# Lakehead University
## Faculty of Science and Environmental Studies

REQUEST REPORT

**Request Tracking Number:** 2014-SCI-4494
**Request Title:** Minor changes to non-entry bioinformatics program for sake of consistency

**[DeAcTerm[EffectiveDate]]** [DeAc[RequestEffectiveDate]]
**Request Status:** In Workflow
Request can't be split

## Request Contents

| Type | | Title |
|---|---|---|
| 1. | New Version of a Degree | BSc (Bioinformatics Major) 4 Yr |

## Request History

| Workflow Step | Workflow Action | User | Change Made | Comments | Date |
|---|---|---|---|---|---|
| Initiator | Approved | Robert Mawhinney | Yes | Submitted to workflow | 11/19/2014 |

## 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 | BSC4.BIOI - BSc (Bioinformatics Major) 4 Yr | 2 |
|----|-------------------------|---------------------------------------------|---|

## Degree Details

| CURRENT VERSION | PROPOSED VERSION |
|-----------------|------------------|
| BSC4.BIOI - BSc (Bioinformatics Major) 4 Yr<br>**Start Term:** Fall 2009<br>**End Term:** No Specified End Date | BSC4.BIOI - BSc (Bioinformatics Major) 4 Yr<br>**Start Term:** ~~Fall 2009~~*2015-16*<br>**End Term:** No Specified End Date |

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### _Required Information_

| CURRENT VERSION | PROPOSED VERSION |
|-----------------|------------------|
| **Institution Unit**<br>Faculty of Science and Environmental Studies | **Institution Unit**<br>Faculty of Science and Environmental Studies |
| **Degree Type**<br>BSC4 | **Degree Type**<br>BSC4 |
| **Major**<br>BIOI | **Major**<br>BIOI |
| **Minor** | **Minor** |
| **Specialization** | **Specialization** |
| **Rationale** | **Rationale**<br>*Minor housekeeping changes to ensure consistency with entry level program. Related to current calendar change 2014-SCI-3987.* |
| **Requirements**<br><br>Four Year Non-Direct Entry program<br>The program requirements for the first three years are the same as for the HBSc (Bioinformatics Major) program; however, in order to remain in the program, students must maintain at least an overall C average in the Core Courses taken in the program.<br><br>**Fourth Year:**<br>(a) Bioinformatics 4501<br>(b) Biology 3330<br>(c) Chemistry 4710<br>(d) Computer Science 3413 and 4411<br>(e) Physics 3511 or Chemistry 4191/Bioinformatics 4191<br>(f)?One half-course elective from the List of Recommended Electives<br>(g) One FCE elective<br><br>**Bioinformatics Core Courses** | **Requirements**<br><br>Four Year Non-Direct Entry program<br>The program requirements for the first three years are the same as for the HBSc (Bioinformatics Major) program; however, in order to remain in the program, students must maintain at least an overall C average in the Core Courses taken in the program.<br><br>Fourth Year:<br>(a) Bioinformatics 4501<br>(b) Biology 3330<br>(c) ~~Chemistry 4710(d)~~ Computer Science 3413 and 4411<br>(~~e~~*d*) Physics 3511 or Chemistry 4191/Bioinformatics 4191<br>(~~f~~*e*) ~~?~~ One ~~half~~*full*-course elective from the List of Recommended Electives<br>(~~g~~*f*) One FCE elective<br><br>Bioinformatics Core Courses |

The major average in Bioinformatics will be calculated on all required Core Courses of the HBSc or four-year BSc:

Bioinformatics 3711 - Bioinformatics
either Bioinformatics 4191 - Special Topics in Biological Chemistry or Physics 3511
either Bioinformatics 4501 - Senior Project or Bioinformatics 4111 - Research Seminars and Bioinformatics 4901 - Honours Thesis

Biology 1110 - Animal Biology
Biology 2171 - Genetics
Biology 2230 - Cell Biology
Biology 2711 - Biology of Microorganisms
Biology 2910 - Laboratory Biology
Biology 3135 - Molecular Genetics
Biology 3330 - Molecular Biology of Development

Chemistry 1110 - Modern Chemistry I
Chemistry 1130 - Modern Chemistry II
Chemistry 2211 - Organic Chemistry I
Chemistry 2231 - Organic Chemistry II
Chemistry 2411 - Physical Chemistry I
Chemistry 3251 - Biochemistry I
Chemistry 3271 - Biochemistry II
Chemistry 4710 - Advanced Research Methodology

Computer Science 1411 - Computer Programming I
Computer Science 1431 - Computer Programming II
Computer Science 2412 - Data Structures
Computer Science 2477 - Object Oriented Programming
Computer Science 3413 - Database Management Systems
Computer Science 4411 - Programming Languages

Mathematics 1171 - Calculus I
Mathematics 1172 - Calculus II
Mathematics 2111 - Differential Equations
Mathematics 2255 - Linear Algebra I
Mathematics 3332 - Introduction to Mathematical Probability
Mathematics 3334 - Introduction to Mathematical Statistics

Physics 1101 - Introductory Physics
Physics 2331 - Modern Physics I


**List of Recommended Electives**
Biology 3138 - Molecular Anthropology I
Biology 4230 - Cancer Biology
Chemistry 3231 - Organic Chemistry III
Chemistry 3451 - Physical Chemistry III
Chemistry 4131 - Special Topic
Computer Science 4471 - Computer Graphics
Computer Science 4475 - Topics in Artificial Intelligence
Computer Science 4478 - Object-Oriented Design and Methodology
Mathematics 2275 - Linear Algebra II
Mathematics 3351 - Applied Numerical Methods
Mathematics 3371 - Computational Linear Algebra and Numerical Approximation I

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| | Mathematics 2275 - Linear Algebra II<br>Mathematics 3351 - Applied Numerical Methods<br>Mathematics 3371 - Computational Linear Algebra and Numerical Approximation I |
| --- | --- |

**_Budgetary Considerations_**

| CURRENT VERSION | PROPOSED VERSION |
| --- | --- |
| **Student Enrolment** | **Student Enrolment**<br>*No* |
| **Student Enrolment Other Units** | **Student Enrolment Other Units**<br>*No* |
| **Additional Resources** | **Additional Resources**<br>*No* |
| **Teaching Loads** | **Teaching Loads**<br>*No effect* |
| **TeachingSupport Services** | **TeachingSupport Services**<br>*None* |
| **Outside Support** | **Outside Support**<br>*No* |