Faculty of Science – *Discovery Grant Application Template with Tips*

This document was prepared by the FoS Grants Team to provide organizational tips and suggested content for each section of the NSERC DG application. This is a guide only and is certainly not exhaustive. Please be sure to follow the NSERC DG instructions, use the Merit Indicators Grid, read the Peer Review Manual, and watch the NSERC webinars – links to all of which can be found on the NSERC DG Program website. We have also provided tips through our own On the Menu videos. Please contact us (sciencegrants@mun.ca) with questions and to take advantage of our comprehensive review.

Research Portal
Application- Discovery Grants Program Individual

Identification

Applicant
Family Name:
First Name:
Middle Names:
Current Position:

Applicant Category: (pick one)
- ECR- Early Career Researcher *(<5yr* in a tenure/tenure-track position)*
- ER- Established Researcher *(>5yr* in an independent academic position)*

*the 5 year window can be extended for eligible delays (parental, family, illness, family, bereavement)

If you are an ECR you can use the text section to defend your ECR status (ex. Time in industry, teaching (non-tenure track), etc.) and indicate when you started your tenure (track) position.

**ECRs are automatically eligible for the ECR Launch Supplement ($12,500 - one time)

Administering Organization
Organization: *Memorial University of Newfoundland*
Department/Division:

Application
Application Title:
Language:
Suggested Evaluation Group (pick one):
- *1501- Genes, Cells and Molecules*
- *1502- Biological Systems and Functions*
- *1503- Evolution and Ecology*

- *1504- Chemistry*
- *1505- Physics*
- *1506- Geosciences*
- *1507- Computer Science*
- *1508- Mathematics and Statistics*
- *1509 – Civil, Industrial and Systems Engineering*
- *1510 – Electrical and Computer Engineering*
- *1511 – Materials and Chemical Engineering*
- *1512 – Mechanical Engineering*

Hours per month to be devoted to the research/activity, or use of equipment or facility:

This should be based on a presumed 160hr work month- what percentage of your time would you spend on this (consider teaching, admin, and other grants/contracts you have)? Most faculty include ~60-80hrs

Supplements/Joint Initiatives (select all that apply):
- DND/NSERC Discovery Grant Supplement
- Northern Research Supplements Program

Leaves of absence:
I entered one or more eligible leaves of absence in my Canadian Common CV for this application:
- *Yes*
- *No*

Note: Use this section to indicate if you had one of the following types of leaves in the last 6 years: maternity/parental, family, medical, COVID-19.
Entering a leave will allow you to add a 2 page free-form addition to supplement your CCV for the amount of time you lost due to the leave beyond the 6 yr. window.

Summary of Proposal

Summary (3000 character max)
This is for a lay summary. Do not use technical terms/jargon.
The purpose is to give the public a brief overview of what your program of research addresses and what its value is to the field and Canada.

Second Official Language Translation
Not mandatory

Proposed Expenditures

Fill in the table with all proposed expenditures for each of the 5 years in the 5 categories. Some examples of those types of expenses are given below:

	Yr 1 Qty	Yr 1 Amt	Yr 2 Qty	Yr 2 Amt	Yr 3 Qty	Yr 3 Amt	Yr 4 Qty	Yr 4 Amt	Yr 5 Qty	Yr 5 Amt
Salaries & Benefits	*Enter quantity*	*Enter $ value x quantity*								
Undergraduate										
Master's										
Doctoral										
Postdoctoral										
Staff										
Subtotal		*autofills*								
Equipment & Facilities										
Hourly rates/ fees for use	*Enter quantity*	*Enter $ value x quantity*								
Computer										
Equipment										
Subtotal		*autofills*								
Materials & Supplies										
Field supplies										
Consumables										
Animals										
Chemicals/ reagents										
Kits										
Travel										
Fieldwork										
Conferences		*We recommend you budget at least 1 conference/ HQP ~$1,000-$2,500 each*								
Travel related to collaborations										
Subtotal		*autofills*								

Dissemination Costs											
Publications		*We suggest budgeting $1-3k / publication*									
Knowledge Translation											
Translation fees											
Subtotal		*autofills*									
Other Expenses (specify)											
Subtotal		*autofills*									

*see our budget tips document for current salary/stipend rates, and MUN policies on expenses – please request this document if you do not already have a copy

Relationship to Other Support (max 12,000 characters)

Only include funding which will overlap with the current DG (April 2024-March 2029).
Include $ already held and $ you have applied for without an available decision.
The purpose of this section is to make it clear that you are not "double-dipping" in your funding requests- it is not to demonstrate your ability to acquire funds.

Ex.
Title: Start-up Funds
Source: Memorial University of Newfoundland (MUN)
Amount & Duration of Award: $70,000 (June 2022- May 2025)
Conceptual/ Financial Overlap Explanation: This grant is intended to provide financial support for the purchase of equipment and basic reagents for the initial set-up of my lab. Although some of the equipment purchased with this grant may be used by HQP involved in the proposed DG there is no financial overlap with the request made in the current DG application.

Do you hold or have applied for CIHR and/or SSHRC funding:
- *Yes*
- *No*

*If you hold/have applied for any CIHR/SSHRC funding (includes MUN-SSHRC awards) you must attach the abstract/summary and budget.

HQP Training Plan (9000 characters max)

We recommend using the following subject headers:

Training Philosophy

Use this section to describe your style of training and HQP engagement, and the training environment you aim to create. Sime things to consider are:
- *Does your lab have a charter or code of conduct?*
- *Are you more hands on/hands off?*
- *Do you create an Individual Development Plan (IDP) with all HQP? (this is a living document with goals for their degree program and career which is revisited periodically)*
- *How often do you meet with students individually/as a group?*
- *What do you consider most important to HQP training? (communication, career planning, critical thinking skills, teamwork, etc.)*
- *Do you encourage HQP to take part in committees, workshops, outreach, professional development, etc.?*
- *What do you do in your lab which is unique?*

Be sure to address barriers/solutions to EDI (specific to your field/lab/MUN/NL, etc.)
- *Consider both recruitment and retention*
- *Check out professional associations to see what barriers they have identified in your field*
- *Ask us for our EDI guides and/or make an appointment with your GFO to help identify barriers and create strategies to eliminate them!*

Training Plan

Use this area to discuss how HQP will be involved in specific aspects of the proposed work and what skills they will gain.

Ex.

PhD1 and MSc1 will work on Objective 1 involving………..

Things to consider:

- *What skills will they gain by the end of their program?*
- *Will they have any co-supervisors/mentors in collaborating labs?*
- *Will junior/senior HQP work together?*
- *Will you send HQP to conferences, workshops, safety training, or suggest any special courses for them to take?*
- *Will they participate in manuscript writing? Do you have a goal for paper authorship/presentations?*
- *What careers will they be ready for after completing their degrees?*
- *Will your trainees have access to specialized facilities/equipment?*

Past Contributions to the Training of HQP* (6000 character max)

Please consult NSERC's new Guidelines on the assessment of contributions to research, training and mentoring for ideas on what is considered a contribution.

You should only refer to HQP you supervised (or co-supervised) in the last 6 years (2017 onwards).

Suggestion: Begin with a statement about how many HQP you have trained over the past 6 years (BSc, MSc, PhD, PDF, RA, high school, etc.). If you co-supervised any students be sure to state your role/involvement (i.e. % supervision, time in lab, primary or secondary supervision, manuscript/thesis prep, etc.)

For ECRs: If you wish to refer to supervision of HQP during your postdoc and/or industry be sure to clearly detail your formal role(s).

Training Environment

Use this section to outline the training environment you have created for your HQP over the past 6 years. This is a good place to discuss specific actions you have previously taken to remove barriers to EDI.

HQP Awards and Research Contributions

Use this section to detail awards and contributions your current/past HQP have made (since 2017). Some examples include:

- *Publications*
- *Presentations*
- *Awards*
- *Scholarships/Fellowships*
- *Reports/policy development*
- *Leadership and mentorship roles*
- *Outreach activities*

Outcomes and Skills Gained by HQP

Use this section to detail the outcomes of your HQP (since 2016). Some examples include:

- *Job/further education*
- *Internship*
- *Graduation*
- *Specialized training*
- *Collaborations*
- *Knowledge Translation/outreach communication skills*
- *Leadership/teamwork skills*

Most Significant Contributions to Research (9000 characters max)

- *Use this section to list up to 5 of your most significant contributions to the Natural Science and Engineering (NSE) fields*
  - *Only include contributions in the last 6 years (unless you can explain how it is still highly relevant in the field and/or specifically relevant to your proposal)*
- *When referring to publications/presentations etc. either cite the full reference or make reference to your CCV. Ex. My lab was the first to demonstrate….. (J1, C1)*
- *You can denote contributions that included HQP with an asterisk (J1*, C1)*
- *Each contribution can be centered around a specific work (manuscript- common for ECRs) or a collection of works tied to a particular theme (more common for ERs)*
- *It is also important to highlight "non-traditional" contributions to the field i.e. service, commitment to HQP training and/or EDI. These types of contributions could be a standalone most significant contribution or discussed within the context of your 5 most significant contributions.*

- ***Explicitly** state the impact to the NSE field and any broad benefit to Canada (socio-economic, policy, applications)*
  - *Publications, presentations*
  - *Citations- who cited you? How are they using your research?*
  - *Editorials and interviews about your research*
  - *Awards (to you and/or HQP)*
  - *Shift in field, new methods/standards of practice*
  - *Uptake/transfer of knowledge/tools by another field*
  - *Informing government policy/guidelines*
  - *Industry reports/ uptake in industry*
  - *Collaboration with community group- e.g., Helped community to solve a problem, create a report, etc.*
  - *Knowledge translation/community engagement leading to more trust/interaction with the public or a particular group*
  - *Commitment to EDI/accessibility/reconciliation*
  - *Creation of a new program, course, workshop, or specialized training for HQP*
  - *Service on committees for your university, a professional association, conference, etc.*
  - *Technology development: software, tools, equipment of use to other researchers/sectors*
  - *Patents, start-ups*
  - *Creation/sharing of data-sets and resources*

*See NSERC's new <u>guidelines</u> on contributions to research for more ideas.

Additional Information on Contributions (3000 characters max)

Use this section to mention other contributions to science and/or explain your contributions in more detail.

Things you could include:

- *What does authorship order mean in your lab and/or specific contributions in your CCV?*
- *What journals do you target for publication and why? (who is the audience?)*

- *Important collaborations (academic, industrial, government, community etc.)*
  - *Reports generated, inclusion of stakeholders, outreach, etc.*
- *Service on scientific communities/societies*
- *Event planning*
- *Scientific outreach/Knowledge translation*
- *Editorial service*
- *Patents*
- *Open-source materials*

**If contributions in your CCV span CIHR/SSHRC mandates, this is where you can emphasize and explain the NSE relevance.

Activity Details

Certification Requirements (yes/no)

Does the proposed research involve humans as research participants?
Does the proposed research involve animals?
Does the proposed research involve human pluripotent stem cells?
Does the proposed research involve hazardous substances?

Impact Assessment

Will any phase of the proposed research take place outdoors?*
*If yes, you will need to complete the Impact Assessment Form (see guide)

Research Subject Codes

Select at least 1 Subject Code

Area of Application Codes

Select at least 1 Area Code

Keywords

Include up to 10 keywords which describe your proposal

Eligibility Profile

Academic Appointment

I hold an academic appointment at an eligible Canadian postsecondary institution. (yes/no)

I will hold an academic appointment at an eligible Canadian postsecondary institution. (yes/no)
Expected Start Date:

Academic Position

Official Title of Position:

Postsecondary Institution: *Memorial University of Newfoundland*

Department/Division:
The position I currently hold or will hold is a tenured, tenure track or lifetime professor emeritus at an eligible Canadian university. (yes/no)

The position I currently hold or will hold is an indeterminate (i.e. with no end date) academic position with an eligible Canadian university, other than tenured, tenure track or lifetime professor emeritus. (yes/no)

The position I currently hold or will hold is a term or contract academic position of no less than three years at an eligible Canadian university. (yes/no)
From: To:

In addition to the academic position named above, I hold a remunerated position at an eligible Canadian institution. (yes/no)

In addition to the academic position named above, I hold a position outside the university sector. (yes/no)

I hold a position outside of Canada. (yes/no)

I am enrolled in a graduate program in the natural sciences or engineering, or I hold a postdoctoral position. (yes/no)

Proposal (max 5 pages)

*We strongly encourage the use of headings and formatting (**B**, I, U) to make your proposal easy to read and to help reviewers quickly identify key components of your application.*

Charts, graphs, and tables can also be used to summarize activities and associated HQP.

Introduction:

- *Discuss the overall long-term vision of your program of research and your recent progress.*
- *Be sure to highlight why you are interested in this field (why is it important and to whom?)*

i.e.

*The goal of my program of research is to ……… which is critically important to the understanding of…… **The long-term vision of my program is to** ……………………….*

In 2017 we published a study of… revealing that….. This led us to hypothesize that…… Recently, we determined that……

It is still unclear whether……. Thus, this proposal aims to address the following objectives:

Objectives:

Clearly state your short-term objectives in 1-2 sentences (usually 2-5 objectives)

i.e.

Objective 1 (MSc1; PhD1): To define the….

Objective 2 (MSc2, PhD2): To determine if...

Objective 3 (UG1, MSc3): To test if…….

*Make sure that your specific objectives address your long term goal(s) and are not just a collection of small projects. Associate HQP with specific objectives.

Literature Review:

- *Discuss the literature pertaining to your field, identify gaps in knowledge*

Methods:

- *Discuss your approach with enough detail for the reviewers to assess the feasibility of your program*
- *Identify which HQP will be involved in each objective*
- *Identify potential pitfalls, alternative methods, etc.*
- *Give general timelines (Gantt chart can be helpful)- this can also be put in your budget or HQP training plan and referred to*
- *Briefly highlight the impact/relevance of completing each objective*

Ex.

Objective 1: To define the……. (PhD1, MSc1).

In order to …..we will…….. PhD 1 will … using ….. technique (ref). We will use … to control for ….. and …. for…. It is possible that …. will happen. In this case we will …..

Next, MSc1 will start …………

Our lab has extensive knowledge in … and have performed … technique before (ref), thus we have the expertise and tools to accomplish the proposed research in ~3 years.

Impact: The data generated by …. will ……….

Impact:

Conclude your proposal by explaining the significance of your proposed work. Be sure to address both the impact to your field of research and the broader impact to other fields, Canada & Canadians (economic, societal, applications, etc.)

*Impacts will likely seem obvious to you, but you need to clearly state them as it may not be obvious to your reviewer(s). Moreover, it makes it easier for them to assess your proposal in a quick discussion!

References (max 2 pages)

List full references for proposal.

**Do not include hyperlinks or refer the readers to websites for additional info*

Budget Justification (max 2 pages)

Include a justification for all line items requested in your budget with a breakdown by year.

Tables can be useful to help explain

Ex.

Salaries and Benefits: ($105,000 over 5 years)

In my department PhD students are paid a minimum stipend of $22k/yr and MSc students are paid a minimum of $19k/yr. It is expected that students will receive funding from the School of Graduate studies and TAships in the amount of $12k for PhD and $10k for MSc. Thus, I request $10k/yr for PhD students and $8k/yr for MSc students to supplement their stipends (as detailed in Table 1). In year 4 I will recruit an undergraduate student in the summer to help MSc2 collect data for objective 3. I expect to recruit a student with an NSERC URSA fellowship and thus request $3,000 to pay the supervisor portion of their award.

Table 1: Student Stipends

Objective	HQP	Year 1	Year 2	Year 3	Year 4	Year 5	Total
1	PhD 1	10,000	10,000	10,000	10,000		40,000
1	MSc 1		8,000	8,000			16,000
2	PhD 2			10,000	10,000	10,000	30,000
3	MSc 2				8,000	8,000	16,000
3	UG 1				3,000		3,000
	TOTAL	10,000	18,000	28,000	31,000	18,000	**$105,000**

**Ensure all numbers match the budget and proposal (i.e. 2 PhD in budget, budget justification, and proposal).*

Attachments (max 4)

-Only add articles/works which were published in the last 6 years (since 2017)

-NEW: you can add an attestation (letter) on confidential research contributions- from industry, gov't, etc.

CCV

Enter your CCV confirmation number to link your CCV

- *Make sure your CCV is up to date!*
- *Ensure your HQP trained match your past HQP section, etc.*
- *Use the comments section to explain the NSE content of works which are published in health/social science journals*