# CLAYTON H. RIDDELL FACULTY OF ENVIRONMENT, EARTH, AND RESOURCES/ UNIVERSITY COLLEGE OF THE NORTH ARTICULATION AGREEMENT - BACHELOR OF ENVIRONMENTAL SCIENCE PROGRAMS

## Clayton H. Riddell Faculty of Environment, Earth, and Resources/University College of the North Articulation Agreement - Bachelor of Environmental Science Programs

Students from University College of the North who graduated from the Natural Resource Management Technology (NRMT) program can receive up to a maximum of 60 transfer credits for courses they have already completed. All remaining courses listed must be completed at UM in order to graduate with a Bachelor of Environmental Science degree.

## Bachelor of Environmental Science - Major Program Chart

| Course | Title | Hours |
|---|---|---|
| **Year 1** | | |
| ENVR 1000 | Environmental Science 1 - Concepts | 3 |
| ENVR 2000 | Environmental Science 2 - Issues | 3 |
| BIOL 1020 | Biology 1: Principles and Themes [10] | 3 |
| BIOL 1030 | Biology 2: Biological Diversity, Function and Interactions [10] | 3 |
| CHEM 1100 | Introductory Chemistry 1: Atomic and Molecular Structure and Energetics [1] | 3 |
| CHEM 1110 | Introductory Chemistry 2: Interaction, Reactivity, and Chemical Properties [1] | 3 |
| CHEM 1120 | Introduction to Chemistry Techniques [1] | 3 |
| MATH 1500 | Introduction to Calculus [2] | 3 |
| STAT 1000 | Basic Statistical Analysis 1 [3] | 3 |
| ECON 1010 | Introduction to Microeconomic Principles | 3 |
| | **Hours** | **30** |
| **Year 2** | | |
| ENVR 2810 | Environmental Critical Thinking and Scientific Research | 3 |
| ENVR 3160 | Environmental Responsibilities and the Law [5] | 3 |
| BIOL 2300 or AGEC 2370 | Principles of Ecology [11] or Principles of Ecology | 3 |
| ECON 2390 or ABIZ 2390 | Introduction to Environmental Economics or Introduction to Environmental Economics | 3 |
| PHYS 1020 | General Physics 1 [6] | 3 |
| STAT 2000 | Basic Statistical Analysis 2 [3] | 3 |
| One of the following: | | 3 |
| PHYS 1030 | General Physics 2 [6] | |
| MATH 1200 | Elements of Discrete Mathematics | |
| MATH 1300 | Vector Geometry and Linear Algebra [7] | |
| MATH 1700 | Calculus 2 [7] | |
| One of the following: | | 3 |
| GEOG 1290 | Introduction to Physical Geography | |
| GEOL 1340 | The Dynamic Earth [12] | |
| Faculty of Arts Course [4] | | 3 |
| | **Hours** | **27** |
| **Years 3-4** | | |
| ENVR 4110 | Critical Thinking and the Environment | 3 |
| Focus area courses including: [8] | | 33 |
| BIOL 2XXX | | |
| ENVR 2XXX | | |
| GEOG 2XXX | | |
| ENVR 4XXX | | |
| ENVR 3020 | Extended Field Topics in Environmental Science 1 | |
| ENVR 3020 | Extended Field Topics in Environmental Science 1 | |
| ENVR 3020 | Extended Field Topics in Environmental Science 1 | |
| GEOG 3200 | Introduction to Remote Sensing (TS) | |
| Elective credits including: | | 27 |
| GEOG 1XXX | | |
| BIOL 2XXX | | |
| REC 2XXX | | |
| ENVR 2XXX | | |
| ENVR 2350 | Technical Communication in the Environmental Sectors | |
| | **Hours** | **63** |
| | **Total Hours** | **120** |

1. The former CHEM 1300 and CHEM 1310 may be used in lieu of CHEM 1100, CHEM 1110, and CHEM 1120. CHEM 1122 and CHEM 1126 may be used in lieu of CHEM 1120.
2. MATH 1230 or MATH 1510 or MATH 1520 may be taken in place of MATH 1500 (or equivalent).
3. STAT 1150 and STAT 2150 may be used in lieu of STAT 1000 and STAT 2000.
4. The former ENVR 2170 or the former ENVR 2270 may be used in lieu of ENVR 2810.
5. The former ENVR 2650 may be used in lieu of ENVR 3160.
6. PHYS 1050 and PHYS 1070 may be used in lieu of PHYS 1020 and PHYS 1030.
7. MATH 1310 and MATH 1710 may be taken in place of MATH 1300 and MATH 1700 (or equivalent).
8. Focus Area courses must include a minimum of 21 credit hours at the 3000- and/or 4000-level. Focus Area performance requirements are defined in Minimum Performance Requirements for Continuation and

Graduation (https://catalog.umanitoba.ca/undergraduate-studies/environment-earth-resources/environment-geography/environmental-science-benvsc-honours/#Minimum-Performance-Requirements). Information on Focus Areas is available in the Focus Area Brochure.

9 Equivalent courses offered through Université de Saint-Boniface may be used in lieu of the specific course identified in the program requirements chart.

10 RRR 1030 (Botany) and RRR 1060 (Zoology) are not exact equivalents of BIOL 1020 and BIOL 1030/1010; however, they may be used to satisfy the Biology requirement for the Environmental Science and Studies program.

11 For students admitted under the Articulation Agreement, RRR 1010 (General Ecology) may be used to satisfy the requirement for BIOL 2300 or AGEC 2370 in the Environmental Science program, although the courses are not exact equivalents.

12 For students admitted under the Articulation Agreement, RRR 1020 (Earth Science) may be used to satisfy the Earth Sciences requirement of the program, equivalent to GEOL 1XXX.

# Bachelor of Environmental Science - Major Co-op Program Chart

| Course | Title | Hours |
|---|---|---|
| **Year 1** | | |
| ENVR 1000 | Environmental Science 1 - Concepts | 3 |
| ENVR 2000 | Environmental Science 2 - Issues | 3 |
| BIOL 1020 | Biology 1: Principles and Themes [10] | 3 |
| BIOL 1030 | Biology 2: Biological Diversity, Function and Interactions [10] | 3 |
| CHEM 1100 | Introductory Chemistry 1: Atomic and Molecular Structure and Energetics [1] | 3 |
| CHEM 1110 | Introductory Chemistry 2: Interaction, Reactivity, and Chemical Properties [1] | 3 |
| CHEM 1120 | Introduction to Chemistry Techniques [1] | 3 |
| MATH 1500 | Introduction to Calculus [2] | 3 |
| STAT 1000 | Basic Statistical Analysis 1 [3] | 3 |
| ECON 1010 | Introduction to Microeconomic Principles | 3 |
| | **Hours** | **30** |
| **Year 2** | | |
| ENVR 2810 | Environmental Critical Thinking and Scientific Research [4] | 3 |
| ENVR 3160 | Environmental Responsibilities and the Law [5] | 3 |
| BIOL 2300<br>or AGEC 2370 | Principles of Ecology [11]<br>or Principles of Ecology | 3 |
| ECON 2390<br>or ABIZ 2390 | Introduction to Environmental Economics<br>or Introduction to Environmental Economics | 3 |
| PHYS 1020 | General Physics 1 [6] | 3 |
| STAT 2000 | Basic Statistical Analysis 2 [3] | 3 |
| ENVR 2900 | Professional Development in the Environmental Sectors 1 | 1.5 |
| One of the following: | | 3 |
| PHYS 1030 | General Physics 2 [6] | |
| MATH 1200 | Elements of Discrete Mathematics | |
| MATH 1300 | Vector Geometry and Linear Algebra [7] | |
| MATH 1700 | Calculus 2 [7] | |
| One of the following: | | 3 |
| GEOG 1290 | Introduction to Physical Geography | |
| GEOL 1340 | The Dynamic Earth [12] | |
| Faculty of Arts Course | | 3 |
| ENVR 3980 | Coop Work Term 1 | 0 |
| ENVR 3910 | Coop Work Term Report 1 | 1.5 |
| | **Hours** | **30** |
| **Years 3-4** | | |
| ENVR 4110 | Critical Thinking and the Environment | 3 |
| ENVR 3900 | Professional Development in the Environmental Sectors 2 | 1.5 |
| ENVR 3990 | Coop Work Term 2 | 0 |
| ENVR 3920 | Coop Work Term Report 2 | 1.5 |
| ENVR 4980 | Work Term 3 (optional) | 0 |
| ENVR 4910 | Coop Work Term Report 3 (optional) | 1.5 |
| Focus area courses including: [8] | | 33 |
| BIOL 2XXX | | |
| ENVR 2XXX | | |
| GEOG 2XXX | | |
| ENVR 4XXX | | |
| ENVR 3020 | Extended Field Topics in Environmental Science 1 | |
| ENVR 3020 | Extended Field Topics in Environmental Science 1 | |
| ENVR 3020 | Extended Field Topics in Environmental Science 1 | |
| GEOG 3200 | Introduction to Remote Sensing (TS) | |
| Elective credits including: | | 21 |
| GEOG 1XXX | | |
| REC 2XXX | | |
| ENVR 2XXX | | |
| BIOL 2XXX | | |
| ENVR 2350 | Technical Communication in the Environmental Sectors | |
| | **Hours** | **61.5** |
| | **Total Hours** | **121.5** |

1 The former CHEM 1300 and CHEM 1310 may be used in lieu of CHEM 1100, CHEM 1110 and CHEM 1120. CHEM 1122 and CHEM 1126 may be used in lieu of CHEM 1120.

2 MATH 1230 or MATH 1510 or MATH 1520 may be taken in place of MATH 1500 (or equivalent).

3 STAT 1150 and STAT 2150 may be used in lieu of STAT 1000 and STAT 2000.

4 The former ENVR 2170 or the former ENVR 2270 may be used in lieu of ENVR 2810.

5 The former ENVR 2650 may be used in lieu of ENVR 3160.

6 PHYS 1050 and PHYS 1070 may be used in lieu of PHYS 1020 and PHYS 1030.

7 MATH 1310 and MATH 1710 may be taken in place of MATH 1300 and MATH 1700 (or equivalent).

8 Focus Area courses must include a minimum of 21 credit hours at the 3000- and/or 4000-level. Focus Area performance requirements are defined in Minimum Performance Requirements for Continuation and Graduation (https://catalog.umanitoba.ca/undergraduate-studies/

environment-earth-resources/environment-geography/environmental-science-benvsc-honours/#Minimum-Performance-Requirements). Information on Focus Areas is available in the Focus Area Brochure.

9 Equivalent courses offered through Université de Saint-Boniface may be used in lieu of the specified course identified in the program requirements chart.

10 RRR 1030 (Botany) and RRR 1060 (Zoology) are not exact equivalents of BIOL 1020 and BIOL 1030/1010; however, they may be used to satisfy the Biology requirement for the Environmental Science and Studies programs.

11 For students admitted under the Articulation Agreement, RRR 1010 (General Ecology) may be used to satisfy the requirements for BIOL 2300 or AGEC 2370 in the Environmental Science program, although the courses are not exact equivalents.

12 For students admitted under the Articulation Agreement, RRR 1020 (Earth Science) may be used to satisfy the Earth Sciences requirement of the program, equivalent to GEOL 1XXX.

13 Students in the cooperative education option who complete ENVR 4980 and ENVR 4910 will graduate with an additional 1.5 degree credits for a total of 121.5 credit hours.

# Bachelor of Environmental Science - Honours Program Chart

| Course | Title | Hours |
|---|---|---|
| **Year 1** | | |
| ENVR 1000 | Environmental Science 1 - Concepts | 3 |
| ENVR 2000 | Environmental Science 2 - Issues | 3 |
| BIOL 1020 | Biology 1: Principles and Themes [10] | 3 |
| BIOL 1030 | Biology 2: Biological Diversity, Function and Interactions [10] | 3 |
| CHEM 1100 | Introductory Chemistry 1: Atomic and Molecular Structure and Energetics [1] | 3 |
| CHEM 1110 | Introductory Chemistry 2: Interaction, Reactivity, and Chemical Properties [1] | 3 |
| CHEM 1120 | Introduction to Chemistry Techniques [1] | 3 |
| MATH 1500 | Introduction to Calculus [2] | 3 |
| STAT 1000 | Basic Statistical Analysis 1 [3] | 3 |
| ECON 1010 | Introduction to Microeconomic Principles | 3 |
| | **Hours** | **30** |
| **Year 2** | | |
| ENVR 2810 | Environmental Critical Thinking and Scientific Research [4] | 3 |
| ENVR 3160 | Environmental Responsibilities and the Law [5] | 3 |
| BIOL 2300<br>or AGEC 2370 | Principles of Ecology [11]<br>or Principles of Ecology | 3 |
| ECON 2390<br>or ABIZ 2390 | Introduction to Environmental Economics<br>or Introduction to Environmental Economics | 3 |
| PHYS 1020 | General Physics 1 [6] | 3 |
| STAT 2000 | Basic Statistical Analysis 2 [3] | 3 |
| One of the following: | | 3 |
| PHYS 1030 | General Physics 2 [6] | |
| MATH 1200 | Elements of Discrete Mathematics | |
| MATH 1300 | Vector Geometry and Linear Algebra [7] | |
| MATH 1700 | Calculus 2 [7] | |
| One of the following: | | 3 |
| GEOG 1290 | Introduction to Physical Geography | |
| GEOL 1340 | The Dynamic Earth [12] | |
| Faculty of Arts Course | | 3 |
| | **Hours** | **27** |
| **Years 3-4** | | |
| ENVR 4110 | Critical Thinking and the Environment | 3 |
| ENVR 4500 | Thesis Project in Environmental Science and Studies | 6 |
| Focus area courses including: [8] | | 33 |
| BIOL 2XXX | | |
| ENVR 2XXX | | |
| GEOG 2XXX | | |
| ENVR 4XXX | | |
| ENVR 3020 | Extended Field Topics in Environmental Science 1 | |
| ENVR 3020 | Extended Field Topics in Environmental Science 1 | |
| ENVR 3020 | Extended Field Topics in Environmental Science 1 | |
| GEOG 3200 | Introduction to Remote Sensing (TS) | |
| Elective credits including: | | 18 |
| GEOG 1XXX | | |
| REC 2XXX | | |
| ENVR 2XXX | | |
| BIOL 2XXX | | |
| ENVR 2350 | Technical Communication in the Environmental Sectors | |
| | **Hours** | **60** |
| | **Total Hours** | **117** |

1 The former CHEM 1300 and CHEM 1310 may be used in lieu of CHEM 1100, CHEM 1110, and CHEM 1120. CHEM 1122 and CHEM 1126 may be used in lieu of CHEM 1120.

2 MATH 1230 or MATH 1510 or MATH 1520 may be taken in place of MATH 1500 (or equivalent).

3 STAT 1150 and STAT 2150 may be used in lieu of STAT 1000 and STAT 2000.

4 The former ENVR 2170 or the former ENVR 2270 may be used in lieu of ENVR 2810.

5 The former ENVR 2650 may be used in lieu of ENVR 3160.

6 PHYS 1050 and PHYS 1070 may be used in lieu of PHYS 1020 and PHYS 1030.

7 MATH 1310 and MATH 1710 may be taken in place of MATH 1300 and MATH 1700 (or equivalent).

8 Focus Area courses must include a minimum of 21 credit hours at the 3000- and/or 4000-level. Focus Area performance requirements are defined in Minimum Performance Requirements for Continuation and Graduation (https://catalog.umanitoba.ca/undergraduate-studies/environment-earth-resources/environment-geography/environmental-science-benvsc-honours/#Minimum-Performance-Requirements). Information on Focus Areas is available in the Focus Area Brochure.

9 Equivalent courses offered through Université de Saint-Boniface may be used in lieu of the specified course identified in the program requirements chart

[10] RRR 1030 (Botany) and RRR 1060 (Zoology) are not exact equivalents of BIOL 1020 and BIOL 1030/1010; however, they may be used to satisfy the Biology requirement for the Environmental Science and Studies programs.

[11] For students admitted under the Articulation Agreement, RRR 1010 (General Ecology) may be used to satisfy the requirement for BIOL 2300 or AGEC 2370 in the Environmental Science program, although the courses are not exact equivalents.

[12] For students admitted under the Articulation Agreement, RRR 1020 (Earth Science) may be used to satisfy the Earth Sciences requirement of the program, equivalent to GEOL 1XXX.

# Bachelor of Environmental Science - Honours Co-op

| Course | Title | Hours |
|---|---|---|
| **Year 1** | | |
| ENVR 1000 | Environmental Science 1 - Concepts | 3 |
| ENVR 2000 | Environmental Science 2 - Issues | 3 |
| BIOL 1020 | Biology 1: Principles and Themes [10] | 3 |
| BIOL 1030 | Biology 2: Biological Diversity, Function and Interactions [10] | 3 |
| CHEM 1100 | Introductory Chemistry 1: Atomic and Molecular Structure and Energetics [1] | 3 |
| CHEM 1110 | Introductory Chemistry 2: Interaction, Reactivity, and Chemical Properties [1] | 3 |
| CHEM 1120 | Introduction to Chemistry Techniques [1] | 3 |
| MATH 1500 | Introduction to Calculus [2] | 3 |
| STAT 1000 | Basic Statistical Analysis 1 [3] | 3 |
| ECON 1010 | Introduction to Microeconomic Principles | 3 |
| | **Hours** | **30** |
| **Year 2** | | |
| ENVR 2810 | Environmental Critical Thinking and Scientific Research [4] | 3 |
| ENVR 3160 | Environmental Responsibilities and the Law [5] | 3 |
| BIOL 2300<br>or AGEC 2370 | Principles of Ecology [11]<br>or Principles of Ecology | 3 |
| ECON 2390<br>or ABIZ 2390 | Introduction to Environmental Economics<br>or Introduction to Environmental Economics | 3 |
| PHYS 1020 | General Physics 1 [6] | 3 |
| STAT 2000 | Basic Statistical Analysis 2 [3] | 3 |
| ENVR 2900 | Professional Development in the Environmental Sectors 1 | 1.5 |
| One of the following: | | 3 |
| PHYS 1030 | General Physics 2 [6] | |
| MATH 1200 | Elements of Discrete Mathematics | |
| MATH 1300 | Vector Geometry and Linear Algebra [7] | |
| MATH 1700 | Calculus 2 [7] | |
| One of the following: | | 3 |
| GEOG 1290 | Introduction to Physical Geography | |
| GEOL 1340 | The Dynamic Earth [12] | |
| Faculty of Arts Course | | 3 |
| ENVR 3980 | Coop Work Term 1 | 0 |
| ENVR 3910 | Coop Work Term Report 1 | 1.5 |
| | **Hours** | **30** |
| **Years 3-4** | | |
| ENVR 4110 | Critical Thinking and the Environment | 3 |
| ENVR 4500 | Thesis Project in Environmental Science and Studies | 6 |
| ENVR 3900 | Professional Development in the Environmental Sectors 2 | 1.5 |
| ENVR 3990 | Coop Work Term 2 | 0 |
| ENVR 3920 | Coop Work Term Report 2 | 1.5 |
| ENVR 4980 | Work Term 3 (optional) | 0 |
| ENVR 4910 | Coop Work Term Report 3 (optional) | 1.5 |
| Focus area courses including: | | 33 |
| BIOL 2XXX | | |
| ENVR 2XXX | | |
| GEOG 2XXX | | |
| ENVR 4XXX | | |
| ENVR 3020 | Extended Field Topics in Environmental Science 1 | |
| ENVR 3020 | Extended Field Topics in Environmental Science 1 | |
| ENVR 3020 | Extended Field Topics in Environmental Science 1 | |
| GEOG 3200 | Introduction to Remote Sensing (TS) | |
| Elective credits including: | | 15 |
| GEOG 1XXX | | |
| BIOL 2XXX | | |
| REC 2XXX | | |
| ENVR 2XXX | | |
| ENVR 2350 | Technical Communication in the Environmental Sectors | |
| | **Hours** | **61.5** |
| | **Total Hours** | **121.5** |

[1] The former CHEM 1300 and CHEM 1310 may be used in lieu of CHEM 1100, CHEM 1110, and CHEM 1120. CHEM 1122 and CHEM 1126 may be used in lieu of CHEM 1120.

[2] MATH 1230 or MATH 1510 or MATH 1520 may be taken in place of MATH 1500 (or equivalent).

[3] STAT 1150 and STAT 2150 may be used in lieu of STAT 1000 and STAT 2000.

[4] The former ENVR 2170 or the former ENVR 2270 may be used in lieu of ENVR 2810.

[5] The former ENVR 2650 may be used in lieu of ENVR 3160.

[6] PHYS 1050 and PHYS 1070 may be used in lieu of PHYS 1020 and PHYS 1030.

[7] MATH 1310 and MATH 1710 may be taken in place of MATH 1300 and MATH 1700 (or equivalent).

[8] Focus Area courses must include a minimum of 21 credit hours at the 3000- and/or 4000-level. Focus Area performance requirements are defined in Minimum Performance Requirements for Continuation and Graduation (https://catalog.umanitoba.ca/undergraduate-studies/environment-earth-resources/environment-geography/environmental-science-benvsc-honours/#Minimum-Performance-Requirements). Information of Focus Areas is available in the Focus Area Brochure.

[9] Equivalent courses offered through Université de Saint-Boniface may be used in lieu of the specified course identified in the program requirements chart.

[10] RRR 1030 (Botany) and RRR 1060 (Zoology) are not exact equivalents of BIOL 1020 and BIOL 1030/1010; however, they may be used to satisfy the Biology requirement for the Environmental Science and Studies programs.

[11] For students admitted under the Articulation Agreement, RRR 1010 (General Ecology) may be used to satisfy the requirement for BIOL 2300 or AGEC 2370 in the Environmental Science program, although the courses are not exact equivalents.

[12] For students admitted under the Articulation Agreement, RRR 1020 (Earth Science) may be used to satisfy the Earth Sciences requirement of the program, equivalent to GEOL 1XXX.

[13] Students in the cooperative education option who complete ENVR 4980 and ENVR 4910 will graduate with an additional 1.5 degree credits for a total of 121.5 credit hours.

# Bachelor of Environmental Science - General

| Course | Title | Hours |
|---|---|---|
| **Year 1** | | |
| ENVR 1000 | Environmental Science 1 - Concepts | 3 |
| ENVR 2000 | Environmental Science 2 - Issues | 3 |
| BIOL 1020 | Biology 1: Principles and Themes [10] | 3 |
| BIOL 1030 | Biology 2: Biological Diversity, Function and Interactions [10] | 3 |
| CHEM 1100 | Introductory Chemistry 1: Atomic and Molecular Structure and Energetics [1] | 3 |
| CHEM 1110 | Introductory Chemistry 2: Interaction, Reactivity, and Chemical Properties [1] | 3 |
| CHEM 1120 | Introduction to Chemistry Techniques [1] | 3 |
| MATH 1500 | Introduction to Calculus [2] | 3 |
| STAT 1000 | Basic Statistical Analysis 1 [3] | 3 |
| ECON 1010 | Introduction to Microeconomic Principles | 3 |
| | **Hours** | **30** |
| **Year 2** | | |
| ENVR 2810 | Environmental Critical Thinking and Scientific Research [4] | 3 |
| ENVR 3160 | Environmental Responsibilities and the Law [5] | 3 |
| BIOL 2300<br>or AGEC 2370 | Principles of Ecology [11]<br>or Principles of Ecology | 3 |
| ECON 2390<br>or ABIZ 2390 | Introduction to Environmental Economics<br>or Introduction to Environmental Economics | 3 |
| PHYS 1020 | General Physics 1 [6] | 3 |
| STAT 2000 | Basic Statistical Analysis 2 [3] | 3 |
| One of the following: | | 3 |
| PHYS 1030 | General Physics 2 [6] | |
| MATH 1200 | Elements of Discrete Mathematics | |
| MATH 1300 | Vector Geometry and Linear Algebra [7] | |
| MATH 1700 | Calculus 2 [7] | |
| One of the following: | | 3 |
| GEOG 1290 | Introduction to Physical Geography | |
| GEOL 1340 | The Dynamic Earth [12] | |
| Faculty of Arts Courses | | 3 |
| | **Hours** | **27** |
| **Years 3-4** | | |
| ENVR 4110 | Critical Thinking and the Environment | 3 |
| Focus Area courses includes: [8] | | 9 |
| ENVR 4XXX | | |
| GEOG 2XXX | | |
| GEOG 3200 | Introduction to Remote Sensing (TS) | |
| Select from as elective credits: | | 21 |
| BIOL 2XXX | | |
| BIOL 2XXX | | |
| ENVR 2XXX | | |
| ENVR 2XXX | | |
| GEOG 1XXX | | |
| REC 2XXX | | |
| ENVR 3020 | Extended Field Topics in Environmental Science 1 | |
| ENVR 3020 | Extended Field Topics in Environmental Science 1 | |
| ENVR 3020 | Extended Field Topics in Environmental Science 1 | |
| ENVR 2350 | Technical Communication in the Environmental Sectors | |
| | **Hours** | **33** |
| | **Total Hours** | **90** |

[1] The former CHEM 1300 and CHEM 1310 may be used in lieu of CHEM 1100, CHEM 1110, and CHEM 1120. CHEM 1122 and CHEM 1126 may be used in lieu of CHEM 1120.

[2] MATH 1230 or MATH 1510 or MATH 1520 may be taken in place of MATH 1500 (or equivalent).

[3] STAT 1150 and STAT 2150 may be used in lieu of STAT 1000 and STAT 2000.

[4] The former ENVR 2170 or the former ENVR 2270 may be used in lieu of ENVR 2810.

[5] The former ENVR 2650 may be used in lieu of ENVR 3160.

[6] PHYS 1050 and PHYS 1070 may be used in lieu of PHYS 1020 and PHYS 1030.

[7] MATH 1310 and MATH 1710 may be taken in place of MATH 1300 and MATH 1700 (or equivalent).

[8] Focus Area performance requirements are defined in Minimum Performance Requirements for Continuation and Graduation (https://catalog.umanitoba.ca/undergraduate-studies/environment-earth-resources/environment-geography/environmental-science-benvsc-honours/#Minimum-Performance-Requirements). Information on Focus Areas is available in the Focus Area Brochure.

[9] Equivalent courses offered through Université de Saint-Boniface may be used in lieu of the specified course identified in the program requirements chart.

[10] RRR 1030 (Botany) and RRR 1060 (Zoology) are not exact equivalents of BIOL 1020 and BIOL 1030/1010; however, they may be used to satisfy the Biology requirement for the Environmental Science and Studies programs.

[11] For students admitted under the Articulation Agreement, RRR 1010 (General Ecology) may be used to satisfy the requirement for BIOL 2300 or AGEC 2370 in the Environmental Science program, although the courses are not exact equivalents.

[12] For students admitted under the Articulation Agreement, RRR 1020 (Earth Science) may be used to satisfy the Earth Sciences requirement of the program, equivalent to GEOL 1XXX.