

## Bachelor of Science *in* Northern Environmental and Conservation Sciences FAQs for Prospective Students

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## **1) What is the Northern Environmental and Conservation Sciences (ENCS) Program?**

Yukon University, in partnership with the University of Alberta, offers years 3 and 4 of a [Bachelor of Science degree in Northern Environmental and Conservation Sciences](#) (B.Sc. ENCS), granted by the University of Alberta. This Northern ENCS Program is delivered primarily by University of Alberta faculty and Yukon University instructors based in Whitehorse.

Canada's North is experiencing unprecedented rates of change in environmental, social, and economic conditions, due to climate change, new governance structures, and accelerated industrial and infrastructure development. These pressures create significant challenges for northern communities, management of northern resources, and maintenance of northern values.

The Northern Systems Major of the Northern ENCS Program applies a systems perspective to understanding the implications of rapid environmental and social change affecting the North, and developing responses that promote resilience and adaptation. Strong foundations in natural and social sciences provide a platform for exploring approaches to conservation and sustainability, with course content that is relevant to the region. Students will learn about systems in the North, in a learning environment respectful of the area's unique ecological, cultural and social realities.

Graduates are prepared for careers in federal, territorial and First Nations governments, with resource industries, conservation organizations, and consulting companies operating in the North, and in environmental education and outreach.

## **2) What kinds of courses does the Northern ENCS Program offer?**

The Northern ENCS Program consists of an interdisciplinary curriculum that integrates natural and social sciences as related to issues such as global climate change, non-renewable energy resources, land use, resource management under modern treaties, changes in water quantity and quality, and wildlife conservation.

Some core courses include: Northern Land-use Planning; Ecology of Northern Landscapes; Northern Resource Management; Environmental Policy; Natural Resource and Environmental Economics; Wildlife Ecology and Management; Biodiversity Conservation; Introduction to Soils and Soil Science; Applied Statistics for Environmental Sciences; and Critical Thinking and Advanced Communication in Science.

## **3) Can I complete my entire Northern ENCS degree at Yukon University?**

Yes! You would complete the first two years of the degree in one of Yukon University's science-based diploma programs ([Northern Science ENCS Stream](#) or [Renewable Resources Management](#)). You would then apply to transfer to the Northern ENCS Program for your final two years. To receive transfer credit toward the B.Sc. ENCS program for courses from Yukon University or from other institutions, students must

have received a grade of C- or higher. Once accepted to the Northern ENCS Program, you would maintain dual registration at the University of Alberta and Yukon University, and complete your coursework at Yukon University.

#### **4) Where is the Northern ENCS Program located at U of A and at Yukon University?**

The B.Sc. in Northern Environmental and Conservation Sciences Program is housed in the [Faculty of Agricultural, Life and Environmental Sciences \(ALES\)](#), and partnered with the [Faculty of Native Studies](#) at the [University of Alberta](#), in [Edmonton, Alberta, Canada](#).

The Northern ENCS Program is offered by [Yukon University](#) in partnership with U of A, and is located in the School of Science, within the Division of Applied Science and Management, at Yukon University in [Whitehorse](#), Yukon, Canada.

#### **5) What first and second year courses are required in the Northern ENCS Program?**

Core first and second year courses include: first-year Biology; one term each of first-year Chemistry, Calculus and English; introductory courses in Statistics, Ecology, Soils, Plant Science (Botany), GIS, Microeconomics and First Nations Studies; and 1-2 field courses. Some of these courses may be completed after admission to the Northern ENCS Program. See [Appendix A](#) for a full course plan for the ENCS degree.

#### **6) Can I take courses in the Northern ENCS Program part-time?**

Yes, part-time study is an option. This may be particularly appealing to returning professionals who would like to continue to work while completing their ENCS course work, parents with young children, and students who need to be employed while studying.

#### **7) Who can apply to the Northern ENCS Program at Yukon University?**

Students who have completed 24 credits of transferable post-secondary coursework may be eligible to apply to the Northern ENCS Program. Application is made to the University of Alberta following consultation with an [ENCS Program Advisor](#) at Yukon University.

Transferable coursework includes first- and second-year courses such as Biology, Chemistry, English, Calculus, Ecology, Microeconomics, Introductory Statistics, and many others. Many students complete this coursework as part of a two-year diploma program, such as Northern Science or Renewable Resources Management, at Yukon University or another institution.

Students may transfer a maximum of 60 credits toward the Northern ENCS Program.

Students must meet the minimum entrance requirements of the University of Alberta's Faculty of Agricultural, Life, and Environmental Sciences (ALES), in which the Northern ENCS Program is housed. These are:

- 24 transferable credits of coursework;

- Minimum Admission Grade Point Average (AGPA) of 2.3;
- Proficiency in English (refer to sections 13.3.1 and 13.3.2 of the U of A Academic Calendar at <http://calendar.ualberta.ca/index.php>); and
- For students under 21 years of age:
  - English 12, Chemistry 12, Biology 12, Principles of Math 12 or Pre-calculus 12, and one of: Calculus 12, Physics 12, Geology 12, Environmental Science 12, History 12, 12-level language, or 12-level Fine Arts.
- For non-matriculated students (21 years of age or older):
  - Chemistry 12, Biology 12, and Pre-calculus 12 (or equivalents), with a grade of at least 50% in each and a minimum overall average of 70%.
- \*Note: if a student does not have the high school prerequisites but has completed a more advanced college/university course in that subject (e.g. does not have Biology 12 but has successfully completed a first-year college/university-level biology course, such as YukonU's BIOL 101/102), then U of A may waive the high school prerequisite. Please contact an [ENCS Program Advisor](#) for more information.

## 8) I think I'm eligible. How do I apply to the Northern ENCS Program?

Contact an [ENCS Program Advisor](#) at Yukon University. The Advisor will conduct a preliminary assessment of your completed coursework and unofficial transcripts to ensure that you are eligible to apply. Once the advisor has confirmed that you are eligible to apply, you will submit an application by going to the [U of Alberta undergraduate admissions page](#) and clicking on the Start Application button. This will take you to the ApplyAlberta system. Please note the following details when filling out the application, the Faculty being applied to is Agricultural, Life, and Environmental Sciences (ALES), the Program is Environmental and Conservation Sciences (or just ENCS), and the Major is Northern Systems. For campus, select "North Campus (Edmonton)" (selecting Northern Systems in the Major section indicates that you are applying to the YukonU program). **U of Alberta application fees apply.** After submitting the application, please also email a pdf copy of the proof of application to Dr. Kathryn Aitken, [kaitken@yukoncu.ca](mailto:kaitken@yukoncu.ca), for Yukon University records. Additionally, you will need to have official copies of your high school and post-secondary transcripts mailed to the Registrar's Office at Yukon University, P.O. Box 2799, 500 University Drive, Whitehorse, Yukon, Y1A 5K4. If you attended Alberta high school or post-secondary institutions that are part of the ApplyAlberta system, then you will not need to have official copies mailed to Yukon University.

After submitting your application, follow the instructions at <https://www.ualberta.ca/admissions/undergraduate/admission/after-you-apply> to ensure that you have activated your Campus Computing ID (CCID) and password. You can monitor the progress of your application by logging into your [UAlberta Launchpad](#) account.

Once you receive an offer of admission from University of Alberta, **you will be required to pay a \$500 tuition deposit** to indicate your intention to attend. The deadline to pay the deposit will be indicated in your [UAlberta Launchpad](#) account. For more information on

tuition deposits and how to accept your offer of admission, visit:  
<https://www.ualberta.ca/admissions/undergraduate/admission/after-you-apply/how-to-accept-your-offer>. For further information, contact U of A Financial Services at [student.payment@ualberta.ca](mailto:student.payment@ualberta.ca) or call 780-492-2400. If you are an indigenous student who will be receiving third-party funding for your education costs (e.g. through your First Nation, etc.), you may qualify for a waiver of the tuition deposit. Contact [indigenous@ualberta.ca](mailto:indigenous@ualberta.ca) to find out more.

## **9) What is the deadline to apply?**

The deadline for applications is:

- June 1 for September admission (extended from March 1)
- November 15 for January admission

## **10) I'm still in high school and want to apply to the Northern ENCS Program after graduation. Which courses should I take?**

Please note that you will not apply directly to the Northern ENCS Program after high school graduation. Instead, you will apply to either the [Northern Science \(ENCS Stream\)](#) or [Renewable Resources Management \(RRMT\)](#) diploma programs at Yukon University, or to similar programs at another post-secondary institution, to complete courses for transfer as years one and two of your ENCS degree. Please see the Yukon University website for entrance requirements and application information for Northern Science (ENCS Stream) and RRMT ([www.yukonu.ca/programs/](http://www.yukonu.ca/programs/)). For the Northern Science (ENCS Stream) diploma, you must have at least two of: English 12, Pre-calculus 12, Biology 11, or Chemistry 11 (Chemistry 12 is strongly recommended).

## **11) I am a high school graduate but I did not complete the high school entrance requirements for University of Alberta. Can I still apply to the Northern ENCS Program?**

Yes, it is possible. Yukon University offers high school equivalencies for English 12, Chemistry 12, Biology 12, and Math 12. Depending on your background and other coursework, you may be able to apply for admission to the Northern ENCS Program and complete the necessary equivalencies at Yukon University while also completing ENCS coursework. Talk to an [ENCS Program Advisor](#) for more information.

## **12) I need some math, chemistry, or biology upgrading. Which courses do I need to take?**

Equivalencies in high school math, chemistry, and biology are available through the School of Academic and Skill Development at Yukon University.

The Yukon University equivalents for Chemistry 11 and Biology 11 are CHEM 050 and BIOL 050. The equivalents for Chemistry 12 and Biology 12 are CHEM 060 and BIOL 060.

YukonU equivalents for Math 11 and 12 are MATH 050 and MATH 060, respectively. Because U of Alberta and Yukon University require equivalents for Yukon's Pre-Calculus 12 (or previously Principles of Math 12), a student entering the Northern ENCS program with Math 11 and 12 may still be required to do some upgrading if they completed other high school math courses (e.g. Applications of Math, etc.). Contact an [ENCS Program Advisor](#) to discuss whether you will need math upgrading.

Students who need math upgrading may be advised to write a math placement test to determine whether they need MATH 050 or 060. These tests are written through the Testing and Assessment Centre at Yukon University. Information on testing is available here: <https://www.yukonu.ca/student-life/learning-matters/testing-assessments>, which includes review material and a link to the online test booking system. Students may be able to complete their placement test from off-campus. Contact the School of Academic and Skill Development at the link above for more information.

### **13) I live in a Yukon community outside of Whitehorse. Can I still complete the Northern ENCS Program?**

Whenever possible, the Northern ENCS Program offers courses via Distance Learning (usually web conference) to Yukon University community campuses.

However, due to lab components in some courses and other logistic constraints, we cannot offer all courses in the program via Distance Learning. Therefore, while a student may be able to complete some of their ENCS coursework from their community, they should expect to spend at least some of their time in the program at the Ayamdigut campus in Whitehorse.

Students taking the Northern Science or Renewable Resources Management diploma programs in anticipation of transferring to the Northern ENCS Program, or students applying to the Northern ENCS Program with less than 60 transferable credits, should plan to complete most of their coursework in Whitehorse.

### **14) How much does the Northern ENCS Program cost?**

After being accepted into the Northern ENCS Program at Yukon University and University of Alberta, students pay tuition only at University of Alberta but pay mandatory non-instructional fees at both institutions. The fees below are based on rates for Canadian citizens or permanent residents. For information on international student fees, visit <http://www.registrarsoffice.ualberta.ca/en/Costs-Tuition-Fees/Undergraduate-Tuition.aspx>

Sample fees assessments are below.

Sample totals for tuition and fees, based on 2020-2021 U of A rates:

- For a student taking a full-time course load of **five 3-credit courses**, academic year per-term fees are:

U of A fees	Per-term cost
<u>U of A tuition</u> (\$569.28 per 3-credit course; tuition cost here is based on full load of 5 courses per term)	\$2846.40
<u>Non-instructional fees</u> (assessed at off-campus, full-time rate)	\$312.25
Students' Union Health & Dental Plan <sup>1</sup>	\$315.00
<b>Yukon University fees</b>	
<u>Student Union, Technology, and Activity fees</u>	\$191.00
<b>Total:</b>	<b>\$3664.65</b>

<sup>1</sup> Students are automatically enrolled in the U of A student health and dental plan but may choose to opt out (see <https://www.studentcare.ca/> for more information).

- For a student taking a part-time course load of **two 3-credit courses**, academic year per-term fees are:

U of A fees	Per term cost
<u>U of A tuition</u> (\$569.28 per 3-credit course; tuition cost here is based on load of 2 courses per term)	\$1138.56
<u>Non-instructional fees</u> (assessed at off-campus, part-time rate)	\$245.11
Students' Union Health & Dental Plan <sup>1</sup>	\$315.00
<b>Yukon University fees</b>	
<u>Student Union, Technology, and Activity fees</u>	\$57.00
<b>Total:</b>	<b>\$1755.67</b>

<sup>1</sup> Students are automatically enrolled in the U of A student health and dental plan but may choose to opt out (see <https://www.studentcare.ca/> for more information).

Students registered in Yukon University Northern Science or Renewable Resources Management diploma programs in preparation for transfer to the ENCS Program pay tuition and non-instructional fees ONLY to Yukon University. For information on current Yukon University tuition rates, visit: <https://www.yukonu.ca/admissions/money-matters>

## 15) Are there services or supports available for Indigenous students?

Both Yukon University and University of Alberta have a variety of services for First Nations, Métis, and Inuit students. For more information on University of Alberta services, download the [Indigenous Student Handbook](#) and visit [UAlberta First Peoples' House](#). For information on Yukon University services, visit: <https://www.yukonu.ca/student-life/health-wellness/first-nations-support-services>



## **16) Does Yukon University have student housing in Whitehorse?**

Yes, Yukon University has campus housing with single and double-occupancy rooms, as well as housing for mature students (aged 25 and older), and for families. For more information on student housing at Yukon University, visit <https://www.yukonu.ca/student-life/campus-housing>

## **17) Is there any funding available to help me during my studies?**

Students registered in the Northern ENCS Program at Yukon University and University of Alberta are eligible to apply for funding at either institution.

For information on funding available through U of A, visit [www.registraroffice.ualberta.ca/en/Financial-Assistance.aspx](http://www.registraroffice.ualberta.ca/en/Financial-Assistance.aspx). Please note that some U of A awards have Alberta residency requirements.

For information on funding available through Yukon University, visit <https://www.yukonu.ca/admissions/money-matters> and go to the Financial Supports section.

The Yukon Government offers several Student Financial Assistance programs for Yukon residents. For more information, visit <http://www.education.gov.yk.ca/student-funding.html>.

## **18) Who do I contact for more information on the Northern ENCS Program at Yukon University?**

Email [ualberta@yukonu.ca](mailto:ualberta@yukonu.ca), or contact the Northern ENCS Program Advisors directly:

Dr. Kathryn Aitken, Program Coordinator  
t. 867.668.8866, [kaitken@yukonu.ca](mailto:kaitken@yukonu.ca)

Dr. Fiona Schmiegelow, Director  
t. 867.668.8711, [fiona.schmiegelow@ualberta.ca](mailto:fiona.schmiegelow@ualberta.ca)



## Appendix A. Course plan for B.Sc. ENCS, Northern Systems Major

U of Alberta course codes in **green**, with Yukon University equivalencies or substitutions in **purple**.

Year 1	Year 2	Year 3	Year 4
<b>UA ECON 101 Intro to Microeconomics</b>  YukonU ECON 100 Intro to Microeconomics	<b>UA NS 390 Research Methods</b>  YukonU FNGA 240 Indigenous Peoples and Research	<b>UA R SOC 375 Public Participation &amp; Conflict Resolution</b>  YukonU FNGA 301 Theory and Practice of Negotiation	<b>UA ENCS 473 Environmental and Conservation Policy</b>
<b>UA NS 200 Aboriginal Canada</b>  YukonU HIST 140 History of Yukon First Nations and Self-gov't	<b>UA REN R 205 Wildlife Biodiversity and Ecology</b>  YukonU NOST 201 Natural History of the North	<b>UA AREC 365 Natural Resource Economics</b>	<b>UA REN R 480 Applied Statistics for Environmental Sciences</b>
<b>UA BIOL 108 Intro to Biological Diversity</b>  YukonU BIOL 101 Principles of Biology I	<b>UA BIOL 208 Principles of Ecology</b>  YukonU BIOL 220 Ecology	<b>UA REN R 307 Environmental Assessment Principles and Methods</b> YukonU RRMT 238 Environmental Protection and Impact Assessment	<b>UA NS 435 Management of Aboriginal Natural Resources</b>
<b>UA CHEM 101 Introductory Univ Chem</b>  YukonU CHEM 110 Structure of Matter	<b>UA REN R 201 Intro to Geomatic Techniques</b>  YukonU GEOG 250 Intro to GIS	<b>UA REN R 364 Principles of Managing Natural Diversity</b>  YukonU BIOL 230 Conservation Biology	<b>UA REN R 466 Climate Change and the North</b>  YukonU GEOG 290 Climate Change and the Circumpolar World
<b>UA REN R 110 Natural Resource Measurements</b>  YukonU RRMT 125 Renewable Resources Measurements	<b>UA REN R 260 History and Fundamentals of Environmental Protection and Conservation</b> YukonU ENST 200 (formerly ENVS 200) Environmental Perspectives OR ENST 201 Environmental Ethics	<b>UA REN R 376 Fisheries and Wildlife Management</b>  YukonU RRMT 223 Wildlife Management	<b>UA REN R 473 Northern Resource Management</b>
<b>UA MATH 134, 144, or 154</b>  YukonU MATH 100 Calculus I or MATH 120 Math for the Life Sciences	<b>UA PL SC 221 Intro to Plant Science</b>  YukonU BIOL 210 Intro to Northern Botany	<b>UA REN R 365 Ecology of Northern Landscapes</b>	<b>UA REN R 463 Biological Adaptation to Northern Environments</b>
<b>UA STAT 151 Intro to Applied Stats I</b>  YukonU MATH 105 Intro to Statistics OR RRMT 202 Stats for Biological Sci.	<b>UA REN R 350 Physical Hydrology</b>  YukonU RRMT 239 Freshwater Ecosystems and Hydrology	<b>UA ALES 391 Critical Thinking &amp; Advanced Communication in Science</b>	<b>APE* - Physical Environment</b>
<b>ENGL (3 credit)</b>  YukonU ENGL 100 English Composition	<b>UA REN R 299 Field School</b>  YukonU NOST 215	<b>APE* - Circumpolar Studies</b>	<b>APE* - Other/Any</b>
<b>ENGL (3 credit) or UA ALES 204 Communication Theory and Practice</b> YukonU COMM 204 (formerly COMM 193) Intro to Scientific and Technical Communication	<b>UA REN R 210 Intro to Soil Science and Soil Resources</b>  YukonU SOIL 210 Intro to Soil Science and Resources	<b>APE* - Ecology</b>	<b>APE* - Ecology</b>
<b>FREE ELECTIVE</b>  YukonU BIOL 102 Principles of Biology II	<b>FREE ELECTIVE</b>	<b>FREE ELECTIVE</b>	<b>CAPSTONE: UA REN R 491 Land-Use Planning in Canada's North</b>

\* APE = Approved Program Elective (The total 100 and 200 level APEs cannot be greater than 2 courses (\*6 credits))