

Research Data Management Standards (interim)

1. Introduction

The *Australian Code for the Responsible Conduct of Research (Australian Code)* was substantially revised in 2018 and the *Macquarie University Code for the Responsible Conduct of Research (Macquarie Research Code)* subsequently amended and issued in July 2019.

The *Macquarie Research Code* articulates broad principles and responsibilities which underpin the responsible conduct of research across varied research contexts and disciplines. It is in place to ensure that research being undertaken under the auspices of Macquarie University is conducted with the highest standards of ethics, responsibility and integrity.

The detail provided in the former *Australian Code* and *Macquarie Research Code* about how the principles and responsibilities should be applied to specific elements or stages of the research process (in this case, to the Management of Research Data) is being refined and clarified. This detail will be included in accompanying guides being written by the Australian Research Council (ARC), National Health and Medical Research Council (NHMRC) and Universities Australia. Until each guide is issued and the associated policies and guidance at Macquarie University are adjusted, researchers are expected to refer to the relevant chapter of the former *Macquarie Research Code* (reproduced in section 4).

The *Macquarie University Research Code Complaints, Breaches and Investigation Procedure* describes how deviations from the principles and responsibilities outlined in the *Macquarie Research Code* (including a failing to meet these standards) must be reported, assessed, investigated and managed.

2. Purpose

These standards outline how the principles and responsibilities articulated in the *Macquarie Research Code* should be applied to the Management of Research Data, Materials and Records.

3. Scope

- a. These standards apply to anyone who conducts research or research support under the auspices of Macquarie University, as per the *Macquarie Research Code*.
- b. While these standards establish the regular expectations for all Macquarie researchers, additional requirements may be imposed on those involved with external/overseas institutions, external funding bodies or publishers, external collaborators, or where required by local legislation, for example in the case of HDR Candidates subject to cotutelle or joint PhD agreements or researchers with a conjoint appointment.
- c. Researchers may consult with a Research Integrity Advisor (RIA) at any time for advice in relation to the implementation of these standards.

3. Chapter 9. Research Data, Materials and Records

Duplicated from the first edition of the *Macquarie University Code for the Responsible Conduct of Research, Part A: Principles and Practices to Encourage Responsible Research Conduct*

1. Research data and records should be accurate, complete and in sufficient detail to enable verification of research results and to reflect what was communicated, decided or done;
2. Materials, as appropriate for the discipline and methodology – e.g. lab notes for chemical science work, audio recordings and samples for linguistics, field notes for anthropology must be retained to substantiate published claims and research results;
3. Hard and digital data must be recorded in a durable and retrievable form, be appropriately indexed and comply with relevant protocols;
4. Research data must be retained intact for a period of at least five years from the date of any publication which is based upon the data or longer if:
 - i. discussion of results continues;
 - ii. there are regulatory or sponsor requirements; or
 - iii. the data has historical or archival value.
5. Where multiple data retention periods may be applicable to a data set the longer time period applies.
6. In the case of identified personal data, the consent obtained with regard to retention, confidentiality, access and reuse must be adhered to, and data must be retained and stored in accordance with any applicable approvals (e.g. ethics committee approvals). Confidential information must be kept in secure storage;
7. Where external service providers are used for a project and identified personal information is involved, the contract must include adequate safeguards for the security of the data and records and for notification of any breaches of their security;
8. Subject to ethical, contractual and legal limitations, researchers are encouraged to make available to other researchers data, records and materials for wider use;
9. Data forming the basis of publications must be available for discussion with other researchers; where confidentiality provisions apply, the data should be kept, where possible, in a way that allows reference by third parties without breaching confidentiality; and
10. When data are obtained from limited access databases, or via a contractual arrangement, written indication of the location of the original data, or key information regarding the database from which it was obtained, must be retained by the research worker.
11. While all researchers are responsible for data and materials management, the principal investigator of a research project is responsible for ensuring that data and materials are managed correctly for that project.

4. Abbreviations

Abbreviation	Definition
NHMRC	National Health and Medical Research Council
ARC	Australian Research Council
Australian Code	<i>Australian Code for the Responsible Conduct of Research 2018</i>
Australian Guide	<i>Guide to Managing and Investigating Potential Breaches of the Australian Code for the Responsible Conduct of Research</i>
Macquarie Research Code	<i>Macquarie University Code for the Responsible Conduct of Research</i>
Macquarie Research Code Procedure	<i>Macquarie University Research Code Complaints, Breaches and Investigation Procedure</i>
RIA	Research Integrity Advisor: A member of Macquarie University staff who has been nominated by the DVC(R) to promote the responsible conduct of research and provide advice to those with concerns or complaints about potential breaches of the <i>Macquarie Research Code</i> . Research Integrity Advisors are people with research experience, wisdom, analytical skills, empathy, knowledge of the University's policy and management structure, and familiarity with the accepted practices in research.

5. Key related documents

5.1 Macquarie University policies and standards

- a. Macquarie University Code for the Responsible Conduct of Research
- b. Macquarie University Research Code Complaints, Breaches and Investigation Procedure
- c. Authorship Standards
- d. Collaborative Research Standards
- e. Conflict of Interest Policy (and Standards)
- f. Higher Degree Research Supervision Policy
- g. Peer Review Standards
- h. Publication and Dissemination Standards
- i. Supervision of Students Undertaking Research

5.2 External documents

- a. Australian Code for the Responsible Conduct of Research 2018
- b. Australian Code of Practice for the Care and Use of Animals for Scientific Purposes
- c. Guide to Managing and Investigating Potential Breaches of the Australian Code for the Responsible Conduct of Research
- d. Guidelines for Ethical Research in Australian Indigenous Studies
- e. National Statement on Ethical Conduct in Human Research

6. Commencement and amendment history

6.1	Contact Officer	Research Integrity Office
6.2	Implementation Officer	Director, Research Ethics and Integrity
6.3	Approval Authority / Authorities	Deputy Vice-Chancellor (Research)
6.4	Date of Commencement	July 2019 – Interim standards under review
6.5	Documents Superseded by this document	This document presents chapter 9 of the former <i>Macquarie University Code for the Responsible Conduct of Research 2014</i> and will be updated following the issue of the <i>Management of Data and Information in Research: A guide supporting the Australian Code for the Responsible Conduct of Research</i> (NHMC, ARC and Universities Australia, 2019)