



## Certificate in Environmental Practice

### Specializations

1. Environmental Assessments, Remediation, Restoration, and Reclamation
2. Policy, Legislation and Regulations
3. Pollution Prevention, Abatement, and Control
4. Waste Management Systems, Processes, and Procedures
5. Sampling and Analytical Work Related to Environmental Activities
6. Strategic Partnering, Planning, Monitoring and Reporting for Sustainability
7. Environmental Management Systems/ Risk Assessment/ Health and Safety
8. Natural Resources Planning and Management
9. Environmental Education and Training
10. Environmental Communication and Public Awareness

The following lists provide an overview of the **elective courses** available in each of the ten concentrations. More courses will be added as more universities and colleges join the CCEE partnership.

Please note that the lists of courses are subject to change periodically, as our partner institutions update their course offerings.

# 1. Environmental Assessments, Remediation, Restoration, and Reclamation

Seven courses (or the equivalent of 21 credits) are required. Six of the electives (18 credits) must be from the list below. The six courses must include one course from each of the groups A,B,C,D. If desired, one course may be selected from any of the other specializations.

## GROUP A: Environmental Assessment

- |    |                                  |          |   |
|----|----------------------------------|----------|---|
| 1. | Royal Military College of Canada | CCE 285  | Introduction to Environmental Impact Assessment             |
|    | <i>or</i>                        | CCF 285  | <i>Introduction à l'évaluation d'impact environnemental</i> |
|    | <i>or</i> TELUQ                  | ENV 3015 | <i>Evaluation environnementale</i>                          |
|    | <i>or</i> Cape Breton University | ENVI 416 | Environmental Impact Assessment I                           |
|    | <i>or</i> Athabasca University   | ENVS 305 | Environmental Impact Assessment                             |
| 2. | Cape Breton University           | ENVI 417 | Environmental Impact Assessment II                          |

## GROUP B: Environmental Site Assessment

- |    |                             |                        |   |
|----|-----------------------------|------------------------|---|
| 1. | University of New Brunswick | FE 3306<br>(English)   | Photo-interpretation for Engineers                            |
|    | <i>or</i>                   | FE 3306<br>(Français)  | <i>Photo-interprétation pour les ingénieurs</i>               |
| 2. | University of New Brunswick | FOR 2285               | GIS in Forestry I   |
| 3. | University of New Brunswick | FOR 2286               | GIS in Forestry II  |
| 4. | University of New Brunswick | FOR 4303<br>(English)  | Optical, Thermal Infrared and Radar Remote Sensing            |
|    | <i>or</i>                   | FOR 4303<br>(Français) | <i>Téledétection optique, infra-rouge, thermique et radar</i> |
| 5. | University of New Brunswick | FOR 3313<br>(English)  | Digital Image Processing in Remote Sensing                    |
|    | <i>or</i>                   | FOR 3313<br>(Français) | <i>Traitement d'images en télédétection</i>                   |
| 6. | University of New Brunswick | FOR 4304<br>(English)  | RADARSAT-2 and Polarimetric Radar Images                      |
|    | <i>or</i>                   | FOR 4304<br>(Français) | <i>Images RADARSAT-2 et polarimétriques radar</i>             |

## GROUP C: Remediation

- |    |                             |                        |  |
|----|-----------------------------|------------------------|--|
| 1. | University of Toronto       | GEM 400                | Introduction to GIS for Environmental Management |
| 2. | University of Toronto       | GEM 401                | Advanced GIS for Environmental Management        |
| 3. | University of New Brunswick | FOR 4286<br>(Français) | <i>Géomatique avec ArcGIS</i>                    |

**GROUP D: Restoration**

- |    |                        |           |   |
|----|------------------------|-----------|---|
| 1. | University of Victoria | ER 311    | Principles and Concepts of Ecological Restoration                     |
| 2. | University of Victoria | ER 314    | Ethical, Legal, and Policy Concepts of Environmental Restoration      |
| 3. | University of Victoria | ER 332    | Selection and Propagation of Native Plants for Ecological Restoration |
| 4. | University of Guelph   | SOIL 3080 | Soil and Water Conservation   |

**OTHER**

- |    |                                  |             |  |
|----|----------------------------------|-------------|--|
| 1. | Royal Military College of Canada | CCE 289     | Impact of science and technology on the environment                  |
|    | <u>or</u>                        | CCF 289     | <i>Impact de la science et de la technologie sur l'environnement</i> |
| 2. | Royal Roads University           | ENVP 313    | Introduction to Environmental Law*                                   |
|    | <u>or</u> Royal Roads University | ENVP 313 FR | <i>Introduction au droit environnemental</i>                         |

\*RRU course eligible if not taken as part of core course requirements

\*Le cours de RRU éligible si pas pris comme la partie de conditions de cours obligatoires

## 2. Policy, Legislation and Regulations

Seven courses (or the equivalent of 21 credits) are required. Six of the electives (18 credits) must be from the list below. If desired, one course may be selected from any of the other specializations.

Of the six courses, students must take a minimum of two from Group A and two from Group B.

### GROUP A: Policy development

1.	Ryerson University	CPPA 322	Canadian Public Administration I
2.	Royal Roads University	ENVP 313	Introduction to Environmental Law*
<i>or</i>	<i>Royal Roads University</i>	<i>ENVP 313 FR</i>	<i>Introduction au droit environnemental*</i>
3.	Athabasca University	POLI 325	Canadian Environmental Politics and Policy
<i>or</i>	<i>TELUQ</i>	<i>ENV 3024</i>	<i>Economie et gestion de l'environnement</i>
<i>or</i>	University of Guelph	POLS 3370	Environmental Politics and Governance
<i>or</i>	University of Toronto	CEM 400	Fundamentals of Environmental Management
4.	University of Toronto	CEM 402	Strategies in Environmental Management

### GROUP B: Enforcement and compliance

1.	Athabasca University	CRJS 420	Environmental Protection and Enforcement
2.	Saskatchewan Institute of Applied Science and Technology	RLAW 102	Aboriginal Resource Rights
3.	University of Guelph	ECON 2100	Economic Growth and Environmental Quality
4.	University of Victoria	ER 314	Ethical, Legal, and Policy Concepts of Environmental Restoration
5.	University of Victoria	ER 352	Non-timber forest products and sustainable use by major forest zones in BC
6.	University of Victoria	HPEO 401	Occupational and Environmental Health Law
7.	British Columbia Institute of Technology	PRKS 3110	Law and Its Administration Part 1
8.	British Columbia Institute of Technology	PRKS 3120	Law and Its Administration Part 2
9.	Cape Breton University	PUBH 421	Occupational Health and Safety Legislation
10.	Ryerson University	COHS 208	Occupational Health and Safety Law

\*RRU course eligible if not taken as part of core course requirements

\*Le cours de RRU éligible si pas pris comme la partie de conditions de cours obligatoires

### 3. Pollution Prevention, Abatement, and Control

Seven courses (or the equivalent of 21 credits) are required. Six of the electives (18 credits) must be from the list below. If desired, one course may be selected from any of the other specializations.

1	Algonquin College of Applied Arts and Technology	SAF5409	Environment Management, An Introduction
2.	Cape Breton University	PUBH 441	Biocontaminants in Indoor Environments
3.	Cape Breton University	PUBH 466	Integrated Pest Management
4.	TELUQ	ENV 3012	<i>Gestion de l'environnement en milieux urbain et industriel</i>
5.	Red River College	CBST-1068	Hazardous Materials Management Principles
6.	Royal Military College of Canada	CCE 306	Hazardous Materials Management
7.	University of Guelph	ECON 2100	Economic Growth and Environmental Quality
8.	University of Guelph	EDRD 4500	Planning Industrial Ecology
9.	Wilfrid Laurier University	EC 238	Environmental Economics
10.	TELUQ	ENV 4014	<i>Technologies d'assainissement et prevention de la pollution</i>
11.	Thompson Rivers University	GEOG 399	Global Climate Changes and Regional Impacts
12.	University of Toronto	CRE 400	Principles of Renewable Energies
13.	University of Toronto	CRE 401	Biofuels
14.	University of Toronto	CEM 401	Urban Water Issues
15.	University of Toronto	ECF 401	Carbon Finance
16.	Royal Military College of Canada	CCE 289	Impact of science and technology on the environment
17.	Vancouver Island University	SCIE 303	Energy and the Environment
18.	University of Toronto	CRE 402	Wind Energy
19.	University of Toronto	CRE 403	Urban Energy Systems
20.	University of Toronto	ECF 402	Environmental Finance Case Study: EU ETS
21.	University of Toronto	ECF 403	GHG Reporting and Accounting
22.	University of Guelph	ENVB 3030	Pesticides and the Environment

## 4. Waste Management Systems, Processes, and Procedures

Seven courses (or the equivalent of 21 credits) are required. Six of the electives (18 credits) must be from the list below. If desired, one course may be selected from any of the other specializations.

1.	Algonquin College of Applied Arts and Technology	SAF5409	Environment Management, An Introduction
2.	Red River College	CBST-1068	Hazardous Materials Management Principles
<i>or</i>	Royal Military College of Canada	CCE 306	Hazardous Materials Management
<i>or</i>		CCF 306	<i>Gestion des matières dangereuses</i>
<i>or</i>	University of Victoria	HPEO407	Hazardous Waste Management
3.	TELUQ	ENV 3012	<i>Gestion de l'environnement en milieux urbain et industriel</i>
4.	Royal Military College of Canada	CCE 485	Environmental Engineering
5.	Northern Alberta Institute of Technology	WWW 102	Water Treatment I
6.	Northern Alberta Institute of Technology	WWW 103	Wastewater Collection Systems
7.	Northern Alberta Institute of Technology	WWW 202	Water Treatment II
8.	Northern Alberta Institute of Technology	WWW 204	Wastewater Treatment II
9.	University of Guelph	EDRD 4500	Planning Industrial Ecology
10.	University of Guelph	ENVB 3030	Pesticides and the Environment
11.	University of Toronto	CEM 401	Urban Water Issues

*NB additional courses will be available shortly.*

## 5. Sampling and Analytical Work Related to Environmental Activities

Seven courses (or the equivalent of 21 credits) are required. Six of the electives (18 credits) must be from the list below. If desired, one course may be selected from any of the other specializations.

Whereas most of the courses listed address several of aspects of this concentration, students should ensure that they have at least an exposure to Group A: Sampling and testing, B: Analysis and interpretation and Group C: GIS and applications. In the case of Group C, which has a strong GIS focus, not more than three courses may be taken from the list; please make your selections on the basis of your experience level.

### GROUP A: Sampling and testing

1.	Sault College	OEL850	Forest Measurement - Theory
2.	University of British Columbia	FOPR 362	Sustainability & Forest Operations
3.	University of British Columbia	FRST 231	Introduction to Biometrics
4.	Royal Roads University	ENVP 303	Statistical Literacy and Critical Thinking*
<u>or</u>	<i>Royal Roads University</i>	<i>ENVP303FR</i>	<i>Statistiques appliquées aux études environnementales*</i>
5.	Cape Breton University	PUBH 441	Biocontaminants in Indoor Environments
6.	Red River College	ENVI-1011	Environmental Chemistry/Toxicology
7.	Sault College	OEL842	Forest Pathology (Theory)
8.	Northern Alberta Institute of Technology	WWW 102	Water Treatment I
9.	Northern Alberta Institute of Technology	WWW 103	Wastewater Collection Systems
10.	Northern Alberta Institute of Technology	WWW 202	Water Treatment II
11.	Northern Alberta Institute of Technology	WWW 204	Wastewater Treatment II
12.	TELUQ	ENV 4010	<i>Environnement et technologies informatiques: les systemes experts</i>
13.	University of Guelph	ENVB 3030	Pesticides and the Environment

### GROUP B: Analysis and Interpretation

1.	University of Toronto	GEM 402	Geospatial Technologies for Environmental Mapping with GIS
2.	University of New Brunswick	FE 3306 (English)	Photo-interpretation for Engineers
<u>or</u>		<i>FE 3306 (Français)</i>	<i>Photo-interprétation pour les ingénieurs</i>
3.	University of New Brunswick	FOR 3313 (English)	Digital Image Processing in Remote Sensing
<u>or</u>		<i>FOR 3313 (Français)</i>	<i>Traitment d'images en télédétection</i>
4.	University of New Brunswick	FOR 4303 (English)	Optical, Thermal Infrared and Radar Remote Sensing
<u>or</u>		<i>FOR4303</i>	<i>Télédétection optique, infra-rouge thermique</i>

		<i>(Français)</i>	<i>et radar</i>
5.	University of New Brunswick	FOR 4304 (English)	RADARSAT-2 and Polarimetric Radar Images
<u>or</u>		FOR 4304 (Français)	<i>Images RADARSAT-2 et polarimétriques radar</i>
6.	Athabasca University	GEOG 322	Introduction to Remote Sensing
<u>or</u>	University of Toronto	GEM 403	Environmental Remote Sensing
7.	University of Toronto	ECF 403	GHG Reporting and Accounting

### **GROUP C: GIS and applications**

1.	Ryerson University	CODG 101	Spatial Databases and Digital Cartography
2.	Ryerson University	CODG 110	Introduction to Digital Geography and GIS
3.	Ryerson University	CODG 125	Digital Geography Applications for the Municipal Professional
4.	University of New Brunswick	FOR 2285	GIS in Forestry I
5.	University of New Brunswick	FOR 2286	GIS in Forestry II
6.	University of New Brunswick	FOR 4286 (Français)	<i>Géomatique avec ArcGIS</i>
7.	SAIT Polytechnic	GEOS 411	Advanced GIS
<u>or</u>	University of Toronto	GEM 401	Advanced GIS for Environmental Management
8.	University of Toronto	GEM 404	GIS Modeling for Environmental Applications

*\*RRU course eligible if not taken as part of core course requirements*

*\*Le cours de RRU éligible si pas pris comme la partie de conditions de cours obligatoires*

## 6. Strategic Partnering, Planning, Monitoring and Reporting for Sustainability

Seven courses (or the equivalent of 21 credits) are required. Six of the electives (18 credits) must be from the list below. If desired, one course may be selected from any of the other specializations.

1.	Red River College	CBST 1042	Sustainable Development Issues
<i>or</i>	Royal Roads University	ENVP 322	Sustainable Development: Ideas and Applications*
<i>or</i>	Royal Roads University	ENVP 322 FR	<i>Développement durable: Idées et applications*</i>
<i>or</i>	Thompson Rivers University	ENST 399	Environmental Studies: Sustainability
2.	TELUQ	ENV 3024	<i>Economie et gestion de l'environnement</i>
3.	TELUQ	ENV 4016	<i>Amenagement du territoire et environnement</i>
4.	Athabasca University	POLI 325	Canadian Environmental Politics and Policy
5.	Sault College of Applied Arts and Technology	OEL836	Natural Resources Entrepreneurship
6.	Ryerson University	CINP 900	Intro to the Nonprofit / Voluntary Sector
7.	Royal Roads University	ENVP 429	Ethics and Environment*
<i>or</i>	Royal Roads University	ENVP 429 FR	<i>Éthique et l'environnement*</i>
8.	Simon Fraser University	SCD 201-3	Introduction to Sustainable Community Development
<i>and</i>	Simon Fraser University	SCD 301-4	Sustainable Community Development Theory and Practice
9.	Simon Fraser University	SCD 401-4	Social Enterprise for Sustainable Community Development
<i>and</i>	Simon Fraser University	SCD 403-4	Leadership for Sustainable Community Development
10.	University of British Columbia	CIVL 200	Engineering and Sustainable Development
11.	University of Toronto	CRE 401	Biofuels
12.	University of Toronto	CRE 403	Urban Energy Systems
13.	University of Toronto	CEM 401	Urban Water Issues
14.	University of Toronto	ECF 400	Environmental Finance
15.	University of Toronto	ECF402	Environmental Finance Case Study: EU ETS
14.	University of Guelph	EDRD 4500	Planning Industrial Ecology

\*RRU course eligible if not taken as part of core course requirements

\*Le cours de RRU éligible si pas pris comme la partie de conditions de cours obligatoires

## 7. Environmental Management Systems/ Risk Assessment/ Health and Safety

Seven courses (or the equivalent of 21 credits) are required. Six of the electives (18 credits) must be from the list below. If desired, one course may be selected from any of the other specializations.

The six courses must include one course from each of the four groups.

### GROUP A: Environmental management – Policy and procedures

- |            |                               |                    |  |
|------------|-------------------------------|--------------------|--|
| 1.         | Algonquin College             | SAF5409            | Environment Management, Introduction                         |
| <i>or</i>  | University of Toronto         | CEM 400            | Fundamentals of Environmental Management                     |
| <i>and</i> | University of Toronto         | CEM 402            | Strategies in Environmental Management                       |
| 2.         | Royal Roads University        | ENVP426            | Leadership and Management for Environmental Practitioners*   |
| <i>or</i>  | <i>Royal Roads University</i> | <i>ENVP 426 FR</i> | <i>Gestion, supervision et outils de prise de décisions*</i> |
| 3.         | Red River College             | PROJ-1030          | Project Management Fundamentals                              |

### GROUP B: Environmental management - Implementation

- |           |                                  |                 |  |
|-----------|----------------------------------|-----------------|--|
| 1.        | Athabasca University             | CRJS 420        | Environmental Protection and Enforcement         |
| 2.        | Cape Breton University           | PUBH 435        | Quality and Environmental Project Management     |
| <i>or</i> | Royal Military College of Canada | CCE 386         | Introduction to Environmental Management Systems |
| <i>or</i> | <i>TELUQ</i>                     | <i>ENV 3140</i> | <i>Les normes environnementales</i>              |
| 3.        | Cape Breton University           | ENVI 456        | Environmental Auditing                           |
| 4.        | Royal Roads University           | ENSC 415        | EMS Tools (P2)                                   |

### GROUP C: Environmental risk assessment

- |           |                        |          |  |
|-----------|------------------------|----------|--|
| 1.        | Cape Breton University | PUBH 411 | Health Risk Assessment                           |
| <i>or</i> | University of Toronto  | CEM 403  | Environmental Risk Assessment                    |
| 2.        | University of Toronto  | CEM 404  | Environment and Human Health (previously ENH400) |

### GROUP D: Occupational and public health

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|----|------------------------|-----------------|--|
| 1. | Athabasca University   | IDRL 308        | Occupational Health and Safety             |
| 2. | Cambrian College       | OHD2003         | Toxicology                                 |
| 3. | Cambrian College       | OHD2005         | Physical Hazards                           |
| 4. | Cape Breton University | PUBH 441        | Biocontaminants in Indoor Environments     |
| 5. | Cape Breton University | PUBH 421        | Occupational Health and Safety Legislation |
| 6. | Cape Breton University | PUBH 466        | Integrated Pest Management                 |
| 7. | <i>TELUQ</i>           | <i>RIN 1110</i> | <i>Hygiene et environnement industriel</i> |
| 8. | University of Victoria | HPEO401         | Occupational and Environmental Health Law  |
| 9. | University of Victoria | HPEO404         | Human Health Risk Assessment               |

- |     |                      |           |  |
|-----|----------------------|-----------|--|
| 10. | Red River College    | ENVI-1011 | Environmental Chemistry/Toxicology     |
| 11. | University of Guelph | ENVB 3030 | Pesticides and the Environment         |
| 12. | University of Guelph | CHEM 3360 | Environmental Chemistry and Toxicology |

*\*RRU course eligible if not taken as part of core course requirements*

*\*Le cours de RRU éligible si pas pris comme la partie de conditions de cours obligatoires*

## 8. Natural Resources Planning and Management

Seven courses (or the equivalent of 21 credits) are required. Six of the electives (18 credits) must be from the list below. If desired, one course may be selected from any of the other specializations. The six courses must include one course from each of the three groups.

### GROUP A: Planning for ecosystem and habitat preservation

1.	Red River College	CBST-1147	Natural Resources Management
2.	Sault College	OEL836	Natural Resources Entrepreneurship
3.	TELUQ	ENV 4016	<i>Amenagement du territoire et environnement</i>
4.	University of British Columbia	FRST 421	Integrated Resources Management I
5.	University of Toronto	GEM 400	Introduction to GIS for Environmental Management

### GROUP B: Analysis for ecosystem and habitat preservation

1.	Thompson Rivers University	BISC 350	Community & Ecosystem Ecology
2.	University of British Columbia	FRST 202	Forest Ecology
3.	University of British Columbia	LFS 490A	Aquaculture and the Environment
4.	University of Victoria	ER 313	Biodiversity and Conservation Biology

### GROUP C: Program implementation

1.	TELUQ	ENV 2010	<i>Gestion de ressources: faune et habitat</i>
2.	TELUQ	ENV 3011	<i>Gestion des ressources renouvelables: secteurs agricole et forestier</i>
<u>or</u> 3.	University of British Columbia	FOPR 262	Forest Access & Transportation
<u>and</u>	University of British Columbia	FOPR 362	Sustainability & Forest Operations
4.	University of Guelph	EDRD 3450	Watershed Planning Practice
5.	University of Guelph	SOIL 3080	Soil and Water Conservation
6.	University of Victoria	ER 352	Non-timber forest products and sustainable use by major forest zones in BC
7.	Wilfrid Laurier University	GG 391	Wildlife and Rural Land Resources Management

## 9. Environmental Education and Training

Seven courses (or the equivalent of 21 credits) are required. Six of the electives (18 credits) must be from the list below. If desired, one course may be selected from any of the other specializations.

1.	Athabasca University	ENVS 435	Case Studies in Environmental Protection: Popular Education, Community Sustainability and Global Connections
2.	Cape Breton University	PUBH 427	Public Health Education
3.	Ryerson University	CMHR 643	Fundamentals of Learning
3.	Durham College	DU-HRM4280	Training and Development
4.	Durham College	DU-TEAC1980	Adult Learning
5.	Durham College	DU-TEAC2980	Curriculum Development
6.	Loyalist College	FALP 8001	Teaching-Learning Strategies
7.	Royal Roads University	EECO 508	Learning Theory and Environmental Program Design
8.	TELUQ	ENV 1631	<i>Environnements technologiques à distance</i>
9.	TELUQ	ENV5000	<i>Environnement et communication</i>
10.	University of Guelph	ENVB 3000	Nature Interpretation
11.	University of Guelph	NRS 2120	Introduction to Environmental Stewardship

*NB Additional courses will be added.*

## 10. Environmental Communication and Public Awareness

Seven courses (or the equivalent of 21 credits) are required. Six of the electives (18 credits) must be from the list below. If desired, one course may be selected from any of the other specializations. Please check course outlines for pre- and co-requisite information. The six courses must include a minimum of two courses from group A and B.

### GROUP A: Environmental Communication and Awareness

1.	Athabasca University	ENVS 435	Case Studies in Environmental Protection: Popular Education, Community Sustainability and Global Connections
2.	Cape Breton University	PUBH 427	Public Health Education
3.	Loyalist College	FALP 8001	Teaching-Learning Strategies
4.	Royal Roads University	ENVP 323	Communication Skills: Writing in the Workplace*
<i>or</i>	<i>Royal Roads University</i>	<i>ENVP 323FR</i>	<i>Aptitudes à la communication*</i>
5.	Royal Roads University	ENVP 429	Ethics and Environment*
<i>or</i>	<i>Royal Roads University</i>	<i>ENVP 429 FR</i>	<i>Éthique et l'environnement*</i>
6.	Sault College of Applied Arts and Technology	SA-OEL 836	Natural Resources Entrepreneurship
7.	TELUQ	ENV 5000	Environnement et communication
8.	University of Guelph	ENVB 3000	Nature Interpretation
9.	Athabasca University	ENVS 361	The Politics of Ecology: Applying Ecological Science to Environmental Concerns

### GROUP B: Environmental Organizations

1.	Ryerson University	CINT 916	Introduction to Fundraising
2.	Ryerson University	CINP 900	Intro to the Nonprofit/Voluntary Sector
3.	Ryerson University	CINP 901	Developing Effective Organizations
4.	Ryerson University	CVFM 201	Planning, Management, and Professionalism in Fundraising
5.	Ryerson University	CVFM 202	Donor Centered Fundraising
6.	Ryerson University	CVFM 203	The Fundraising Campaign

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*NB Additional courses will be added.*