

University of Toronto Mississauga
Numeracy Development Initiative (NDI)
Call for Proposals, 2021-2022

The Office of the Dean is pleased to invite again Departments to submit proposals to the Numeracy Development Initiative (NDI) program in the 2021-2022 academic year. The NDI will be organized in a fashion similar to the successful Writing Development Initiative (WDI), which has been supporting UTM students for more than a decade.

A pool of funds is available to support projects that integrate numeracy (quantitative literacy) instruction into the core courses across the curriculum. We are inviting Departments to submit proposals for projects that will involve numeracy-related exercises and instruction in order to help students gain the ability and confidence to employ quantitative reasoning when engaging with course content, and possibly beyond. The objective of such projects, which might include mathematical, statistical, or computational approaches, is to enrich students' understanding of ideas and concepts in the courses they are taking. By offering financial support, the Office of the Dean hopes to encourage individual Departments to integrate forms of numeracy instruction that expand the skill set and knowledge of their students.

Some key areas of quantitative proficiency targeted in these funded projects include: reasoning about size, numbers, and quantities; generating, gathering, analyzing, and understanding data; communicating quantitative information in oral and written form; experimenting with numbers (e.g., simulations); understanding patterns of change (linear, proportional, exponential, periodic, and so on); logical reasoning and identifying logical flaws in arguments; and probabilistic reasoning and interpreting information obtained by statistical tools.

Submission Requirements

To submit a **new proposal**, please go to [the NDI webpage](#) to download, complete, and submit the Word document form found there. Please ensure that your Department's Chair has approved the proposal before you submit it. The deadline for submission of proposals is **April 16, 2021**.

Funding recommendations for proposals will be made by a committee consisting of representatives of the RGASC and Departments from across the disciplinary spectrum.

Assessment and Final Report

Proposals must indicate the project's desired learning outcomes; these will be used by the Numeracy Specialist to help design assessment mechanisms.

The RGASC will conduct a basic assessment of all funded NDI projects, but to do so we will require some minimal assistance from participating course instructors and TAs (e.g., for in-course data collection, reminding students to complete a survey, filling out reflective questionnaires). This basic assessment structure prevents assessment planning and execution from being too onerous for Departments or course instructors; that said, the RGASC is happy to

collaborate or support in the development of more specific or detailed assessment mechanisms, especially as projects develop over several iterations.

Basic assessment will, at a minimum, include the following three elements:

1. Assessment of any changes in students' quantitative literacy skills with short pre- and post-quizzes. These quizzes will be designed by the Numeracy Specialist in consultation with the course instructors and administered in labs or tutorials.
2. Pre- and post-surveys of students' self-reported attitudes and beliefs about the techniques or skills taught in the intervention, and about their own quantitative literacy.
3. TAs' and course instructors' reflective assessments of the project and their observations about the changes in their students' quantitative literacy skills or attitudes. These will be collected through a short questionnaire.

The RGASC will provide the resources to administer basic assessment, with the Numeracy Specialist taking the lead. Resource sharing for more complex assessment plans will be negotiated between the Numeracy Specialist and the course instructors or Departmental contact as applicable.

A **Final Report Template** will be provided to course instructors at the beginning of January 2022 to document the details of the assessment of, reflection on, and changes to the project. Final reports for 2021-2022 projects will be due by **April 14th, 2022**.

RGASC Support

The RGASC is pleased to make a variety of centralized resources and services available to Departments participating in the NDI. As much of the additional numeracy work and instruction that the NDI supports is done by TAs, we offer training and support to assist them, and also to provide them with valuable professional development: It is likely that some TA training (a projected maximum of 4 hours per TA) will be required for most projects. All NDI-specific training will be funded by the Office of the Dean and designed and conducted by the Numeracy Specialist. The precise focus of the training (e.g., pedagogical strategies or lesson preparation) and number of hours offered will be determined by the Numeracy Specialist in consultation with the course instructor, if appropriate.

In addition to these TA training opportunities, the RGASC is also pleased to offer additional student support such as "course-specific drop-ins" at the RGASC during the term, as requested by course instructors, in which students in NDI-funded courses would receive specialized consultations with RGASC strategists on an assignment-specific basis. As always, faculty and staff at the RGASC will be available to assist course instructors and Departments with assignment design, classroom instruction, and other activities that integrate numeracy into their curriculum.

The amount of money allocated to a single project will depend on a variety of factors, including but not limited to the number of students enrolled in the targeted course(s). Please note as well that preference will be given to projects embedded in courses that are part of a program of study in which emphasis on developing numeracy skills extends beyond the individual course.

Contact Information

Proposals for new projects should be submitted to Andie Burazin at the Robert Gillespie Academic Skills Centre by **April 16, 2021**, using this address: a.burazin@utoronto.ca. Decisions on funding will be made by **May 21st, 2021**.

If you have any questions regarding the NDI or your specific proposal, please contact Andie.