

# THE UNIVERSITY OF BRITISH COLUMBIA | OKANAGAN



## OKANAGAN SENATE SECRETARIAT

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**September 22, 2010**

**To: Okanagan Senate**

**From: Admissions and Awards Committee and Curriculum Committee**

**Subject: Environmental Chemistry Honours Program (approval)**

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The Admissions and Awards Committee and the Curriculum Committee have reviewed the material presented by the Faculty of Arts and Sciences for the Environmental Chemistry Honours Program. The attached proposal is deemed ready for approval.

As such, the following is recommended to Senate:

***Motion: That Senate approve the Environmental Chemistry Honours Program brought forward by the Faculty of Arts and Sciences as set out in the attached proposal.***

For the Committees,  
Dr. Sharon McCoubrey, Chair, Admissions and Awards Committee  
Dr. Marvin Krank, Chair, Curriculum Committee



## UBC Okanagan Curriculum Proposal Form New or Change to Course or Program

Category: 1

<p><b>Faculty:</b> Arts and Sciences <b>Department:</b> Chemistry <b>Faculty Approval Date:</b> August 10, 2010 <b>Effective Session:</b> 2010W</p>	<p><b>Date:</b> March 25, 2010 <b>Contact Person:</b> W. Stephen McNeil <b>Phone:</b> 250.807.8751 <b>Email:</b> <a href="mailto:s.mcneil@ubc.ca">s.mcneil@ubc.ca</a></p>
<p><b>Proposed Calendar Entry:</b></p> <p><u>Homepage &gt; Faculties, Schools, and Colleges &gt; Faculty of Arts and Sciences &gt; Bachelor of Science Programs &gt; Environmental Chemistry</u></p> <p><b>Environmental Chemistry</b></p> <p><b>[14619] Major in Environmental Chemistry</b></p> <p><b>[14629] Note:</b> UBC Okanagan also offers a <a href="#"><i>Major in Chemistry</i></a>.</p> <p><b>[14679]</b> This program provides students with a core education in the four important areas of chemistry: analytical, inorganic, organic, and physical chemistry, with specialization in environmental chemistry. Employment opportunities include positions with environmental consulting firms, environmental departments in industrial operations, analytical laboratories, and environmental regulatory agencies.</p> <p><b>[14620]</b> Students entering the Major in Environmental Chemistry program must complete Chemistry 11 (or equivalent) and Principles of Mathematics 12 or Pre-Calculus 12. Students are strongly advised</p>	<p><b>Draft Calendar URL:</b> <a href="http://www.calendar.ubc.ca/okanagan/proof/edit/index.cfm?tree=18,282,858,1256">http://www.calendar.ubc.ca/okanagan/proof/edit/index.cfm?tree=18,282,858,1256</a></p> <p><b>Present Calendar Entry:</b></p> <p><u>Homepage &gt; Faculties, Schools, and Colleges &gt; Faculty of Arts and Sciences &gt; Bachelor of Science Programs &gt; Environmental Chemistry</u></p> <p><b>Environmental Chemistry</b></p> <p><b>[14619] Major in Environmental Chemistry</b></p> <p><b>[14629] Note:</b> UBC Okanagan also offers a <a href="#"><i>Major in Chemistry</i></a>.</p> <p><b>[14679]</b> This program provides students with a core education in the four important areas of chemistry: analytical, inorganic, organic, and physical chemistry, with specialization in environmental chemistry. Employment opportunities include positions with environmental consulting firms, environmental departments in industrial operations, analytical laboratories, and environmental regulatory agencies.</p> <p><b>[14620]</b> Students entering the Major in Environmental Chemistry program must complete Chemistry 11 (or equivalent) and Principles of Mathematics 12 or Pre-Calculus 12. Students are strongly advised</p>



to complete Chemistry 12.

First Year	Credits
CHEM 111, 113; or CHEM 121, 123	6
MATH 100, 101	6
Two of ENGL 112, 113, 114, 150, 151, 153	6
PHYS 112, 122; or PHYS 102, 111	6
BIOL 116, 125; or two of EESC 101, 111, 121 <sup>1</sup>	6
Total Credits	30

Second Year	
One of CHEM 201, 210	3
CHEM 203, 204	6
CHEM 211	3
CHEM 220	3
STAT 230	3
BIOL 116, 125; or two of EESC 101, 111, 121 <sup>1</sup>	6
Arts elective <sup>2</sup>	3
Science elective <sup>2</sup>	3
Total Credits	30

Third and Fourth Years	
CHEM 301, 302	6
CHEM 311	3
CHEM 317	3
One of CHEM 330, 333, 413	3
One of CHEM 335, 337, 338, 339	3
One of CHEM 412, 434	3
CHEM 461	3
EESC 309, 323	6
EESC 423	3
Two approved environmental electives <sup>2,3</sup>	6
Arts electives <sup>2</sup>	9
Electives <sup>2</sup>	12
Total Credits	60

to complete Chemistry 12.

First Year	Credits
CHEM 111, 113; or CHEM 121, 123	6
MATH 100, 101	6
Two of ENGL 112, 113, 114, 150, 151, 153	6
PHYS 112, 122; or PHYS 102, 111	6
BIOL 116, 125; or two of EESC 101, 111, 121 <sup>1</sup>	6
Total Credits	30

Second Year	
One of CHEM 201, 210	3
CHEM 203, 204	6
CHEM 211	3
CHEM 220	3
STAT 230	3
BIOL 116, 125; or two of EESC 101, 111, 121 <sup>1</sup>	6
Arts elective <sup>2</sup>	3
Science elective <sup>2</sup>	3
Total Credits	30

Third and Fourth Years	
CHEM 301, 302	6
CHEM 311	3
CHEM 317	3
One of CHEM 330, 333, 413	3
One of CHEM 335, 337, 338, 339	3
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CHEM 461	3
EESC 309, 323	6
EESC 423	3
Two approved environmental electives <sup>2,3</sup>	6
Arts electives <sup>2</sup>	9
Electives <sup>2</sup>	12
Total Credits	60



<p>Minimum credits for degree 120</p> <p><sup>1</sup> Students must complete BIOL 116, 125, and two of EESC 101, 111, 121. The order in which these pairs of courses are completed in first and second year is optional.</p> <p><sup>2</sup> At least 18 total credits (including 6 credits in first-year English) must be in Arts courses. A further 9 elective credits must be from either Arts or Science other than Chemistry. At least 9 elective credits must be 300 level or higher, and 3 of these must be Science credits.</p> <p><sup>3</sup> The environmental electives must be chosen from outside Chemistry, in consultation with a program advisor.</p> <p><b>[15525]</b> Students are encouraged to take courses offered in other disciplines that are relevant to the B.Sc. in Environmental Chemistry. Such courses often have prerequisites, so students should start planning their electives early in their degree program.</p> <p><b><u>Environmental Chemistry Honours Program</u></b></p> <p><b><u>The Honours in Environmental Chemistry program is designed to provide an intensive program of study through coursework and research experience. Students who complete this program will have the ability to work independently and with a high level of competency. The course requirements are the same as in the Major in Environmental Chemistry program, except 6 credits of the elective component of the program must be in CHEM 449.</u></b></p> <p><b><u>Admission Requirements</u></b></p>	<p>Minimum credits for degree 120</p> <p><sup>1</sup> Students must complete BIOL 116, 125, and two of EESC 101, 111, 121. The order in which these pairs of courses are completed in first and second year is optional.</p> <p><sup>2</sup> At least 18 total credits (including 6 credits in first-year English) must be in Arts courses. A further 9 elective credits must be from either Arts or Science other than Chemistry. At least 9 elective credits must be 300 level or higher, and 3 of these must be Science credits.</p> <p><sup>3</sup> The environmental electives must be chosen from outside Chemistry, in consultation with a program advisor.</p> <p><b>[15525]</b> Students are encouraged to take courses offered in other disciplines that are relevant to the B.Sc. in Environmental Chemistry. Such courses often have prerequisites, so students should start planning their electives early in their degree program.</p>
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- Fourth-year standing (minimum of 78) credits in the Environmental Chemistry Major.
- Minimum grade average of 75% in all courses taken to date applicable to the Environmental Chemistry Major.
- Enrolment in CHEM 449.

#### Graduation Requirements

- Completion of the course requirements for the Major in Environmental Chemistry.
- A minimum 75% graduating grade average (GGA).
- CHEM 449 with a minimum grade of 75%.

**Type of Action:** On the Environmental Chemistry degree Calendar page, insert parallel wording that describes an Environmental Chemistry Honours program.

**Rationale:** With the recent changes to the Environmental Chemistry degree program, it should have its own Honours option, distinct from that associated with the Chemistry degree.