



CSIRO Industry PhD Program

Supervisor Guide

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1. Introduction

The purpose of this guide is to outline key supervisor responsibilities, roles and expectations while engaging with the CSIRO Industry PhD (iPhD) Program. As a contributing supervisor, understanding key PhD milestones, official university requirements, and project management strategies will assist in obtaining a successful research outcome.

This resource is aligned to [Australian Council of Graduate Research \(ACGR\)](#)'s Good Practice Principles and Guidelines which promote quality supervision for PhD students. Supervisors are encouraged to consider the following recommendations in addition to the CSIRO Industry PhD Program Rules and clauses set out in the project's Collaboration Agreement. However, the participating university may mandate other formal student-supervisor agreements and/or the use of university-specific supervision guidelines and requirements.

2. Supervisor Panel Responsibilities

CSIRO's Industry PhD (iPhD) program requires a supervisory panel consisting of industry, CSIRO, and university supervisors to jointly supervise a PhD student in an agreed capacity for up to four years.

The university supervisor (primary) responsibilities generally include:

- Ensure that the student meets all administrative and academic requirements of the PhD
- Provide subject expertise, training and guidance in the planning and execution of the PhD
- Provide timely feedback on submitted work and be accessible to the student at mutually agreed times
- Provide mentoring and support to encourage professional and career development
- Track and assess student performance and when required, suggest ways of achieving satisfactory progress
- Ensure the student completes a university induction program which highlights relevant institutional support systems, including available resources, pastoral care, financial support, training, counselling, funding/grants, and travel services
- Ensure that relevant program financial procedures and obligations are followed
- Provide access to required facilities, resources, and infrastructure
- Organise alternative supervision if long periods of leave or disruption occur during the student's candidature. Permanent alternative supervision or delegation of supervision must be approved by the participating university and supervisory panel

The CSIRO supervisor responsibilities generally include:

- Provide CSIRO-focussed expertise towards the PhD, as required
- Provide timely feedback on submitted work and be accessible to the student at mutually agreed times
- Provide access to required facilities, resources, and infrastructure
- Meet supervisory requirements of the participating university
- Ensure the student completes the CSIRO induction, which includes access to site and support services, if required
- Ensure that relevant program financial procedures and obligations are followed

The industry supervisor responsibilities generally include:

- Provide industry-focussed expertise towards the PhD, as required

- Provide timely feedback on submitted work and be accessible to the student at mutually agreed times
- Provide access to required facilities, resources, and infrastructure
- Meet supervisory requirements of the participating university
- Ensure the student completes mandatory company induction, which includes access to site and support services, if required
- Ensure that relevant program financial procedures and obligations are followed
- Provide the student with a three-month *Industry Engagement component*, to contextualise the research project and further develop the student's professional skills and business acumen. For further information see the *Program Rules*

3. Supervisory Panel Roles

When allocating roles and responsibilities, consider each supervisor's area of expertise, capacity, and previous experience. For example:

- What specific area of expertise and skills can you provide the student with? *Discipline knowledge, research design, rules/deadlines, mentoring and support etc*
- Approximately how many hours per week can you support the student with?
- What, if any, support is needed from other people in your organisation? *Associate supervisors, lab staff, technicians, other support staff etc*

4. Key Milestones

PhD students must meet several milestones throughout their PhD. The following key milestones are commonly used in Australian universities, however there may be variation in academic terminology and structure. For further information, please contact the participating university's Graduate Research School.

Confirmation of Candidature

Confirmation of Candidature is a significant milestone in the first year of candidature. On initial enrolment, students are given probationary status and candidature is generally confirmed after the student demonstrates satisfactory progress on their PhD project. This generally includes presenting a satisfactory *research proposal* and *oral presentation* and receiving *ethics approval*. Typically, the research proposal addresses the value/need of the research, the industry problem it will help solve, a valid research methodology and how data will be collected and used.

Thesis Submission

Thesis submission formally indicates the completion of the research project. Examiners are nominated according to the university's policies, based on expertise, reputation, and research history. Supervisors will be required to perform a pre-submission thesis review and assist students with addressing and responding to examiner's feedback. Typically, examiners assess the student's engagement with relevant literature, theoretical framework and design, valid research methodology, publications, and presentation of findings.

5. Student-Supervisor Panel Expectations

Supervisors and students often have differing initial expectations about supervision. It is best practice to discuss expectations at the commencement and throughout the PhD. Some suggestions follow.

Project Onboarding & Management

Program onboarding and constructing a clear project management plan can help facilitate a smooth research journey for the student and supervisory panel. Consider the following:

- Ensure the student has attended all mandatory induction sessions: *University, CSIRO, industry and iPhD program onboarding.*
- Develop a project plan with key milestones.
- Implement a system to collate submitted student work, feedback, and action plans.
- Develop a written plan for the student's *Industry Engagement component.* (See Program Rules on our website for requirements.)
- Discuss the *Project Expense and Development Package* funds and any other relevant university funding. (See Program Rules on our website for requirements.)
- Ensure the student is aware of and can locate university rules, policies and guidelines which relate to PhD students.
- Acknowledge the project Intellectual Property arrangements as outlined in the Collaboration Agreement.
- Agree to publication and authorship arrangements: *IP, confidentiality, publication type, quantity, and target audience.*
- Outline strategies to be implemented if a supervisor is unavailable or on leave or sabbatical.

Meetings

Transparent and structured student-supervisor communication is critical to a PhD project. The student's primary location, mode of study (on or off campus) and stage reached in their research may influence the communication strategy and meeting frequency. Consider the following:

- Frequency of meetings: *Weekly, fortnightly, monthly*
- Meeting attendees: *All supervisors together (recommended) or separately*
- Student pre-work requirements before a meeting: *How long before meetings should the work be submitted, what should be submitted*
- Duration of meetings: *One hour, 30 mins*
- Meeting location: *Virtual, in-person*
- Meeting structure: *Who manages the agenda and takes meeting minutes*
- Preferred communication outside of scheduled meetings: *Email, text, phone*
- Outputs of a meeting: *A summary of meeting discussion and actions can be useful.*

Feedback Provision

Feedback is a critical component for student success and should be provided in a timely, constructive manner. Consider the following:

- Turn-around time for feedback: *One week, one month*

- How the feedback is provided: *Written, in-person, electronic*
- Feedback recording system that shows feedback has been provided and actioned: *Minutes from meetings, archived notes, action lists, thesis versions, etc*

Supervisor Level of Assistance

Each student and supervisory panel relationship is unique. Some students require more support and training than others. Consider how much supervisory support and training opportunities will be needed and available to the student for:

- Conducting the literature review
- Contextualising the research in an industry setting
- Developing and/or refining the central research question
- Selecting the research methodology
- Providing exemplar proposals/documents in the required university's prescribed formats
- Writing and editing the thesis
- Working with the student to respond to reviewer and examiner feedback

6. Core Competencies: Student Self-Assessment & Supervisory Panel Support

The student is required to complete a self-assessment of core competencies as part of their *Individual Learning Roadmap (ILR)*, which is developed and delivered by iPhD program staff. Students are encouraged to share results with their supervisors to recommend training and seek support based on the identified learning priorities. Some actions that could be implemented to assist the student with professional development include:

- Build the three-month *Industry Engagement component* around the identified learning priorities. See Program Rules on our website for further details.
- Seek out relevant training events, such as conferences and seminars and cover any associated costs with the *Project Expense and Development Package* funds. See Program Rules on our website for further details.
- Introduce the student to relevant professional networks.
- Advise the student to make an appointment with the university's career's service to discuss career skills and planning.

7. Managing Student Relationships

Supporting and Mentoring the Student

A good supervisor-student relationship includes:

- on-time completions
- a structured schedule for completing milestones and sequencing project activities
- providing timely and clear feedback
- appropriately praising the student
- identifying, and dealing with potential issues and difficult situations (academic and personal)

- adapting the project scope to manage unforeseen challenges
- encouraging the use of support services, and
- enforcing, when appropriate, research and academic standards.

In essence, good mentors will consider unique student situations and encourage or advise students on appropriate professional and career development.

Dealing with Difficult Situations

Regardless of the student's background or nature of the research, students will often experience a roller coaster of emotions throughout their candidature. Encouraging the student to take breaks and holidays, building informal networking with peers, and ensuring that the student is aware of university and CSIRO support systems, while helping students to identify conferences/seminars to attend, are good strategies to support the student.

Although every effort should be made to minimise conflict, in some cases, it may be unavoidable. In these circumstances, it is important that all supervisors and iPhD program staff are aware of the issue and prompt discussions take place to explore and remedy the situation. If a resolution cannot be easily found, the issue should be escalated to the supervisory panel's superiors and/or the university's Graduate Research School, using collated documented evidence and the clauses set out in the Collaboration Agreement.

8. Contact

For further information or support contact: iphd@csiro.au or www.csiro.au/iphd