Biology at Memorial University of Newfoundland

\*\*Entrance Requirements:\*\*

-Requirements:

1. Biology [1001](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/)/[1002](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/) with an average of at least 65%
2. minimum overall average of 60%

-Required Courses:

1. Six credit hours in [Critical Reading and Writing (CRW)](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/6/1/#d.en.307242) courses, including at least 3 credit hours in English courses.
2. Mathematics [1090](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/) and Mathematics [1000](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/) (or Mathematics [109A/B](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/) and Mathematics [1000](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), or Mathematics [1000](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/) only)
3. Chemistry [1050](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/) and [1051](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/) (or [1200](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/) and [1001](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), or [1010](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/) and the former 1011) (or Physics [1020](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/)/[1021](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/) (or equivalent)
4. If Mathematics [1000](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/) taken, any one other first year course.

\*\*Minor in Biology:\*\*

-Required Courses:

1. 24 credit hours in Biology courses: [1001](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/) and [1002](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/) (or equivalent) plus any 18 credit hours chosen from the list of Biology courses except Biology [2040](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [2041](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [2120](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [3053](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), and [3820](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/).

\*\*Major in Biology:\*\*

-Required Courses:

1. Six credit hours in [Critical Reading and Writing (CRW)](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/6/1/#d.en.307242) courses, including at least 3 credit hours in English courses
2. Physics [1020](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/) and [1021](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/) (or equivalent)
3. Mathematics [1000](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/)
4. Chemistry [1050](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/) and [1051](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/) (or [1200](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/) and [1001](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), or [1010](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/) and the former 1011), and Chemistry [2400](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/)
5. Statistics [2550](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/) or any of the courses listed in the credit restrictions of Statistics [2550](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/)
6. Human Biosciences [2001](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/) or the former Biochemistry 2101 or 2201, and Human Biosciences [2003](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/) or the former Biochemistry 3106 or 3206
7. Extra Science courses as necessary to fulfil the requirement for 78 credit hours in Science as stipulated under

\*\*Major in Biology (Co-operative) Program (BCOP)

-Requirements:

1. Admission is limited, competitive, and selective.
2. The primary criteria used in reaching decisions on applications for admission are motivation and overall academic achievement. Students may be required to participate in an interview as part of the selection process.
3. A student must first be admitted to the Biology Major.
4. Application deadline: October 15 for the following Spring semester work term (normally the third semester in year two).
5. To be eligible for admission, a student must have completed the second year Biology Core, with an overall average of at least 65%, and an overall average of at least 65% in all Biology courses before the start of the first work term. A student must have an overall average of 65% in all other required courses, and must be registered as a full- time student in the semester in which application is made.

-Program of Study:

1. In addition to the requirements below, a student must fulfill all requirements for a Major in Biology or Honours in Biology.
2. Students’ status in the program is assessed at the end of each semester. To remain in BCOP, a student must receive a passing grade in all required courses, and must maintain an overall average of at least 65% in all Biology courses and an overall average of at least 65% in all courses, including electives. A student who fails a required course, fails to maintain an overall average of 65% in Biology courses, or fails to maintain an overall average of 65%, will be required to withdraw from BCOP. The student in question may apply for readmission in a subsequent year after passing the specified required course(s) previously failed, or re-establishing the required average.
3. A student is required to successfully complete three work terms, one of which will normally be either in the Fall or Winter semester.

-Work Term Placement:

1. General management of the BCOP is the responsibility of the designated Academic Staff Member in Co-operative Education (ASM-CE). ASM-CE’s are responsible for facilitating the engagement of potential employers in the program, organizing competitions for Work Term employment, arranging job interviews and facilities, managing the co-op data base, and developing employment opportunities and monitoring and evaluating students during the work term.
2. Students are ultimately responsible for securing their work term placements. ASMs-CE provide support for the job search and inform students of potential opportunities.
3. A student who is admitted to the co-op program gives permission to the University to provide a copy of the applicant’s resume, university transcript and work term evaluations to potential employers.
4. A student who has been accepted to BCOP may independently obtain a work term placement in consultation with the ASM-CE. Such employment positions must satisfy the criteria for work terms, be confirmed in writing by the employer and be approved by the ASM-CE before the first day of the work term according to the [Co-operative Education website](https://www.mun.ca/coop).

-Registration and Evaluation Performance:

1. In Work Terms I, II, and III, a student must register for Biology 199W, 299W, and 399W respectively.
2. The Work Term evaluations shall consist of two components:  
   1. On-the-job Student Performance:  
        
       Job performance shall be assessed by Co-operative Education in consultation with the department using information gathered during the Work Term and input from the employer towards the end of the Work Term. Formal written documentation from the employer shall be sought. Evaluation of the job performance will result in one of the following classifications: OUTSTANDING, ABOVE EXPECTATIONS, SATISFACTORY, MARGINAL PASS, FAIL.
   2. Assignment(s):  
      1. A student is required to submit one or more assignment(s) to Co-operative Education as outlined in the course syllabus.
      2. Assignment(s) are evaluated by a faculty member and an ASM-CE.
   3. Evaluation of the work term assignment(s) will result in one of the following classifications: OUTSTANDING, ABOVE EXPECTATIONS, SATISFACTORY, MARGINAL PASS, FAIL.  
        
       The evaluation of the job performance and the assignment(s) are recorded separately on the transcript. Overall evaluation of the work term will result in one of the following final grades being awarded:  
      1. Pass with Distinction: Indicates OUTSTANDING PERFORMANCE in both the assignment(s) and the job performance.
      2. Pass: Indicates that PERFORMANCE MEETS EXPECTATIONS in both the assignment(s) and the job performance.
      3. Fail: Indicates FAILING PERFORMANCE in the assignment(s) or the job performance, or both. To remain in BCOP, a student must obtain a final grade of Pass or higher.
3. If a student fails to achieve the Work Term standards specified above, the student will be required to withdraw from BCOP. Such a student may reapply to the program, at which time the student will be required to repeat the Work Term with satisfactory performance. Only one Work Term may be repeated in the entire program.
4. A student who withdraws from a Work Term without acceptable cause subsequent to a job placement will be required to withdraw permanently from BCOP.
5. A student who drops a Work Term without prior approval from both Co-operative Education and the Biology Co-op Liaison, or who fails to honour an agreement to work with an employer, or who conducts in such a manner as to cause the discharge from the job, will be awarded an overall grade of FAIL for the Work Term in question and will be required to withdraw permanently from BCOP.
6. Permission to drop a Work Term does not constitute a waiver of degree requirements, and a student who has obtained such permission must successfully complete an approved Work Term in lieu of the one dropped.

\*\*Honors in Biology:\*\*

-Requirements:

1. Biology [1001](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/) and [1002](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/) or their equivalents;
2. 15 credit hours in the following core courses: Biology [2060](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [2250](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [2600](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [2900](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), plus one of Biology [3401](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [3402](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), or [4404](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/); and
3. 42 credit hours from Biology electives at the 2000, 3000 or 4000 level (except Biology [2040](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [2041](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [2120](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [3053](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), and [3820](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/)) and Biology [499A](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/) and [499B](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/).
4. A maximum of half of all Biology electives can be Biology courses with no associated laboratory/seminar (i.e., courses that have 3 contact hours/week).

-Core Course Requirements:

1. Six credit hours in [Critical Reading and Writing (CRW)](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/6/1/#d.en.307242) courses, including at least 3 credit hours in English courses.
2. Physics [1020](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/) and [1021](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/) (or equivalent)
3. Mathematics [1000](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/)
4. Chemistry [1050](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/) and [1051](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/) (or [1200](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/) and [1001](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), or [1010](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/) and the former 1011), and Chemistry [2400](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/)
5. Statistics [2550](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/) or any of the courses listed in the credit restrictions of Statistics [2550](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/)
6. Human Biosciences [2001](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/) or the former Biochemistry 2101 or 2201, Human Biosciences [2003](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/) or the former Biochemistry 3106 or 3206
7. Electives to make up 120 credit hours

\*\*Applied Ecology and Conservation:\*\*

-Required Courses:

1. Biology [3610](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [3650](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4122](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4306](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4307](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4360](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4405](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4605](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4650](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4651](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4710](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4810](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4820](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4911](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/)

\*\*Aquatic Life:\*\*

-Required Courses:

1. Biology [3014](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [3050](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [3630](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [3709](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [3710](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [3711](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [3712](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [3714](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [3715](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4122](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4601](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4710](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4750](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4912](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/)

\*\*Biological Tools and Techniques:\*\*

-Required Courses:

1. Biology [3050](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [3709](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [3950](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [3951](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4270](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4360](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4405](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4605](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4606](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4607](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4710](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4770](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4810](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4820](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/)

\*\*Biology for Health Professions:\*\*

-Required Courses:

1. Biology [3050](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [3052](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [3500](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [3530](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4010](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4050](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4200](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4241](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4245](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4404](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4550](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4605](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/)
2. Medicine [310A/B](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/)

\*\*Comparative Biology:\*\*

-Required Courses:

1. Biology [3202](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [3300](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [3401](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [3402](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [3640](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [3715](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [3750](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4122](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4620](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4630](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4701](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4770](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4910](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/)

\*\*Evolutionary Ecology:\*\*

-Required Courses:

1. Biology [3295](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [3715](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [3811](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [3951](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4005](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4250](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4270](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4505](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4605](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4620](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4630](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4701](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4710](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4800](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4910](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/)

\*\*Molecular, Microbial, and Cell Biology:\*\*

-Required Courses:

1. Biology [3050](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [3052](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [3401](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [3402](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [3530](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [3950](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [3951](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4050](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4052](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4241](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4250](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4251](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4404](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/), [4606](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/)
2. Human Biosciences [3207](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-science/11/2/) or the former Biochemistry 3207

\*\*BIOL 1001 Principles of Biology\*\*

\*Introduction to the science of Biology, including a discussion of the unity, diversity, and evolution of living organisms.\*

LH: 3

PR: Science 1807 and Science 1808

\*\*BIOL 1002 Principles of Biology\*\*

\*Introduction to the science of Biology, including a discussion of the unity, diversity, and evolution of living organisms.\*

LH: 3

PR: Science 1807 and Science 1808; BIOL 1001

\*\*BIOL 2010 Biology of Plants\*\*

\*Study of the structure, function, and reproductive biology of plants, with emphasis on vascular plants and their relationship to the environment and human activities.\*

LH: 3

PR: Science 1807 and Science 1808; BIOL 1001 and 1002

\*\*BIOL 2040 Modern Biology and Human Society I\*\*

\*Examines aspects of the human body and implications of modern biological research for human beings. Topics include cancer, diet, nutrition, circulatory disease, immunity, human genetics, genetic engineering, and reproductive engineering.\*

UL: Not acceptable for Biology programs

\*\*BIOL 2041 Modern Biology and Human Society II\*\*

\*Examines the origins and consequences of the environmental crisis of the 20th century. Topics include population explosion, pollution, global food supplies, and environmental ethics.\*

UL: Not acceptable for Biology programs

\*\*BIOL 2060 Principles of Cell Biology\*\*

\*Modern view of the biology of eukaryotic cells, organelles, and molecules and their interactions in living organisms.\*

LH: 3

PR: Science 1807 and Science 1808; BIOL 2250 or Human Biosciences 2004

\*\*BIOL 2120 Biology for Students of Earth Sciences\*\*

\*Introduction to Biology principles for Earth Sciences students. Includes classification, levels of biological organization, and basic concepts in ecology.\*

LH: 3

PR: Science 1807 and Science 1808; Earth Science major; Earth Sciences 1001 or 1002

\*\*BIOL 2122 Biology of Invertebrates\*\*

\*Study of invertebrates with emphasis on structure, function, adaptations, and life histories.\*

LH: 3

PR: Science 1807 and Science 1808; BIOL 1001, 1002

\*\*BIOL 2210 Biology of Vertebrates\*\*

\*Study of vertebrates, emphasizing structure, function, adaptations, and life histories.\*

LH: 3

PR: Science 1807 and Science 1808; BIOL 1001, 1002

\*\*BIOL 2250 Principles of Genetics\*\*

\*Introduction to Mendelian and molecular genetics. Includes phenotype, genotype, chromosome theory, molecular biology of DNA, RNA, protein, and applications of genetic biotechnology.\*

LH: 3-hour labs alternating weekly with tutorials

PR: Science 1807 and Science 1808; BIOL 1001 and 1002; Chemistry 1050

\*\*BIOL 2600 Principles of Ecology\*\*

\*Conceptual course introducing the principles of ecology, including theoretical, functional, and empirical approaches.\*

LH: 3

PR: Science 1807 and Science 1808; BIOL 1001 and 1002 or BIOL 2120

\*\*BIOL 2900 Principles of Evolution and Systematics\*\*

\*Introduction to processes and patterns of evolution, principles of classification. Covers natural selection, microevolution, adaptation, speciation, phylogenetic systematics, and macro-evolutionary patterns.\*

LH: 3

PR: Science 1807 and Science 1808; BIOL 2250

\*\*BIOL 3014 Biology and Ecology of Boreal and Arctic Seaweeds\*\*

\*Field course examining seaweed biology and ecology. Special study of living specimens in various coastal sites, demonstrating physiological and ecological adaptations to cold-water habitats.\*

PR: Science 1807 and Science 1808; BIOL 2600 or equivalent

\*\*BIOL 3050 Introduction to Microbiology\*\*

\*Study of basic principles underlying microbial life. Includes structure, function, bioenergetics, growth, viruses, microbial diseases, immunology, and control of microorganisms.\*

LH: 3

PR: Science 1807 and Science 1808; BIOL 2250; Biochemistry 2201

\*\*BIOL 3052 Food Microbiology\*\*

\*Study of microbiology of water and food. Emphasizes beneficial and detrimental roles of microorganisms in water and food systems.\*

LH: 3

PR: Science 1807 and Science 1808; BIOL 3050

\*\*BIOL 3053 Microbiology for Nurses\*\*

\*Examines fundamentals of microbiology with emphasis on medical microbiology. Includes host responses to infections, human diseases caused by microorganisms, and control of microorganisms.\*

LH: 2

PR: Science 1807 and Science 1808; Nursing program students

Certainly! Here's the information about the additional courses you provided:

---

\*\*BIOL 4720 Corals and Coral Reefs\*\*

\*An advanced course in the science and management of corals and coral reefs, including cold-water corals. Topics include basic coral biology, coral reef geomorphology, optical and acoustic remote sensing of corals and reefs, reef fish and fisheries, reefs and climate change, pollution effects on corals and coral reefs, reef conservation, social, cultural, and economic aspects of reef management.\*

CR: Geography 4917

PR: Two of BIOL 2600, 3650, 3709, 3710, 3711, or 3714, or permission of the instructor

\*\*BIOL 4750 Fisheries Ecology\*\*

\*Application of ecological principles to the problem of managing exploited fish populations. Laboratory exercises based on a simulation approach to fisheries problems using computer and animal models.\*

LH: 3

PR: BIOL 2600

\*\*BIOL 4770 Research Experience in Animal Behaviour\*\*

\*Allows students to gain research experience in selected areas of animal behavior. This course may be offered in a usual 12-week semester or as a two-week field course.\*

EQ: Psychology 4770

LC: Either three hours of lecture per week or a two-week field course that embodies equivalent instructional time

PR: BIOL 3750 or Psychology 3750

\*\*BIOL 4800 Advanced Palaeontology\*\*

\*Field, lecture, laboratory, and seminar course dealing with selected topics in general and applied paleontology. Topics include measuring evolution and extinction, population paleontology, functional morphology, paleoecology, statistical methods for paleontological studies, and applications in petroleum, mining, and environmental studies. Taught and administered by the Department of Earth Sciences.\*

EQ: Earth Sciences 4800

LH: 3

PR: Earth Sciences/BIOL 3811, and one of Statistics 2550 or any of the courses listed in the credit restrictions of Statistics 2550 or Mathematics 2000

\*\*BIOL 4810 Research Field Course in Marine Biology\*\*

\*Consists of an intensive two-week field school designed to acquaint students with marine field research, experimental design, methodology, and data analysis. Emphasis on individual projects. Projects must be designed and approved prior to the commencement of the course and will involve a written report.\*

PR: Science 1807 and Science 1808; BIOL 3710 and any two of BIOL 2010, 2122 or 2210, and permission of the Head of the Department. It is strongly recommended that students take BIOL 3709 before 4810.

\*\*BIOL 4820 Field Course in Terrestrial Biology\*\*

\*Begins with a three-week field school immediately prior to the beginning of the Fall Semester. Designed to acquaint students with terrestrial organisms and environments, with emphasis on survey and sampling techniques. In the Fall Semester, material and data collected in the field will be used in lecture and laboratory periods dealing with identification, analytical methods, and report compilation.\*

PR: Science 1807 and Science 1808; BIOL 2010, 2122, 2210, 2600 and permission of the Head of the Department. It is recommended that students successfully complete BIOL 4605.

\*\*BIOL 4910-4920 Special Topics in Biology\*\*

\*Given for senior undergraduates in a two-week format involving equivalent instruction time as a course on campus. Covers a range of topics in specialized fields in Biology and may be offered at the Bonne Bay Field Station, at the Harlow campus, or elsewhere as appropriate. May be taught by visiting specialists when available.\*

\*\*BIOL 499A and 499B Honours Dissertation\*\*

\*Available only to students in the Honours Program. Requirements for the Dissertation are outlined under Honours Degrees.\*

PR: Admission to the Honours Program

---

\*\*Work Term Descriptions\*\*

\*\*BIOL 199W Work Term I\*\*

\*Follows the successful completion of Semester 4. Students are expected to learn, develop, and practice the high standards of behavior and performance normally expected in the work environment. Students will observe, apply, analyze, and/or evaluate concepts from biology courses in the workplace and further their understanding of the principles of biology and how they are applied in a professional setting.\*

CH: 0

LC: 0

PR: Admission to the Biology Major and successful completion of Semester 4

\*\*BIOL 299W Work Term II\*\*

\*Follows the successful completion of Semester 6. Students are expected to further develop and expand their knowledge and work-related skills and should be able to accept increased responsibility and challenge. In addition, students are expected to demonstrate an ability to deal with increasingly complex work-related concepts and problems. Students will continue to observe, apply, analyze, and/or evaluate concepts from biology courses in the workplace and continue to further their understanding of the principles of biology and how they are applied in a professional setting. Students are required to complete one or more assignments, as outlined in the syllabus.\*

CH: 0

LC: 0

PR: BIOL 199W

\*\*BIOL 399W Work Term III\*\*

\*Follows the successful completion of Semester 7 or Work Term II. Students will have sufficient academic grounding and work experience to contribute in a positive manner to the problem-solving and management processes needed and practiced in the work environment. Students should become better acquainted with their discipline of study, should observe and appreciate the attitudes, responsibilities, and ethics normally expected of professionals, and should exercise greater independence and responsibility in their assigned work functions.\*

CH: 0

LC: 0

PR: BIOL 299W