

The Threshold Learning Outcomes for Chemistry

TLO 1. Understanding the culture of chemistry	<i>Understand ways of scientific thinking by:</i>	1.1 recognising the creative endeavour involved in acquiring knowledge, and the testable and contestable nature of the principles of chemistry
		1.2 recognising that chemistry plays an essential role in society and underpins many industrial, technological and medical advances
		1.3 understanding and being able to articulate aspects of the place and importance of chemistry in the local and global community
TLO 2. Scientific knowledge	<i>Exhibit depth and breadth of chemistry knowledge by:</i>	2.1 demonstrating a knowledge of, and applying the principles and concepts of, chemistry
		2.2 recognising that chemistry is a broad discipline that impacts on, and is influenced by, other scientific fields
TLO 3. Inquiry, problem solving and critical thinking	<i>Investigate and solve qualitative and quantitative problems in the chemical sciences, both individually and in teams, by:</i>	3.1 synthesising and evaluating information from a range of sources, including traditional and emerging information technologies and methods
		3.2 formulating hypotheses, proposals and predictions and designing and undertaking experiments in a safe and responsible manner
		3.3 applying recognised methods and appropriate practical techniques and tools, and being able to adapt these techniques when necessary
		3.4 collecting, recording and interpreting data and incorporating qualitative and quantitative evidence into scientifically defensible arguments
TLO 4. Communication	<i>Communicate chemical knowledge by:</i>	4.1 appropriately documenting the essential details of procedures taken, key observations, results and conclusions
		4.2 presenting information, articulating arguments and conclusions, in a variety of modes, to diverse audiences, and for a range of purposes
TLO 5. Personal and social responsibility	<i>Take personal, professional and social responsibility by:</i>	5.1 demonstrating a capacity for self-directed learning
		5.2 demonstrating a capacity for working responsibly and safely
		5.3 recognising the relevant and required ethical conduct and behaviour within which chemistry is practised