

Executive Summary

Graduate Specialization in Chemical and Environmental Toxicology
Cyclical review year 2012-2013

Prepared by the Ottawa Carleton Committee on Graduate Quality Assurance (OCCGQA)
Meeting of March 23, 2015

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| Name of Program Reviewed | Specialization in Chemical and Environmental Toxicology (Joint/Collab) |
| Degrees | <p>At the University of Ottawa:</p> <ul style="list-style-type: none"> • Master of Science in Biology, Specialization in Chemical and Environmental Toxicology / Maîtrise ès sciences Biologie Spécialisation en toxicologie chimique et environnementale • Master of Science in Chemistry, Specialization in Chemical and Environmental Toxicology / Maîtrise ès sciences Chimie Spécialisation en toxicologie chimique et environnementale • Master of Science in Earth Sciences, Specialization in Chemical and Environmental Toxicology / Maîtrise ès sciences Sciences de la Terre Spécialisation en toxicologie chimique et environnementale • Doctor of Philosophy in Biology, Specialization in Chemical and Environmental Toxicology / Doctorat en philosophie Biologie Spécialisation en toxicologie chimique et environnementale • Doctor of Philosophy in Chemistry, Specialization in Chemical and Environmental Toxicology / Doctorat en philosophie Chimie Spécialisation en toxicologie chimique et environnementale • Doctor of Philosophy in Earth Sciences, Specialization in Chemical and Environmental Toxicology / Doctorat en philosophie Sciences de la Terre Spécialisation en toxicologie chimique et environnementale <p>At Carleton University:</p> <ul style="list-style-type: none"> • MSc Biology with Specialization in Chemical and Environmental Toxicology • MSc Chemistry with Specialization in Chemical and Environmental Toxicology • MSc Earth Sciences with Specialization in Chemical and Environmental Toxicology • PhD Biology with Specialization in Chemical and Environmental Toxicology • PhD Chemistry with Specialization in Chemical and Environmental Toxicology • PhD Earth Sciences with Specialization in Chemical and Environmental Toxicology |
| Responsible academic units | <ul style="list-style-type: none"> • Ottawa-Carleton Chemistry Institute (OCCI) • Ottawa-Carleton Institute of Biology (OCIB) |

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| | <ul style="list-style-type: none"> Ottawa-Carleton Geoscience Centre (OCGC) |
| Fields | N/A |
| Final Evaluation | <p>At the University of Ottawa:</p> <ul style="list-style-type: none"> Good quality program for the Master of Science in Biology, Specialization in Chemical and Environmental Toxicology / Maîtrise ès sciences Biologie Spécialisation en toxicologie chimique et environnementale Good quality program for the Master of Science in Chemistry, Specialization in Chemical and Environmental Toxicology / Maîtrise ès sciences Chimie Spécialisation en toxicologie chimique et environnementale Good quality program for the Master of Science in Earth Sciences, Specialization in Chemical and Environmental Toxicology / Maîtrise ès sciences Sciences de la Terre Spécialisation en toxicologie chimique et environnementale Good quality program for the Doctor of Philosophy in Biology, Specialization in Chemical and Environmental Toxicology / Doctorat en philosophie Biologie Spécialisation en toxicologie chimique et environnementale Good quality program for the Doctor of Philosophy in Chemistry, Specialization in Chemical and Environmental Toxicology / Doctorat en philosophie Chimie Spécialisation en toxicologie chimique et environnementale Good quality program for the Doctor of Philosophy in Earth Sciences, Specialization in Chemical and Environmental Toxicology / Doctorat en philosophie Sciences de la Terre Spécialisation en toxicologie chimique et environnementale <p>At Carleton University:</p> <ul style="list-style-type: none"> Good quality program for the MSc Biology with Specialization in Chemical and Environmental Toxicology Good quality program for the MSc Chemistry with Specialization in Chemical and Environmental Toxicology Good quality program for the MSc Earth Sciences with Specialization in Chemical and Environmental Toxicology Good quality program for the PhD Biology with Specialization in Chemical and Environmental Toxicology Good quality program for the PhD Chemistry with Specialization in Chemical and Environmental Toxicology Good quality program for the PhD Earth Sciences with Specialization in Chemical and Environmental Toxicology |

Significant Strengths of the Program

The graduate specialization in chemical and environmental toxicology (join) (referred to as the OCCET) is judged by the OCCGQA as being of “good quality”. The overall assessment of the OCCET specialization is

positive. The reviewers noted the fact that this specialization is almost unique in Canada, and that its location in the National Capital Region generates many associated benefits, including excellent access to experts and facilities in research-intensive agencies.

The impressive track record of publications, grants, awards and research chairs achieved by professors at both universities, coupled with the good degree of collaboration among them in research endeavours and activities, adds to the richness and diversity of the student experience in this joint collaborative specialization. This is further enhanced by the close ties maintained with professional associations in this field, which allow students to benefit from experiential learning and networking opportunities.

Areas for Improvement and Enhancement

Possibilities for enhancing the OCCET specialization include building a stronger sense of community by identifying more clearly which professors and students in the various Institutes are affiliated with the OCCET.

There is scope to raise awareness and promote the OCCET specialization among Chemistry and Earth Sciences students.

The OCCET specialization receives minimal administrative support, even though there is an increasing number of international applicants, whose queries are more complex. Moreover, the conversion rate for international applicants is low, largely because of limited funding opportunities.

Good employment prospects mean that some students begin working before submitting or defending their theses, which can sometimes cause delays in time-to-completion.

Recommendations

It is recommended that the OCCET:

1. Re-examine the administrative support structure for the program, specifically with regard to the program coordinators' workload, to determine whether additional administrative support is needed.
2. Encourage professors to clearly identify their affiliation with the specialization on their websites.
3. Explore the possibility of allowing students to apply to the home program and the specialization at the same time, and to receive an offer of acceptance to both simultaneously; this could help build a cohort and act as a recruitment tool.
4. Continue seeking ways to build a sense of community, perhaps by piggy-backing on more events organized by the supporting institutes.
5. Articulate more clearly and promote more widely the valuable and marketable knowledge and skills this specialization builds to encourage a greater enrolment from Chemistry and Earth Sciences students.
6. Consider whether a more systematic use of exit surveys or alumni surveys (or similar tools) could provide a better picture of students' perceptions of their experience in the program, as well as their post-graduation employment.
7. Continue monitoring time-to-completion for theses.

Implementation Plan

Calendar and Deadlines

The OCCET is encouraged to follow through on the recommendations before the next cyclical review, which will be carried out no later than 2020-2021, and the OCCGQA would welcome an account of any subsequent improvements that may result before that time.

Authorities

The OCCET specialization coordinators will be responsible for implementing these recommendations with the assistance of the directors and associate directors of the OCCI, the OCIB, and the OCGC, who together with the deans of Science will oversee the application and implementation of the recommendations in their respective institutions.