NATS 3027 LABORATORY QUALITY MANAGEMENT

Credit Points 10

Legacy Code 300883

Coordinator Sindy Kayillo (https://directory.westernsydney.edu.au/search/name/Sindy Kayillo/)

Description This capstone unit is directed towards the accreditation of a laboratory for chemical, microbiological or forensic testing, using the standards that are applicable in industry. The unit focuses upon the importance and coordination of good laboratory management, teamwork, calibration, record keeping and laboratory manuals. Groups of students are required to develop, establish and operate a comprehensive Laboratory Quality Management system designed for a specific class of chemical, microbiological or forensic test. The students' technical competence and quality system are then assessed using the guidelines laid down by the National Association of Testing Authorities (NATA).

School Science

Discipline Other Natural And Physical Sciences

Student Contribution Band HECS Band 2 10cp

Check your HECS Band contribution amount via the Fees (https://www.westernsydney.edu.au/currentstudents/current_students/fees/) page.

Level Undergraduate Level 3 subject

Equivalent Subjects NATS 3029 - Laboratory Quality Management

Restrictions Successful completion of 60 credit points at Level 1 and 40 credit points at Level 2 in Bachelor of Science, Bachelor of Medical Science of Bachelor of Natural Science.

Assumed Knowledge

A demonstrated understanding of and competence with laboratory techniques in analytical chemistry or microbiology, corresponding to successful completion of a Level 2 Microbiology or Analytical Chemistry subject.

Learning Outcomes

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

1. Describe the nature and importance of a Laboratory Quality Management System, and the operation of ISO/IEC 17025.
2. Design and follow a laboratory quality management system for the accomplishment of a specific chemical, forensic or microbiological test.
3. Develop quality-management documentation, including sections of a Laboratory Quality Manual, in accordance with ISO/IEC 17025, including policies and procedures.
4. Solve operational problems in a laboratory context.
5. Explain the importance of method validation, calibration procedures, traceability of results, Quality Assurance and Quality Control.
6. Develop appropriate technical skills for working in an accredited chemical, forensic or microbiological testing laboratory.
7. Work constructively within a team.
8. Learn independently, without direct supervision by academic staff.
9. Report on the experience of being assessed by an external accreditation body (NATA).
10. Handle chemical substances and/or micro-organisms safely, and critically evaluate the risks associated with laboratory work, in the context of Work, Health and Safety practices and legislation.

Subject Content

1. Designing and working within a well-defined organisational structure;
2. Developing, establishing and operating a laboratory quality management system designed for a specific class of chemical, microbiological or forensic test;
3. Preparing a Laboratory Quality Manual in accordance with ISO/IEC 17025 and the relevant Field Application Documents from the National Association of Testing Authorities (NATA);
4. Understanding and following NATA laboratory accreditation guidelines.

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.

Item	Length	Percent	Threshold	Individual/ Group Task
Assessment by NATA Assessors	2 hours	40	N	Individual
Student's contribution to the Laboratory Quality Manual	1000-1500 words	10	N	Individual
Student's contribution to the overall practicum	Monitored throughout the semester	30	N	Both (Individual & Group)
Viva voce examination, incorporating an exit interview	30 minutes	10	N	Individual
Peer assessment	2 pages	10	N	Individual

Teaching Periods

Spring

Hawkesbury

Day

Subject Contact Michael Phillips (https://directory.westernsydney.edu.au/search/name/Michael Phillips/)

View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=NATS3027_22-SPR_HW_D#subjects)