

# NATS 3002 ADVANCED MEDICINAL CHEMISTRY

**Credit Points** 10

**Legacy Code** 300891

**Coordinator** Christopher Gordon ([https://directory.westernsydney.edu.au/search/name/Christopher Gordon/](https://directory.westernsydney.edu.au/search/name/Christopher%20Gordon/))

**Description** Medicinal Chemistry is an interdisciplinary science that exists at the intersection of chemistry, pharmacology, physiology and human health. Students will explore the multidisciplinary nature and interconnectedness of medicinal chemistry through in-depth study of topics that relate medicinal chemistry to disciplines such as physiology, natural product science, biochemistry and pharmacology. It will also explore the expectations of a professional medicinal chemist.

**School** Science

**Discipline** Medical Science

**Student Contribution Band** HECS Band 2 10cp

Check your fees via the Fees ([https://www.westernsydney.edu.au/currentstudents/current\\_students/fees/](https://www.westernsydney.edu.au/currentstudents/current_students/fees/)) page.

**Level** Undergraduate Level 3 subject

**Pre-requisite(s)** CHEM 1005

## Restrictions

Successful completion of 40 credit points at Level 2 or 3

## Learning Outcomes

On successful completion of this subject, students should be able to:

1. Research and review information including scientific literature on a selected topic in medicinal chemistry
2. Teach a selected topic of medicinal chemistry to peers in a short oral presentation (group)
3. Review and explain a selected topic in medicinal chemistry in a written essay (individual)
4. Explore the professional competencies relevant to a final year medicinal chemistry student
5. Discuss selected areas in medicinal chemistry presented by peers during the oral presentations
6. Evaluate the essays of your peers on selected topics in medicinal chemistry

## Subject Content

1. Introduction to advanced medicinal chemistry, drugs and drug targets
2. Enzymes, receptors and nucleic acids as drug targets
3. Drug discovery, design, and development ? Finding a lead and optimising target interactions
4. Elucidating drug-target interactions
5. Selected topics in medicinal chemistry - Antibacterial agents
6. Selected topics in medicinal chemistry - Antiviral agents
7. Selected topics in medicinal chemistry - Anticancer agents

## Assessment

The following table summarises the standard assessment tasks for this subject. Please note this is a guide only. Assessment tasks are

regularly updated, where there is a difference your Learning Guide takes precedence.

Type	Length	Percent	Threshold	Individual/ Group Task	Mandatory
Quiz	30 minutes (10 questions)	10	N	Individual	Y
Intra-session Exam	1.5 hours	10	N	Individual	Y
Presentation	Approx. 20 minutes (group of 3)	15	N	Group	Y
Essay	Approx. 1,500 words	15	N	Individual	Y
Final Exam	2 hours	50	Y	Individual	Y