

# NATS 7029 FORENSIC TOXICOLOGY II

**Credit Points** 10

**Legacy Code** 301137

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

**Description** This subject will expand on concepts encountered in Forensic Toxicology I, providing in-depth knowledge of pharmacology and toxicology as it pertains to commonly encountered abused and toxic substances. This subject is unique in offering modules in doping control, expert testimony and human performance and postmortem toxicology. 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

**Pre-requisite(s)** NATS 7028

## 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 interest and further education
2. Understand basic pharmacokinetic parameters such as absorption, distribution, metabolism and elimination (ADME)
3. Understand the pharmacology and basic metabolites of the presented illicit drug substances
4. Understand the chemical, pharmacological, pharmacokinetic, toxic properties and effects of alcohol and the procedures of quantitative analyses for blood alcohol
5. Understand the effects of drugs and alcohol on driving impairment
6. Understand the ADME, pharmacology and toxicity of a number of metals commonly encountered in forensic toxicology
7. Understand the process of acquisition, preparation, analysis of tissues, bodily fluids and postmortem samples such as liver, vitreous humor, urine, bile and blood
8. Understand the pharmacology, testing procedures and regulations concerning commonly abused drugs used in athletics for the enhancement of human performance
9. Understand the basic regulations of doping control within the horse and dog racing industry and associated sample acquisition and analyses
10. Understand the basic regulations associated with drug testing in the workplace and the acquisition of samples such as blood, urine and hair

11. Understand the basic principles of expert testimony and the role of the expert witness in forensic toxicology
12. Be able to apply the presented concepts and procedures in the execution and completion of a virtual case study
13. Use web based tools for communication and for the education of themselves and others

## Subject Content

Module 1 Pharmacokinetics and Drug Action  
 Module 2 Drug Classifications and Pharmacology  
 Module 3 Alcohol and Volatiles  
 Module 4 Metals  
 Module 5 Post Mortem Forensic Toxicology  
 Module 6 Doping Control  
 Module 7 Human Performance Toxicology  
 Module 8 Expert Testimony

## 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=NATS7029\\_22-FT1\\_ON\\_O#subjects](https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=NATS7029_22-FT1_ON_O#subjects))

## Uni of Florida/Canberra-Term 2 (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/))

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## 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=NATS7029\\_23-FT1\\_ON\\_2#subjects](https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=NATS7029_23-FT1_ON_2#subjects))

## Florida Term 2 (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/))

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