



UNSW Course Outline

CHEM4516 Chemistry Honours 16 UoC - 2024

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General Course Information

Course Code : CHEM4516

Year : 2024

Term : Term 3

Teaching Period : T3

Is a multi-term course? : No

Faculty : Faculty of Science

Academic Unit : School of Chemistry

Delivery Mode : Research

Delivery Format : Standard

Delivery Location : Kensington

Campus : Sydney

Study Level : Undergraduate

Units of Credit : 16

Useful Links

[Handbook Class Timetable](#)

Course Details & Outcomes

Course Description

This course is only available to students enrolled in an Honours Program in the School of Chemistry and enrolment must be approved by the School's Honours Coordinator.

Chemistry Honours Project is a year-long (3 Term) research project comprised of a combination of cutting edge research, skills units and theory. This course is taken over the course of 3 Terms, with 3 x 16 UoC equating to 48 UoC of research. The research is directed by an academic or equivalent in the School of Chemistry and comprises original research.

To engage in the Honours program on a part-time basis, students will need to enrol in CHEM4508 (8 UoC) over 6 Terms.

Course Aims

The course aims expand the student's knowledge of chemistry research in a research specialisation chosen by the student. This will include understanding the process through which research is planned, carried out and reported. There is also significant interaction with the research group of the supervisor chosen for the project.

Designed for those with a higher level of preparedness in Chemistry. A multifaceted course that will give students a high level of basic research skills, especially in critical evaluation of data and communication of results, but with a specialised focus on Chemistry.

Relationship to Other Courses

Part of honours program - Chem4501, 4502 (or 4503), 4506, 4512, 4518.

Course Learning Outcomes

| Course Learning Outcomes |
|---|
| CL01 : Demonstrate professional behaviour in research by preparing risk assessments, maintaining research progress and keeping appropriate records that enable replication of research results. |
| CL02 : Independently investigate and solve qualitative and quantitative problems in chemical sciences by applying relevant research methods. |
| CL03 : Access and evaluate peer reviewed literature using information technologies. |
| CL04 : Communicate research in the written and graphical format aimed at a scientific audience in the format of a discipline journal and identify potential future research direction. |
| CL05 : Identify and articulate the skills acquired during the research experience and relate these to employability and graduate attributes. |
| CL06 : Apply research techniques effectively in order to accurately acquire, record, analyse, interpret and communicate scientific data. |

| Course Learning Outcomes | Assessment Item |
|---|--|
| CL01 : Demonstrate professional behaviour in research by preparing risk assessments, maintaining research progress and keeping appropriate records that enable replication of research results. | <ul style="list-style-type: none"> • Thesis • Introductory proposal and viva • Final Viva • Coursework |
| CL02 : Independently investigate and solve qualitative and quantitative problems in chemical sciences by applying relevant research methods. | <ul style="list-style-type: none"> • Seminar • Thesis • Final Viva • Coursework |
| CL03 : Access and evaluate peer reviewed literature using information technologies. | <ul style="list-style-type: none"> • Introductory proposal and viva • Thesis • Final Viva • Coursework |
| CL04 : Communicate research in the written and graphical format aimed at a scientific audience in the format of a discipline journal and identify potential future research direction. | <ul style="list-style-type: none"> • Seminar • Introductory proposal and viva • Thesis • Final Viva |
| CL05 : Identify and articulate the skills acquired during the research experience and relate these to employability and graduate attributes. | <ul style="list-style-type: none"> • Seminar • Coursework • Thesis • Final Viva |
| CL06 : Apply research techniques effectively in order to accurately acquire, record, analyse, interpret and communicate scientific data. | <ul style="list-style-type: none"> • Seminar • Thesis • Final Viva |

Learning and Teaching Technologies

Moodle - Learning Management System

Additional Course Information

See honours gold book to be made available to all students in Week 1.

Assessments

Assessment Structure

| Assessment Item | Weight | Relevant Dates |
|---|--------|----------------|
| Thesis Assessment Format: Individual | 50% | |
| Seminar Assessment Format: Individual | 10% | |
| Introductory proposal and viva Assessment Format: Individual | 10% | |
| Final Viva Assessment Format: Individual | 20% | |
| Coursework Assessment Format: Individual | 10% | |

Assessment Details

Thesis

Assessment Overview

The thesis is due in your final term (third or sixth term) at the end of Week 8.

You will produce a written document that describes the research undertaken over the course of your Honours studies. The thesis is structured according to the sub-discipline of your research and typically involves sections such as an abstract, introduction or literature review, methods or experimental or theory, results and discussions and conclusions.

The thesis should detail the research undertaken, critically analyse the results and provide discussions to contextualise the findings. There is a limit of 50 pages on the thesis. The formatting guidelines will be provided at the beginning of your Honours.

Your thesis is assessed by the examination panel who will provide written feedback.

Course Learning Outcomes

- CL01 : Demonstrate professional behaviour in research by preparing risk assessments, maintaining research progress and keeping appropriate records that enable replication of research results.
- CL02 : Independently investigate and solve qualitative and quantitative problems in chemical sciences by applying relevant research methods.
- CL03 : Access and evaluate peer reviewed literature using information technologies.
- CL04 : Communicate research in the written and graphical format aimed at a scientific audience in the format of a discipline journal and identify potential future research direction.
- CL05 : Identify and articulate the skills acquired during the research experience and relate these to employability and graduate attributes.
- CL06 : Apply research techniques effectively in order to accurately acquire, record, analyse, interpret and communicate scientific data.

Assignment submission Turnitin type

This assignment is submitted through Turnitin and students can see Turnitin similarity reports.

Generative AI Permission Level

Assistance with Attribution

This assessment requires you to write/create a first iteration of your submission yourself. You are then permitted to use generative AI tools, software or services to improve your submission in the ways set out below.

Any output of generative AI tools, software or services that is used within your assessment must be attributed with full referencing.

If outputs of generative AI tools, software or services form part of your submission and are not appropriately attributed, your Convenor will determine whether the omission is significant. If so, you may be asked to explain your submission. If you are unable to satisfactorily demonstrate your understanding of your submission you may be referred to UNSW Conduct & Integrity Office for investigation for academic misconduct and possible penalties.

For more information on Generative AI and permitted use please see [here](#).

We advise students not to use AI but if they do, they do so at their own peril. AI assistance needs to be appropriately attributed.

Seminar

Assessment Overview

The seminar occurs in your final term (e.g., 3rd term for full time Honours or 6th term for part time Honours) in Week 11.

This is a formal presentation to the staff and students of the School of Chemistry. You will present the research you have undertaken to an audience with a strong foundation in chemistry. The seminar is 15 minutes in length and questions are asked following the seminar.

You are encouraged to use a presentation that is engaging, clear and concise. You are expected to introduce your project, define the motivation of the work, highlight the major results and findings. Optionally, you may provide details on experimental procedures and approaches and other facets that assist in the audience understanding your work. This represents training in scientific communication to large expert audiences.

You will receive feedback as written comments as well as oral feedback from your supervisor. ☒

Course Learning Outcomes

- CL02 : Independently investigate and solve qualitative and quantitative problems in chemical sciences by applying relevant research methods.
- CL04 : Communicate research in the written and graphical format aimed at a scientific audience in the format of a discipline journal and identify potential future research direction.
- CL05 : Identify and articulate the skills acquired during the research experience and relate these to employability and graduate attributes.
- CL06 : Apply research techniques effectively in order to accurately acquire, record, analyse, interpret and communicate scientific data.

Detailed Assessment Description

Students are required to give a short seminar coupled with a short interview based on their written proposal. They will answer questions on their presentation. The seminar is graded by their examination panel.

Feedback is provided within a week following the assessment.

Assessment Length

To be advised

Assessment information

See moodle

Assignment submission Turnitin type

Not Applicable

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Introductory proposal and viva

Assessment Overview

The proposal is due at the end of Week 5 and the viva will take place in Week 7 in your first term of enrolment (date will be confirmed)

You will produce a research proposal and be introduced to your examination panel during the viva. The viva acts similar to a short interview where you present a 5 minute introduction to your project (you may use slides or aids such as a whiteboard or communicate verbally).

The presentation should outline the background, aims and significance, and the design (methods) of the project. You will be strictly held to 5 minutes to present to allow for approximately 10 minutes of questions. You should deliver the project in a clear and succinct manner, much like a scientific pitch.

The questions will probe your understanding of the background and literature and the proposed methods. The examiners may suggest some ideas that you may wish to take on-board and discuss with your supervisor.

Overall, this serves as a 15 minute assessment that will provide feedback to you on your presentation skills and your ability to communicate your project and why you are undertaking your project. This feedback will be delivered in a written summary from the panel.

Course Learning Outcomes

- CL01 : Demonstrate professional behaviour in research by preparing risk assessments, maintaining research progress and keeping appropriate records that enable replication of research results.
- CL03 : Access and evaluate peer reviewed literature using information technologies.
- CL04 : Communicate research in the written and graphical format aimed at a scientific audience in the format of a discipline journal and identify potential future research direction.

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Final Viva

Assessment Overview

The final viva occurs in the student's final term (e.g., their 3rd term for full time students or 6th term for part time students) in Week 11.

The final viva lasts for approximately 20 mins and acts as a full interview where you will first be asked to highlight the major finding of your work and then questioned on various aspects of your research.

The examination panel is typically the same as the panel for the introductory viva, they can ask questions from the thesis, the seminar and/or of the research performed or chemical theory. The panel prepares a selection of questions at various levels of difficulty designed to assess your know-how and ability to address questions in a small group environment.

You will receive feedback as written comments as well as oral feedback from your supervisor. ☒

Course Learning Outcomes

- CL01 : Demonstrate professional behaviour in research by preparing risk assessments, maintaining research progress and keeping appropriate records that enable replication of research results.
- CL02 : Independently investigate and solve qualitative and quantitative problems in chemical sciences by applying relevant research methods.
- CL03 : Access and evaluate peer reviewed literature using information technologies.
- CL04 : Communicate research in the written and graphical format aimed at a scientific audience in the format of a discipline journal and identify potential future research direction.
- CL05 : Identify and articulate the skills acquired during the research experience and relate these to employability and graduate attributes.
- CL06 : Apply research techniques effectively in order to accurately acquire, record, analyse, interpret and communicate scientific data.

Generative AI Permission Level

Not Applicable

Generative AI is not considered to be of assistance to you in completing this assessment. If you do use generative AI in completing this assessment, you should attribute its use.

For more information on Generative AI and permitted use please see [here](#).

Coursework

Assessment Overview

Coursework is offered in intensive mode across all terms and you can choose to complete this over 2 or 3 terms.

This course will feature a combination of lectures and tutorials to emphasise the concepts being taught.

Teaching the advanced concepts in sub-blocks with associated tutorial exercises allows you to focus on one particular contemporary concept at a time. Tutorial exercises are designed to give you practical experience relevant to the concept. Timely feedback (generally written comments and discussions with your instructors) allows you to follow the thread of the course. The

examination of each concept immediately following its completion brings together the strands to complete the learning experience.

Tests for the coursework are 60 minutes long with 10 minutes of reading time. It is an open book exam either in exam rooms (in person) or online (timed quiz). The tests are held at times coordinated with students (so as to not impact unavoidable research tasks or laboratory demonstrating). Students are advised at least two weeks before the test is given.

Course Learning Outcomes

- CL01 : Demonstrate professional behaviour in research by preparing risk assessments, maintaining research progress and keeping appropriate records that enable replication of research results.
- CL02 : Independently investigate and solve qualitative and quantitative problems in chemical sciences by applying relevant research methods.
- CL03 : Access and evaluate peer reviewed literature using information technologies.
- CL05 : Identify and articulate the skills acquired during the research experience and relate these to employability and graduate attributes.

Assignment submission Turnitin type

Not Applicable

Generative AI Permission Level

Not Applicable

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General Assessment Information

Grading Basis

Standard

Course Schedule

Attendance Requirements

Students are expected to undertake research. In addition, they should attend the School of Chemistry Seminar Series and meetings arranged by the honours coordinator.

Course Resources

Prescribed Resources

Please discuss with research supervisors.

Staff Details

| Position | Name | Email | Location | Phone | Availability | Equitable Learning Services Contact | Primary Contact |
|----------|---------------|-------|----------|-------|----------------|-------------------------------------|-----------------|
| Convenor | Neeraj Sharma | | | | By appointment | Yes | Yes |

Other Useful Information

Academic Information

Upon your enrolment at UNSW, you share responsibility with us for maintaining a safe, harmonious and tolerant University environment.

You are required to:

- Comply with the University's conditions of enrolment.
- Act responsibly, ethically, safely and with integrity.
- Observe standards of equity and respect in dealing with every member of the UNSW community.
- Engage in lawful behaviour.
- Use and care for University resources in a responsible and appropriate manner.
- Maintain the University's reputation and good standing.

For more information, visit the [UNSW Student Code of Conduct Website](#).

Academic Honesty and Plagiarism

Referencing is a way of acknowledging the sources of information that you use to research your assignments. You need to provide a reference whenever you draw on someone else's words, ideas or research. Not referencing other people's work can constitute plagiarism.

Further information about referencing styles can be located at <https://student.unsw.edu.au/referencing>

Academic integrity is fundamental to success at university. Academic integrity can be defined as

a commitment to six fundamental values in academic pursuits: honesty, trust, fairness, respect, responsibility and courage. At UNSW, this means that your work must be your own, and others' ideas should be appropriately acknowledged. If you don't follow these rules, plagiarism may be detected in your work.

Further information about academic integrity, plagiarism and the use of AI in assessments can be located at:

- The [Current Students site](#),
- The [ELISE training site](#), and
- The [Use of AI for assessments](#) site.

The Student Conduct and Integrity Unit provides further resources to assist you to understand your conduct obligations as a student: <https://student.unsw.edu.au/conduct>

Submission of Assessment Tasks

Penalty for Late Submissions

UNSW has a standard late submission penalty of:

- 5% per day,
- for all assessments where a penalty applies,
- capped at five days (120 hours) from the assessment deadline, after which a student cannot submit an assessment, and
- no permitted variation.

Any variations to the above will be explicitly stated in the Course Outline for a given course or assessment task.

Students are expected to manage their time to meet deadlines and to request extensions as early as possible before the deadline.

Special Consideration

If circumstances prevent you from attending/completing an assessment task, you must officially apply for special consideration, usually within 3 days of the sitting date/due date. You can apply by logging onto myUNSW and following the link in the My Student Profile Tab. Medical documentation or other documentation explaining your absence must be submitted with your application. Once your application has been assessed, you will be contacted via your student email address to be advised of the official outcome and any actions that need to be taken from there. For more information about special consideration, please visit: <https://student.unsw.edu.au/special-consideration>

Important note: UNSW has a “fit to sit/submit” rule, which means that if you sit an exam or submit a piece of assessment, you are declaring yourself fit to do so and cannot later apply for Special Consideration. This is to ensure that if you feel unwell or are faced with significant circumstances beyond your control that affect your ability to study, you do not sit an examination or submit an assessment that does not reflect your best performance. Instead, you should apply for Special Consideration as soon as you realise you are not well enough or are otherwise unable to sit or submit an assessment.

Faculty-specific Information

Additional support for students

- [The Current Students Gateway](#)
- [Student Support](#)
- [Academic Skills and Support](#)
- [Student Wellbeing, Health and Safety](#)
- [Equitable Learning Services](#)
- [UNSW IT Service Centre](#)
- Science EDI Student [Initiatives](#), [Offerings](#) and [Guidelines](#)

School-specific Information

UNSW Changes to Special Consideration: Short Extension

The School of Chemistry has carefully reviewed all of its assessments to determine whether they are suitable for automatic short extensions as set out by the UNSW Short Extension Policy. The current deadline structures for all assessment tasks in the School of Chemistry already accommodate the possibility of unexpected circumstances that may lead students to require additional time for submission. **The School of Chemistry has opted out of the UNSW Short Extension provision for all its courses**, and we have already integrated flexibility into our assessment deadlines. This decision is subject to revision in response to the introduction of new course offerings. All students may still apply for Special Consideration for any assessment via the usual procedures.

School Contact Information

Level 1, Dalton Building (F12)

W: www.chemistry.unsw.edu.au

Also see: ***Contacts and Support*** section of the course Moodle page (where applicable)