


GRADUATE CERTIFICATE OF GREEN CHEMISTRY AND SUSTAINABLE TECHNOLOGIES

monash.edu/science/gcgst





THE FUTURE OF INDUSTRY IS CHANGING.

“Green chemistry is a paradigm shift. It is the ability not to just learn to effectively deal with and regulate the use of hazardous materials but to think outside the box and create products without using hazardous materials.”

Distinguished Professor John C Warner,
Monash University School of Chemistry.

COURSE INTRODUCTION

The Graduate Certificate of Green Chemistry and Sustainable Technologies provides expert training in 'green technologies' focused on chemistry and chemical manufacturing, combined with an understanding of sustainability issues to support the transformation of industry.

The principles of green technologies are aligned to sustainability issues to advance the reduction or elimination of hazardous substances involved in the design, manufacture and application of diverse chemical products.

The environmental, economic and social benefits are also examined.

You can choose aspects of green technologies, from innovation to design, and focus on applications in different contexts. The course can act as a pathway to the Master of Green and Sustainable Technologies.



CAREER OUTCOMES

There are many opportunities open to you in a range of industries as a graduate of the Graduate Certificate of Green and Sustainable Technologies.

These include:

- Process development, strategy and R&I in various industries including pharmaceutical, materials, cosmetics and food companies, agrochemical, fertilisers and polymer industries
- Manufacturing industries
- Environmental and sustainable services or companies
- Private and public biotech companies
- CSIRO and chemical research institutes
- Government and consultancy
- Education.

AT A GLANCE:

CAMPUS

Clayton campus

DURATION

6 months full time, or one year part time

QUALIFICATION

Graduate Certificate of Green Chemistry and Sustainable Technologies

COURSE STRUCTURE

The course comprises **24 points**.
Units are **six points** unless otherwise stated.

You must complete one of the following units:

- Introduction to green chemistry
- Green chemistry consultancy project (12 points)

You must complete 12 to 18 points from the following units:

- Green chemistry innovation: transforming industry and manufacturing
- Environmental governance and citizenship
- Corporate sustainability management
- Biomass and biorefineries
- Advanced biopolymers
- Sustainability and innovation
- Climate change, energy and human security
- Processes to influence change
- Designing safer chemicals
- Green chemical synthesis and applications
- Managing innovation
- Sustainable operations and supply chain management

ENTRY REQUIREMENTS

MINIMUM ENTRY REQUIREMENTS

An Australian bachelor degree (or equivalent) with at least first year Chemistry studies or equivalent* and at least 60% (credit) average overall, or equivalent qualification and experience approved by the faculty.

*general knowledge of topics in composition and nomenclature of matter; physical, chemical, electrochemical properties of matter; how atoms and molecules react; stoichiometry; equilibria; kinetics; thermodynamics; quantifying chemical reactions.

ENGLISH LANGUAGE REQUIREMENTS

Monash minimum: Level A, that is: IELTS (Academic): 6.5 overall (no band lower than 6.0); or Pearson Test of English (Academic): score of 58 overall with no band lower than 50; or TOEFL Internet-based test: score of 79 overall with minimum scores: Writing: 21, Listening: 12, Reading: 13 and Speaking: 18; or Equivalent approved English test

GET IN TOUCH

If you have more questions, please get in touch!

Contact:

chem-mgcst@monash.edu

FURTHER INFORMATION

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monash.edu

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