OFFICE OF
RESEARCH SERVICES

NSERC Research Tools and Instruments Grant - Application and Proposal Tip Sheet

Before getting started, please review:

- RTI Grants Program Guidelines
- Application instructions
- Peer Review Manual (2025-26) (especially p. 18: Reviewers' Assessment Notes Template)
- RTI FAQs
- How to complete NSERC CCV
- NSERC's "How to Apply to RTI" video series
- NSERC guide on integrating equity, diversity and inclusion considerations in research
- Government of Canada Policy on Sensitive Technology Research and Affiliations of concern
- Procurement Restriction Policy

Webinars

- NSERC RTI webinars
  - September 9, 2025 @ 1 pm Register here
  - September 25, 2025 @ 1 pm Register here
- Ontario Tech ORS Resources: RTI + Q&A with Dr. Janice Strap, former RTI adjudication committee member

Deadlines

- Internal NOI form (mandatory): October 2, 2025
- ORS Comprehensive Review (optional): October 2, 2025
- ORS Administrative Review + RGA (mandatory): October 13, 2025
- NSERC Deadline: October 27, 2025

Recent Program Updates

- *NEW this year* At least two recent quotations are required for any individual item(s) over $40,000 net. If the required number of quotations cannot reasonably be submitted, applicants must provide a clear justification in the Budget justification section. NSERC indicates, however, that applicants are encouraged to provide quotations for all equipment.
- *NEW this year* Please be advised that the Ontario Procurement Restriction Policy will apply. Grants that request equipment from U.S. vendors will only be considered if there are no suitable Canadian or alternate international vendors able to supply equipment with similar functionality. Applicants should identify potential vendors early to determine whether the equipment is only

available from a U.S source. If the RTI grant is awarded, all procurement must follow the appropriate Procurement of Goods and Services Procedures (Threshold Values and Means of Procurement), and the rationale for purchase from a U.S. vendor must be clearly documented and defensible.

- **(Since 2024) Mandatory ORS Internal Notice of Intern form:** The NOI form is mandatory for all researchers interested in submitting an application to the October 2025 NSERC RTI competition. Based on the information applicants provide in the form, ORS will review applicants' and co-applicants' eligibility, as well as the location in which proposed equipment is to be housed, and any exceptional installation or compliance requirements. Please submit your completed NOI form to amber.zapletal@ontariotechu.ca by October 2, 2025. Forms will be shared with the Ontario Tech Office of Campus Infrastructure and Sustainability (OCIS) to determine whether any renovations will be required to accommodate the requested equipment. The information collected on the form is for internal university purposes only.
- **(Since 2024) STRAC Policy and Applicant Attestation forms:** In accordance with the Policy on Sensitive Technology Research and Affiliations of Concern (STRAC), all researchers involved in activities (applicant and/or co-applicants) funded by a grant that aims to advance a Sensitive Technology Research Area (STRA) must review the List of Named Research Organizations (NROs) and attest that they are not affiliated with, or receiving funding or in-kind support from any listed NRO. ***If you check that your research is advancing one of the STRAs, y*****ou must submit attestation forms from the applicant, co-applicants and collaborators, as applicable, certifying that they have read, understand, and are compliant with this policy.** Should your application be successful, you and your research team(s) will also be required to comply with the policy **for the duration of the grant that aim to advance one or more STRAs.** Please contact Amber Zapletal if you have any questions or concerns about this requirement.
- **(Since 2023)** Research Tools and Instruments (RTI) grants applicants and co-applicants who were successful in the previous year's RTI competition (Fall 2024) are ineligible to apply for one year. Eligibility will be reinstated the following competition year. This change is being implemented to increase access to the RTI program to the largest number of eligible researchers. This decision, as well as the changes to the selection criteria for this year, are informed by the recent evaluation of the Discovery research program and the results of the gender-based analysis plus (GBA+) of the RTI program.

Writing style and clarity

Reviewers review a high volume of proposals (25-35), including ones with which they indicated they had a "low" comfort level in reviewing, and often they are reviewing these proposals over their December holidays. In past years, there has been a "forced ranking" in which reviewers were asked to give an equal distribution of scores (an equal amount of 1/10s, 2/20s,…,10/10s).

Thus, a well-written, revised, edited and polished proposal will automatically put you ahead of your colleagues who have submitted rushed, last-minute proposals.

- Make the title as descriptive as possible, and use carefully chosen descriptive key words
- Write your proposal for general knowledge in your field.
- Write clearly and concisely.
- Communicate the importance and potential impact of your work.
- Include white space (don't cram too much text).
- Have colleagues/grants officers review your application in advance to provide feedback.
- If you don't have the time to put into writing/editing/revising your proposal, consider waiting to apply next year.
- Application attachments must be prepared according to NSERC's presentation standards.

Instrument/equipment ask

- Don't be afraid to ask for full $150,000.
- Make sure to "do your homework" and contact multiple vendors; reviewers in your field will know if you are quoting a reasonable price for the requested equipment.
- Do not make your application a "shopping list" of smaller equipment/instruments.
    - Group smaller items into coherent systems.
    - Add smaller items to a larger quote.
    - If there are "one-off" less expensive items, then these should be purchased from other funds such as start-up funds or Discovery Grants.
- Group smaller requested items into systems and give the system a name. In the proposal, refer to the whole system and discuss why the system is needed for your research. In the budget justification, breakout the individual pieces of the system to discuss the specifications and requirements of each piece of equipment.
- Explain that there's no overlap with similar equipment at your institution or close institutions.
- Explain if you are upgrading or replacing failed equipment.

Applicant team

- NSERC does not advise whether or not team applications have a better chance of getting funded.
    - You must demonstrate that the equipment will be used close to 100% of working hours as possible, but co-applicants should only be added if they will be major users of the equipment who require it for their research and this has to be explained and justified in the proposal and budget justification.
    - Don't just add co-applicants because you think their CVs will strengthen the application. Co-applicants have to be integrated into the four-page proposal and the three-page budget justification, so you don't want to have too many co-applicants.
    - Teams should strive for a diverse group of co-applicants and major users, including balanced gender representation. Equity, diversity and inclusion considerations should be reflected in the rationale of the team composition and, where applicable, in the designated roles within the team.
    - If you are a single applicant who will be using the equipment close to 100% of the time and you need it for your research, that's fine as well.

- Invite co-applicants early to give them time to accept the invitation, link their NSERC CCV, complete their eligibility profile, indicate how many hours per month they will devote to the proposed research, and complete their Attestation Form, if applicable.
- According to NSERC, early-career researchers are not at any advantage or disadvantage in the competition; all researchers need to "sell" their intended research as applications will be adjudicated based on the merit of the proposed research and the need for the instrumentation (the evaluation criteria), just as all other applications.
- Highlight how HQP will be using the instrument/equipment to show that even if Ontario Tech is a small institution, there is important research and training happening here.
    - The "hands-on" training of undergrads could be spun as an advantage over large institutions.
    - Include the levels of students who will be trained (undergraduate, Master's, PhD, Post-docs) to show the range of training.
    - Highlight benefit to Canada of HQP being trained on this equipment.

Proposal Summary (3,000 characters)

The summary (along with the title) will allow reviewers to determine their comfort level with reviewing your application. It should be a succinct and accurate description of the requested equipment and proposed research and should stand on its own, even when separated from your application.

- Use plain language; avoid jargon and acronyms.
- Use this section to "market" you and your research, and to get reviewers excited.
- Don't just copy and paste from proposal.
- Write this section last.

Proposal (maximum four pages)

This attachment will detail your equipment/instrument request and discuss the proposed research. We strongly recommend that you have the RTI Grants Peer Review Manual open to page 18 (Appendix A – Assessment notes template) as you write your proposal. Address all three selection criteria, and the sub criteria, in the order that they are listed. Provide enough information to clearly show reviewers how your request and research program satisfies the criteria and sub criteria.

Selection Criteria:
Need, urgency and suitability (40%):

- demonstration that the equipment is essential for the research and that there are no other more cost-effective ways of obtaining the results
- availability of similar equipment/facilities/services in the vicinity
- impact of a delay in acquisition of equipment on the research and the pace of research progress
- need to upgrade or replace obsolete or failed equipment
- degree of utilization of the equipment by the applicant(s) and other users

Feasibility and impact (40%):

- quality and significance of research program(s), including potential for major advances and impact in the discipline as a result of the equipment
- feasibility of the plan to use the equipment
- extent to which the applicant has relevant experience or has presented a training plan to demonstrate how they will gain the ability to fully use the equipment
- consideration of equity, diversity and inclusion in the rationale of the team composition (applicant, co-applicant(s) and major users)

Training of highly qualified personnel (HQP) (20%):

- quality and extent of training
- opportunity for hands-on training
- potential to provide marketable skills for students trained on the equipment
- consideration of equity, diversity and inclusion in the training of HQP

Read the program guidelines and peer review manual prior to beginning your proposal to ensure that you understand what reviewers will be looking for when assessing your proposal.

Other proposal tips:

- Discuss the degree of utilization of the equipment by you and any other users.
- Mention *number* of current and future users or equipment (including HQP).
- Highlight scientific merit of proposed research and the need for the requested equipment to advance the research.
- Highlight key points from your CV if you have relevant experience to use the equipment; otherwise, include a training plan on how you will learn to use the equipment.
- Discuss how HQP will participate in the proposed research and use the requested equipment.
- Discuss importance of training HQP on the requested equipment and to what industries/companies these skills will be valuable.
- Portray the need for equipment to bring research to the next level (and to secure future funding).
    - Give examples of types of experiments you can do with new equipment and how the equipment would advance your research and enhance the training of HQP.
    - Articulate the impact on your research of any delays in securing the equipment.
    - Discuss the degree of utilization of equipment; show that it will be used at all working hours.
- Discuss the institutional environment and that you have the resources to operate and maintain the equipment.
    - Mention specific resources (technicians, grants, tools, software, etc.).
- Mention if you are familiar with this instrument/ equipment because you've had it or worked with it before to show that you know how to maintain it.
    - Give confidence that you will use the resource effectively.
- Justify why you cannot share equipment.
    - Can mention the expansion of lab personnel as a need for new equipment.
- Every co-applicant's proposed research and need for the equipment has to be discussed in the four-page proposal attachment.

- Discuss co-applicant's complementary expertise and/or experience and why the equipment is critical to all of their research.
- include a management plan to show that equipment will be efficiently utilized by all users most of the time.
- Specify who is responsible for training HQP (applicant, co-applicants and/or vendors)

EDI Considerations

Refer to the NSERC guide on integrating equity, diversity and inclusion considerations in research. Articulate EDI considerations in Research Design and in Team Composition. EDI should flow through every section of proposal, and not be an "afterthought" in your proposal. Reviewers are asked to evaluate the applicants' consideration of EDI as part of the evaluation criteria, so make sure to take the time to create a thoughtful EDI plan tailored to your institutional and disciplinary context, with specific and concrete actions meant to address known barriers to EDI in your field.

Describe EDI strategies that are **specific, intentional and ongoing.** Avoid broad or generic statements about EDI and go beyond listing/quoting institutional policies, or mentioning training that you have taken, or plan to take.

- Demonstrate that you have a deep knowledge of systemic barriers to EDI that are institution- and discipline-specific.
- Provide concrete examples of practices that will meaningfully engage trainees who are members of under-represented groups and that will create an equitable and inclusive training environment in which all trainees can reach their full potential.
- These practices can include the proactive and intentional recruitment of a diverse group of trainees; the equitable distribution of training, mentorship, and career development opportunities; and/or the implementation of practices that promote inclusion.
- Include statistics and/or literature to support your statements and establish the context of your discipline.
- Tailor these actions to our institutional context, as well as to your research team and specific discipline. Show you will proactively support EDI and explain what you are already doing to address these barriers.
- Outline measures to consider EDI during recruitment, mentorship/training activities, **and** the ongoing inclusive environment in your lab/research group.
- Do not include identifying personal information or demographic data about team members or trainees. Rather, explain your practices for forming a diverse and inclusive research team and training environment. You may include information about yourself or your lived experience.

Context Questions

- Are there gaps in representation in the current lab or group/department/in the field in general? If no, is this diversity the result of **intentional** actions, or is the result of chance?
- What are the usual practices for recruitment and research training in your team or discipline? Are these practices fair and consistent?
- Are training and mentorship opportunities equitably distributed? Does everyone have the same access to skills and experience, relative to training level?

- Do all team members and trainees feel welcome, included, and supported in their success?

EDI in Team Composition

- Outline processes and intentional efforts to assemble a diverse team
- Describe your efforts at outreach to diverse networks to recruit prospective team members
- Explain team members' expertise/experience in EDI and that they have experience training/mentoring diverse HQP
- Articulate that equity/inclusion are embedded into research activities, training, and decision-making
- Mention flexibility and accommodation in scheduling to accommodate diverse trainees (who have family care responsibilities, outside employment, or longer commutes, for example)

EDI in Use of Research Equipment

- Address equitable access, time sharing, and accessibility of the equipment for co-applicants and other users
- How will be time on the equipment be allocated?
  - Is scheduling/allocation clear and transparent?
  - Is there flexibility or accommodation in scheduling for researchers with caregiving responsibilities?
- How will more junior researchers and/or HQP be considered in access to the equipment/infrastructure?
  - Part of commitment to equitable mentoring: provide equitable opportunities to gain marketable skills
- Is the equipment accessible/housed in an accessible space?
  - Describe any Universal Design principles or accommodations for users with disabilities.

EDI in Trainee Recruitment and Selection

- Post opportunities openly and widely and use inclusive language
- Engage in proactive recruitment, using target venues and encouraging diverse applicants
- Establish diverse selection committees, wherever possible, and ensure all committee members complete unconscious bias education
- Evaluate candidates using pre-determined selection criteria that are consistently applied
- Base decisions only on the application materials
- Take into account career/academic interruptions or non-linear career paths
- Carefully evaluate emerging methodologies or non-traditional scholarship, as applicable
- Be aware of biases in letters of reference
- Spend sufficient time on each application—biases are most pronounced when we are rushed
- Conduct process check-ins with other committee members

EDI in Training and Mentorship

- Create equitable training and career development opportunities, relative to level of study
  - Opportunities to gain skills, use infrastructure, co-publish, present research, work with collaborators, network, engage with partners, etc.

    - Track these opportunities
- Develop a team EDI training plan to build capacity
- Create equitable access to mentorship opportunities
- Create mentorship plans/individual development plans with all trainees
- Develop a team mentorship network and distribute mentorship work equitably.

Creating an Inclusive Environment

- Inclusion is **not** a matter of counting under-represented groups.
    - A diverse environment is not necessarily inclusive
    - Inclusive environments are supportive, collaborative, professional, respectful, collegial, and value wellness
- Lead by example — model inclusive behaviours and practice allyship
    - Emphasize these skills for lab managers and other scientific staff
- Adopt a code of conduct/guidelines for labs or fieldwork, and share widely
    - Create accountability — show you take concerns seriously
- Establish "core hours" and accommodate flexibility in scheduling
- Organize and host accessible and inclusive events
- Communicate University resources that support EDI, accessibility, and mental health

EDI in Research Design

EDI in Research Design is the consideration of sex, gender, and other identity factors in research design and methods, data collection and analysis, and knowledge mobilization across all stages of the research cycle:

- How the research is carried out
- Who the research subjects are (who is included/excluded)
- Who will be affected by the research

EDI in RD counters biases, addresses gaps in research, and makes research more usable and socially relevant.

Context Questions

- Does the literature review address EDI/diversity considerations? Are there any gaps in existing scholarship?
- Which population groups might benefit from the research or might experience unintended impacts?
- Does the project use existing data sets? Could these data sets contain biases?
- Does the research take place on Indigenous lands or refer to Indigenous communities/peoples?
- What diversity factors(s) could be embedded to strengthen the study?
- How will you obtain data/information for these factors? What methods will you use?
- Can research data be disaggregated by identity factors (race, sex, gender, etc.)?
- How will the findings reach those who will benefit?
- How will the dissemination of findings be accessible and inclusive?

Budget Justification (maximum three pages)

Provide a breakdown of the items requested including details on models, manufacturers, prices, exchange rates (Bank of Canada rates must be used) and applicable taxes.

Use this attachment to break down the specifications of all of the requested items and justify why the equipment and its specifications are required for the proposed research. This section must also explain any other sources of funding for the requested items and the relationship to other research support, to show that there is no overlap between the requested RTI funding and any currently held for or applied for funding.

- The applicant and all co-applicants should explain the relationship to other funds; include brief descriptions of relevant types of other sources of funding and explain how there is no overlap.
- Justify why you are choosing to go with one vendor over the other.
- Discuss funding for the operation and maintenance of equipment.

Quotations (from two vendors)

Attach two recent quotations for any individual item(s) costing over $40,000 (before taxes).

- If you can't get two quotations for any items over $40,000, explain why you can't get two quotations (for example, because only one company makes this instrument).

Very Important: in the Budget Justification attachment, applicants provide a clear breakdown of the items requested indicating the subtotal(s), the institutional tax rate, the total tax and, if applicable, the currency exchange rate(s) and the converted currency total(s) in the budget justification template.

- For the institutional tax rate, be sure to use 3.41% - as this is the equivalent HST rate that Ontario Tech pays after our tax rebates.
- To calculate the exchange rate, use the monthly Bank of Canada Exchange Rates: https://www.bankofcanada.ca/rates/exchange/monthly-exchange-rates/

Budget Justification Table Template

Item	Quantity	Cost per unit in original currency	Exchange rate	Total cost in Canadian dollars
			Subtotal:	
			Institutional tax rate (%):	3.41%
			Total tax:	

Item	Quantity	Cost per unit in original currency	Exchange rate	Total cost in Canadian dollars
			Total cost:	
			Total confirmed from other source(s):	
			Total requested from NSERC:	

Aside from equipment, eligible costs include:

- transportation/shipping costs for purchased equipment
- fabrication, assembly and installation of the equipment
- extended warranty or service contract
- brokerage and customs charges for the importation of equipment and supplies
- testing/calibration costs
- on-site costs of training staff to use equipment
- software licensing or upgrades
- Note: travel required for the supplier to install, repair and/or refurbish equipment is an eligible cost

Please note: RTI grants must be used only for the specific type of equipment for which the grant was awarded through the peer review process. Grantees who wish to purchase equipment different from that specified in the application must obtain written permission from NSERC's use of grant funds prior to its purchase. Grantees may, however, buy a model different from that requested in the application without prior NSERC approval (e.g., newer or upgraded model).

Please refer to the application instructions for a full list of eligible and ineligible expenses for RTI grants.

Questions?

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NSERC Program Officer:
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Research Portal tech assistance:
webapp@nserc-crsng.gc.ca or 1-855-275-2861