



Course

Quantum Nature of Molecules - from Earth to Space

CHEM3011

6 Units of Credit

Overview

CHEM3011 builds on previous physical chemistry content and deepens students' understanding and ability to utilise contemporary computational and experimental methods. It will explore the phenomenological nature of matter at the quantum scale.

The first part of the course focuses on establishing the theoretical foundations and introducing powerful new theories including statistical thermodynamics and symmetry. The second part of the course introduces students to the application of these methods in modern computational chemistry. The third part of the course illustrates modern experimental techniques such as laser spectroscopy to elucidate chemical reactions down to the femtosecond timescale.

Throughout the course, there will be an emphasis on applications of these techniques, for example, in atmospheric chemistry, astrochemistry and organic chemistry.

Faculty

Faculty of Science

School

School of Chemistry

Study Level

Undergraduate

Offering Terms

Term 3

Campus

Kensington

Delivery Mode

Fully on-site

Indicative contact hours

8

Timetable

[Visit timetable website for details](#)

Conditions for Enrolment

Prerequisite: CHEM2011 or NANO2002 or PHYS2111

Course Outline

To access course outline, please visit:

[CHEM3011 Course Outline](#)

Fees

Commonwealth Supported Students \$1170

Domestic Students \$5760

International Students \$5760

DISCLAIMER

Please note that the University reserves the right to vary student fees in line with relevant legislation. This fee information is provided as a guide and more specific information about fees, including fee policy, can be found on the [fee website](#).

For advice about fees for courses with a fee displayed as "Not Applicable", including some Work Experience and UNSW Canberra at ADFA courses, please contact the relevant Faculty.

Where a Commonwealth Supported Students fee is displayed, it does not guarantee such places are available.

Pre-2019 Handbook Editions

Access past handbook editions (2018 and prior)

[Pre-2019 Handbook Editions](#)

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Authorised by Deputy Vice-Chancellor (Academic)

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