

NATS 7039

PHARMACEUTICAL ANALYSIS

Credit Points 10

Legacy Code 301143

Coordinator Mark Williams ([https://directory.westernsydney.edu.au/search/name/Mark Williams/](https://directory.westernsydney.edu.au/search/name/Mark%20Williams/))

Description This subject focuses on the characterisation and the structural proof of drug compounds routinely encountered in Forensic and Pharmaceutical 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

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. Understand the procedures and principles involved in the preparation and analyses of drug and toxicology samples
3. Be familiar with common preliminary tests, and understand the chemistry and theory of testing procedures
4. Be familiar with common analytical techniques, their working mechanisms, and the chemistry and principles of confirmatory drug testing, including Ultra violet spectroscopy, normal and reverse phase chromatography, infrared spectroscopy and Gas chromatography/mass spectroscopy, NMR, Supercritical fluid separations and capillary electrophoresis
5. Understand the importance of, and the procedures involved in, quality assurance and quality control in drug testing and have a conceptual understanding of accuracy
6. Be able to use web-based tools for communication and for the education of themselves and others

Subject Content

Module 1 Sample Handling, Storage and Preparation

Module 2 Presumptive Tests

Module 3 Ultraviolet Spectrophotometry

Module 4 Infrared Spectrophotometry

Module 5 Nuclear Magnetic Resonance

Module 6 Mass Spectroscopy

Module 7 Gas Chromatography

Module 8 High Performance Liquid Chromatography

Module 9 Capillary Electrophoresis

Module 10 Supercritical Fluid Separations

Module 11 Trace analysis

Module 12 Optimisation of Experimental Conditions

Module 13 Legal Implications and Data Interpretation

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 |
|------------|---------------|---------|-----------|-----------------------|
| Final Exam | Not specified | 100 | N | Individual |

Teaching Periods

Uni of Florida/Canberra-Term 1 (2022)

Online

Online

Subject Contact Chris Lennard ([https://directory.westernsydney.edu.au/search/name/Chris Lennard/](https://directory.westernsydney.edu.au/search/name/Chris%20Lennard/))

View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=NATS7039_22-FT1_ON_0#subjects)

Uni of Florida/Canberra-Term 3 (2022)

Online

Online

Subject Contact Chris Lennard ([https://directory.westernsydney.edu.au/search/name/Chris Lennard/](https://directory.westernsydney.edu.au/search/name/Chris%20Lennard/))

View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=NATS7039_22-FT3_ON_0#subjects)

Florida Term 1 (2023)

Online

Online

Subject Contact Chris Lennard ([https://directory.westernsydney.edu.au/search/name/Chris Lennard/](https://directory.westernsydney.edu.au/search/name/Chris%20Lennard/))

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=NATS7039_23-FT1_ON_2#subjects)

Florida Term 3 (2023)

Online

Online

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