Module 6

Graduate Supervision and Research Integrity

September 2025

Toronto Metropolitan University

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About the Module

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About the Module

At Toronto Metropolitan University (TMU), "SRC" refers to the full scope of Scholarly, Research, and Creative (SRC) activities. However, for consistency with the Tri-Agency Framework: Responsible Conduct of Research and the external guidelines and resources referenced in these modules, we will use the term "research" unless directly referencing TMU's Senate Policy 118: SRC Integrity.

The case studies in the following modules are for educational purposes and do not necessarily represent the procedures, practices, or policies at TMU.
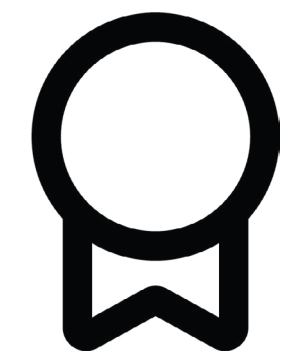
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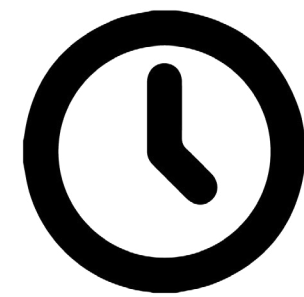
The **training module** is self-paced and can be completed according to your own time and schedule.

If you require a **Certificate of Completion** please complete this module through the D2L platform. [Learn more on our Research Integrity eLearning page](.).

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Relevant Principles of Research Integrity

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Principle 9

Treat everyone involved with research fairly and with respect.

Principle 10

Acknowledge all contributors and contributions in research.

Principle 11

Engage in the responsible training of researchers.

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About Research Ethics in Graduate Supervision

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About Research Ethics in Graduate Supervision

When supervisors model ethical behaviour and promote research integrity, trainees and other research personnel are more likely to follow best practices. All supervisors are responsible for familiarizing themselves with **TMU's Policy on Research Integrity (Policy 118)**.

Effective supervision set out by the **Yeates School of Graduate Studies (YSGS) Graduate Supervision Guidelines** involves:

- Fostering a respectful research environment.

- Providing timely guidance.

- Clearly communicating expectations.

If poor supervision leads to a breach of research integrity, outcomes may impact both the trainee/research personnel and the supervisor who failed in their responsibilities.

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Leading with Integrity

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Guidance on appropriate supervision and training is detailed in the [Responsible Conduct of Research Framework Interpretations (Article 2.7)](#) including the following best practices:

- Communicate often and clearly with each other.

- Ensure a common understanding of roles, responsibilities, and reasonable and attainable expectations.

- Establish agreements, if applicable, regarding authorship, acknowledgement, and contributions prior to beginning the research, writing a paper, or submitting.

- Ensure there is a safe space in which parties feel comfortable to ask questions.

- Discuss Responsible Conduct of Research (RCR) on a regular basis so that the topic is not seen as taboo.

- Hold periodic meetings as a group on select RCR topics (e.g., authorship, how to acknowledge others' contributions, how to appropriately cite a research paper).

- Review work together to ensure data is accurate and not falsified, fabricated, or plagiarized.

- Ensure the research-working environment is functional, constructive, and respectful to avoid any potential negative impact on research conduct.

- Establish clear guidance and expectations on record-keeping in line with the discipline and policies of the institution.

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Case Studies

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Allegations:

Improper and misleading notebooks and recording data, fabrication of research data, falsification of research data, destruction of research records, and irreproducible research findings.

Findings:

R, a PhD student, failed to maintain appropriate research notes and lab books or properly record their raw and primary data, fabricated and falsified research data, destroyed/removed research records, and reported non-existent work (R's thesis research could not be verified or duplicated). The Institution was concerned with R's credibility and reliability through the inquiry and investigation processes. Although R was found to be solely responsible for their actions, the Institution noted that R lacked the necessary supervision and issues that arose were not properly or adequately addressed. Had there been better supervision, the Institution found, it is possible that many of the issues could have been discovered earlier and some perhaps avoided altogether.[1]

Breach:

Fabrication, falsification, destruction of research records.

1. Adapted from: Government of Canada (2019), File 89

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Institutional disposition:

- Expelled R from the Institution.

- Addressed the gap in the Institution's procedures and supervisory systems.

Agency recourse:

- Declared R ineligible to hold, participate in, or apply for Agency funding as an applicant, co-applicant or participate in any Agency grant application as a collaborator, partner or in any other capacity for a period of five years.

- Declared R ineligible to participate in Agency peer review processes for the same five years.

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Allegation:

Invalid authorship.

Findings:

R, an established researcher and lab supervisor, was initially alleged to have omitted a student from the list of authors in a publication. An institutional investigation revealed that, beyond the question of invalid authorship, R did not have adequate protocols and procedures for record-keeping and data management in the lab. As a result, it was virtually impossible for R, or anyone else, to ascertain the contribution that lab members had made to the research project or any given publication that arose out of that work.[2]

Breach:

Lack of rigour.

2. Adapted from: Government of Canada (2019), File 132

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Institutional disposition:

- Suspended R without pay for six months.

- Made alternate arrangements for student supervision during this time.

- Considered strategies for ensuring that R did not resume their previous lab management practices after returning from suspension.

Agency recourse:

- Declared R ineligible to hold, participate in or apply for Agency funding as an applicant, co-applicant, collaborator, partner or in any other capacity in any Agency grant application for a period of two years.

- Declared R ineligible to participate in Agency peer review processes for the same two-year period.

- Terminated R's active awards.

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Reflection Questions

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1. What is the role of a supervisor in mitigating the risk of breaches of research integrity in graduate students' research activities?

2. What are some best practices to model appropriate supervision and training?

Test for Understanding

Begin

R, a faculty member in need of a publication in which they were the sole author, offered attribution on one paper to a former PhD student for which the former student made no substantive contribution in exchange for removing the student's name from another paper on which R was also listed as author. What are the breaches of SRC integrity in this scenario?

A Misleading publication and/or invalid authorship

B Mismanagement of conflict of interest

C Falsification

D A and B

❌ Incorrect

A "Misleading publication and/or invalid authorship" is incorrect <u>on its own.</u>

Offering attribution to a student who made no substantive contribution is an example of breach 6.15.4 of Policy 118: Giving or receiving honourary authorship or inventorship.

Try again

❌ **Incorrect**

B "Mismanagement of conflict of interest" is incorrect <u>on its own</u>.

This means failure to disclose and/or address material conflicts of interest to the university, sponsors, colleagues, or journal editors when submitting a grant, protocol, manuscript, or when asked to undertake a review of research grant applications, manuscripts, or to test or distribute products.

Try again

❌ Incorrect

C "Falsification" is incorrect.

Falsification means manipulating, changing, or omitting data, source material, methodologies, or findings, including graphs and images, without appropriate acknowledgement, such that the research record is not accurately represented.

Try again

✓ Correct

D "A and B" is correct.

There are two breaches of SRC integrity identified in this scenario. "Misleading publication and/or invalid authorship" and "Mismanagement of conflict of interest."

"Misleading publication and/or invalid authorship" is offering attribution to a student who made no substantive contribution, and is an example of breach 6.15.4 of Policy 118: Giving or receiving honourary authorship or inventorship.

"Mismanagement of conflict of interest" means failure to disclose and/or address material conflicts of interest to the university, sponsors, colleagues, or journal editors when submitting a grant, protocol, manuscript, or when asked to undertake a review of research grant applications, manuscripts, or to test or distribute products.

Advance >

References and Other Resources

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Finnish Advisory Board on Research Integrity. (2017). Supervision of doctoral dissertations and their review process in Finland with a special emphasis on research integrity.

Abrassart et al. (2018). Montreal declaration for a responsible development of Artificial Intelligence.

Finnish National Board on Research Integrity. (2019). Section 5: Authorship agreement checklist for participants in a research project. Agreeing on authorship: Recommendation for research publications.

Government of Canada (2019). Summaries of RCR files involving a confirmed breach. Panel on Responsible Conduct of Research.

Tijdink, J.K., et al. (2023). Guidelines for research institutions on responsible supervision.

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Module Complete

Thank you for reviewing the university's Graduate Supervision and Research Integrity Module.

If you require a **Certificate of Completion**, please complete the module through the D2L platform.

Research Integrity eLearning resources