

## **Graduate Certificate in Research elective unit – XGR504 Advanced Analytical Techniques (Central Science Laboratory)**

*Are you a newly enrolled HDR student that will be accessing instrumentation and expertise in the Central Science Laboratory as part of your candidature in 2024 or beyond?*

If yes, then you are strongly encouraged to enroll in the CSL elective unit “**Advanced Analytical Techniques**” (XGR504) offered in 2024 as part of the Graduate Certificate in Research program.

This unit has proved a highly popular elective with Science and Health Science related candidates. The merit of this course and the CSL teaching team associated with this unit are consistently acknowledged with UTas Course Unit Commendations.

The unit is also open to existing HDR candidates (enrolled prior to 2024) seeking to increase their understanding of modern analytical instrumentation.

Commencing on **Tuesday 26<sup>th</sup> March**, this unit includes an introductory two-day workshop of CSL capabilities followed by two practical hands-on electives (of two days duration each). Topics to be covered include:

- Organic Mass Spectrometry
- Electron Microscopy and X-ray Microanalysis
- Stable Isotope Mass Spectrometry
- Molecular Genetics
- Proteomics Mass Spectrometry
- ICP Mass Spectrometry
- NMR Spectroscopy
- Vibrational Spectroscopy

Following introductory lectures candidates select their practical areas of interest, typically aligned to their individual research requirements. During the elective component(s) students work in the laboratory with recognised specialists and are introduced to (amongst others) the technique, the principles of operation, the pros-and-cons of the methodology, issues related to sample preparation, instrument maintenance, data interpretation, as well as specific application areas.

**Enrolment is easy! Log onto eStudent and add XGR504 to your X5A study plan.**

For further information about the Graduate Certificate in Research program visit <https://www.utas.edu.au/research-admin/graduate-research/current-candidates/your-graduate-research-coursework>

### **Contacts**

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