

**CARLETON UNIVERSITY COMMITTEE ON
QUALITY ASSURANCE
Cyclical Review of the undergraduate programs
in Nanoscience
Executive Summary and Final Assessment Report**

This Executive Summary and Final Assessment Report of the cyclical review of Carleton's undergraduate programs in Nanoscience are provided pursuant to the provincial Quality Assurance Framework and Carleton's Institutional Quality Assurance Process (IQAP).

EXECUTIVE SUMMARY

The undergraduate programs in Nanoscience reside in the Department of Chemistry, a unit administered by the Faculty of Science.

As a consequence of the review, the programs were categorized by Carleton University's Senate Quality Assurance and Planning Committee (SQAPC) as being of good quality. (Carleton's IQAP 7.2.12).

The External Reviewers' report offered a very positive assessment of the programs. Within the context of this positive assessment, the report nonetheless made a number of recommendations for the continuing enhancement of the programs. These recommendations were productively addressed by the Director of the Nanoscience Program, the Chair of the Department of Chemistry, the Dean of the Faculty of Science in a response to the External Reviewers' report and Action Plan that was submitted to SQAPC on April 16th, 2020.

Department/School/Institute Name

Unit Response to External Reviewers' Report & Action Plan

Programs Being Reviewed: B.Sc. Nanoscience

Approved by Dean: February 24th, 2020

Note: This document is made available for public posting on the Vice- Provost's website.

Introduction & General Comments

The review committee's comments were positive and helpful. In general, the themes of these comments were to try to build a sense of community within the program, among the undergraduates and the instructors, as well as to increase efforts at recruiting.

In general, all recommendations are agreed to unconditionally. Please see below.

Calendar Changes

If any of the action items you intend to implement will result in calendar changes, please describe what those changes will be. To submit a formal calendar change, please do so using the Courseleaf system.

UNIT RESPONSE AND IMPLEMENTATION PLAN

Programs Being Reviewed: Nanoscience

External Reviewer Recommendation & Categorization	Action Item	Owner	Timeline	Will the action described require calendar changes? (Y or N)
<p>1. Improve the student cohort experience by branding the Bachelor of Nanoscience program.</p>	<p>We will be having semester meet and greets with all Nanoscience students at the beginning of the Fall and Winter terms. In the Fall, the program Advisor will introduce himself and talk about protocol for booking appointments.</p>	<p><i>Undergraduate Advisor, (Nanoscience and Chemistry)</i></p>	<p><i>Immediately</i></p>	<p><i>No</i></p>
<p>2. Faculty involved in the program should meet with the Bachelor of Nanoscience students once per term as a group.</p>	<p>See recommendation 3.</p>	<p><i>Undergraduate Advisor, (Nanoscience and Chemistry)</i></p>	<p><i>Ongoing</i></p>	
<p>3. A faculty member involved in the Bachelor of Nanoscience program should be identified to the students as an advisor.</p>	<p>The advisor for the program will arrange a meeting in January 2020 between the students of the Nanoscience program, and the key instructors of the program. This meeting will be to discuss the expectations of the program, ensure that the students know</p>	<p><i>Undergraduate Advisor, (Nanoscience and Chemistry)</i></p>	<p><i>Ongoing</i></p>	<p><i>No</i></p>

	<p>the key instructors and their areas of research (for potential CHEM 4908 thesis research projects), and to meet each other. Here, the students will be informed that Seán Barry is the current advisor for the program.</p>			
<p>4. Efforts should be made to incorporate more bio, energy, and environmental nanoscience into the program to attract more students.</p>	<p>Administrator of the Carleton nanofab FANSSI has undertaken a redesign of the keystone courses in the Nanoscience program (CHEM 3600: Introduction to Nanotechnology and CHEM 4103: Surfaces and Nanostructures). Given the feedback from the program review, he will strengthen the themes of bio, energy, and environmental nanoscience in these courses.</p>	<p><i>Facility Administrator, NanoFab FANSSI</i></p>	<p><i>Immediately</i></p>	<p><i>No.</i></p>
<p>5. Engineering should set aside seats for the Bachelor of Nanoscience students and streamline the entry process for these students to take their courses.</p>	<p>We have been in discussions with the Electronics Department in Engineering on how to set up the courses to allow Nanoscience students in without requiring special permission. The Undergraduate Administrator will continue to correspond with the Department throughout the timetabling process.</p>	<p><i>Undergraduate Program Administrator</i></p>	<p><i>Immediately</i></p>	<p><i>No.</i></p>

<p>6. Greater efforts should be made to advertise this program to high school students. High school students are not aware of nanoscience.</p>	<p>This year the Chemistry Department will be hosting the first NanoDay. This day is designed to teach high school students who are interested in Chemistry more about the fields of Nanoscience and Nanotechnology. This outreach event is for students in Grade 11 Chemistry or Grade 12 who are interested in studying Science at Carleton University, or who are passionate about Chemistry and would like to learn more about Nanoscience and the programs Carleton University has to offer. This year we will be accepting 45 high school students from the Ottawa Area. We will use the outcome of this year's event decide on the size and scope of future Nanoscience outreach events.</p>	<p><i>Maria DeRosa</i></p>	<p><i>March Break 2020</i></p>	<p><i>No.</i></p>
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