSHIP STATEMENT:							
FORMAT:	Quizzes in the laboratory build skills and understanding towards producing a video presentation.						
CRITERIA:	No.						Learning Outcome assessed
	1	Produce data arising from participation in the laboratory and produce and oral report showing effective understanding, analysis and communication.					1 2 3
GENERIC SKILLS:	Communication, Problem solving, Information literacy						

All - Assessment Task 3: Final exam

GOAL:	Demonstrate and apply knowledge of inorganic chemistry.						
PRODUCT:	Examination - Centrally Scheduled						
AUTHORSHIP STATEMENT:							
FORMAT:	Short and extended answer, problem solving, calculations based on material from learning modules, tutorials and laboratory activities.						
CRITERIA:	<table border="1"><thead><tr><th>No.</th><th></th><th>Learning Outcome assessed</th></tr></thead><tbody><tr><td>1</td><td>A final exam containing questions requiring written answers.</td><td>1 2</td></tr></tbody></table>	No.		Learning Outcome assessed	1	A final exam containing questions requiring written answers.	1 2
No.		Learning Outcome assessed					
1	A final exam containing questions requiring written answers.	1 2					
GENERIC SKILLS:							

7. Directed study hours

A 12-unit course will have total of 150 learning hours which will include directed study hours (including online if required), self-directed learning and completion of assessable tasks. Student workload is calculated at 12.5 learning hours per one unit.

8. What resources do I need to undertake this course?

Please note: Course information, including specific information of recommended readings, learning activities, resources, weekly readings, etc. are available on the course Canvas site– Please log in as soon as possible.

8.1. Prescribed text(s) or course reader

You need regular access to the resource(s) below. Many texts are available as ebooks through the [Library](#) at no additional cost.

REQUIRED?	AUTHOR	YEAR	TITLE	EDITION	PUBLISHER
Required	Flowers et al	2019	Chemistry	2nd edition	Chemistry 2e NOTE: This textbook is licensed under a Creative Commons licence and is freely available online. Information about how to access the textbook is on Canvas
Recommended	Blackman, Allan	2022	Chemistry	5th	Wiley

8.2. Specific requirements

Laboratory coat, safety glasses, closed in footwear.

9. How are risks managed in this course?

Risk assessments have been performed for all laboratory classes and a moderate level of health and safety risk exists. Moderate risks are those associated with laboratory work such as working with chemicals and hazardous substances. You will be required to undertake laboratory induction training and it is also your responsibility to review course material, search online, discuss with lecturers and peers and understand the health and safety risks associated with your specific course of study and to familiarise yourself with the University's general health and safety principles by reviewing the [online induction training for students](#), and following the instructions of the University staff

10. What administrative information is relevant to this course?

10.1. Assessment: Academic Integrity

Academic integrity is the ethical standard of university participation. It ensures that students graduate as a result of proving they are competent in their discipline. This is integral in maintaining the value of academic qualifications. Each industry has expectations and standards of the skills and knowledge within that discipline and these are reflected in assessment.

Academic integrity means that you do not engage in any activity that is considered to be academic fraud; including plagiarism, collusion or outsourcing any part of any assessment item to any other person. You are expected to be honest and ethical by completing all work yourself and indicating in your work which ideas and information were developed by you and which were taken from others. You cannot provide your assessment work to others. You are also expected to provide evidence of wide and critical reading, usually by using appropriate academic references.

In order to minimise incidents of academic fraud, this course may require that some of its assessment tasks, when submitted to Canvas, are electronically checked through Turnitin. This software allows for text comparisons to be made between your submitted assessment item and all other work to which Turnitin has access.

10.2. Assessment: Additional Requirements

Eligibility for Supplementary Assessment

Your eligibility for supplementary assessment in a course is dependent of the following conditions applying:

- (a) The final mark is in the percentage range 47% to 49.4%; and
- (b) The course is graded using the Standard Grading scale

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10.3. Assessment: Submission penalties

Late submissions may be penalised up to and including the following maximum percentage of the assessment task's identified value, with weekdays and weekends included in the calculation of days late:

- (a) One day: deduct 5%;
- (b) Two days: deduct 10%;
- (c) Three days: deduct 20%;
- (d) Four days: deduct 40%;
- (e) Five days: deduct 60%;
- (f) Six days: deduct 80%;
- (g) Seven days: A result of zero is awarded for the assessment task.

The following penalties will apply for a late submission for an online examination:

- Less than 15 minutes: No penalty
- From 15 minutes to 30 minutes: 20% penalty
- More than 30 minutes: 100% penalty

10.4. Links to relevant University policy and procedures

For more information on Academic Learning & Teaching categories including:

- Assessment: Courses and Coursework Programs
- Review of Assessment and Final Grades
- Supplementary Assessment
- Central Examinations
- Deferred Examinations
- Student Conduct
- Students with a Disability

For more information, visit <https://www.usc.edu.au/explore/policies-and-procedures#academic-learning-and-teaching>

10.5. Student Charter

UniSC is committed to excellence in teaching, research and engagement in an environment that is inclusive, inspiring, safe and respectful. The [Student Charter](#) sets out what students can expect from the University, and what in turn is expected of students, to achieve these outcomes.

10.6. General Enquiries

For course-specific questions, contact your teaching staff or Course Coordinator.

For other enquiries or to access support, please contact Student Central:

- [UniSC Student Central](#)
- [UniSC Adelaide Student Central](#)