



# Unit Outline (Higher Education)

**Institute / School:** Institute of Innovation, Science & Sustainability

**Unit Title:** HONOURS RESEARCH METHODS

**Unit ID:** SCHON4001

**Credit Points:** 15.00

**Prerequisite(s):** Nil

**Co-requisite(s):** Nil

**Exclusion(s):** Nil

**ASCED:** 019999

**Description of the Unit:**

This unit develops the skills necessary for conducting and managing an honours research project. The unit is also important for preparing students for a higher degree by research. Topics addressed will include, among others, research ethics, developing a research project, experimental design, data collection and analysis, and scientific writing and communication.

**Grade Scheme:** Graded (HD, D, C, P, MF, F, XF)

**Work Experience:**

No work experience: Student is not undertaking work experience in industry.

**Placement Component:** No

**Supplementary Assessment:** No

Supplementary assessment is not available to students who gain a fail in this Unit.

**Course Level:**

Level of Unit in Course	AQF Level of Course					
	5	6	7	8	9	10
Introductory	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Intermediate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Advanced	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Learning Outcomes:**

**Knowledge:**

- K1.** Identify occupational health and safety standards and ethical responsibilities, and understand their relevance to effective research outcomes;
- K2.** Define characteristics of effective research hypotheses and objectives, and the role of the literature review;
- K3.** Explain and appreciate the importance of robust experimental design;
- K4.** Recognise the qualities of effective communication of research through publication, text, oral presentations and visual media;
- K5.** Describe the principles of different qualitative and quantitative approaches to data analysis.

**Skills:**

- S1.** Prepare a research proposal, incorporating OH&S, ethics and risk assessment documentation as required;
- S2.** Appreciate the necessary qualities of a productive research project;
- S3.** Critically analyse research from journals, books and seminars;
- S4.** Deliver clear and professional oral communication of research to colleagues and collaborators.

**Application of knowledge and skills:**

- A1.** Demonstrate ability to critically analyse published research;
- A2.** Design and deliver research seminar.
- A3.** Write a research proposal relevant to project;

**Unit Content:**

This unit will assist students in the design and management of a research project. The unit will primarily serve to address the issues and challenges of the student's honours research project, though it will also provide an introduction to research philosophy, post graduate research, and the challenges facing an early career researcher. The unit will introduce students to the methodologies of disciplines other than their own, and hence it serves as an introduction to the broader scientific community. The unit is designed to be taken in the first semester of the one-year BSc(Hons) program, and to contribute to the graduate attributes expected of an honours graduate.

Topics may include:

- Occupational Health and Safety issues relating to research
- Research ethics
- Developing a research proposal
- Qualitative and quantitative research
- Experimental design
- Literature review and critical reading
- Data collection and management issues
- Data analysis and interpretation
- Scientific writing for a thesis and journals
- Science communication, including seminar presentations
- Intellectual property

**FEDTASKS**

Federation University Federation recognises that students require key transferable employability skills to prepare them for their future workplace and society. FEDTASKS (**T**ransferable **A**tttributes **S**kills and **K**nowledge)

provide a targeted focus on five key transferable Attributes, Skills, and Knowledge that are to be embedded within curriculum, developed gradually towards successful measures and interlinked with cross-discipline and Co-operative Learning opportunities. *One or more FEDTASK, transferable Attributes, Skills or Knowledge must be evident in the specified learning outcomes and assessment for each FedUni Unit, and all must be directly assessed in each Course.*

FEDTASK attribute and descriptor		Development and acquisition of FEDTASKS in the Unit	
		Learning Outcomes (KSA)	Assessment task (AT#)
FEDTASK 1 Interpersonal	<p>Students will demonstrate high-level skills to effectively communicate, interact and work with others both individually and in groups.</p> <p>Students will be required to display (in person and/or online) high-level skills in-person and/or online in:</p> <ul style="list-style-type: none"> <li>• Effective verbal and non-verbal communication via a range of synchronous and asynchronous methods</li> <li>• Active listening for meaning and influencing</li> <li>• High-level empathy for others</li> <li>• Negotiating and demonstrating extended conflict resolution skills</li> <li>• Working respectfully in cross-cultural and diverse teams</li> </ul>	K1, K2, K3, K4, K5 S1, S2, S3, S4, A1, A2, A3	AT1, AT2, AT3
FEDTASK 2 Leadership	<p>Students will demonstrate the ability to apply leadership skills and behaviours</p> <p>Students will be required to display skills in:</p> <ul style="list-style-type: none"> <li>• Creating, contributing to, and enabling collegial environments</li> <li>• Showing self-awareness and the ability to self-reflect for personal growth</li> <li>• Inspiring and enabling others</li> <li>• Making informed and evidence-based decisions through consultation with others</li> <li>• Displaying initiative and ability to solve problems</li> </ul>	K1, K2, K3, K4, K5, S1, S2, S3, S4, A1, A2, A3	AT1, AT2, AT3

FEDTASK attribute and descriptor		Development and acquisition of FEDTASKS in the Unit	
		Learning Outcomes (KSA)	Assessment task (AT#)
FEDTASK 3 Critical Thinking and Creativity	<p>Students will demonstrate an ability to work in complex and ambiguous environments, using their imagination to create new ideas.</p> <p>Students will be required to display skills in:</p> <ul style="list-style-type: none"> <li>• Reflecting critically on complex problems</li> <li>• Synthesising, evaluating ideas, concepts and information</li> <li>• Proposing alternative perspectives to refine ideas</li> <li>• Challenging conventional thinking to clarify concepts through deep inquiry</li> <li>• Proposing creative solutions in problem solving</li> </ul>	K1, K2, K3, K4, K5, S1, S2, S3, S4, A1, A2, A3	AT1, AT2, AT3
FEDTASK 4 Digital Literacy	<p>Students will demonstrate the ability to work proficiently across a range of tools, platforms and applications to achieve a range of tasks</p> <p>Students will be required to display high-level skills in:</p> <ul style="list-style-type: none"> <li>• Finding, accessing, collating, evaluating, managing, curating, organising and appropriately and securely sharing complex digital information at a high-level</li> <li>• Receiving and responding to messages in a range of digital media</li> <li>• Using digital tools appropriately to conduct research</li> <li>• Contributing proficiently to digital teams and working groups</li> <li>• Participating in and utilising digital learning opportunities</li> </ul>	Not applicable	Not applicable

FEDTASK attribute and descriptor		Development and acquisition of FEDTASKS in the Unit	
		Learning Outcomes (KSA)	Assessment task (AT#)
FEDTASK 5 Sustainable and Ethical Mindset	Students will demonstrate the ability to think ethically and sustainably. Students will be required to display (in person and/or online) high-level skills in-person and/or online in: <ul style="list-style-type: none"> <li>• The responsible conduct of research</li> <li>• Making informed judgments that consider the impact of devising solutions in multiple global economic environmental and societal contexts</li> <li>• Demonstrating commitment to social responsibility as a professional and a citizen</li> <li>• Generating research solutions which are sustainable, ethical, socially responsible and/or sustainable</li> <li>• Extending lifelong, life-wide and life-deep learning to be open to diverse others</li> <li>• Demonstrate extended actions to foster sustainability in their professional and personal life.</li> </ul>	Not applicable	Not applicable

### Learning Task and Assessment:

Students are encouraged to participate in the faculty seminar program, and other external seminars.

Learning Outcomes Assessed	Assessment Tasks	Assessment Type	Weighting
K3, K4, S3, A1	Discuss and critically analyse research papers	Short report	10% - 30%
K1, K3, K4, S4, A2	Oral presentation of research proposal	Presentation(s)	20% - 40%
K1, K2, K5, S1, S2, S4, A2, A3	Research proposal	Report	40% - 60%

### Adopted Reference Style:

Australian Harvard

Refer to the [library website](#) for more information

Fed Cite - [referencing tool](#)