

The logo for Brock University, featuring the word "Brock" in white text on a red rectangular background.

Brock

A horizontal banner image showing a close-up of a human eye on the left and a bird's eye on the right, with a blue abstract pattern on the far right.

Faculty of Mathematics
and Science

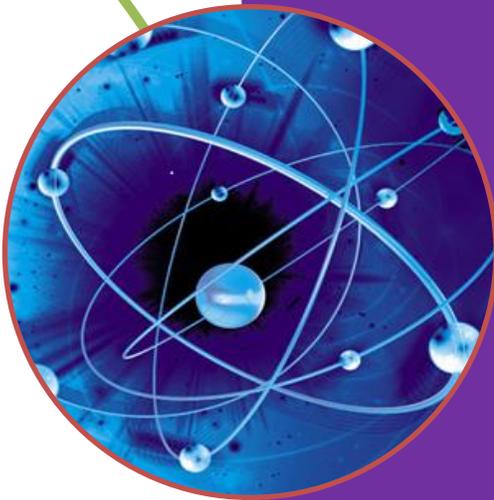
FACULTY OF MATH & SCIENCE

SMA INPUT, 2016-21

DRAFT (JUNE 20)



MISSION & CORE VALUES



MISSION

Our purpose is the advancement of scientific knowledge through discovery and teaching. We strive to provide a student-oriented undergraduate and graduate education based on the principles of excellence, innovation, and accessibility and to conduct world-class fundamental and applied research.

We promote interdisciplinary programs, collaboration among the faculty, and collegiality in the sharing of resources. We are dedicated to maintaining responsive links with the broader community and contributing to its development.



CORE VALUES

Excellence in research

High quality education

Hands-on training

Student engagement in discovery

Outstanding student-faculty interaction

Inclusiveness, collegiality, collaboration, and nurturing



STRATEGIC PRIORITIES 2016-21





GOALS SUPPORTING STRATEGIC PRIORITIES

Forming the 21st Century Scientific Leader and Citizen

- Continually improving and developing relevant academic programs
- Expanding experiential education
- Growing the internationalization of academic programs

Conducting World-Class Scientific Research

- Expanding state-of-the-art research responsive to societal needs
- Increasing transdisciplinary research
- Strengthening computational science

Engaging Community Partners for the Betterment of Education and the Quality of Life

- Expanding academic collaborations with Ontario colleges
- Nurturing links with Niagara schools
- Increasing our outreach to community partners and industries

OBJECTIVES TOWARDS GOALS

Forming the 21st Century Scientific Leader and Citizen Prioritized Objectives by Goals Strands

Continually Improving and Developing Academic Programs for the 21st Century

- Launch the PhD program in Computer Science
- Develop a joint undergraduate program with Niagara College in Data Science
- Develop a BA program in Earth and Planetary Science
- Develop graduate programs in Neuroscience
- Increase retention, progression and graduation rates
- Contribute to the development of a PhD program in Sustainability/Global Change

Expanding Experiential Education

- Conduct a comprehensive review of experiential education in the Faculty
- Develop a roadmap for expanding experiential education
- Launch the *LabPlus* experiential credentials program
- Increase opportunities for research and discovery courses

Growing the Internationalization of Academic Programs

- Increase the number of articulation agreements with international universities
- Develop new graduate professional programs
- Expand international experiences for current students

Conducting World-Class Scientific Research

Expanding State-Of-The-Art Research Responsive to Societal Needs

- Strategic replacement of retiring faculty to maintain excellence in scholarship
- Ensure the viability and continuing success of the Biomanufacturing Centre by establishing a roadmap for its future
- Creation of an Insect Borne Disease Research Centre

Increasing Transdisciplinary Research

- Review transdisciplinary research: achievements and opportunities
- Establish a transdisciplinary research Fund
- Increase research collaborations within the Faculty and across the University

Strengthening Computational Science

- Increase the participation, visibility, and impact of the Brock Institute for Scientific Computing (BISC)
- Increase HQP training within BISC
- Integrate Data Science and Bioinformatics into BISC
- Establish a computational science fund

Engaging Community Partners for the Betterment of Education and the Quality of Life

Expanding Academic Collaborations with Ontario Colleges

- Establish a roadmap for the renewal of existing exchange programs
- Develop a joint program with Niagara College in Data Science
- Explore other avenues for collaborations

Nurturing Links with Niagara School Boards and Schools

- Establish *Science Plus Niagara* in collaboration with Niagara school boards to oversee the promotion of mathematics and science within schools. *Let's Talk Science, Scientifically Yours*, mentorships and math & science camps included under this umbrella
- Develop strategies to engage Niagara schools math & science educators and counsellors

Increasing the Outreach Footprint of the Faculty of Math & Science by Reaching Out to Community Partners and Industries

- Conduct a faculty survey to identify:
 - Existing outreach engagements
 - Scientific and technical expertise offered to community partners and industries
- Coordinate with the Co-op Office to expand and improve co-op and experiential learning opportunities for students