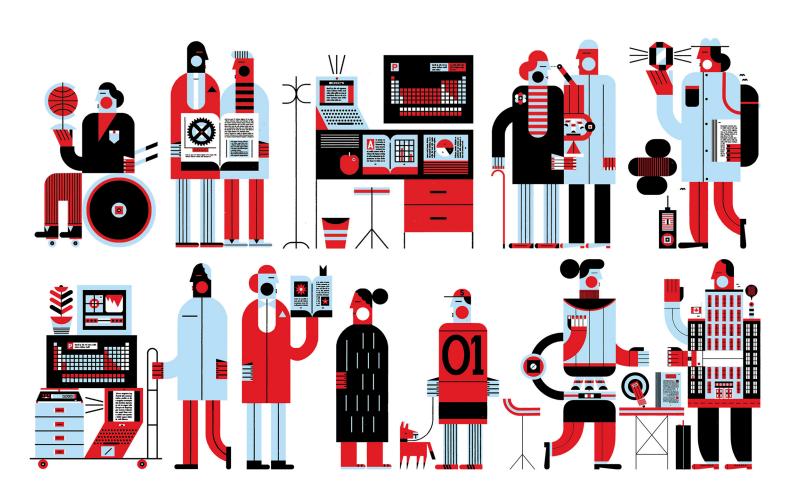


Selection committee guide for Postgraduate Scholarships—Doctoral and Postdoctoral Fellowships programs

2023-2024





Foreword

This document is a guide for members of the Natural Sciences and Engineering Research Council of Canada (NSERC) Scholarships and Fellowships selection committees that are responsible for the evaluation of Postgraduate Scholarships—Doctoral and Postdoctoral Fellowships applications. It describes the activities carried out by members and chairs of these selection committees, as well as the policies, guidelines, and deliverables for each of these activities.

Applicants who refer to this document should note that the content is intended to guide members and outline principles rather than provide them with a set of rules.

For more information regarding scholarships and fellowships programs, policies, and guidelines contact <u>NSERC staff</u>.

This document is updated annually.

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1. Overview of scholarships and fellowships

1.1 Doctoral scholarships

The Canada Graduate Scholarships–Doctoral (CGS D) and NSERC Postgraduate Scholarships–Doctoral (PGS D) programs provide financial support to high-calibre scholars who are engaged in doctoral programs in the natural sciences and engineering. This support allows these scholars to fully concentrate on their studies and seek out the best research mentors in their chosen fields, both within Canada and abroad.

There is a single application and review process for the CGS D and the PGS D programs. Applicants in the top tier are offered the CGS D (\$35,000 per year, tenable only in Canada) and meritorious applicants in the next tier are offered the PGS D (\$21,000 per year, tenable in Canada and abroad). The duration of these scholarships¹ is 36 months.

1.2 Postdoctoral fellowships

The NSERC Postdoctoral Fellowships (PDF) program provides support to a core of the most promising researchers at a pivotal time in their careers. These fellowships² offer doctoral graduates an opportunity to increase their research experience at an eligible Canadian or foreign research institution. The PDF program is also intended to secure a supply of highly qualified Canadians with leading-edge scientific and research skills for Canadian industry, government, and academic institutions. These fellowships are valued at \$45,000 per year for a duration of 24 months.

2. Membership

2.1 Overview

Expert scientists and engineers from academia, industry, and government form the membership of <u>discipline-based selection committees</u>. Members review and score scholarship and fellowship applications assigned to them according to policies and guidelines established by NSERC. For a complete list of members, refer to the NSERC <u>Selection Committees and Evaluation Groups</u> web page.

¹ The term *Scholarships* refers to both the CGS D and PGS D programs throughout this document.

² The term *Fellowships* refers to the PDF program throughout this document.

2.2 Selection process

NSERC regularly solicits nominations for members of its selection committees from academic and industrial research institutions and government organizations within Canada and abroad. Experts are recruited based on knowledge and experience, language, equity and inclusivity, research sector, geographic region, and suitability. For more information about the recruitment of members, consult the Guidelines Governing Membership of Selection Committees.

2.3 Term of membership

Membership terms are usually limited to three years and approximately one-third of the membership changes each year. The rotation of members allows for broader representation of institutions, complementary expertise, and vitality of the selection committees. The presence of experienced members on the selection committees promotes consistency and continuity in the selection process and assists with the orientation of new members.

2.4 Roles and responsibilities

2.4.1 Members

Members participate in the review of applications and provide recommendations based on the program selection criteria. Specific responsibilities include

- completing the <u>Bias in Peer Review</u> training module and taking steps to help mitigate unconscious biases during the review process
- reading the <u>Instructions for completing an application</u> for the scholarships and fellowships programs
- o reading the Tri-Agency Statement on Equity, Diversity and Inclusion (EDI)
- reading <u>Equity</u>, <u>diversity</u> and <u>inclusion considerations</u> at each stage of the <u>research process</u>
- completing the self-identification questionnaire
- participating in orientation meetings and discussions
- submitting comfort ratings and identifying <u>conflicts of interest</u> for all applications received
- reading, scoring, and providing in-depth evaluations for a subset of applications, within the assigned timeframe
- reading, participating in deliberations for, and scoring all applications discussed during the <u>review meeting</u>
- notifying NSERC staff of research proposals that may be outside of NSERC's mandate

- providing feedback to NSERC staff and the chair on policy and procedural items in preparation for the chairs' meetings
- o recommending potential new members

2.4.2 Chairs

The selection committee chairs help to ensure the orderly and complete review of applications and the transmission of recommendations to NSERC. They lead the selection committee's efforts to maintain the highest quality of evaluation, monitor consistency and equity of approach, and help to ensure that all important aspects of applications are considered during the review process. Chairs play an important oversight role, act as a liaison and represent their respective selection committees during chairs meetings, and provide policy advice and guidance on the delivery of the programs. Chairs also share the roles and responsibilities of members.

2.4.3 Group chair

The group chair is appointed by NSERC to act as a liaison between the selection committees listed on the <u>Selection Committees and Evaluation Groups</u> web page and the <u>Committee on Discovery Research (CDR)</u>, of which the group chair is a member. CDR is responsible for making policy recommendations to <u>Council</u> for various NSERC programs, including those related to the training of highly qualified personnel. In this capacity, the group chair acts in the best interest of all selection committees. The group chair is not considered a member of any selection committee and does not evaluate, discuss, or score applications.

2.4.4 NSERC staff

NSERC staff are not members of any selection committee and do not evaluate, discuss, or score applications. Staff oversee membership, provide advice on NSERC policies, guidelines, and procedures, determine application eligibility, assign applications to members, and help ensure consistency and equity of approach in the review of all applications assigned to a selection committee.

2.5 Orientation sessions and meetings

Throughout their term, members are required to attend virtual orientation sessions and review meetings. Depending on the selection committee and discipline, the frequency, format, and length of these meetings may vary.

2.5.1 Orientation session

At the start of the review process, an orientation session is held for all members. This session provides an overview of the review process and of NSERC's policies and guidelines. It also provides an opportunity for new members to ask questions and for returning members to share best practices and provide advice to new members.

2.5.2 Fellowships review meeting

After the initial <u>scoring</u> of applications, members are required to participate in a virtual fellowships review meeting. During this meeting, a subset of applications is discussed and scored by all members who do not have a <u>conflict of interest</u>. Members must familiarize themselves with all applications being discussed. The three members who initially scored the application must be prepared to present the application to the selection committee for discussion and <u>scoring at the fellowships review meeting</u>.

Members may provide feedback on the review process during a policy discussion at the end of the meeting or by email.

Note: There is no review meeting associated with the doctoral review process.

2.5.3 Chairs' meetings

Prior to and after the review process, each selection committee chair and the group chair are invited to participate in a virtual meeting with NSERC staff to discuss policy-related items.

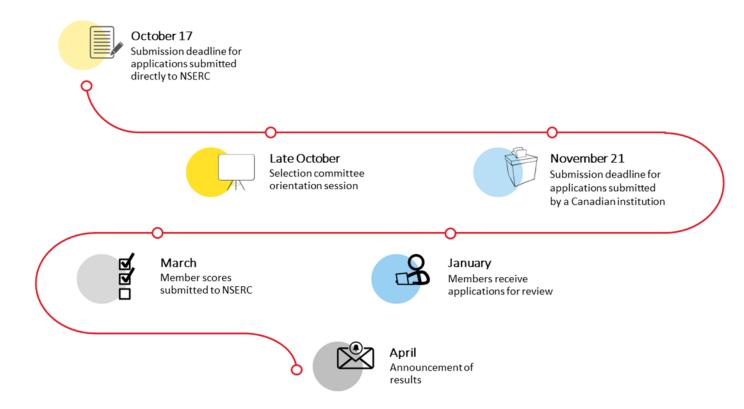
2.6 Time commitment

Participation of experts in the review of scholarship and fellowship applications is crucial to the success of the programs; serving in this capacity involves a significant time commitment. Contributing as a member demands periods of activity that may interfere with normal responsibilities. It is recommended that an appropriate amount of time is set aside for the thorough review of applications.

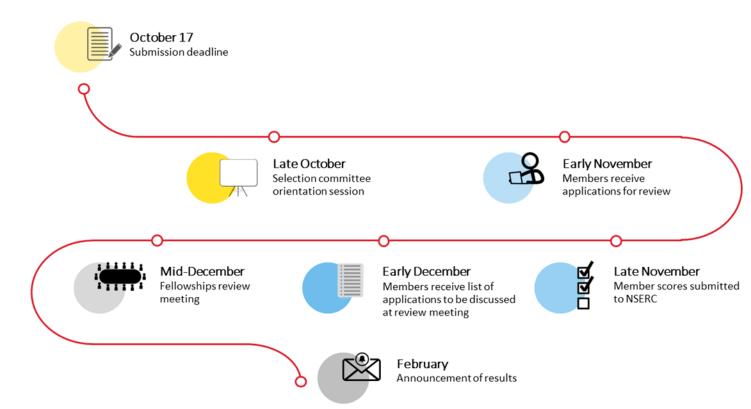
3. Review process

3.1 Process overview

Scholarships timeline



Fellowships timeline



3.2 Receipt of applications

Scholarship applications are submitted to NSERC either through a Canadian institution or directly by the applicant. Each eligible Canadian institution is assigned a <u>quota</u> of applications for the scholarship programs that can be forwarded to NSERC.

Fellowship applications are submitted directly to NSERC by the applicant.

3.3 Assignment of applications to selection committees

Scholarship and fellowship applications are reviewed by one of the selection committees listed on the <u>Selection Committees and Evaluation Groups</u> web page. Each application is assigned to a selection committee based on the chosen <u>research subject code</u>. NSERC staff may assign an application to a different selection committee if they determine that the subject matter is more appropriate for another selection committee. Applicants are notified if their application is

transferred. Members should notify NSERC staff if they are of the opinion that an application should be reviewed by a different selection committee.

3.4 Assignment of applications to members

To assist in the assignment of applications, members are asked to provide individual expertise comfort levels (high, medium, low, zero) and identify conflicts of interest for applications received by their selection committee. NSERC staff responsible for each selection committee uses this information to assign applications to members, balancing workload while taking into account potential conflicts of interest, language considerations, and expertise comfort levels. Members are responsible for reviewing a subset of the applications submitted to NSERC. Each application is assigned to three members for review. Given the broad range of topics covered by each selection committee, members may be asked to review applications outside their primary area of expertise. Members should advise NSERC of any potential issues with the assignment of applications as soon as possible.

3.4.1 Conflicts of interest

Members must adhere to the <u>Conflict of Interest and Confidentiality Agreement for Review Committee Members, External Reviewers, and Observers</u> and are responsible for declaring any conflicts of interest prior to the review of applications. In the context of scholarship and fellowship applications, NSERC adheres to the following guidelines:

- If an applicant is, has been, or will be under the direct supervision of a member, or if there is a personal link, the member must withdraw from the discussion and scoring. The member may not act as a reviewer for such applications.
- If an applicant is, or will be, in the same department as the member, the member must withdraw from the discussion and the scoring. The member may not act as a reviewer for such applications.
- If an applicant is, or will be, at the same institution as the member, but in a different department, the member is permitted to participate in the discussion and scoring. The member may act as a reviewer for such applications.

Guidelines of this nature cannot foresee all possible situations. In cases where these guidelines do not clearly describe a situation or where a member has difficulty making a judgment, NSERC staff will make the decision.

3.5 Review of applications

Important: The review of applications must be based solely on the information provided in the application. Members are asked not to obtain extra information (such as seeking updates to the publication status of research papers or visiting external websites linked to within the free-form sections) for the applications they are reviewing.

Members are reminded that, according to the <u>Conflict of Interest and Confidentiality Agreement for Review Committee Members, External Reviewers, and Observers, they must ensure that all review materials are stored in a secure manner to prevent unauthorized access. When no longer required, review materials must be destroyed in a secure manner.</u>

Members have access to the following documents in a secure electronic environment

- o all scholarship and fellowship applications for the given selection committee
- scoring spreadsheets for assigned applications
- blank scoring templates³
- o scoring instructions and procedures
- training resources
- meeting materials

During the review process, members should consult the following materials, available on the NSERC website

- NSERC Postgraduate Scholarships Doctoral program
- Canada Graduate Scholarships Doctoral program
- Postdoctoral Fellowships program
- Instructions for completing an application Form 201 Postgraduate
 Scholarship–Doctoral or Postdoctoral Fellowship
- Equity, diversity and inclusion considerations at each stage of the research process
- o Balanced, broad, and responsible: A practical guide for research evaluators
- Resource videos

o <u>Instructions for completing a report on the applicant – form 201</u>

³ The scoring templates are provided only as a tool to help ensure that all selection criteria are taken into account when reviewing applications; NSERC does not collect this information.

Applicants are expected to follow the instructions set out in these materials and members' scores should reflect this. If any of the information listed above is missing or cannot be accessed, members should contact NSERC staff.

3.6 Selection criteria and indicators

Table 1 illustrates the applicable selection criteria and relative weightings for each program.

Table 1: Relative weightings of selection criteria

Selection criteria	Weighting (%)	
Selection Criteria	Scholarships	Fellowships
Research ability and potential	50	70
Relevant experiences and achievements obtained within and beyond academia	50	-
Communication, interpersonal and leadership abilities	-	30
Total	100	100

Members should refer to <u>Appendix A</u> and <u>Appendix B</u> for a summary of selection criteria indicators and the locations within the application where evidence of these indicators may be found for each program.

3.6.1 Selection criteria and indicators for scholarship applications

Scholarship applications are evaluated based on the following selection criteria

- research ability and potential
- o <u>relevant experiences and achievements obtained within and beyond</u> <u>academia</u>.

Research ability and potential

Quality of research proposal

- specific, focused, and feasible research question(s) and objective(s)
- clear description of the proposed methodology
- o significance and expected contributions to research

Relevant training; such as academic training, lived experience, and traditional teachings.

Research experience and achievements relative to the applicant's stage of study, lived experience, and knowledge systems.

Quality of contributions and extent to which they advance the field of research. Contributions may include: publications, patents, reports, posters, abstracts, monographs, presentations, creative outputs, knowledge translation outputs, community products, etc.

Demonstration of sound judgment and ability to think critically.

Demonstration of responsible and ethical research conduct, including honest and thoughtful inquiry, rigorous analysis, commitment to safety and to the dissemination of research results, and adherence to the use of professional standards.

Enthusiasm for research, originality, initiative, autonomy, relevant community involvement and outreach.

The ability or potential to communicate theoretical, technical, and/or scientific concepts clearly and logically in written and oral formats.

Relevant experiences and achievements obtained within and beyond academia

Scholarships, awards, and distinctions (amount, duration, and prestige)

Academic record, such as

- transcripts
- duration of previous studies
- o program requirements and courses pursued
- o course load
- relative standing in program (if available)

Members should consider the entire academic record when assessing academic excellence. Members should favourably consider situations where an applicant has demonstrated an improving trend or provided an appropriate explanation for their academic record in the Applicant's statement section of the application. The experience of members plays a key role in this evaluation. It is important to note that members are not expected or required to calculate GPAs manually.

Professional, academic, and extracurricular activities as well as collaborations with supervisors, colleagues, peers, students, and members of the community such as

- o teaching, mentoring, supervising, and/or coaching
- managing projects
- o participating in science and/or research promotion
- participating in community outreach, volunteer work, and/or civic engagement
- chairing committees and/or organizing conferences and meetings
- participating in departmental or institutional organizations, associations, societies, and/or clubs

The onus is on the applicant to provide a clear and complete application that demonstrates attention to detail and permits a comprehensive assessment.

3.6.2 Selection criteria and indicators for fellowship applications

Fellowship applications are evaluated based on the following selection criteria

- o research ability and potential
- o communication, interpersonal, and leadership abilities

Research ability and potential

The following elements are examples of what should be considered in the evaluation of research ability and potential:

Significance, feasibility, clarity, and merit of research proposal

- specific, well-focused, and realistic objectives
- clear and detailed description of the proposed methodology
- significance and expected contributions to research

Contributions to research and development

 publications, conference presentations and/or proceedings, poster presentations, technical reports, or patents

Members should consider the stage of the applicant's academic career and any relevant research or work experience in the assessment of the contributions to research and development. The assessment must be based on the quality and impact of all contributions, not only on the number of publications or conference presentations. Members must be mindful of the different publication practices in different disciplines. Where publications are prepared in collaboration with other

students, postdoctoral fellows, or researchers, the applicant should describe their role and involvement in both the research and the preparation of contributions. For additional guidance, review the NSERC <u>Guidelines on assessment of contributions to research, training and mentoring.</u>

Academic training and relevant work experience

- o complementarity of the applicant's expertise and the proposed research
- applicant's capacity to undertake the proposed research (technical skills, lab techniques, experience, etc.)

Scholarships and awards

o awards and/or prizes based on research ability and potential

Researcher attributes

 critical thinking, application of knowledge, judgment, originality, initiative, autonomy, and enthusiasm for research

Justification for location of tenure

- o appropriateness of the location for the proposed research
- accessibility of necessary equipment and resources

In most circumstances, applicants are not permitted to hold a PDF award at their PhD-granting institution; however, an exception can be requested. The request must be based on medical reasons (for example, proximity to required health care facilities), family reasons (for example, a spouse's career), or scientific reasons (for example, availability of specialized equipment) that would make it extremely difficult for the applicant to leave a particular institution. Applicants are encouraged to propose an alternate location of tenure in case their request for an exception is not granted. Applicants will not be granted permission to hold the fellowship with their PhD supervisor, even if the PhD supervisor changes research institutions.

Ability to complete projects within an appropriate time period

o if applicable, the applicant's explanation of any <u>special circumstances</u> must be taken into consideration

Communication, interpersonal, and leadership abilities

The following elements are examples of what should be considered in the evaluation of communication, interpersonal, and leadership abilities:

Professional, academic, and extracurricular interactions and collaborations with

supervisors, colleagues, peers, students, and members of the community

- teaching, mentoring, supervising, and/or coaching
- managing projects
- participating in science promotion, science/community outreach, volunteer work, and/or civic engagement
- chairing committees and/or organizing conferences and meetings
- participating in departmental or institutional organizations, associations, safety committees, societies, and/or clubs
- industrial work experience
- showing leadership and active participation in Environmental Health and Safety (for example, laboratory safety).

Awards for papers, reports, posters, oral presentations, teaching, and/or volunteer/outreach work

Participation in publication writing

 When publications have been prepared in collaboration with other students, postdoctoral fellows, or researchers, the applicant should describe their role and involvement in both the research and the preparation of contributions.

Quality of presentation of application

- o adherence to the NSERC online presentation and attachment standards
- grantsmanship
- proper spelling and grammar

The onus is on the applicant to provide a clear and complete application that demonstrates attention to detail and permits a comprehensive assessment.

3.6.3 Additional factors in the review of applications

All applications are reviewed with the same expectations in terms of the quality and potential of the contributions that have been, or will be, produced or undertaken. Some additional factors that may influence the review process are detailed below.

Work experience

In some instances, an applicant may return to an institution for graduate studies after obtaining work experience. In these situations, members should consider the relevant work experience and, where applicable, factor this into their evaluation.

Subject matter eligibility

NSERC supports research whose major challenges lie in the Natural Sciences and Engineering (NSE), other than the health sciences. Research primarily in the NSE that advances NSE knowledge is eligible for NSERC support, even if it may have potential future applications in human health—such as diagnosis or treatment. Proposals that include the use of methodologies, tools, techniques, and knowledge from the NSE are not automatically considered eligible. Members who have doubts as to whether the research proposed is eligible for support by NSERC should review the application on the same basis as all others, but should alert NSERC staff as soon as possible. For more information, members can consult the following resources

- Selecting the Appropriate Federal Granting Agency
- Addendum to the guidelines for the eligibility of applications related to health
- Eligibility criteria for students and fellows

Final decisions on subject matter eligibility are the responsibility of NSERC staff. Applicants whose proposals are deemed ineligible by NSERC staff are informed in writing.

Equity, diversity, and inclusion considerations in the research process

All applications include the *Equity, Diversity, and Inclusion Considerations in the Research Process* module, which asks applicants to consider how equity, diversity, and inclusion (EDI) considerations have (or have not) been taken into account at any of the stages of the research process for the proposed research. Members are expected to take the contents of this module into account during the review process. Considering EDI in the research process, where relevant, promotes research excellence by making it more relevant to society as a whole, more ethically sound, rigorous, reproducible, and useful.

NSERC acknowledges that EDI considerations may not be applicable in the context of some research projects, but nonetheless encourages that all applications fully consider their relevance, as they apply to more areas than one might think. Generally, research that involves or impacts human subjects, organisms capable of differentiation, or their tissues or cells can benefit from such considerations. Before concluding that EDI considerations are not relevant, the type of data collected and who might be impacted by the research findings should be thoroughly considered. Applicants are instructed to review the Equity, diversity and inclusion considerations at each stage of the research process web page for more information and guidance on this module.

Implicit or unconscious biases

NSERC expects members to consistently guard against the possibility of unconscious bias influencing the decision-making process, whether these biases are based on schools of thought, the perceived value of fundamental versus applied research, areas of research or research approaches (including emerging ones), size or reputation of an institution, experience or prominence of the proposed supervisor, age, gender, and/or other personal factors associated with the applicant. NSERC cautions members against any judgment of an application based on such factors. To assist members in recognizing potential bias, all members must complete the Bias in-Peer Review online learning module. Members are also encouraged to complete one of the Sex and Gender training modules produced by CIHR.

NSERC is actively engaged in increasing EDI practices in its review processes, enhancing the integrity of the selection process, and ensuring access to the largest pool of qualified participants, including all underrepresented groups. For more information and resources, see NSERC's Equity, Diversity and Inclusion web page.

Important: NSERC strongly encourages the use of inclusive language (for example, referring to applicants as "the applicant" or "they" instead of "he/she"). Any discussions should be free from words or sentences that reflect prejudiced, stereotyped, or discriminatory language of particular people, groups, or institutions. Use of inclusive language has been shown to decrease unconscious bias during the review process. For further information on unconscious bias, consult the Department for Women and Gender Equality Canada's Gender-based Analysis Plus: Unconscious bias web page.

Special circumstances (optional section)

Members must consider any special circumstances the applicant has chosen to provide that have had an effect on their performance and/or productivity. This includes delays in disseminating research results due to health problems, family responsibilities, parental leave, disabilities, trauma and loss, or other applicable circumstances. Members must also consider any special circumstances related to COVID-19 that may have delayed or interrupted the applicant's studies or research, or otherwise affected the performance on which the assessment for funding will be made. The special circumstances section should include the following information as needed

 the duration of the delay/interruption and, if applicable, a percentage of reduction in workload

- a clear description of its impact, including if relevant, the type of research contribution impacted (for example, publications, data collection, presentations, etc.)
- for delays relating to the COVID-19 pandemic, specification on the impacts and how they relate to the particular circumstances (for example, lab access, equipment delays, family responsibilities, etc.), as well as an explanation about what was done to adjust or compensate in response to these impacts.

Members must recognize the impacts of the delays and/or if appropriate, assess the quality of the applicant's performance and/or productivity during their active period (that is, excluding the period of special circumstances).

San Francisco Declaration on Research Assessment (DORA)

<u>DORA</u> is a global initiative whose purpose is to support the development and promotion of best practices in the assessment of scholarly research. It aims to address the negative consequences of unintended overuse of journal publications as a primary quality indicator for research output. As a signatory of DORA, NSERC has reaffirmed its commitment to excellence in research evaluation and the importance of knowledge translation. The DORA principles are reflected in NSERC's overall approaches to research assessment, and in its commitment to continuous improvement of assessment practices.

To promote NSERC's support of research excellence in Canada and incorporate the principles of DORA, NSERC has developed new <u>Guidelines on assessment of contributions to research, training and mentoring</u>. These guidelines recognize and value a broader range of contributions, including outreach and mentoring, and emphasize their quality and impact.

Quality indicators include

- Novelty, creativity, and/or innovation in the methodology and/or application of the research
- Suitable and rigorous methodology
- Consideration of equity, diversity, and inclusion in all aspects of the research process
- Transparency, accessibility of results, and appropriate data stewardship
- Exposure for trainees to non-academic work environments

Impact indicators include

Acceptance and use of research results by stakeholders, including members
of the research community, relevant partners, specific communities, or others
who may benefit from the research

- Increases to equitable and inclusive participation in the research ecosystem, including enhanced engagement and retention of underrepresented groups in the NSE
- Advances to reconciliation and the decolonization of Indigenous research
- Contributions to economic development or to environmental or social innovations or influence on current policy, guidelines, regulations, laws, standards, and/or practice

Technology transfer

Many contributions to industry or other end-users take the form of confidential technical or internal reports (to protect proprietary information) or are subject to patent or copyright protection. If an application's contribution record includes items of this nature, and these cannot be elaborated upon in the application for confidentiality reasons, the application may include an additional one-page letter written by the institution or company involved, attesting to the confidential nature of the contribution.

This letter must attest solely to the confidential or protected nature and significance of the contribution in as specific terms as possible and cannot serve as an additional Report on the Applicant. NSERC staff carefully review the contents of all submitted letters prior to approving their addition to an application.

If a technology transfer letter is included in an assigned application, members must take the contents of the letter into account during the review process.

3.7 Scoring applications

3.7.1 Initial scoring

For each selection criterion, members must place each of their assigned applications into one of six possible merit categories – 6 (highest), 5, 4, 3, 2, or 1 (lowest). Applications placed into merit categories 3, 4, or 5 may be given an optional "+" or "-" to allow for better differentiation among those applications which fall near key NSERC funding lines.

Members must adhere to the forced distributions shown in *Table 2: Doctoral and postdoctoral application* scoring system when scoring their assigned applications. It is important that members use the full range of merit scores.

Table 2: Doctoral and postdoctoral application scoring system

Merit category	*Distribution	**Possible merit score(s)
6	Up to 15%	6
5	Up to 20%	5 (+) 5 5 (-)
4	Up to 25%	4 (+) 4 4 (-)
3	Up to 25%	3 (+) 3 3 (-)
2	Up to 20%	2
1	Up to 15%	1

This may result in a scenario whereby a reviewer uses only five of the six available merit categories during their review.

An application's merit is scored relative to that of all other applications received. Applications placed in merit categories 1 and 2 are not necessarily of poor quality. Instead, they may represent worthy applications within a group of exceptional applications.

3.7.2 Compilation of scores

Once the three reviewers' initial merit scores have been returned to NSERC, they are compiled, and a list is produced.

Fellowship applications near or above the funding cut-off line are discussed at the <u>fellowships review meeting</u>. A subset of the highest scored fellowship applications may be pre-awarded without being discussed. Applications that have been flagged by members or NSERC staff, for any reason, may also be discussed by the selection committee during the fellowships review meeting.

There is no review meeting associated with the doctoral review process.

^{**}No forced distribution is applied to the merit scores contained within each merit category. For example, while up to 25% of applications may be placed into merit category 4, the proportion of these which are assigned merit scores of 4(-), 4, or 4(+) is at the reviewer's discretion.

3.7.3 Scoring applications at the review meeting

High-scored fellowship applications and applications that have been flagged for discussion by members or NSERC staff are discussed at the fellowships review meeting. All members meet virtually to discuss the applications that are brought forward to the review meeting. Before the meeting, NSERC staff provides members with a list of the applications to be discussed. All members must read these applications prior to the meeting, as they are expected to discuss and provide a score for each one, unless they have a conflict of interest. Typically, pre-awarded applications are not scored at the review meeting.

With the exception of members with a conflict of interest, the entire selection committee is present for the discussion of each application. The first reviewer assigned to the application summarizes its strengths and weaknesses. Following this assessment, the second and third reviewers highlight areas of agreement or disagreement with the first reviewer's analysis. Comments or questions may be raised by the other members and a general discussion follows as required. After the discussion, members confidentially provide a score for each selection criterion.

3.7.4 Final scores

NSERC applies the relative weighting for each selection criterion and calculates the final score for each application based on the three reviewers' scores or the scores allocated by the entire selection committee, depending on whether or not the application was discussed at the review meeting. Based on these scores, a final list is produced.

3.7.5 Collection and use of self-identification data

Equity, diversity, and inclusion strengthen research communities and the quality, social relevance, and impact of research. Self-identification data provides information on the diversity of the population applying for, receiving, and reviewing applications for agency funds. These data are important for monitoring our programs and informing measures to increase EDI among all those involved in the research enterprise.

Self-identification data is collected as part of the application process and is not seen or used by NSERC's selection committee members or by the applicant's references. Institutions are permitted to recommend an unlimited number of self-identified Indigenous applicants to the PGS D program above their application <u>quota</u>. In order to be considered for this, Indigenous applicants must provide consent in the

application form to share this information with their institutions and NSERC.

To address systemic barriers that limit the full participation of all talented individuals, NSERC aims for the proportion of short-listed and funded applications from those who self-identify as members of underrepresented groups to be at least similar to the proportion of applications received from these groups. This rebalancing of proportions is only used as needed, and only for meritorious applications. Underrepresented groups may include women and gender minorities, Indigenous peoples, persons with disabilities, members of visible minorities/racialized groups, and members of 2SLGBTQIA+ communities.

To complete this equalization process, NSERC calculates the proportion of applications and award offers for members of underrepresented groups. If the application rate is higher than the award rate, meritorious applications from members of these groups may be offered additional awards. To be considered as part of this equalization process, applicants must provide their consent.

Self-identification data is also collected from selection committee members who participate in the review process. This data is used for the purposes of program operations (including the recruitment of external individuals for merit review processes, where applicable) and planning, performance measurement and monitoring, evaluation, and audits, and may be used in aggregate to report to government or to the public. Self-identification information will be reported in a form (for example, aggregate) to ensure the protection of the identity of any individual.

3.8 Communication of results

Scholarship and fellowship applicants are notified of their results in April and February, respectively.

Due to the large number of applications received, members do not provide written feedback.

4. Legal and ethical information

4.1 Confidentiality of application material

Members appointed to the selection committee are asked to read and sign the Conflict of Interest and Confidentiality for Review Committee Members, External Reviewers, and Observers, describing NSERC's expectations and requirements. All application material (electronic copies of applications, print-outs, notes, etc.) is provided to members in confidence and must be used for review purposes only. Such material must be kept in a secure place, not accessible to colleagues or students. In addition, material that the member no longer requires must be destroyed in a secure manner (that is, shredding). All personal notes and documents must be securely destroyed at the conclusion of the review process. All applications and documentation provided to members electronically must be deleted. If NSERC requires assistance in providing additional information for particular cases after the review process, new copies of relevant material will be provided.

4.2 Confidentiality of recommendations

All funding recommendations are subject to approval by NSERC. Outcomes may be changed for reasons such as budget, administrative error, or lack of full adherence to NSERC policies.

All matters discussed during the fellowships review meeting are confidential and must not be divulged to others. Notifying applicants of the results of deliberations is the responsibility of NSERC staff, following official approval. Results must not be disclosed by members. If approached by an applicant or other individual concerning a decision or any other matter, members must decline discussion and refer the person to NSERC. Staff will act as the liaison between the selection committees and the applicant.

4.3 Privacy Act and Access to Information Act

NSERC must adhere to the <u>Privacy Act</u>. Personal information provided by applicants must be used only for the purpose of assessing applications and making funding decisions. The use or disclosure of such information for any other purpose is forbidden.

The information collected for this purpose must be collected directly from the individual. It may be collected from other sources only as part of the formal review process. For this reason, members must not use or consider information about an applicant that has been obtained in any other way (for example, by a member by virtue of their involvement in other activities).

Members are not asked to submit written comments to NSERC about an applicant or application. As per the <u>Access to Information Act</u>, applicants have a right to access information about themselves that is held by NSERC. A written opinion of a

reference about an application (for example, Report on the Applicant) is available to the applicant; the name of the reference is not.

<u>Lists of members</u> are published regularly by NSERC on its website.

4.4 Official Languages Act

NSERC, like all other federal institutions, has a key role to play in the implementation of the <u>Official Languages Act</u>. NSERC has an obligation to ensure that the public can communicate with, and receive services from, the agency in either official language.

Selection committees must ensure that all applications receive a full and detailed review, regardless of the official language of presentation. On occasion, this may entail consultation with NSERC staff to identify members with adequate linguistic capability.

4.5 Other considerations

Applicants must adhere to a number of <u>requirements for certain types of research</u>, all of which are available on the NSERC web page.

Reviewers must alert NSERC to any potential concerns or problems related to the above items that are observed in information sessions or during the review process. Here are some examples

- Inadequate sensitivity to the potential concerns of human subjects and/or inadequate provisions for the participation of human subjects in experiments, as required by the <u>Tri-Council Policy Statement: Ethical Conduct for</u> Research Involving Humans
- Use of animals in experiments when the significance of the proposed research does not appear to justify either the use of animal subjects or the proposed experimental protocol inclusion of controlled information in an application
- Inadequate training of graduate students in the handling of hazardous chemicals or biological substances
- Potentially harmful effects on the environment, or an inaccurate or incomplete assessment of these effects
- Research that involves the use of human pluripotent stem cells where the applicant has checked the "Yes" on their application

Concerns should be presented to NSERC staff to determine whether there is a means of resolving any apparent problems quickly, or whether the awarding of a

scholarship or fellowship should be delayed pending resolution of the problem.

4.5.1 Responsible conduct of research

Canada's federal granting agencies—the Canadian Institutes of Health Research, the Natural Sciences and Engineering Research Council of Canada, and the Social Sciences and Humanities Research Council of Canada—are committed to fostering and maintaining an environment that supports and promotes the responsible conduct of research. The Tri-Agency Framework: Responsible Conduct of Research sets out the responsibilities and corresponding policies for researchers, institutions, and the agencies that together help support and promote a positive research environment.

4.5.2 Member concerns about the responsible conduct of research

The agencies expect the highest standards of integrity in the research that they fund and in the review process they manage. The electronic submission of an application to the agencies commits the applicant(s) to a number of principles, including compliance with the Tri-Agency Framework: Responsible Conduct of Research. Should members identify, during the review process, any apparent lack of integrity (for example, possible misrepresentation in an agency application or related document; providing incomplete, inaccurate, or false information in a grant or award application or related document), they should bring their concerns to the attention of agency staff at the earliest opportunity. The agency will then refer any allegations to the Secretariat on responsible conduct of research for follow-up. Such allegations should not be a consideration during the review process, nor should they be part of the selection committee's discussions.

Members who raise concerns should rest assured that the matter will be addressed by the Secretariat in accordance with the <u>Tri-Agency Framework: Responsible</u> <u>Conduct of Research</u>; however, members will not be privy to the outcome of the matter, as the findings are confidential and no personal information is shared.

4.5.3 Member responsibilities in regard to the responsible conduct of research

Members of an NSERC selection committee who find themselves in the position of having to respond to formal allegations concerning the responsible conduct of research will not participate in the work of the selection committee while an investigation is underway.

In addition, members should notify the agencies of any conflict of interest—financial

or otherwise—that might influence the agencies' decision on what applications the members can review. Members and reviewers are responsible for respecting the confidentiality of application material and for declaring conflicts of interest. Should members become aware of a situation that violates the integrity of the review process, they should discuss this immediately with agency staff.

Appendix A: Selection criteria and indicators for scholarship applications

Note: Members must consider any <u>special circumstances</u> that have had an effect on the performance and/or productivity of the applicant.

Selection criteria (weighting %)	Indicators	Evidence
	Quality of research proposal	Outline of proposed research
Research ability and potential (50%)	Relevant training Research experience and achievements relative to the applicant's stage of study, lived experience, and knowledge systems	 Academic, research, and other relevant work experience Scholarships and other awards offered Thesis most recently completed or in progress
	Quality of contributions and extent to which they advance the field of research. Contributions may include: publications, patents, reports, posters, abstracts, monographs, presentations, creative outputs, knowledge translation outputs, community products, etc.	 Contributions and statements – Parts I, II, and III Reports on the applicant
	Demonstration of sound judgment and ability to think critically Demonstration of responsible and ethical research conduct, including honest and thoughtful inquiry, rigorous analysis, commitment to safety and to the dissemination of research results, and adherence to the use of professional standards	
	Enthusiasm for research, originality, initiative, autonomy, relevant community involvement, and outreach	 Scholarships and other awards offered Thesis most recently completed or in progress Outline of proposed research Contributions and statements – Parts II and III

	The ability or potential to communicate theoretical, technical, and/or scientific concepts clearly and logically in written and oral formats	Reports on the applicant
	Scholarships, awards, and distinctions (amount, duration, and prestige)	Scholarships and other awards offeredReports on the applicant
	Academic record	Institution transcripts
Relevant experience and		Reports on the applicantAcademic background
obtained within and beyond academia	Professional, academic, and extracurricular activities, as well as collaborations with supervisors, colleagues, peers, students, and members of the community	 Academic, research, and other relevant work experience Scholarships and other awards offered Contributions and statements – Parts I, II, and III Reports on the applicant

Appendix B: Selection criteria and indicators for fellowship applications

Note: Members must consider any <u>special circumstances</u> that have had an effect on the performance and/or productivity of the applicant.

Selection criteria (weighting %)	Indicators	Evidence
	Significance, feasibility, clarity, and merit of research proposal	Outline of proposed researchJustification for location of tenure
Research ability and potential (70%)	Contributions to research and development	 Thesis most recently completed or in progress Contributions and statements – Parts I, II, and III Reports on the applicant Technology transfer letter (if applicable)
	Academic training and relevant work experience	Academic, research, and other relevant work experience Contributions and statements — Part III, applicant's statement Reports on the applicant
	Scholarships and awards	Scholarships and other awards offeredReports on the applicant
	Researcher attributes	Contributions and statements – Parts II and III Reports on the applicant Outline of proposed research
	Justification for location of tenure	Justification for location of tenure
	Ability to complete projects within an appropriate time period	 Academic background Thesis most recently completed or in progress Contributions and statements – Parts II and III Reports on the applicant

Communication , interpersonal, and leadership	Professional, academic, and extracurricular interactions and collaborations with supervisors, colleagues, peers, students, and members of the community	 Academic, research, and other relevant work experience Contributions and statements – Part III, applicant's statement Reports on the applicant
abilities (30%)	Awards for papers, reports, posters, oral presentations, teaching, and/or volunteer/outreach work	 Scholarships and other awards offered (for example, best paper award at a conference) Contributions and statements – Parts I, II, and III Reports on the applicant
	Participation in publication writing	Contributions and statements – Parts I and II Reports on the applicant
	Quality of presentation of application	All sections of the application package, excluding the Reports on the Applicant