



Nova Scotia Institute of Science

Student Science & Technology Communication Competition

Information for Post-Secondary Authors

The Nova Scotian Institute of Science (NSIS) is once again sponsoring its annual Student Science and Technology Communication Competition. The competition is open to all students registered at a Nova Scotian University or College in 2024-2025 and has two categories:

1. undergraduate/college;
2. postgraduate

A minimum cash prize of \$600 will be awarded to the best essay prepared by a student in each category. Prize amounts may increase depending on competition sponsorship.

All students who submit an essay will be offered a free 1-year membership in the NSIS. Winners will be featured on the NSIS website with their consent to include a photo. The winning and other high-quality essays may be posted on the NSIS website and winning authors of research papers may be invited to submit their paper to *the Proceedings of the Nova Scotian Institute of Science*, a peer-reviewed, Atlantic Canadian journal. Winning papers submitted to the Proceedings are subject to the journal's normal editorial and peer review process.

Topics and General Guidelines

The competition is open to any topic of a scientific (natural and social) or technological nature. Possible topics include but are not limited to: climate change, Earth's ecosystems and cycles, the environment, human health, sustainable development, renewable energy, digital technology, artificial intelligence, innovations in space exploration, communications, mathematics, and statistics, but note these are only suggestions and other topics may be submitted. Submissions can be in either an essay, or for scientific research that is your own, a research article.

Essay

Entries submitted to the competition should be an original essay that:

- Provides a substantive review of a certain aspect of current science or technology developments including its relevance, significance and/or application, and your analysis or perspective;
- Represents your own analyses and research based on literature review, or an original work of your own or in collaboration with others;
- Includes a list of references from peer-reviewed science or technology journals or books, to facilitate the judging of originality, and the relevance and significance of the topic being covered
- Explains the topic in a way that is accessible/ easily understood by a general audience

This is a communication competition so the goal is to take a complex scientific or technology-based topic and break it down to a level that can be communicated with a general audience. You should assume that your potential readers may have a general knowledge of science and technology but are not specialists in your specific subject. Avoid jargon and acronyms. If you must use specific technical terms or acronyms they should be defined or explained, preferably in a Glossary. The following journals can serve as models for this level of writing: *Scientific American*, *The Smithsonian*, *The New Scientist*.



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The essay should include the following:

- Cover Page with a Title, author name and affiliation (University and Department)
- A brief Abstract
- Introduction
- Discussion
- Conclusions
- Acknowledgements (if applicable)
- References

Research Article

Entries submitted to the competition in a research article format should be an original research article that:

Presents the results of original scientific research you conducted, including background, methodology, data analysis, and conclusions based on your findings; Highlights the scientific significance, relevance, and implications of your research, and places it within the context of existing work in the field; Includes a well-organized structure with clearly labeled sections and is supported by references from peer-reviewed journals, providing context and supporting arguments to validate your findings; Conveys the research in a way that, while precise and detailed, is accessible to a general science audience, maintaining clarity and minimizing technical jargon wherever possible.

The article should include the following:

- Cover Page with a Title, author name and affiliation (University and Department)
- A brief Abstract
- Introduction
- Methodology
- Results
- Discussion
- Conclusions
- Acknowledgements (if applicable)
- References

Formatting Guidelines

APA reference format is preferred. Formatting such as that used by Proceedings of the NSIS or a prominent generalist science journal (e.g.: Nature) can serve as an example of suitable reference formatting.

Aim for 3,000-4,000 words in the body of your paper. Word count should not include the title page, abstract, figures/tables (including their captions), or references. Do not include your name, university/college name, or other personally identifying information in the body of the paper, this should only be placed on the title page.

Use 1.5 line spacing and standard 1-inch (2.54 cm) margins. Font choice should be an easy-to-read (sans serif) font such as Calibri, Arial, or Open Sans and should be size 12 font. Number all pages, not including the title page.



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Authorship, Acknowledgements, and Copyrights

You must be the sole author and creator of the essay. You must include a statement indicating the writing is wholly your own and acknowledge the role any others played in preparing your submission (e.g.: minor editorial suggestions from your professor or advisor, provision of photographs, etc.). If the essay includes inputs or contributions from collaborators, their contributions to the text should be kept to a minimum, and explicitly noted in the acknowledgements section. Also, indicate if the essay or paper has been, or is likely to be used substantially elsewhere.

Please respect copyrights if you need to reproduce illustrations from journals or books. You must have permission from the original publication to reproduce their figures.

If you use original data or results from your own published work, include the name and email of your research supervisor or your collaborators, and provide a statement that they have agreed to the inclusion of the data or results in your submission. All personal or scientific information that you provide will be held in confidence.

All submissions will be screened for plagiarism and use of AI using software. Plagiarism or AI assisted writing such as ChatGPT will result in immediate disqualification.

Registration

Registration Deadline: Students must register on or before **December 16, 2024** by emailing the Competition Coordinators at the e-mail address below.

The following information should be included in your registration email:

- Your name, e-mail, and phone number.
- The name of your university or college and department
- The name of your degree, diploma, or certification program and current year of study in the program. If enrolled at a university, clarify whether you are an undergraduate or graduate student
- The subject or topic of your proposed entry, and a tentative title.

Submitting your essay/research article:

Electronic submission is strongly preferred. Please submit an electronic copy of your paper as a Word (.doc or .docx) or Adobe (.pdf) attachment to the Coordinators at the e-mail address below.

E-mail: nsis.1862.competition@gmail.com

If electronic format is unavailable to you, please contact the Coordinators to arrange drop off or mailing of your essay before the submission deadline so it is received by the deadline.

Submission Deadline: Submit your final essay to the Coordinators by: **January 17, 2025.**



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Judging

All papers will be judged according to the following criteria:

- Appeal to a broad audience (able to be understood by non-specialists)
- Significance of the subject, unbiased analysis, novel perspectives
- Scientific or technical correctness
- Clarity of presentation: clear, comprehensive, concise, logical, well-explained, readable. Free of spelling, grammatical and typographical errors.
- Overall impression of the paper.

Our panel of 5+ judges come from a wide variety of scientific and technological backgrounds and perspectives and may include professors, senior scientists, graduate students, post-docs and those currently working in Science and Tech industries. To make the judging process as objective as possible, judges work from a scoring rubric with the above criteria and submissions are subject to a blind review process. Your name, place and year of study, and department will be removed before sharing with the judges. Judges will only be aware whether the paper is in the undergraduate/college or post graduate category. Decisions made by the panel of Judges are final and not subject to appeal.

Winners and Presentation of Awards

The winners of the competition will be contacted on or before **March 15, 2025** and the winning entries will be announced on the NSIS website.

Presentation of the awards (certificates and cheques) will take place at the NSIS Public Lecture on **Monday, April 7, 2025**.

Winning students who are unable to attend the awards presentation in person in Halifax, may join to be recognized virtually and their award will be mailed out to a location of their preference.

Competition Coordinators

Have a question about the competition/ guidelines? Reach out to the coordinators:

Dr. Shannon Ezzat, Associate Professor, Cape Breton University
Dr. Jinshan Xu, Physical Scientists, Bedford Institute of Oceanography
E-mail: nsis.1862.competition@gmail.com