

Accelerate Guide: Writing your proposal

Writing your Proposal- Website Information

Who is the audience?

Your proposal will be reviewed by at least two external experts in the field(s) covered in the application. These reviewers will be active researchers who have been chosen to review your proposal because they are well qualified to make a judgment on the quality of the proposed research project. Therefore, you want to provide sufficient detail in your proposal to adequately convey to the reviewers that you have thought about this project and that you have the knowledge to carry it out. If your proposal is poorly written, it may be either misunderstood or misinterpreted, leading to a request for revisions or rejection. As the proposal writer, it is your task to clearly make the case for the value and feasibility of your research project.

What type of proposal is this?

This is a research proposal. Before beginning to write this application make sure you clearly know what your research question is. This is not a consulting proposal or a proposal for a development project. You are not simply helping your industry/organization partner to achieve a task. You are looking to expand the knowledge base in an area that is relevant to both your industry/organizational partner and the academic community. For more information about <u>eligible research</u> and assistance in reviewing/developing your proposal for Mitacs Accelerate (which may include an international component), please contact a <u>Business</u> <u>Development Representative</u>.

How long should my proposal be?

The answer depends on how many internships you are applying for: the larger the project the more information you will need to provide. There are no length limits on the application form because we do want you to use the space you deem necessary to clearly present your research project and provide enough details so that it can be evaluated by external reviewers.

What is the format and style of the proposal?

Think about this proposal the way you would think about writing a scientific/academic article. The type of information, including citations and a reference list, that is appropriate in these types of articles is also appropriate to include in this application. Keep your statements concise, clear and orderly. Abbreviations should be explained the first time they are presented, and jargon should be avoided as much as possible. Improper spelling, poor grammar and punctuation will appear unprofessional and sloppy. Don't rely solely on spell-check for proof-reading to avoid these pitfalls.

The remainder of this guide provides information about specific sections of the Mitacs Accelerate proposal template.

Proposed work plan for internship unit(s) (IU) (section 1.8)

This table is used to provide a high-level overview of the proposed research project and information about intern(s) to the reviewers. The information provided will show when each intern will work. No details should be provided here as they will be requested in Section 2. Here are examples you can use as a starting point to produce your own table.





Example 1: 2 interns, multiple sequential IUs

		Year 1		Year 2					
	1-4	5-8	9-12	1-4	5-8	-8 9-12			
Intern Name	Degree Program	IU							
John Dow	PhD	3	х	х	х				
TBD	PhD	2				х		х	
Total Internships 5									
Total Project Funding \$75,000									

Example 2: Many interns, many IUs

		Years	Year 1			Year 2			Year 3			
Months		1-4	5-8	9-12	1-4	5-8	9-12	1-4	5-8	9-12		
Intern Name	Degree Program	IU										
Richard Wright	PDF	6	х	х	х	х	х	х				
Allison Scott	PhD	3	х	х	х							
TBD	PhD	6				Х	х	х	х	Х	Х	
TBD	Masters	1	х									
TBD	Masters	1				х						
TBD	Masters	1							х			
Total Internships 18		•						•				
Total Project Funding	\$270,000											

Research Abstract (section 2.2; approx. 200 words)

The research abstract will be used to recruit reviewers. It must therefore clearly summarize the research proposed including the research problem to be addressed and its significance, objectives, and proposed methodology. We suggest an approximate length of 200 words. Please note that abstracts that are too long will be truncated. Moreover, long abstracts have a deterring effect on reviewers and might delay their recruitment as well as the evaluation of your proposal. The research abstract is mandatory and will remain confidential. In this way it differs from the public project overview (section 7.2) which is targeted at a lay audience and will appear on our web site.

Background and review of relevant prior work (section 2.3; 500 words minimum)

The background information describes the research context for your project. Describe the nature of the research problem to be addressed and why it is important, as well as any holes or gaps in the research – in particular, it should identify the gap(s) that you plan to address in your internship. This section **must** contain references to past work on the subject you're investigating. References to academic literature should be cited in the text in a style typical in your field and listed in section 2.9. Only list references that are cited within your proposal. After reading the background section, reviewers should understand the state of the art and knowledge gaps in the research area that will be addressed by the intern, and be prepared to understand the objectives of the research project.



General objectives (section 2.4)

The objectives should follow directly from the background described in the previous section. Provide details of the research objectives for the internship(s). Here, it is possible to have many objectives (especially if describing a larger research project or collaboration) or to break down a general objective into sub-objectives.

Details of internships or subprojects (section 2.5)

In this section we ask that you describe the proposed research in detail. It can be presented by intern (which will often work well for smaller projects) or subprojects (often used for larger and more complex projects).

Specific objectives of the internship or subproject (section 2.5.b)

The specific objectives should stem from the general objective and be specific to each intern or subproject. If the project only includes one (1) intern the general and specific objectives can be identical. In such a case you can simply refer back to section 2.4. If section 2.4 describes a larger research project or collaboration in which this intern is a participant, then list the objective(s) specific for the intern. It is good practice to divide a project into several sub-objectives.

Methodologies (section 2.5.c)

In this section you should describe the experimental method, computational, field or laboratory techniques (as relevant to your discipline) that you will use in the implementation of your objectives, as well as any equipment, procedures, or participants. For example, you might describe the experimental set up, what variables will be measured (and over what possible ranges), what are the controls, how data will be sampled, and how these data will be analyzed. If you will be conducting surveys or interviews, you should explain how many participants you will target, how you will select or recruit them, the length of the survey or duration of interview session(s), the design of the survey/interview questions, how the data will be analyzed, etc.

The methodology section is your chance to prove to the reviewers that you are well aware and knowledgeable about what you are proposing and why you are proposing it. Describe how the methods you will use are going to help you achieve the objectives of the project. With each objective or subproject proposed, break each one down and describe the experimental methods and how the methods you will use are going to help you achieve the objectives of the project. If the methods are established, convince the reviewers that you are familiar with them and that the technology is available. If the methods are innovative, explain how they will offer an improvement. If there are any anticipated challenges, highlight them and propose solutions.

Tips:

- Describing the methodology for each sub-objective makes it easy on reviewers to assess each section. It
 will also facilitate matters for the Timeline section.
- Provide enough detail to enable peer reviewers to evaluate the proposed methods and techniques. Include relevant references and citations to previous research in your field as needed.
- Do not assume that reviewers will be familiar with all the terminology and current methodology. Avoid statements like "We will use standard techniques to measure the soil composition." Give detailed information about how the samples will be collected, exactly what techniques will be used, and what measurements will be taken.
- Avoid using an overabundance of personal pronouns, such as "I/We will".



3 of 6 www.mitacs.ca

- Your proposal should demonstrate that you:
 - Have an up-to-date knowledge of your field.
 - Understand the complexity of the subject and the methods you will apply.
- Be sure to clearly describe how you plan to analyze the data you collect. The reviewers will be looking for this information.
- Acknowledge any potential difficulties you foresee and how you might address them. There is always an
 element of uncertainty in a research project. Show the reviewers that you've thought about the
 uncertainties in your project and have some ideas about how you will adapt your approach if needed.

Timeline (section 2.5.d)

The timeline is used to show which task(s) will be performed and when to achieve which objectives. The timeline should clearly link the key methodological steps presented in section 2.5c with the specific objectives presented in section 2.5b. We propose using a Gantt chart for clarity but other formats are acceptable.

Expected deliverables (section 2.5.e)

Every project includes the Mitacs Final Report and Mitacs survey as basic deliverables. Please also list any other expected deliverables of the project (publication, Master's and PhD theses, patent, prototype, report, conference, exhibit, etc.). Please note that we expect that the new knowledge gained through the proposed research will be publishable or disseminated in a format appropriate to the field.

Benefit to the intern (section 2.5.f)

Describe how the intern will benefit from the opportunity to interact directly with the partner organization as part of this research project. Describe any other special benefits afforded the intern (i.e. benefit from working with an industry partner in a foreign country) as a result of participating in this internship.

Interaction and Justification (sections 2.5.g)

It is expected that you will spend approximately 50% of your internship interacting with personnel from the partner organization, most likely at their site, or in the field, as appropriate to the project. The balance of the internship should be spent at the academic institution. Variations from the 50% guideline are possible in certain cases, e.g., if a particular piece of equipment is only available at the academic institution or at the partner site, you may spend more time at one location or the other. This should be justified in section 2.5.h; talk to your BD representative for more details about what is allowed.

Partner interaction (section 2.5.h)

Use this section to give the reviewers a clear description of the time the intern will spend on-site with the partner, including number of weeks or % of the time. What activities will they undertake on site or in the field with the partner? Where will they work? Are there any special facilities or equipment that will be available at the partner site to help them carry out the research project? Which personnel from the partner organization will the intern work with and be supervised by? What expertise do those individuals bring to the project and to the intern's work?

If your application involves an international accelerate component, please read the following. You must also complete Appendix B with additional information required for your application.



Interaction and Justification – international travel outside of Canada (sections 2.5.g, 2.5.h and Appendix B) If the project includes a foreign host academic institution in the same country (recommended), please indicate the amount of time split between the industry partner and host academic institution. The balance of the internship should be spent at an academic institution. Variations from this guideline are possible in certain cases, and should be discussed with your Mitacs <u>Business Development Representative</u> prior to application submission. This should be justified in section 2.5h. If your project also includes interacting with more than one partner organization, add up all the time spent between both partners. Similarly, if your project includes interacting with more than one academic institution, add up all the time spent between those institutions. If your travel outside of Canada is longer than 12 consecutive months, please include a justification.

Interaction and Justification - inbound to Canada (sections 2.5g, 2.5h and Appendix B)

The project requires that a host academic institution in Canada be involved, and that time be spent there under the guidance of your host academic supervisor. Please indicate the amount of time split between the industry partner and host Canadian academic institution. The balance of the internship should be spent at an academic institution. Variations from this guideline are possible in certain cases, and should be discussed with your Mitacs <u>Business Development Representative</u> prior to application submission. This should be justified in section 2.5h. If your travel to Canada is longer than 12 consecutive months, please include a justification.

Relationship (if any) to past/other Mitacs projects (section 2.8)

This section applies if you have done an internship yourself in the past or if someone else working on your project within your research group has done a Mitacs Accelerate internship, Mitacs Elevate fellowship, or relevant participation in any Mitacs program in the past. Please note the intern name and internship or fellowship title in this section and explain in a sentence or two how the work being proposed for this internship relates to the previous one. If you or your group are currently submitting other applications to Mitacs Accelerate, Mitacs Elevate, or Mitacs Globalink please note that here, too.



Budget and Invoicing (Section 5)

Accelerate Budget instructions:

On the "Summary" worksheet, start by selecting the "budget type" (Standard or Cluster – cell I3), enter the "expected submission date" (cell N3), "project title, and partner organization(s) (column D).

Program guidelines to consider when completing the Accelerate Budget:

- Minimum contribution of \$7,500 (exclusive of tax) from the Partner Organization(s) for each internship for
 Standard Accelerate project.
- Minimum contribution of \$6,000 (exclusive of tax) from the Partner Organization for each internship for
 Cluster Accelerate project. Cluster projects require minimum 3 interns and minimum 6 internships.
- Contribution funds from the partner organization must be paid to Mitacs prior to the internship start date to facilitate efficient payment process for interns.
- Each intern must receive a minimum \$10,000 stipend/salary for each internship unit.
- o Each internship unit must be no less than 4 months and no greater than 6 months.
- o Interns may complete up to 4 internship units (4-6 months each) during a Master's degree, and up to 8 internship units during a PhD, and Post-doctoral Fellows may complete a maximum of 9 internship units.
- Please structure your budget by term (January 1 April 30; May 1 August 31; September 1 –
 December 31). Mitacs invoices and releases funding on a term basis.
- As per Mitacs Policy: The start date of each internship cannot predate the research approval of the project AND the receipt of partner funds for the internship.

Additional Partner Funds:

Partner organizations sometimes desire to provide extra funds to increase the stipend and/or research funds in an Accelerate grant. Additional partner contributions flowing through Mitacs are only allowed with academic institution approval. The additional contribution must be detailed in the proposal budget. The extra funds may only be for stipend or direct costs of the internship and a clear justification must be provided in the text of the proposal. The additional funds must be included in the total partner contribution in both the budget and memorandum of the proposal so that the academic institution can clearly see and approve the planned budget when they sign the application. If the academic institution does not approve of the addition of unmatched funds to the grant, then the funds must be removed from the budget and will not flow through Mitacs.

1) Section 1: Breakdown of internships:

- Update the first term period in Year 1 (cell G15, which is a drop down list).
- Each line represents an individual intern, where you can enter the intern name, Academic Supervisor, Cosupervisor, academic institution, and Partner Organization(s) associated with that intern (columns B F). If the intern is not yet identified, please list the intern name as "TBD #"
- Each intern can complete a maximum of 1 internship unit per term (enter "1" under the appropriate term to outline when you expect the internships to take place for each intern). This will automatically populate the Total Award, Stipend, Research Costs, as well as required Partner Contribution on the worksheet.

2) Section 2.1. Summary of research expenses:

• Available research expenses per term will be automatically populated based on the information in Section 1.



6 of 6 www.mitacs.ca

- Complete this section by including details of the project expenses.
- A detailed description of eligible expenses is available on the NSERC website at the following link: http://www.nserc-crsng.gc.ca/Professors-Professeurs/FinancialAdminGuide-GuideAdminFinancier/FundsUse-UtilisationSubventions eng.asp

3) Section 2.2. Project expenses outside of the Mitacs Award value – In-kind contribution

- Provide the estimated amount of the additional resources the intern would have access over the full duration of the project that are outside of the Mitacs award value.
- Additional resources are considered In-kind partner contribution.

4) Section 3.1: Invoicing

- Select Invoicing Schedule (Annual or Term cell C52)
- Required Partner contribution per selected Schedule is outlined and automatically populated based on the information in Section 1.
- On the "Detail Budget" worksheet, most information is automatically populated based on the information on the "Summary" worksheet. Note: Must complete Term 1
- Select Co-funding Option (column J). Note: Please consult with your <u>Business Development Representative</u> to determine if your application requires co-funding. If it does not, please select "No Co-funding"
- Complete the internship type (column I)
- Must complete Term 1, including internship start/end date (Refer to cell N4 on "Summary" worksheet for earliest available start date).
- To change the stipend value (default is \$10,000 per internship), use the "Stipend Overwrite" column (yellow column M) for each applicable internship. This will update the "Summary" worksheet values.
- For additional partner funds (to cover stipend/salary top ups or for additional research expenses), please fill out the "Additional Partner contribution" column (column R) for each applicable internship. This will update the "Summary" worksheet values.

Suggested reviewers (section 6)

Provide the names and contact information for 6 people who would be qualified to review your proposal. Reviewers are typically faculty members, but can also be PhD-level scientists doing research in industry or government agencies. The suggested reviewers do not need to be Canadian. "Arms-length" means that they must be from a different academic institution, and that you and/or your supervisor and/or partner must not have collaborated with them in the last 5 years. Please do **not** contact them yourself, simply provide their names and information.

Public Project Overview (section 7.2)

This section is a brief summary of your project. The title and public project overview will be posted on our website. This overview should be written in plain language, as if you were explaining your project to a high school student. Avoid using acronyms and scientific jargon. Writing a good lay summary is a very important



7 of 6 www.mitacs.ca

skill to have. Funding agencies may use the lay summary for press releases/annual reports and also to attract potential donors. Lay summaries must be simple and direct while giving the reader a reason to care. Explain why the research is significant to the general public (people who don't do research for a living). Briefly explain the motivation for the project, the problem to be addressed, how you are planning to address it, and the anticipated impact to the partner. After you've written it, ask a friend to review it.

Appendix B

For projects with international travel only (section B1.1)

Please indicate Yes or No if the project contains any internship units that occur at a partner organization outside of the intern's home country. If yes, please highlight those specific internships in the table in Section 1.8

