



Lakehead University
Faculty of Science and Environmental Studies

REQUEST REPORT

Request Tracking Number: 2013-SCI-2852
Request Title: Water Resource Science Program Changes

Request Effective Date: Fall 2014
Request Status: In Workflow
 Request can't be split

Request Contents

Type		Title
1.	New Version of a Degree	Honours BSc (Water Resource Science Major)
2.	New Version of a Degree	BSc (Water Resource Science Major) Specialization in Applied Environmental Water Management 4 Yr
3.	New Version of a Degree	BSc (Water Resource Science Major) 4 Yr
4.	New Version of a Degree	Honours BSc (Water Resource Science Major) Specialization in Applied Environmental Water Management

Request History

Workflow Step	Workflow Action	User	Change Made	Comments	Date
Initiator	Approved	Amanda Diochon	Yes	Submitted to workflow	11/11/2013
Dean and Faculty Council Review Stage	Approved	Christina Maenpaa	No	This calendar change was approved at the SES Faculty Council on November 11, 2013. Approved by Dr. Dean	11/13/2013
Optional Dean-Natural Resources Management	Approved	Ulf Runesson	No	No issue with changes.	11/20/2013

Supporting Documents

File Name	Uploaded By	Upload Date	Size
-----------	-------------	-------------	------

Supporting Documents Audit Trail

File Name	User	Date	Action
-----------	------	------	--------

Notes

Date	User	Note
------	------	------

1.	New Version of a Degree	HBSC.WATE - Honours BSc (Water Resource Science Major)
----	-------------------------	--

Justification

Adding courses to the program that students are already enrolling in to complete their degree requirements.
Deleting courses that are no longer offered at the institution.

Degree Details

CURRENT VERSION	PROPOSED VERSION
HBSC.WATE - Honours BSc (Water Resource Science Major) Start Term: Fall 2002 End Term: Summer 2013	HBSC.WATE - Honours BSc (Water Resource Science Major) Start Term: Fall 2002 2014 End Term: Summer 2013 No Specified End Date

<i>Required Information</i>	
CURRENT VERSION	PROPOSED VERSION
Institution Unit Faculty of Science and Environmental Studies	Institution Unit Faculty of Science and Environmental Studies
Degree Type HBSC	Degree Type HBSC
Major WATE	Major WATE
Minor	Minor
Specialization	Specialization
Rationale	Rationale <i>Deleting courses that are no longer offered. Adding existing courses relevant to the program.</i>
Requirements Four Year program A student may enter, proceed in and graduate from the Honours BSc (HBSc) program in accordance with stipulations in the University Regulations section, and Faculty of Science and Environmental Studies Regulations section, of the Calendar. The overall average in all Biology, Geography, Geology and Water Resource Science courses must be at least 70%. By March 15 of their third year, students eligible to enter the fourth year of the HBSc program, and who intend to fulfil the thesis requirement in the next academic year must (a) have a faculty advisor, (b) have a topic approved by the advisor, and (c) submit a one page report, outlining the thesis proposal, to the program co-ordinator. All course choices in fourth year must be approved by the program co-ordinator. First Year: (a) Biology 1110 and 1130	Requirements Four Year program A student may enter, proceed in and graduate from the Honours BSc (HBSc) program in accordance with stipulations in the University Regulations section, and Faculty of Science and Environmental Studies Regulations section, of the Calendar. The overall average in all Biology, Geography, Geology and Water Resource Science courses must be at least 70%. By March 15 of their third year, students eligible to enter the fourth year of the HBSc program, and who intend to fulfil the thesis requirement in the next academic year must (a) have a faculty advisor, (b) have a topic approved by the advisor, and (c) submit a one page report, outlining the thesis proposal, to the program co-ordinator. All course choices in fourth year must be approved by the program co-ordinator. First Year:

<p>(b) Chemistry 1110 and 1130 (c) Geography 1120 (d) Geology 1111 and 1131 (e) One full course equivalent elective</p> <p>Second Year: (a) Biology 2210 and one half-course selected from: Biology 2711, 3151, 3313, 3610 (b) One FCE selected from: Geography 2211, 2251, 2351, 3411 (c) Geology 2214 and 3311 (d) Mathematics 2310 and 2311 (e) One full course equivalent elective</p> <p>Third Year: (a) Two FCEs selected from: Biology 2711, 3114, 3151, 3313, 3610, 4113, 4115, 4212, 4213, 4217, 4430, 4431, 4435 or Applied Bio-Molecular Science 4710 (b) Chemistry 2111 (c) One FCE selected from: Geography 2211, 2251, 2351, 3251, 3311, 3313, 3317, 3411, 3471, 4211, 4333, 4431, 4451 (d) Geology 3130 and 3410 (e) One half-course elective</p> <p>Fourth Year: (a) One FCE selected from: Biology 3114, 3151, 3313, 3610, 4113, 4115, 4212, 4213, 4217, 4430, 4431, 4435, 4710, 4711, or Applied Bio-Molecular Science 4710 (b) One FCE selected from: Geography 2211, 2251, 2351, 3251, 3311, 3313, 3317, 3411, 3471, 4211, 4333, 4411, 4431, 4451 (c) Geology 4011 and 4137 (d) Water Resource Science 4101 and 4630 (e) One half-course elective</p>	<p>(a) Biology 1110 and 1130 (b) Chemistry 1110 and 1130 (c) Geography 1120 (d) Geology 1111 and 1131 (e) One full course equivalent elective</p> <p>Second Year: (a) Biology 2210 and one half-course selected from: Biology 2110, 2711, 3151, 3313, 3610 (b) One FCE selected from: Geography 2211, 2251, 2351, 3411 (c) Geology 2214 and 3311 (d) Mathematics 2310 and 2311 (e) One full course equivalent elective</p> <p>Third Year: (a) Two FCEs selected from: Biology 2110, 2711, 3114, 3151, 3212, 3313, 3610, 3990, 3991, 4113, 4115, 4117, 4212, 4213, 4217, 4252, 4430, 4431, 4435, 4512, 4610, 4711, or Applied Bio-Molecular Science 4710 or NRMT 1010, 2055, 3116, 3135, 3215, 3219, 4251 (b) Chemistry 2111 (c) One FCE selected from: Geography 2211, 2251, 2351, 3251, 3253, 3255, 3311, 3313, 3317, 3411, 3471, 4211, 4231, 4333, 4431, 4451 or NRMT 2350, 4217 (d) Geology 3130 and 3410 (e) One half-course elective Water Resource Science 3094</p> <p>Fourth Year: (a) One FCE selected from: Biology 3114, 3151, 3212, 3313, 3610, 3990, 3991, 4113, 4115, 4117, 4212, 4213, 4217, 4252, 4430, 4431, 4435, 4512, 4610, 4710, 4711, or Applied Bio-Molecular Science 4710 or NRMT 3116, 3135, 3215, 3219, 4251 (b) One FCE selected from: Geography 2211, 2251, 2351, 3251, 3253, 3255, 3311, 3313, 3317, 3411, 3471, 4211, 4231, 4333, 4411, 4431, 4451 or NRMT 4217 (c) Geology 4011 and 4137 (d) Water Resource Science 4101 and 4630 (e) One half-course elective</p>
--	---

<u>Budgetary Considerations</u>	
CURRENT VERSION	PROPOSED VERSION
Student Enrolment	Student Enrolment <i>No. Students in the program are already enrolling in the courses proposed for inclusion in the program to meet their degree requirements because not all courses in the current list are offered every year.</i>
Student Enrolment Other Units	Student Enrolment Other Units <i>No. For the reason outlined in the section for student enrollment.</i>
Additional Resources	Additional Resources <i>No. For the reason outlined in the section for student</i>

	<i>enrollment.</i>
Teaching Loads	Teaching Loads <i>No. For the reason outlined in the section for student enrollment.</i>
TeachingSupport Services	TeachingSupport Services <i>No. For the reason outlined in the section for student enrollment.</i>
Outside Support	Outside Support <i>No. For the reason outlined in the section for student enrollment.</i>

2.	New Version of a Degree	BSC4.WATE.WM - BSc (Water Resource Science Major) Specialization in Applied Environmental Water Management 4 Yr
----	-------------------------	---

Justification

Adding courses to the program that students are already enrolling in to complete their degree requirements. Deleting courses that are no longer offered at the institution.

Degree Details

CURRENT VERSION	PROPOSED VERSION
BSC4.WATE.WM - BSc (Water Resource Science Major) Specialization in Applied Environmental Water Management 4 Yr Start Term: Fall 2013 End Term: No Specified End Date	BSC4.WATE.WM - BSc (Water Resource Science Major) Specialization in Applied Environmental Water Management 4 Yr Start Term: Fall 2013 2014 End Term: No Specified End Date

<u>Required Information</u>	
CURRENT VERSION	PROPOSED VERSION
Institution Unit Faculty of Science and Environmental Studies	Institution Unit Faculty of Science and Environmental Studies
Degree Type BSC4	Degree Type BSC4
Major WATE	Major WATE
Minor	Minor
Specialization APWA	Specialization APWA
Rationale #2012-SCI-293 (add new WATE 3094) (referred 18Jan2013 and approved 25Apr2013). Associated program changes to BSC4.WATE.WM. Also Transition Plan includes changes regarding GEOL 3311, GEOG 2251 and 3411 in Fourth Years.	Rationale #2012-SCI-293 (add new WATE 3094) (referred 18Jan2013 and approved 25Apr2013). Associated program changes to BSC4.WATE.WM. Also Transition Plan includes changes regarding GEOL 3311, GEOG 2251 and 3411 in Fourth Years. ch
Requirements Four Year Non-Direct Entry program The program requirements are the same as for the HBSc (Water Resource Science Major) Specialization in Applied Environmental Water Management program except one FCE elective is taken instead of the Honours Thesis (Water Resource Science 4101), as indicated below, and in order to remain in the program, students must maintain at least an overall C average in all Biology, Geography, Geology and Water Resource Science courses. Fourth Year: (a) Geology 4011 and 4137 (b) Geography 3411 and 4411	Requirements Four Year Non-Direct Entry program The program requirements are the same as for the HBSc (Water Resource Science Major) Specialization in Applied Environmental Water Management program except one FCE elective is taken instead of the Honours Thesis (Water Resource Science 4101), as indicated below, and in order to remain in the program, students must maintain at least an overall C average in all Biology, Geography, Geology and Water Resource Science courses. Fourth Year: (a) Geology 4011 and 4137

<p>(c) Water Resource Science 4630 (d) One FCE selected from: Biology 2711, 3114, 3151, 3313, 3151, 3313, 3610, 4113, 4115, 4212, 4213, 4217, 4430, 4431, 4435, 4710, 4711, or Applied Bio-Molecular Science 4710 (e) One half-course selected from: Geography 2211, 2351, 3251, 3311, 3313, 3317, 3471, 4211, 4333, 4431, 4451 (f) One FCE elective(s)</p> <p>Students who successfully complete a four-year BSc (Water Resource Science Major) Specialization in Applied Environmental Water Management degree will still receive the Environmental Technician Diploma from Confederation College.</p>	<p>(b) Geography 3411 and 4411 (c) Water Resource Science 4630 (d) One FCE selected from: Biology 2711, 3114, 3151, 3212, 3313, 3151, 3313, 3610, 3990, 3991, 4113, 4115, 4117, 4212, 4213, 42174252, 4430, 4431, 4435, 4512, 4610, 4710, 4711, or Applied Bio-Molecular Science 4710 <i>or NRMT 3116, 3135, 3215, 3219, 4251</i> (e) One half-course selected from: Geography 2211, 2351, 3251, 3253, 3255, 3311, 3313, 3317, 3471, 4211, 4231, 4333, 4431, 4451 <i>or NRMT 4217</i> (f) One FCE elective(s)</p> <p>Students who successfully complete a four-year BSc (Water Resource Science Major) Specialization in Applied Environmental Water Management degree will still receive the Environmental Technician Diploma from Confederation College.</p>
---	---

<u>Budgetary Considerations</u>	
CURRENT VERSION	PROPOSED VERSION
Student Enrolment	Student Enrolment <i>No. Students in the program are already enrolling these courses to complete their degree requirements because courses in the current listing are not offered every academic year.</i>
Student Enrolment Other Units	Student Enrolment Other Units <i>No. For the reason outlined in the section on student enrollment.</i>
Additional Resources	Additional Resources <i>No. For the reason outlined in the section on student enrollment.</i>
Teaching Loads	Teaching Loads <i>No. For the reason outlined in the section on student enrollment.</i>
TeachingSupport Services	TeachingSupport Services <i>No. For the reason outlined in the section on student enrollment.</i>
Outside Support	Outside Support <i>No. For the reason outlined in the section on student enrollment.</i>

3.	New Version of a Degree	BSC4.WATE - BSc (Water Resource Science Major) 4 Yr
----	-------------------------	---

Justification

Adding courses to the program that students are already enrolling in to complete their degree requirements.
Deleting courses that are no longer offered at the institution.

Degree Details

CURRENT VERSION	PROPOSED VERSION
BSC4.WATE - BSc (Water Resource Science Major) 4 Yr Start Term: Fall 2002 End Term: No Specified End Date	BSC4.WATE - BSc (Water Resource Science Major) 4 Yr Start Term: Fall 2002 2014 End Term: No Specified End Date

<i>Required Information</i>	
CURRENT VERSION	PROPOSED VERSION
Institution Unit Faculty of Science and Environmental Studies	Institution Unit Faculty of Science and Environmental Studies
Degree Type BSC4	Degree Type BSC4
Major WATE	Major WATE
Minor	Minor
Specialization	Specialization
Rationale	Rationale <i>Deleting courses no longer offered. Adding existing courses relevant to program learner outcomes.</i>
Requirements Four Year Non-Direct Entry program The program requirements are the same as for the HBSc (Water Resource Science Major) program except one FCE elective is taken instead of the Honours Thesis (Water Resource Science 4101), as indicated below and in order to remain in the program, students must maintain at least an overall C average in all Biology, Geography, Geology and Water Resource Science courses. Fourth Year: (a) One FCE selected from: Biology 3114, 3151, 3313, 3610, 4113, 4115, 4212, 4213, 4217, 4430, 4431, 4435, 4710, 4711, or Applied Bio-Molecular Science 4710 (b) One FCE selected from: Geography 2211, 2251, 2351, 3251, 3311, 3313, 3317, 3411, 3471, 4211, 4333, 4411, 4431, 4451 (c) Geology 4011 and 4137	Requirements Four Year Non-Direct Entry program The program requirements are the same as for the HBSc (Water Resource Science Major) program except one FCE elective is taken instead of the Honours Thesis (Water Resource Science 4101), as indicated below and in order to remain in the program, students must maintain at least an overall C average in all Biology, Geography, Geology and Water Resource Science courses. Fourth Year: (a) One FCE selected from: Biology 3114, 3151, 3212 , 3313, 3610, 3990 , 3991 , 4113, 4115, 4117 , 4212, 4213, 4217 4252 , 4430, 4431 , 4435, 4512 , 4610 , 4710, 4711, or Applied Bio-Molecular Science 4710 <i>or NRMT 3116, 3135, 3215, 3219, 4251</i> (b) One FCE selected from: Geography 2211, 2251, 2351, 3251, 3253 , 3255 , 3311, 3313, 3317, 3411,

(d) Water Resource Science 4630 (e) One and one-half FCE electives	3471, 4211, 4231 , 4333, 4411, 4431, 4451 <i>or NRMT 4217</i> (c) Geology 4011 and 4137 (d) Water Resource Science 4630 (e) One and one-half FCE electives
---	--

<u>Budgetary Considerations</u>	
CURRENT VERSION	PROPOSED VERSION
Student Enrolment	Student Enrolment <i>No. Students in the program are already enrolling in these courses to satisfy their degree requirements because courses in the current listing are not offered every year.</i>
Student Enrolment Other Units	Student Enrolment Other Units <i>No. For the reason outlined in the section for student enrollment.</i>
Additional Resources	Additional Resources <i>No. For the reason outlined in the section for student enrollment.</i>
Teaching Loads	Teaching Loads <i>No. For the reason outlined in the section for student enrollment.</i>
TeachingSupport Services	TeachingSupport Services <i>No. For the reason outlined in the section for student enrollment.</i>
Outside Support	Outside Support <i>No. For the reason outlined in the section for student enrollment.</i>

4.	New Version of a Degree	HBSC.WATE.WM - Honours BSc (Water Resource Science Major) Specialization in Applied Environmental Water Management
----	-------------------------	--

Justification

Adding courses to the program that students are already enrolling in to complete their degree requirements. Deleting courses that are no longer offered at the institution.

Degree Details

CURRENT VERSION	PROPOSED VERSION
HBSC.WATE.WM - Honours BSc (Water Resource Science Major) Specialization in Applied Environmental Water Management Start Term: Fall 2013 End Term: No Specified End Date	HBSC.WATE.WM - Honours BSc (Water Resource Science Major) Specialization in Applied Environmental Water Management Start Term: Fall 2013 2014 End Term: No Specified End Date

<u>Required Information</u>	
CURRENT VERSION	PROPOSED VERSION
Institution Unit Faculty of Science and Environmental Studies	Institution Unit Faculty of Science and Environmental Studies
Degree Type HBSC	Degree Type HBSC
Major WATE	Major WATE
Minor	Minor
Specialization APWA	Specialization APWA
Rationale #2012-SCI-293 (add new WATE 3094) (referred 18Jan2013 and approved 25Apr2013). Associated program changes to HBSC.WATE.WM. Also Transition Plan includes changes regarding GEOL 3311, GEOG 2251 and 3411 in Third and Fourth Years.	Rationale #2012-SCI-293 (add new WATE 3094) (referred 18Jan2013 and approved 25Apr2013). Associated program changes to HBSC.WATE.WM. Also Transition Plan includes changes regarding GEOL 3311, GEOG 2251 and 3411 in Third and Fourth Years.
Requirements Four Year program Students must achieve a minimum 60% overall average in all courses at the end of their first year at the University and a minimum 70% average in all courses at the end of their second year at the College. To successfully complete the program the overall average in all Biology, Geography, Geology and Water Resource Science courses must be at least 70%. First Year: (a) Biology 1110 and 1130 (b) Chemistry 1110 and 1130	Requirements Four Year program Students must achieve a minimum 60% overall average in all courses at the end of their first year at the University and a minimum 70% average in all courses at the end of their second year at the College. To successfully complete the program the overall average in all Biology, Geography, Geology and Water Resource Science courses must be at least 70%. First Year:

<p>(c) Forestry 1010 (d) Geography 1120 and 2211 (e) Geology 1111 and 1131 (f) Water Resource Science 1094 (a non-credit required course)</p> <p>Second Year (Confederation College)</p> <p>Third Year: (a) Biology 2110 and 2210 (b) Water Resource Science 3094 (c) Geography 2251 (d) Geology 2214 and 3410 (e) One FCE selected from: Biology 2711, 3114, 3151, 3313, 3610, 4113, 4115, 4212, 4213, 4217, 4430, 4431, 4435, or Applied Bio-Molecular Science 4710 (f) One FCE selected from: Geography 2211, 2351, 3251, 3311, 3313, 3317, 3471, 4211, 4333, 4431, 4451</p> <p>Fourth Year: (a) Geology 4011 and 4137 (b) Geography 3411 and 4411 (c) Water Resource Science 4101 and 4630 (d) One FCE selected from: Biology 2711, 3114, 3151, 3313, 3610, 4113, 4115, 4212, 4213, 4217, 4430, 4431, 4435, 4710, 4711, or Applied Bio-Molecular Science 4710 (e) One half-course selected from: Geography 2211, 2351, 3251, 3311, 3313, 3317, 3471, 4211, 4333, 4431, 4451</p>	<p>(a) Biology 1110 and 1130 (b) Chemistry 1110 and 1130 (c) Forestry 1010 (d) Geography 1120 and 2211 (e) Geology 1111 and 1131 (f) Water Resource Science 1094 (a non-credit required course)</p> <p>Second Year (Confederation College)</p> <p>Third Year: (a) Biology 2110 and 2210 (b) Water Resource Science 3094 (c) Geography 2251 (d) Geology 2214 and 3410 (e) One FCE selected from: Biology 2711, 3114, 3151, 3212, 3313, 3610, 3990, 3991, 4113, 4115, 4117, 4212, 4213, 42174252, 4430, 4431, 4435, 4512, 4610, 4711, or Applied Bio-Molecular Science 4710 <i>or NRMT 2055, 3116, 3135, 3215, 3219, 4251</i> (f) One FCE selected from: Geography 2211, 2351, 3251, 3253, 3255, 3311, 3313, 3317, 3471, 4211, 4231, 4333, 4431, 4451 <i>or NRMT 2350, 4217</i></p> <p>Fourth Year: (a) Geology 4011 and 4137 (b) Geography 3411 and 4411 (c) Water Resource Science 4101 and 4630 (d) One FCE selected from: Biology 2711, 3114, 3151, 3212, 3313, 3610, 3990, 3991, 4113, 4115, 4117, 4212, 4213, 42174252, 4430, 4431, 4435, 4512, 4610, 4710, 4711, or Applied Bio-Molecular Science 4710 <i>or NRMT 2055, 3116, 3135, 3215, 3219, 4251</i> (e) One half-course selected from: Geography 2211, 2351, 3251, 3253, 3255, 3311, 3313, 3317, 3471, 4211, 4231, 4333, 4431, 4451 <i>or NRMT 4217</i></p>
--	---

<u>Budgetary Considerations</u>	
CURRENT VERSION	PROPOSED VERSION
Student Enrolment	Student Enrolment <i>No. Students are already enrolling in these courses to satisfy their degree requirements because courses in the current list of offerings are not available every academic year.</i>
Student Enrolment Other Units	Student Enrolment Other Units <i>No. For the reason outlined in the section on student enrollment.</i>
Additional Resources	Additional Resources <i>No. For the reason outlined in the section on student enrollment.</i>
Teaching Loads	Teaching Loads <i>No. For the reason outlined in the section on student enrollment.</i>
TeachingSupport Services	TeachingSupport Services

	<i>No. For the reason outlined in the section on student enrollment.</i>
Outside Support	Outside Support <i>No. For the reason outlined in the section on student enrollment.</i>