

FIG 0021: Toolkit for Diverse STEM Students

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Overview: Our goal is to affirm and support historically excluded and underrepresented students in STEM. If you have the passion for science but you are bewildered by the many unwritten rules of science, we can help! Are you wondering how to plan your STEM degree? Are you interested in becoming part of a more inclusive science community? Are you uncertain about how to access all the tools you can use to succeed in STEM? Do you want to know where to find support? We will help you with these and other challenges. We will work as a group to address these topics and learn how to support each other's success. There will be group work, hands-on activities, and guest speakers. This is a winter-term learning module offered as part of the Dalhousie Science Scholars and Leaders Program.

Relevant science programs: All

Co-requisites/Prerequisites: This is an interactive group open to all students with a passion for science and a desire to make a difference in the world through a STEM career.

Restrictions: Restricted to first and second year science students.

Syllabus

Week 1: Introduction / getting to know each other

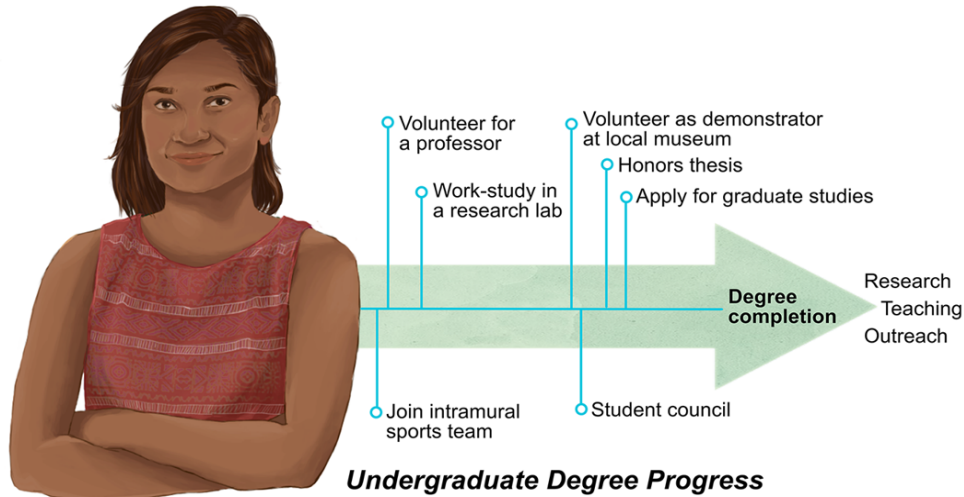
- Student survey - majors, interests, what are you looking for, maybe some self-identification?
- Quick overview of course
- Icebreaker activity
- Value affirmation
- Feedback for student-centered learning (what topics should we cover)

Week 2: Diverse Perspectives in Science

- The culture in science (at Dal, and more broadly)
 - The data does not speak for itself & Scientific biases
 - Marginalized perspectives "Who speaks for the data?"
 - Environmental racism
- Diverse scientific perspectives (e.g., Indigenous science, non-Western science)
- Paper discussion

Week 3: Scientific vision

"In my career, I want to inspire the next generation of scientists."



- Looking Inward - start with interests and values - what is exciting/interesting to them based on their experiences, values, ethics, background, relationship to community, etc.
- How can it connect or relate to science?
- What is a scientific vision? Developing a plan

Week 4: Planning your degree

- Short lecture on degree progression in STEM at Dal
- Faculty advisors as guests
 - What are some common questions?
 - Biggest mistakes" document
- Students work in small groups to develop their plan of study
- Turning your vision into a concrete plan
- Course Requirements (FoS - has program-specific degree planning tools)
- Other activities (coop, work-study, teams, clubs)
- Holistic career plans
- Additional tutorial: After-hours Wallace McCain booking for any students looking for additional guidance. Volunteer graduate students will be present to assist.

Weeks 5 and 6: Opportunities and Mentorship Part I

- Research and research labs
- Panel from honors students and/or early career graduate students
 - Discuss coop / internship / PT job opportunities / Taships / etc.
- Activity: Writing an email to express interest
- Student leadership and on-campus opportunities (another panel)
- Community and Outreach

Week 7: Available Resources

- Mental health and wellness
- Library
- Writing Center
- HRES
- Activity: peer groups/scenario
 - Grief, mental health counseling, racism or prejudice
 - Very short explanatory presentation

Week 8: Learning from Failure

- Guests of successful scientists (& undergrads) and their failure stories
- Casual conversations with scientists - round robin discussion

Week 9: Student-Choice Activity

Week 10: Student-Choice Activity