nscc | Applied Research

APPLIED KNOWLEDGE

INNOVATIVE RESEARCH

PROVEN RESULTS
NSCC Applied Research

Applied Research helps NSCC realize its mission by working with industry partners to grow their businesses. This direct engagement with industry helps our province’s economy, enhances quality of life and builds innovation capacity in Nova Scotia.

Applied Research is a form of teaching at NSCC that directly connects students with the subject they are studying. It’s a great way to get practical experience and, at the same time, gain problem solving and teamwork skills that are necessary for today’s workplace.

Growth in our capacity and scope of Applied Research projects has resulted in a research operation equipped to respond to industry and community needs with a focus on:

- **ENERGY**
- **OCEANS**
- **ENGINEERED TECHNOLOGIES**
- **GEOMATICS**

Our Industry Liaison Officer helps industry partners connect to the expertise and resources at the College to increase productivity, competitiveness, economic development and job creation through applied research and commercialization activities.

Working in our communities, the research scientists are curiosity-driven, innovative leaders.

“What I’m doing is not just lab-based research; it also has practical applications. I enjoy moving innovative ideas from concept to reality.”

Dr. Alain Joseph, Research Scientist, Nova Scotia Community College
Services

Applied Research at NSCC is all about finding innovative solutions to practical, real-world problems. Through a network of students, faculty, staff and research scientists, we work with industry and community partners to help them come up with new or improved products and processes. NSCC has well-equipped facilities which provide us with the tools to contribute to the development of new technologies that we can transfer to our partners. The commercialization of research findings adds value to the communities we serve and contributes to the economic growth of our province.

The Applied Research office provides quality assurance, institutional oversight and professional guidance. Our goal is to connect clients to our faculty, staff and student-based research teams. In doing so, we help students develop their applied research skill sets, enhance the quality of the learning experience for our students and employees, and meet the needs of our partners.

“For our second-year project, we designed a device to launch and recover sonar equipment. The opportunity to apply the knowledge from our program to a real project was a phenomenal learning experience.”

Samantha Fredericks
Mechanical Engineering Technology

Intellectual property at NSCC

NSCC’s primary interest is to facilitate applied research to support industry and community needs, enhance learning for students and create opportunities to work collaboratively with partners to create innovative and practical solutions. Intellectual property assignment is addressed with each partner before a project begins.

“Canadian colleges are an important player in our national innovation ecosystem. The team at NSCC is showing what colleges can achieve when they have the state-of-the-art research infrastructure they need to conduct top level applied research.”

Gilles G. Patry, Canadian Foundation for Innovation
PROGRAM AND FACULTY EXPERTISE
With 120+ programs, NSCC offers applied research partnering and potential in a variety of fields.
Facilities and capabilities

Students, faculty, business partners and industry collaborate to generate solutions to real-world problems using the power of technology, creativity, imagination and innovation.

**Design & Innovation Centre**

The Design & Innovation Centre provides an area where NSCC can work with industry partners to explore new ideas using a specialized suite of technology that includes advanced design software, 3D modelling and a metal laser sintering printer.

**Engineered Technologies Research Lab**

Through its multi-disciplinary activities, the Engineered Technologies Lab works with a variety of technology-based sectors. This lab provides specialized equipment such as the Acoustic Systems Trainer for SONAR for testing and developing underwater acoustic-based devices, a ZEPTO Plasma Surface Activation System and a portable and modular spectrometer for the development of more effective monitoring and prediction techniques for field applications.

**Applied Geomatics Research Group**

NSCC has extensive research experience in geomatics which stems from the Applied Geomatics Research Group (AGRG). AGRG applies advanced mapping techniques and meteorological monitoring to solve problems and support sustainable development in areas related to the coastal zone, aquaculture sites, agriculture and forestry lands. NSCC is also the only academic institution to own a topo-bathymetric lidar that can acquire elevation and cover type across the land sea boundary.

**Applied Energy Research Lab**

With a $2.3 million grant from the National Sciences and Engineering Research Council of Canada (NSERC), the college is building a microgrid to develop and commercialize smart grid technologies. The Applied Energy Research Lab is equipped to develop and test sustainable energy alternatives and has extensive experience in solar energy technologies and monitoring devices.

**Pilikan House**

A residential demonstration site and living lab, Pilikan House provides a hands-on teaching and research facility for alternative and sustainable energy systems.
Applied Research is NSCC’s engine of innovation generating a direct, positive impact on the local economy. With advanced technology at hand, our experienced teams are working with industry to apply practical solutions to real-world problems while creating an opportunity for our students to learn from the process.

Don Bureaux, President, Nova Scotia Community College