

Forensic Laboratory Accreditation and Quality Systems 2022NSC - Tri 1 2021 - Nathan Campus - Blended

1. General Course Information

1.1 Course Details

Course code	2022NSC
Course title	Forensic Laboratory Accreditation and Quality Systems
Academic organisation	ESC School of Environment and Science
Trimester	Trimester 1 2021
Mode	Blended
Level	Undergraduate
Location	Nathan, On Campus
Credit point value	10

Restrictions:

Restriction: Students must be enrolled in the following programs: 1264 B Forensic Science, 1433 B Forensic Sc/B Crim Crim Just

Course Description:

This course highlights the importance of formal accreditation of forensic laboratories and the significance and purpose of quality assurance, quality control and quality systems for world-class forensic laboratories.

Assumed Background:

This course requires background knowledge in laboratory procedures either chemistry or molecular biology and an understanding of forensic science and the importance of accreditation. Pre-requisite: 1008NSC Principles of Forensic Investigation

1.2 Course Introduction

This course is important to you because it aims to provide an understanding of the processes involved in, and significance of, NATA accreditation. Accreditation is mandatory for all forensic laboratories, police services, testing laboratories, government laboratories and most businesses. It also aims to explain the purpose and significance of quality control, quality assurance, and the quality management systems for forensic services. The course will cover the ISO/IEC international guidelines for accreditation and the accrediting agencies of Australia and elsewhere in the world. You should be aware that the vast majority of your professional activities following graduation will be in accordance with the requirements of one or more accreditation guidelines within a quality management system.

Previous Student Feedback

- Gaining the knowledge of NATA protocols, accreditation and just general laboratory procedure. I think it's a great advantage when applying for jobs.
- The course was very in-depth with engaging assessment and very helpful for bringing an experience close to the workforce. I thoroughly enjoyed this course.

1.3 Course Staff

Primary Convenor
APro Carney Matheson

Email	c.matheson@griffith.edu.au
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Campus	Nathan Campus
Building	Science 1 (N25)

1.4 Timetable

Timetables are available on [the Programs and Courses website](#).

NB: Details contained in this Section of the course profile and Section 4.1 Learning Activities are to be read in conjunction with the official class timetable. The published class timetable which is the authoritative source for timetabling information for all campuses can be located by clicking on the above link.

Additional Timetable Information

The course will have three components lectures, labs and tutorials. The lectures form a solid basis for professional practice, and elements of this course provide the necessary framework for learning in relation to subsequent forensic courses in your chosen major (either forensic molecular biology or forensic chemistry). Part of this course will include how the knowledge you gain in this course can enhance your opportunities for obtaining employment.

1.5 Lecture Capture

It is standard practice at Griffith University that lectures timetabled in lecture capture-enabled venues are recorded and made available to students on the relevant course site, in accordance with the University's [Lecture Capture Policy](#).

The lecture series delivered as part of this course will be recorded and accessible via the Learning@Griffith course site.

1.6 Technical Specifications

No special technical specifications are required.

2. Aims, Outcomes & Graduate Attributes

2.1 Course Aims

This course is available only to students enrolled in the programs Bachelor of Forensic Science or Bachelor of Forensic Science/ Bachelor of Criminology and Criminal Justice. It is a core course for the Forensic Molecular Biology Major and for the Forensic Chemistry Major. This course is important to you because it aims to provide an understanding of the processes involved in, and significance of, NATA accreditation of forensic laboratories. It also aims to explain the purpose and significance of quality control, quality assurance, and quality management systems for forensic laboratories. You should be aware that the vast majority of your professional activities following graduation will be in accordance with the requirements of one or more quality management systems, should you elect to work in a government facility or any commercial organisation.

2.2 Learning Outcomes

After successfully completing this course you should be able to:

1. CONTENT-BASED OUTCOMES

- 1.1 Understand the components, guidelines, terminology and standards used for accreditation.
- 1.2 Understand and explain the purpose of, and processes involved in, NATA accreditation of forensic laboratories.
- 1.3 Understand and explain the purpose and significance of quality controls, quality assurance and quality management systems in a forensic laboratory.
- 1.4 Understand and explain the common features and the differences in NATA accreditation requirements and quality systems requirements in different forensic laboratories: forensic biology, forensic chemistry and toxicology, and police forensic sciences.
- 1.5 Understand the accreditation systems in Australia and around the world.

2. COGNITIVE OUTCOMES

- 2.1 Be able to objectively discuss the specifics of appropriate and recommended quality systems for particular forensic laboratories, and to justify those specifics.
- 2.2 Demonstrate a fundamental understanding of the role and importance of NATA accreditation and quality systems.

2.3 Continue the process of acquiring demonstrable skills and knowledge relevant and applicable to future study or employment in forensic laboratory organisations or in other professions associated with the criminal justice system.

2.4 Develop competence to contribute to team development of a model quality management system suitable for a forensic laboratory seeking accreditation.

3. APPLICATION OUTCOMES

3.1 Apply the knowledge gained in this course to the reporting process within a quality management system.

3.2 Demonstrate the ability, in relation to the material covered by this course, to communicate using professional forensic/ scientific terminology.

3.3 Perform some of the quality assurance and quality control activities employed within an accredited laboratory.

2.3. Graduate Attributes

For further details on the Griffith Graduate please [click here](#)

Griffith University prepares influential graduates to be:

- [Knowledgeable and skilled, with critical judgement](#)
- [Effective communicators and collaborators](#)
- [Innovative, creative and entrepreneurial](#)
- [Socially responsible and engaged in their communities](#)
- [Culturally capable when working with First Australians](#)
- [Effective in culturally diverse and international environments](#)

This table demonstrates where each of the Griffith Graduate Attributes is taught, practised and assessed in this course.

For further details on the Griffith Graduate Attributes please refer to [The Griffith Graduate policy](#).

University wide attributes

Graduate Attribute	Taught	Practised	Assessed
Knowledgeable and skilled, with critical judgement	•	•	•
Effective communicators and collaborators	•	•	•
Innovative, creative and entrepreneurial	•		
Socially responsible and engaged in their communities	•		

Additional Course Information on Graduate Attributes

Prepare students for employment in a quality management system.

3. Learning Resources

3.1 Required Resources

Details of your Required Learning Resources are available from the [Reading List](#).

3.2 Recommended Resources

Details of your Recommended Learning Resources are available from the [Reading List](#).

3.3 University Learning Resources

The University provides many facilities and support services to assist students in their studies. Links to information about University support resources that are available to students are included below for easy reference.

[Readings](#) - New online service enabling students to access Required and Recommended Learning resources. It connects to the library catalogue to assist with quickly locating material held in Griffith libraries and enables students to manage and prioritise their readings, add personal study notes and export citations.

[Learning@Griffith](#) - there is a dedicated website for this course via the Learning@Griffith at myGriffith.

Academic Integrity Tutorial - this tutorial helps students to understand what academic integrity is and why it matters. You will be able to identify types of academic misconduct, understand what skills you will need in order to maintain academic integrity, and learn about the processes of referencing styles.

Student Support - provides a range of services to support students throughout their studies including personal support such as Counselling and Health Services; Academic support; and Financial and Welfare support.

The **Careers and Employment Team** provides: Career Wellbeing, Career Planning and Decision Making, Finding Jobs, Skills Identification and Development, Graduate Employment Information, LinkedIn Profile Review, Interview Preparation, Online Psychometric and Aptitude Test Preparation, International Student Support, Disability Disclosure Strategies and Higher Degree Research (HDR) Career Consultations.

Library and Learning Services: Library and Learning Services provides a wide range of quality client-focused services and programs to students, researchers and staff of the University. Library and Learning Services works in collaboration with the academic community to achieve academic and research outcomes.

Support for learning - the University provides access to common use computing facilities for educational purposes.

Code of Practice - Griffith Information Technology Resources.

3.5 Other Learning Resources & Information

There is no prescribed text for this course.

Supporting materials will be as provided by the teaching staff, primarily on Learning@Griffith.

4. Teaching & Learning Activities

4.1 Learning Activities

Week Commencing	Activity	Learning Outcomes
8 Mar 21 - 12 Mar 21	Week 1: Introduction (Lecture): Introduction to quality assurance and quality control, Accrediting agencies, NATA and International standards	1.1, 1.2, 1.5, 2.1, 2.2, 3.2
8 Mar 21 - 12 Mar 21	Week 1: NATA (Tutorial): NATA documentation, accreditation terminology and how to succeed in this course.	1.1, 1.2, 1.3, 1.4, 1.5, 2.1, 2.2, 2.3, 2.4, 3.2
15 Mar 21 - 19 Mar 21	Week 2: Establishing Laboratory Accreditation (Lecture): Accrediting a lab, Accrediting documentation, The application process and SOPs	1.1, 1.2, 1.3, 1.4, 1.5, 2.1, 2.2, 2.3
15 Mar 21 - 19 Mar 21	Week 2: The Accreditation Process (Tutorial): The documents in the application process, SOPs and your part in the accreditation process.	1.1, 1.2, 1.3, 1.4, 1.5, 2.1, 2.2, 2.3, 2.4, 3.1, 3.2
22 Mar 21 - 26 Mar 21	Week 3: Validation (Lecture): Developmental validation, Internal validation and Inter-laboratory comparisons	1.1, 1.2, 1.3, 1.4, 1.5, 2.1, 2.2
22 Mar 21 - 26 Mar 21	Week 3: Validation (Tutorial): The different types of validation, the importance of validation and how it is performed.	1.1, 1.2, 1.3, 1.4, 1.5, 2.1, 2.2, 2.3, 2.4, 3.1, 3.2
29 Mar 21 - 2 Apr 21	Week 4: Quality controls (Lecture): Traceability, Calibration and control samples and Procedures to maintain quality	1.1, 1.2, 1.3, 1.4, 1.5, 2.1, 2.2
29 Mar 21 - 2 Apr 21	Week 4: Assignment 1 (Tutorial): Non-conformance	1.1, 1.2, 1.3, 1.4, 1.5, 2.1, 2.2, 2.3, 2.4, 3.1, 3.2, 3.3
12 Apr 21 - 16 Apr 21	Week 5: Maintaining Accreditation (Lecture): External audits, internal audits, inspections, non-conformance, corrective actions and preventative actions.	1.1, 1.2, 1.3, 1.4, 1.5, 2.1, 2.2, 2.3, 3.1, 3.2
12 Apr 21 - 16 Apr 21	Week 5: (Tutorial): How to perform an audit.	1.1, 1.2, 1.3, 1.4, 1.5, 2.1, 2.2, 2.3, 2.4, 3.1, 3.2, 3.3
19 Apr 21 - 23 Apr 21	Week 6: Quality in Forensic Science Laboratories (Lecture): Chain of custody, Laboratory records, Contamination mitigation and laboratory conditions	1.1, 1.2, 1.3, 1.4, 1.5, 2.1, 2.2, 2.3, 2.4
19 Apr 21 - 23 Apr 21	Week 6: Quality in Forensic Science Laboratories (Tutorial): Laboratory documentation	1.1, 1.2, 1.3, 1.4, 1.5, 2.1, 2.2, 2.3, 2.4

Week Commencing	Activity	Learning Outcomes
26 Apr 21 - 30 Apr 21	Week 7: Quality assurance and the analyst (Lecture): Proficiency testing and The roles of quality staff	1.1, 1.2, 1.3, 1.4, 1.5, 2.1, 2.2, 2.3, 2.4
26 Apr 21 - 30 Apr 21	Week 7: (Tutorial): Non-conformance reporting	1.1, 1.2, 1.3, 1.4, 1.5, 2.1, 2.2, 2.3, 2.4, 3.1, 3.2, 3.3
3 May 21 - 5 May 21	Week 8: Guest Lecture (Lecture): Guest lecturers will present information about quality aspects in their forensic scientific workplace.	1.1, 1.2, 1.3, 1.4, 1.5, 2.1, 2.2
3 May 21 - 5 May 21	Week 8: Assignment 2 (Tutorial): Non-conformance Report	1.1, 1.2, 1.3, 1.4, 1.5, 2.1, 2.2, 2.3, 2.4, 3.1, 3.2, 3.3
10 May 21 - 12 May 21	Week 9: Guest Lecture (Lecture): Guest lecturers will present information about quality aspects in their forensic scientific workplace.	1.1, 1.2, 1.3, 1.4, 1.5, 2.1, 2.2
10 May 21 - 12 May 21	Week 9: (Tutorial): Laboratory preparation.	1.1, 1.2, 1.3, 1.4, 1.5, 2.1, 2.2, 2.3, 2.4, 3.1, 3.2, 3.3
17 May 21 - 19 May 21	Week 10: Guest Lecture (Lecture): Guest lecturers will present information about quality aspects in their forensic scientific workplace.	1.1, 1.2, 1.3, 1.4, 1.5, 2.1, 2.2
17 May 21 - 19 May 21	Week 10: (Tutorial): Laboratory preparation	1.1, 1.2, 1.3, 1.4, 1.5, 2.1, 2.2, 2.3, 2.4, 3.1, 3.2, 3.3
17 May 21 - 21 May 21	Laboratory 1 (Laboratory):	1.1, 1.2, 1.3, 2.2, 2.3, 2.4, 3.1, 3.2, 3.3
24 May 21 - 26 May 21	Week 11: Employment in a Quality System (Lecture): Roles of staff in a quality system, Terminology and Applying for a quality systems job	1.1, 1.2, 1.3, 1.4, 1.5, 2.1, 2.2, 2.3, 2.4, 3.1, 3.2
24 May 21 - 26 May 21	Week 11: Employment in a Quality System (Tutorial): Applying for a quality systems job and laboratory preparation.	1.1, 1.2, 1.3, 1.4, 1.5, 2.1, 2.2, 2.3, 2.4, 3.1, 3.2
24 May 21 - 28 May 21	Laboratory 2 (Laboratory):	1.2, 1.3, 2.1, 2.2, 2.3, 2.4, 3.1, 3.2, 3.3
31 May 21 - 4 Jun 21	Week 12: International Accreditation (Lecture): International accreditation organisations and systems, accredited forensic laboratories and quality management systems	1.1, 1.2, 1.3, 1.4, 1.5, 2.1, 2.2, 2.3, 2.4, 3.1, 3.2
31 May 21 - 4 Jun 21	Week 12: Exam preparation and revision (Tutorial): Exam preparation, revision and laboratory data and reporting.	1.1, 1.2, 1.3, 1.4, 1.5, 2.1, 2.2, 2.3, 2.4, 3.1, 3.2
31 May 21 - 4 Jun 21	Laboratory 3 (Laboratory):	1.2, 1.3, 2.1, 2.2, 2.3, 2.4, 3.1, 3.2, 3.3

4.2 Other Teaching and Learning Activities Information

Disability. If any student has a disability and/or health condition that may impact on their ability to successfully undertake required learning activities in this course, they are encouraged to complete the Griffith University Disclosure Statement and advise their Course Convenor.

Public Holidays: *If a class is usually scheduled on a day that falls on a public holiday, or is cancelled for any reason, the content will be delivered online or intergrated across other classes, as appropriate.*

Students repeating a course: *Normally, students repeating a course should not carry forward marks from a previous attempt. Assessment items are usually offered to provide formative experience as well as a summative assessment. Therefore, NO MARK for any assessment item from a previous attempt will be carried forward.*