

# NATS 7039

## PHARMACEUTICAL ANALYSIS

**Credit Points** 10

**Legacy Code** 301143

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

**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

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. 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 Infared 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 | 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 \(https://classregistration.westernsydney.edu.au/odd/timetable/?subject\\_code=NATST039\\_25-FT1\\_ON\\_2#subjects\)](https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=NATST039_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 \(https://classregistration.westernsydney.edu.au/odd/timetable/?subject\\_code=NATST039\\_25-FT3\\_ON\\_2#subjects\)](https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=NATST039_25-FT3_ON_2#subjects)