

# NATS 7047 SYNTHETIC MEDICINAL CHEMISTRY

**Credit Points** 10

**Legacy Code** 301142

**Coordinator** Ricky Spencer (<https://directory.westernsydney.edu.au/search/name/Ricky Spencer/>)

**Description** This subject has been developed to introduce students to the chemical principles and procedures surrounding the synthesis of commonly encountered licit and illicit chemical substances, and to introduce you to the processes involved in the forensic analysis of clandestine drug laboratories. This subject is taught by the University of Florida as part of a collaborative venture between the University of Florida and Western Sydney University. Note: Further information on this subject is available from the University of Florida.

**School** Science

**Discipline** Forensic 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** Postgraduate Coursework Level 7 subject

## Restrictions

Students must be enrolled in 3741 Master of Forensic Science, 3742 Graduate Diploma in Forensic Science or 3743 Graduate Certificate in Forensic Science.

## Learning Outcomes

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

1. Be able to comfortably navigate the WWW and know how to locate and use web based resources for their interests and further education
2. Be able to recognize chemical functional groups and to know their chemical and physical characteristics
3. To understand the basic chemical reactions involved in illicit drug synthesis
4. To understand the processes involved in the synthesis of amphetamine, methamphetamine and MDMA
5. To understand the processes involved in the synthesis PCP
6. To understand the processes involved in the synthesis of opiates and Fentanyl
7. To understand the processes involved in the synthesis of cocaine and crack
8. To understand the processes involved in the synthesis of LSD
9. To be familiar with the steps taken in the forensic investigation of clandestine drug laboratories

## Subject Content

Module 1 Functional Groups

Module 2 Reactions Involved in Illicit Drug Synthesis I

Module 3 Reactions Involved in Illicit Drug Synthesis II

Module 4 Amphetamines, Methamphetamine and MDMA

Module 5 Phencyclidine

Module 6 Opiates

Module 7 Cocaine

Module 8 LSD

Module 9 Clandestine Laboratories

## 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
Final Exam	Not specified	100	N	Individual	N

Teaching Periods

## Uni of Florida - Term 1 (2025)

### Online

#### Online

**Subject Contact** Ricky Spencer (<https://directory.westernsydney.edu.au/search/name/Ricky Spencer/>)

[View timetable](https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=NATS7047_25-FT1_ON_2#subjects) ([https://classregistration.westernsydney.edu.au/odd/timetable/?subject\\_code=NATS7047\\_25-FT1\\_ON\\_2#subjects](https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=NATS7047_25-FT1_ON_2#subjects))

## Uni of Florida - Term 3 (2025)

### Online

#### Online

**Subject Contact** Ricky Spencer (<https://directory.westernsydney.edu.au/search/name/Ricky Spencer/>)

[View timetable](https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=NATS7047_25-FT3_ON_2#subjects) ([https://classregistration.westernsydney.edu.au/odd/timetable/?subject\\_code=NATS7047\\_25-FT3\\_ON\\_2#subjects](https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=NATS7047_25-FT3_ON_2#subjects))