

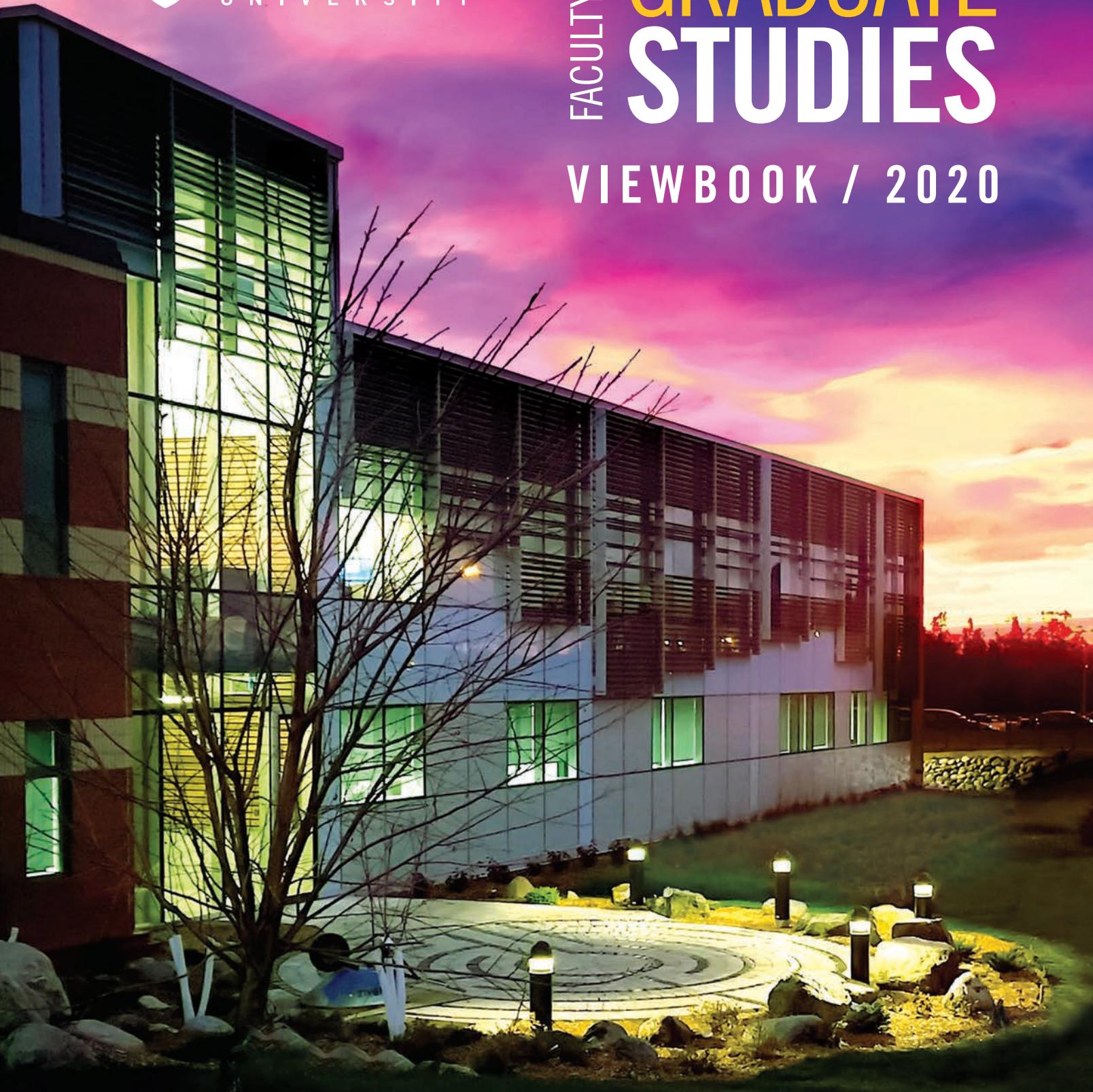


Lakehead
UNIVERSITY

FACULTY OF

GRADUATE STUDIES

VIEWBOOK / 2020



GRADUATESTUDIES.LAKEHEADU.CA



CASES BUILDING

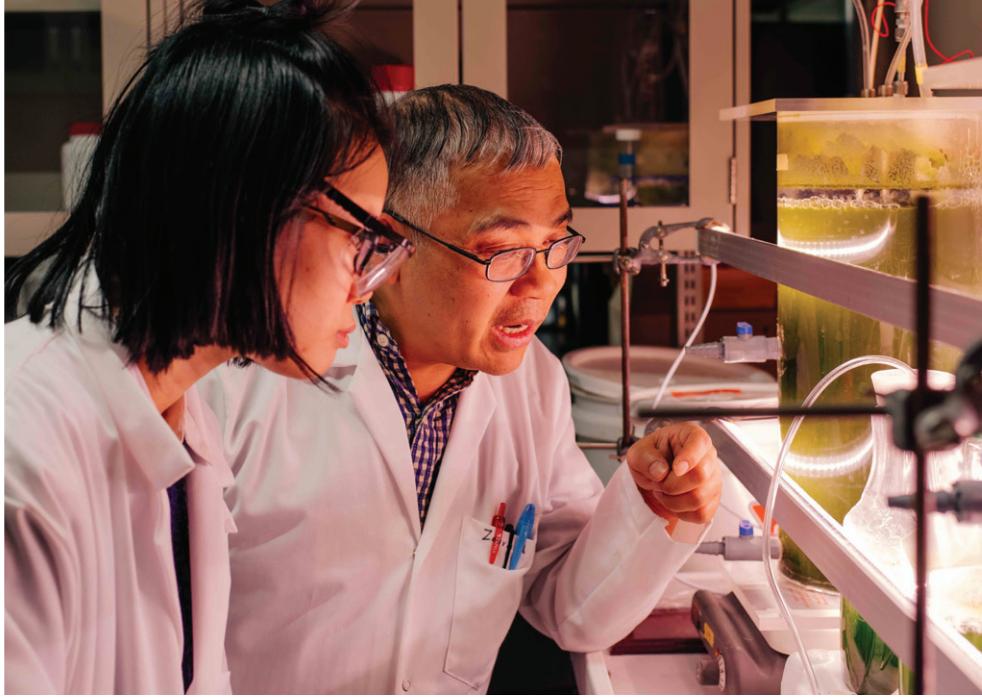
CASES (Centre for Advanced Studies in Engineering and Sciences) is Lakehead University's newest facility on the Thunder Bay campus. This 4,000 square metre building has space for over 80 graduate students, including a graduate student lounge and patio. Housed within CASES is INGENUITY, a student incubator zone where the great ideas of tomorrow come to life. Students and faculty create knowledge through research, and CASES will help transform this knowledge into innovation. Connected by a walkway to the library and Lakehead International, CASES is a hub for research, innovation, entrepreneurship, and social connection among students, faculty, industry, and community partners.



Lower level lounge space



Graduate Students' Lounge



CASES Advanced Wastewater Biohazard Lab



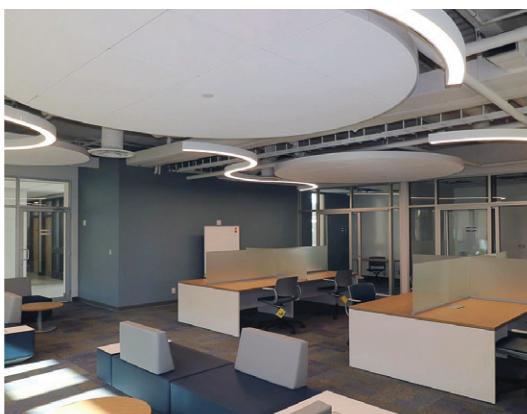
CASES atrium



Lakehead University Instrumentation Lab & LUCAS
(Centre of Analytical Services) – X-ray photoelectron
spectroscopy (XPS)



CASES Green Processes Research Centre



INGENUITY incubator space

LAKEHEAD UNIVERSITY IS NO ORDINARY PLACE



I wish you a warm welcome to Lakehead University. For the 4th year in a row, RE\$EARCH Infosource has awarded Lakehead University the title of Research University of the Year in Canada in our peer category. Our continued success in research and innovation is largely due to the quality of graduate programs we offer, as well as our award-winning faculty and students. Our new Research Plan (2019-2023) identifies our research priorities and highlights exactly the graduate programs that relate to each priority. You will find the list very extensive. At Lakehead University, we have a number of world-class institutes and centres. A look at our research centers will make it easy for you to identify leading researchers and areas where you will be able to conduct research that ignites your passions and makes a difference. The impact of research goes far beyond the lab at Lakehead University. Our Innovation Management Office can help you commercialize your innovations, and develop partnerships with industry and government to facilitate knowledge transfer and community connections. I invite you to make yourself at home in our new building, the Centre for Advanced Studies in Engineering and Sciences (CASES). This building has certainly become a hub for graduate students to gather in the lounge for socializing and research conversations. Top quality graduate studies education for Lakehead University is a priority, and I encourage you to find exciting and stimulating research projects in your chosen program.

Andrew P. Dean, PhD, Vice-President, Research and Innovation



Lakehead offers 40 Graduate Programs at Master and PhD levels. Students have the ability to work closely with their supervisor due to our smaller student population.

Exceptional and unconventional! Two ideas that faculty and staff strive to uphold at Lakehead University. We encourage you to explore the details of our exceptional graduate studies programming and potential research opportunities outlined in this guidebook. As a comprehensive and research-intensive university, Lakehead's graduate programs endeavour to provide you with the scholarly student-centered environment necessary to pursue your personal, professional and intellectual development. To that end, Lakehead University has developed the Centre for Advanced Studies in Engineering and Sciences Building (CASES) to further inspire top-tier research and innovation. This building houses a dedicated lounge and patio for our graduate students to study, collaborate or socialize. In addition, it is home to four of Lakehead's newest Canada Research Chairs, three research support units, the Faculty of Graduate Studies, more than seven leading research programs and laboratories, and INGENUITY – a business incubator space. Of course, at Lakehead University, your graduate experience extends beyond the lab or classroom, as many of our programs offer placements, fieldwork, or co-op opportunities, and plenty of chances to socialize with fellow students on or off campus. I warmly welcome you to explore the many unconventional opportunities available for you to engage with our community of scholars at Lakehead University, and I look forward to greeting you at one of our campuses.



Chander Shahi, PhD, Dean, Faculty of Graduate Studies

OUR CITY - THUNDER BAY

Experience the best in Canada with a dynamic city life along with the most breathtaking natural backdrop. You will find it difficult to imagine a more beautiful and natural place to live and learn. Situated in the heart of Canada on the north shore of Lake Superior, Thunder Bay is the largest urban centre between Winnipeg, Manitoba and Toronto, Ontario. A city with deeply-rooted Indigenous and European cultures, Thunder Bay is truly a culturally-diverse community. From live theatre, festivals and concerts, to shopping, great nightlife and a vibrant arts and culture scene, there is something for everyone.

thunderbay.ca

lakeheadu.ca/thunder-bay

Discover all Thunder Bay has to offer:

Thunder Bay Experience Guide

visithunderbay.com

The Walleye Thunder Bay Arts & Culture Alternative
thewalleye.ca

OUR HOMETOWN FACTS

111,000
POPULATION

100+ RESTAURANTS
FEATURING FOODS FROM
AROUND THE WORLD

3 MAJOR AIRLINES
THUNDER BAY INTERNATIONAL AIRPORT -
AIR CANADA, WESTJET AND PORTER

7 SHOPPING
DISTRICTS

305 DAYS OF
SUNSHINE
PER YEAR

20+ ANNUAL
CITY FESTIVALS

OUR CAMPUS FACTS

57,000+
ALUMNI AROUND THE WORLD

1,000
GRADUATE STUDENTS

100+
HECTARES
OF CAMPUS SPACE

40+ GRADUATE
PROGRAMS

1 LAKE +
RIVER
RUNNING
THROUGH
CAMPUS



OUR CITY - ORILLIA*

Nestled on the shores of Lake Couchiching and Lake Simcoe near the Greater Toronto Area, the City of Orillia is vibrant with over 30,000 people. Orillia has all the amenities of a large urban centre, with small-town charm that offers year-round opportunities for arts, culture, recreation and music.

orillia.ca

lakeheadu.ca/orillia

OUR HOMETOWN FACTS

30,000
POPULATION

10 km
WATERFRONT TRAILS

100+
RESTAURANTS

20 MINUTE
DRIVE FROM
BARRIE

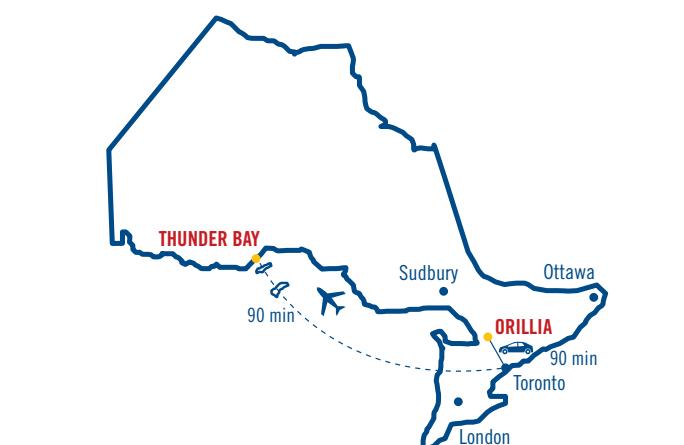
OUR CAMPUS FACTS



ENVIRONMENTALLY
DESIGNED AND CERTIFIED CAMPUS (LEED)



DISCOUNTED & DEDICATED
BUS SERVICE DAILY
FROM THE CITY OF BARRIE TO ORILLIA CAMPUS



* While all graduate programs are offered from our Thunder Bay campus, selected programs have students located in Orillia. Please inquire at gstudent@lakeheadu.ca for more information. Our Education and Biology programs are offered at both Orillia and Thunder Bay campuses.



STUDENT SERVICES INFORMATION

At Lakehead, we are here for you. We understand that university life at times can become stressful, and overwhelming, and we commend you for taking on this incredible challenge. We are proud to offer several supports, programs, and opportunities to promote your overall health and well-being.

ABORIGINAL CULTURAL AND SUPPORT SERVICES

Through our Aboriginal Cultural and Support Services, we provide a culturally-supportive environment to all Aboriginal students in a variety of ways: academic/cultural workshops, cultural teachings, feasts, sweat lodge ceremonies, annual fall harvest and LUNSA Powwow. We also offer an Aboriginal Student Lounge in Thunder Bay that acts as a hub for student activities throughout the year.

lakeheadu.ca/acss

ATHLETICS

Our on-campus fitness facilities include the C.J. Sanders Fieldhouse, a 15,000 square-foot gymnasium, and The Hangar, a 50,000 square-foot student athletic facility. Together, they feature: weight rooms, cardio machines, hot yoga studio, beach volleyball courts, Olympic-sized swimming pool, indoor track, astro-turf field, outdoor sports fields, change rooms and saunas. There's also always the opportunity to take in a Thunderwolves game or event and cheer on your favourite university team.

thunderwolves.ca

lakeheadu.ca/orillia-athletics



GRADUATE STUDENT ASSOCIATION (GSA)

Lakehead University Graduate Students' Association (LUGSA) is the fully autonomous student body that represents full and part-time graduate students registered at Lakehead University. We are committed to providing assistance, information and services necessary to help graduate students successfully complete their goals. We organize several social, academic and recreational events throughout the school year. All graduate students are welcome to become members of the GSA.

gsa.lakeheadu.ca

FACULTY OF GRADUATE STUDIES

The Faculty of Graduate Studies offices are located on the upper level in the new CASES building. Our staff are happy to assist prospective and current graduate students in many areas including: admissions, program requirements, regulations, campus information, potential financial support, thesis processing and much more. We want your experience at Lakehead to be positive and rewarding. Make us your first stop if you have any questions throughout your program.

graduates.studies.lakeheadu.ca

STUDENT CENTRAL

At Student Central you will be able to access everything you need - from technical issues with course registration to help with your OSAP application, Student Central is the place to go. Our dedicated, cross-trained Student Central Professionals are able to solve issues from start to finish with improved consistency of service and answers.

[lakeheadu.ca/studentcentral](http://studentcentral.lakeheadu.ca)



LIBRARY

As a graduate student, we know you balance your time between learning, researching and instructing. The Lakehead University Library provides you access to the resources, space and informational services you will need to excel as a student, researcher and instructor. The Graduate Reading Room is a quiet space dedicated to you, located on the 4th floor of the Chancellor Paterson Library.

library.lakeheadu.ca/gradstudents

LUSU

The Lakehead University Student Union (LUSU) represents all students studying at Lakehead University. We are over 8,000 strong, uniting undergraduate and graduate, full and part-time, and domestic and international students. Founded in 1981, LUSU has been a part of student life for over thirty years. We are a democratic institution run by students who are elected by students.

lusu.ca

NANABIJOU CHILD CARE CENTRE

Inspired by two Lakehead University students and the continuous support of Lakehead University administration, Nanabijou Child Care Centre opened in January 1988. Over time, we have expanded our services; however, it has always been our mission to provide inclusive, affordable, licensed quality child care. Nanabijou Child Care Centre is located on the Lakehead University Campus in Thunder Bay. We currently provide care for 108 children ranging from infancy to school age.

lakeheadu.ca/nanabijou

STUDENT ACCESSIBILITY SERVICES

Student Accessibility Services (SAS) coordinates services and facilitates the provision of reasonable academic accommodations for students with documented disabilities/medical conditions. SAS staff collaborate with students, staff and faculty in developing strategies for a successful learning experience while maintaining the academic standards and integrity of Lakehead University. To learn more about our services please visit:

lakeheadu.ca/sas

STUDENT HEALTH AND WELLNESS

Our Student Health and Wellness Centres are environments that facilitate physical, emotional, intellectual and spiritual health. In accordance with our vision, these Centres offer medical care, mental health counselling, and clinical referrals to support students' personal, academic, and professional success.

lakeheadu.ca/shw (Thunder Bay)

lakeheadu.ca/student-health-wellness (Orillia)

STUDENT SUCCESS CENTRE

The Student Success Centre has many programs and support services in place to help you achieve your academic and personal goals while studying at Lakehead University. We provide academic support through career exploration, co-operative opportunities and leadership development.

lakeheadu.ca/ssc





ADMISSION PROCESS

We are proud to offer a diverse selection of Master, PhD, and Diploma programs at the graduate level. Our students enjoy the guidance and support of highly dedicated faculty, competitive funding opportunities, and considerable freedom as to what and where they will study.

Please be advised that meeting the minimum admission requirements does not guarantee admission into a program. Also, departments may require further documentation to support your application. Please review the links provided in this guide to determine specific admission requirements.

Steps to Apply for Admission to Graduate Studies at Lakehead University:

- 1 EXPLORE OUR GRADUATE PROGRAMS
- 2 REVIEW ADMISSION REQUIREMENTS
- 3 PREPARE YOUR APPLICATION
- 4 APPLY ONLINE

lakeheadu.ca/academics/graduate/applying

MASTER'S DEGREE

Except where otherwise stated in the admission requirements of a particular program, domestic applicants to Master's degree programs must have a minimum B average on the last 20 half credits or equivalent at the third or fourth year level from a four year undergraduate degree.

For a complete list of our program offerings, please visit:

lakeheadu.ca/masters-programs

DOCTORAL DEGREE

Applicants for admission must be graduates of a recognized university and show evidence of scholarly achievement. Students must have a Master's degree or its equivalent with an academic average as specified by the desired program. Applicants for our Doctoral programs are strongly encouraged to engage a supervisor for their studies before they apply.

For a complete list of our program offerings, please visit:

lakeheadu.ca/doctoral-programs

GRADUATE DIPLOMA

Please see individual faculty pages or for more information, visit:

lakeheadu.ca/graduate-diploma

ADDITIONAL ADMISSION REQUIREMENTS

The recommended deadline for admission and funding for most programs is February 1st. However, please be advised that the firm deadline for our Health Science Programs (MHSc and MPH) is February 1st, December 15th for our Clinical Psychology Programs, and November 15th for our Joint PhD Educational Studies Program.

APPLICATION FEES

\$100 CAD fee applies for each online program application.

TUITION FEES

For information regarding fees, please visit:

lakeheadu.ca/graduate-studies-fees

START DATES

A Fall (September), Winter (January) or Spring (May) intake may be available for your program; please visit the link below to confirm specific program start date options:

lakeheadu.ca/graduate-start-terms



INTERNATIONAL STUDENTS

At Lakehead, we welcome students from over 80 different countries. Lakehead University International offers a number of specialized services and supports to help you throughout your studies as well as during your transition to Canada, such as: study permit assistance, free airport pick-up services, English Language Program, on-campus IELTS testing centre, UHIP – University Health Insurance Program, homestay, and social & cultural activities.

LAKEHEAD UNIVERSITY INTERNATIONAL

As an International Student, you may have questions about Lakehead University and student life. At Lakehead International, we provide many services to assist with your transition, and we are committed to making your time here the best it can possibly be. The team at Lakehead International is available to answer any questions about admission, advising, registration, student visas and any other support you may need along the way.

lakeheadu.ca/international
international@lakeheadu.ca

IN 2018/2019 LAKEHEAD UNIVERSITY WAS HOME TO 1,411 INTERNATIONAL STUDENTS WITH REPRESENTATION FROM 81 DIFFERENT COUNTRIES.

ADMISSION REQUIREMENTS AND DEADLINES FOR INTERNATIONAL APPLICANTS

The firm deadline to receive complete applications is May 15th. Our minimum admission requirement for international applicants is 75% or 3.0 on a 4 point Canadian scale, with an accredited university degree equivalent to a Lakehead University 4 year degree. We advise all international students to apply early, as admission into our programs is competitive. Should you wish to apply to a thesis program, we strongly advise you to contact a potential supervisor, and have your proof of English language proficiency complete.

At this time, we do not pre-assess qualifications.

ENGLISH LANGUAGE PROFICIENCY REQUIREMENTS FOR ADMISSION

Applicants whose first language is not English must demonstrate they can cope with the language demands of an English language university. Applicants to graduate programs may meet our English language requirements if they have successfully completed 3 years of full-time, post-secondary study in English.

Applicants whose native language is not English, and who cannot verify having recently studied in an English language post-secondary system for more than three years of full-time study, will be required to present proof of English language proficiency as follows:

Test	Minimum Score
TOEFL - Test of English as a Foreign Language (Paper based)	550 (no component score less than 50)
TOEFL (Computer based)	213 (no component score less than 17)
TOEFL (Internet based)	80 (no component score less than 19)
IELTS - International English Language Testing System	6.5 (no individual score less than 6.0)
MELAB - Michigan English Language Assessment Battery	85
CAEL - Canadian Academic English Language Assessment	60

Lakehead University's Institution Code for TOEFL scores is 0888.

Some academic units may require a higher score and meeting the minimum requirements does not guarantee admission to Lakehead University.

FUNDING OPPORTUNITIES

In the 2018/2019 academic year, we offered 229 Faculty Research Awards to our graduate students with a combined value of approximately \$1.8 million.

ENTRANCE AND IN-COURSE SCHOLARSHIPS & AWARDS

As a full-time graduate student at Lakehead University, you have the opportunity to apply for several scholarships and awards throughout the academic year. Many of these scholarships and awards are program specific, but there are several opportunities that are open to students in any program. It is important to regularly visit our graduate funding website listed below. There you will find all available in-course financial offerings, as well as any eligibility requirements, application forms, and deadlines to submit.

ENTRANCE AND IN-COURSE BURSARIES

If you are a full-time graduate student at Lakehead University who demonstrates financial need, you are invited to apply for our bursary program. Many of the bursary possibilities are made available by our generous donors. These bursaries are provided to help cover the costs of tuition and supplies.

Find further information regarding funding opportunities at: myAwards.lakeheadu.ca



EXTERNAL AWARDS

External awards programs are offered by federal and provincial scholarship agencies and often require you to apply a year in advance of beginning your graduate studies. Many of these awards are adjudicated competitions that require a separate application and are considered highly competitive as the monetary value of these scholarships can be \$15,000 and higher. For additional information, please visit the graduate funding website listed below.

lakeheadu.ca/graduate-student-funding

MORE OPPORTUNITIES

Graduate Assistant appointments may be offered to eligible full-time graduate students (including Visa students) at a rate of \$10,197.68 (2019-20) at the Master's level; and of \$11,120.82 (2019-20) at the Doctoral level. A regular appointment constitutes a maximum of 270 hrs of work over the Fall and Winter terms averaging not more than 10 hrs of work per week.

FACULTY RESEARCH AWARDS

A stipend may be paid to a full-time degree candidate for research or academic activities relevant and related to the student's field(s) of study within the academic program. Faculty Research Awards are awarded by the student's supervisor. In the 2018/2019 academic year, we offered 229 faculty research awards at a combined value of approximately 1.8 million dollars to our graduate students.

COMMUNITY-BASED LEARNING

At Lakehead University, some of our graduate programs offer the opportunity to participate in Community-Based Learning, a strategy that uses a variety of instructional methods, which can help students better engage with, preserve, and transfer knowledge. These opportunities may include:

- ▶ Fieldwork
- ▶ Co-op
- ▶ Practicum
- ▶ Internship





ONE OF THE TOP UNIVERSITIES IN CANADA IN INNOVATIVE RESEARCH

INGENUITY – Lakehead's first student business incubator space will nurture start-up companies through business mentorship and entrepreneurship training. The strategic vision for INGENUITY is to foster an entrepreneurial culture, create employment and self-employment opportunities, and to contribute to the region's economic development by leveraging existing community resources to deliver a range of on-campus entrepreneurship activities. One of the main goals of INGENUITY will be to provide a professional working environment, teach essential entrepreneurial skills, and facilitate business development through mentorship to help solve the problems new fledgling ventures face. The most important outcome of INGENUITY to Lakehead University is to promote awareness about entrepreneurial resources, programming, and opportunities for students, and, in turn, to create and support entrepreneurial culture and passion on-campus.

The INGENUITY District within CASES utilizes 4232 square feet, and this space includes:

- ▶ Incubator/co-working space
- ▶ Media room
- ▶ INGENUITY Connections Theatre
- ▶ Rental offices
- ▶ Makerspace (3D Printer Room)
- ▶ Bookable meeting rooms

Programming for INGENUITY will include:

- ▶ Workshops and speakers series
- ▶ Boot camps
- ▶ Competitions
- ▶ Mentor network access
- ▶ Start-up grants for students
- ▶ Professional development training
- ▶ Lunch-and-learns

RESEARCH AND INNOVATION WEEK

As a comprehensive and research-intensive university, Lakehead strives to nurture discovery, support innovation, and advance achievement. Through close collaboration with local and global communities, ideas put forth by our talented researchers and students have created meaningful impacts and have led to the emergence of new companies and businesses. Research and Innovation at Lakehead University is celebrated annually during our Research and Innovation Week.

During this week, graduate students have the opportunity to participate in the 3MT® competition, and the winner moves on to compete at the provincial level. Participating in a 3MT® competition increases a student's capacity to effectively explain his or her research in three minutes, in a language appropriate to a non-specialist audience. Competitors are allowed one PowerPoint slide, but no other resources or props. Will you accept the challenge?



lakeheadu.ca/research-and-innovation-week





RESEARCH CENTRES AND INSTITUTES

Lakehead University is committed to fostering interdisciplinary and trans-disciplinary research in partnership with industry, community organizations and government. Through our Research Centres and Institutes, we foster intellectual environments in which researchers and students combine their expertise to create new forms of inquiry and new types of solutions.

BIOREFINING RESEARCH INSTITUTE (BRI)

BRI creates novel research and development opportunities, new technology models and jobs, and value-added products from renewable resources that ultimately lead to reduced dependence on fossil fuels and lower greenhouse gas emissions.

e: admin.bri@lakeheadu.ca
t: (807) 343-8863

CENTRE FOR EDUCATION AND RESEARCH ON AGING AND HEALTH (CERAH)

CERAH's mission is to advance health and social care for an aging population and promote the health and well-being of people aging across the lifespan.

Dr. Elaine Wiersma, Director
e: ewiersma@lakeheadu.ca
t: (807) 766-7294

CENTRE OF EDUCATION AND RESEARCH ON POSITIVE YOUTH DEVELOPMENT (CERPYD)

CERPYD is focused on generating, disseminating and applying knowledge about children and adolescents and their well-being, while specializing in the areas of mental health, addictions, education, and youth justice.

Dr. Ed Rawana, Director
e: ed.rawana@lakeheadu.ca
t: (807) 343-8453

CENTRE FOR INNOVATION AND ENTREPRENEURSHIP RESEARCH (CIER)

The primary purpose of the Centre for Innovation and Entrepreneurship Research (CIER) is to promote and support research on innovation and entrepreneurship at Lakehead University.

Dr. Michael Dohan, Director
e: msdohan@lakeheadu.ca
t: (807) 343-8635

CENTRE OF EXCELLENCE FOR SUSTAINABLE MINING AND EXPLORATION (CESME)

CESME's purpose is to encourage, develop and support research, education and outreach activities that result in responsible economic development and sustainability for all stakeholders involved in and affected by mineral extraction.

Dr. Peter Hollings, Director
e: cesme@lakeheadu.ca
t: (807) 343-8329

CENTRE FOR HEALTH CARE ETHICS (CHCE)

CHCE is dedicated to promoting ethical health care in Northwestern Ontario by providing a forum for dialogue, the interdisciplinary exchange of information and collaborative research between Lakehead University faculty, students, members of the health care professions, researchers, administrators, and the public.

Dr. Kristen Jones-Bonofiglio, Director
e: chce@lakeheadu.ca
t: (807) 343-8126

CENTRE FOR NORTHERN STUDIES (CNS)

Established in the late 1980s, the Centre for Northern Studies has directly contributed, through its academic program, speaker series, grants, publications, international student exchanges, and research projects, to the university's national and international reputation as one of the main centres for Northern Studies in Canada and indeed the entire Circumpolar North. CNS was created by a partnership of regional and academic representatives to help ensure that Lakehead University is able to respond to the needs of our regions.

Dr. Chris Southcott, Director
e: chris.southcott@lakeheadu.ca
t: (807) 343-8349

FACULTY RESEARCH PROFILE – DR. PEDRAM FATEHI

When thinking about our pulp and paper, oil, and mining industries, Dr. Pedram Fatehi wants to know how we can make green processes better. Dr. Fatehi is a Canada Research Chair and an Industrial Chair in Green Chemicals and Processes, and the founding Director of the Green Processes Research Centre. Trained as a chemical engineer, Dr. Fatehi continuously strives to find the most efficient ways to maximize the use of liquid waste and wood byproducts when creating environmentally sound biofuels. He is an internationally acclaimed leading researcher in the field of lignin, which is one of the main components of any lignocellulosic biomass (wood and agro-based).

To see his research evolve from the conceptual idea to the commercialized product, Dr. Fatehi works closely with his team of graduate students, national, and international collaborators to produce cost-effective answers to the needs of local, national, and international industries that produce forest, mining, pharmaceutical, and cosmetic products. For Dr. Fatehi, multi-disciplinarity is key to fostering effective and productive research teams that are energetic and eager to learn new concepts and create new knowledge. Dr. Fatehi's research team includes students from a variety of disciplines including Environmental Engineering, Chemical Engineering, Chemistry, and Biotechnology. Wanting to make the world an environmentally better place and Canada an economic driver, Dr. Fatehi's hope is that one day a process will be developed based on his research outcomes that impact the chemical industry, particularly in Canada.



FAQs

WHAT ARE RESEARCH CENTRES OR INSTITUTES?

Imagine a space that brings together students, faculty members, members of the community and/or industry, all with a common goal: to research and study a specific area of inquiry. Research Centres and Institutes allow researchers at all levels to connect, share their expertise, and work together on mutual interests. The teams often include researchers from different disciplines; more established faculty members mentor junior faculty members, postdoctoral fellows, interns, and students.

WHAT OPPORTUNITIES ARE AVAILABLE FOR GRADUATE STUDENTS?

Research Centres and Institutes can offer employment opportunities to graduate students, as well as research opportunities. To complement and enhance students' academic work, graduate students may have the opportunity to work on a faculty member's or research team's project. Students who choose to get involved in Research Centres or Institutes will meet junior and senior researchers in their fields of study, be included in partnerships with community members or organizations, and gain exposure and hands-on experience beyond the classroom.

HOW CAN I GET INVOLVED?

If you are interested in a particular field or would like to know about opportunities in a Research Centre or Institute, visit the Research and Innovation website:

www.lakeheadu.ca/research-and-innovation/facilities-centres

There you will find the list of Research Centres and Institutes, and the faculty members who are associated with a Centre or Institute are listed on the respective websites. During your studies, you may wish to contact one of these professors to see if there are research projects or opportunities at the Centre or Institute that would be of interest to you. Also, most Centres and Institutes have public talks and events, and students are especially welcomed. Attending these is a great way to interact with members of the Centre or Institute, meet other graduate students, and learn more about current projects.

DISCOVERY THROUGH COLLABORATION



CENTRE FOR RESEARCH ON SAFE DRIVING (CRSD)

The mandate of the Centre is to contribute to the reduction of traffic-related crashes through the understanding of the fundamental processes that support safe driving and through the development of interventions to optimize safe driving.

Dr. Michel Bédard, Director

e: michel.bedard@lakeheadu.ca
t: (807) 343-8630

CENTRE FOR RURAL & NORTHERN HEALTH RESEARCH (CRaNHR)

The Centre provides high level quantitative and qualitative research into determinants of rural and northern health, and conducts evaluative research on health services, programs and policies for provincial and federal agencies, health care organizations, and Indigenous communities.

Dr. Christopher Mushquash, Director

e: cjmushqu@lakeheadu.ca
t: (807) 343-8239

Dr. Mary Ellen Hill, Senior Researcher

e: maryellen.hill@lakeheadu.ca
t: (807) 766-7278

RESEARCH CENTRE FOR SUSTAINABLE COMMUNITIES (RCSC)

The aim of the RCSC is the development of an improved understanding of factors that influence the sustainability of communities using an innovative, comprehensive, and focused approach through the compound lenses of the social and natural sciences, the humanities, and fine arts.

Dr. Nandakumar Kanavillil, Director

e: nkanavil@lakeheadu.ca
t: (705) 330-4008 ext. 2633

LAKEHEAD UNIVERSITY AGRICULTURAL RESEARCH STATION (LUARS)

The Research Station specializes in on-station and on-farm research, especially in the areas of crop production and protection and soil and nutrient management, with an aim to develop new beneficial agronomic practices for improving productivity as well as identifying potential new and alternate crops and cropping systems suitable for Northern Ontario.

Dr. Tarlok Singh Sahota, Director

e: tssahota@lakeheadu.ca
t: (807) 475-8404

LAKEHEAD SOCIAL HISTORY INSTITUTE

The Lakehead Social History Institute is a partnership of historical researchers at Lakehead University and in the Thunder Bay community with the aim to encourage and promote historical research and training.

Beverly Soloway, Director

e: shi@lakeheadu.ca
t: (807) 343-8581

GREEN PROCESSES RESEARCH CENTRE (GPRC)

GPRC is a hub for local and international researchers working on cutting-edge green technologies that will develop new products with the aim of transforming Canadian industries to adopt new sustainable processes with green products that will protect the environment.

Dr. Pedram Fatehi, Director

e: pfatehi@lakeheadu.ca
t: (807) 343-8697

ENHANCING THE PREVENTION OF INJURY & DISABILITY @ WORK (EPID@WORK) RESEARCH INSTITUTE

The mandate of the EPID@Work Research Institute is to bring people together to reduce impacts of work-related injury and work disability through collaborative applied research and provision of education to enhance knowledge related to injury and disability. Information generated from our research will inform practice and policies aiming to improve health and social outcomes in Northwestern Ontario and beyond.

Dr. Vicki Kristman, Director

e: epid.hbsc@lakeheadu.ca
t: (807) 343-8961

FACULTY RESEARCH PROFILE - DR. LORI CHAMBERS



Dr. Lori Chambers is a legal historian whose research has always had a focus on gender.

"All of my research currently is on aspects of violence against women and children in the family," says Dr. Chambers, who is currently working on several collaborative projects, including partnerships with faculty and graduate students on Lakehead University's Thunder Bay and Orillia campuses. One of the drivers for Dr. Chambers's research is the discrepancy between the stories of domestic violence that the public hears, the real stories, and how these stories are further changed within the Canadian legal system. Her work on Lakehead University's policy for sexual violence on campus prompted her to look at issues that have always been present in the background of her research, and bring these to the forefront.

Dr. Chambers's research works to challenge the ways in which the public responds to gendered violence; she wants to "create a more helpful and sympathetic space towards women and children who experience such violence". Her research strives to "push police and the courts to respond better", and has already influenced the Supreme Court decisions. As a faculty member of the Social Justice and Women's Studies collaborative graduate programs, Dr. Chambers works with students from various disciplinary backgrounds and values their mutual learning. As she puts it, "you learn from your students and ask questions in new ways".

CENTRE FOR ANALYTICAL SERVICES (LUCAS)

LUCAS promotes the research interests of Lakehead University's faculty while providing regional access to the University's analytical testing facilities.

The following facilities are members of LUCAS:

Aquatic Toxicology Research Centre (ATRC):

an aquatic facility that supports research into the evaluation and prevention of toxic effects from industrial wastes in the environment.
Dr. Peter Lee, Academic Director

Biotechnology Laboratory for Enzymes and Bioproducts (BLEB):

focuses on applied biotechnical analytical services in bioproduct analysis, biodegradation studies, enzyme assay, microbiology and aspects of molecular biology.

Dr. Wensheng Qin, Director

Biomass Utilization Research Laboratory (BURL):

offers access to the unique pulping research facilities in the Chemical Engineering Department at Lakehead University.
Dr. Pedram Fatehi, Manager

Lakehead University Environmental Laboratory (LUEL):

offers multi-parameters testing of soils, sediments, biological tissues, vegetation, waters and specific chemicals, as well as conducts field investigations for water quality, wetlands and environmental effects monitoring.

Dr. Peter Lee, Director

Lakehead University Geospatial Data Centre:

provides various mapping and 3D imaging services to Northwestern Ontario and beyond.
Dr. Robert Stewart, Director

Lakehead University Instrumentation Laboratory (LUIL):

a multi-purpose, centralized facility which serves researchers and students from three faculties, providing access to spectrometers, electron and laser microscopes and analyzers needed for modern research and training of Canada's future scientists.

Dr. Francis Appoh, Manager

Dr. Francis Appoh, Director of LUCAS

e: kmaa@lakeheadu.ca
t: (807) 343-8590

Lakehead University Materials Characterization Services (LUMCS):

offers materials characterization services including chemical characterization, atomic force microscopic analysis, and measurement of chemical, electrical and optical properties.

Dr. Aicheng Chen, Co-Director
Dr. Stephen Kinrade, Co-Director
Dr. Robert Mawhinney, Co-Director

Lakehead University Mineralogical and Experimental Laboratory (LUMINX):

serves as a bridge between minerals industry and university researchers by providing advanced mineralogical and geochemical services that are not routinely available from commercial firms.

Dr. Andrew Conly, Director

Lakehead University Molecular Archaeochemistry and Residue Services (LUMARS):

provides molecular services for the characterization and identification of a large range of molecules including carbohydrates, nucleic acids, amino acids, hydrocarbons, lipids, terpenes, terpenoids, fatty acids, alkaloids, fats, phospholipids, steroids, and waxes, aromatics and inorganic compounds.

Dr. Tamara Varney, Director

Lakehead University Wood Science Testing Facility (LUWSTF):

offers state-of-the-art testing for the mechanical properties of wood and wood products, hot press runs for composite research, and large ovens for physical property research projects.

Dr. Mathew Leitch, Director

Paleo-DNA Laboratory:

one of the top ancient DNA research laboratories in the world. It is specifically designed to accommodate low-copy number, degraded, or ancient samples and vigorously control contamination.

Steve Fratpietro, Technical Manager

**ONE-OF-A-KIND
PROGRAMS**



FACULTY OF BUSINESS ADMINISTRATION (BUSINESS, MANAGEMENT, COMMERCE)

Accredited with the Association to Advance Collegiate Schools of Business (AACSB) and Chartered Professional Accountants (CPA).



MASTER OF BUSINESS ADMINISTRATION (MBA)

The Master of Business Administration (MBA) program at Lakehead University is designed for students with undergraduate degrees in any discipline to prepare for success in a wide range of management careers. Students develop technical skills and practical knowledge about managing in organizations.

The program achieves these goals through stimulating lectures, energetic class discussions, analysis of relevant cases, and projects with industry partners.

Two Options:

Finish the MBA program in 12 months (3 terms, full time), or complete the MBA with Advanced Studies in Management in 16 months (4 terms, full time).

Part-Time option available

lakeheadu.ca/masters-mba

BACHELOR OF ENGINEERING – MBA PROGRAM

This joint-degree program provides direct entry from Lakehead University's Engineering (BEng) program to the MBA. This program enables students to integrate their engineering and business studies in the final two years of study. Graduates of this program receive both degrees at the end of five years of study.



MASTER OF SCIENCE IN MANAGEMENT (MScMgt)

The Master of Science in Management program is designed for students with degrees in Business or a related field. The program develops analytical and research skills along with an understanding of managerial applications.

The program is comprised of interactive seminars, enriching courses and a final project or thesis that allows students to perform research in their chosen areas of interest, including:

► Accounting	► Human resources and organizational behaviour
► Business technology management	► Marketing
► Entrepreneurship and innovation	► Strategic management
► Finance	► Operations management

The program can be completed within 12 months of full-time study. A two-year flexible option is available for working professionals.

lakeheadu.ca/masters-business-management

GRADUATE DIPLOMA IN ACCOUNTING (GDA)

Lakehead University's Graduate Diploma in Accounting (GDA) is a one semester professional accounting program, which prepares students to pursue the Chartered Professional Accountant (CPA) designation. The GDA enhances the technical and enabling competencies of undergraduate students by further developing critical thinking, analytical, integrative and ethical reasoning, and communication skills. The program is open to graduates from Lakehead University's HBComm program, or from an equivalent business program at another Canadian university, who have the prerequisite undergraduate courses for the CPA Professional Education Program (PEP).

lakeheadu.ca/diploma-accounting

FACULTY OF EDUCATION

Lakehead University's Faculty of Education provides you with the knowledge, skills, and opportunities to be a leader in educational research, theory, and practice. Our Master of Education and Joint PhD in Educational Studies programs allow you to study topics that are important to you, while challenging you to improve your teaching skills. We help you to address the latest educational theories and support you in the acquisition of skills and knowledge to positively affect learners. We offer full-time and flex-time programs at the Master's level at both Orillia and Thunder Bay campuses, or completely online.

MASTER OF EDUCATION (MEd) – EDUCATIONAL STUDIES

Our Educational Studies program provides a unique learning experience, which addresses the current landscape of both education and research.

Specializations in Women's Studies and Gerontology are available.

lakeheadu.ca/masters-education

lakeheadu.ca/masters-specialization-gerontology

lakeheadu.ca/masters-specialization-womens-studies

Should you be interested in a Thesis or PhD program, areas of faculty research include, but are not limited to:

- ▶ Cutting-edge math
- ▶ Indigenous education
- ▶ Climate change education
- ▶ Special education
- ▶ Large-scale testing
- ▶ Science as inquiry
- ▶ Holistic education
- ▶ Fat studies
- ▶ Digital literacies
- ▶ Poetic inquiry
- ▶ Early language development
- ▶ Men's violence against women
- ▶ Moral education

MASTER OF EDUCATION (MEd) – EDUCATION FOR CHANGE

Education for Change provides an innovative learning experience that allows you to complete your Master of Education with one of the following specializations:

Environmental and Sustainability Education (ESE)

ESE focuses on theory, research, and practices that analyze the cultural and ecological politics of sustainability and fosters mutually flourishing relationships between humanity and the natural world. It includes approaches such as climate change pedagogy, ecopedagogy, environmental justice education, food education, humane education, outdoor education, and place-based education.

Indigenous Education (IE)

IE is grounded in Indigenous historical, philosophical, sociocultural, and political foundations and Indigenous research, protocols, and practices that focus on educational aspects of the politics of colonization and decolonization, honouring Indigenous knowledges and relationships to land, exploring Indigenous approaches to well-being, and revitalizing traditional worldviews and languages.

Social Justice Education (SJE)

SJE focuses on theory, research, and practices that analyse and address social forces both in and out of schools that perpetuate injustice and oppression, and includes approaches with diverse emphases such as anti-racist education, anti-classist education, fat pedagogy, feminist pedagogy, humane education, Indigenous education, inclusive education, and queer pedagogy.

It is also possible to include a Women's Studies or Gerontology specialization with any of the above program choices. Please note, the Women's Studies specialization is not available as an online option.

lakeheadu.ca/masters-education

lakeheadu.ca/masters-specialization-gerontology

lakeheadu.ca/masters-specialization-womens-studies



JOINT DOCTOR OF PHILOSOPHY IN EDUCATIONAL STUDIES (PhD)

The Joint PhD in Educational Studies is offered by Lakehead University, Brock University and the University of Windsor. There are three fields of study: Cognition and Learning, Educational Leadership and Policy Studies, and Social/Cultural/Political Contexts of Education.

The Joint PhD in Educational Studies Program promotes scholarly inquiry and the production of new knowledge within the context of a research culture.

Application Deadline: November 15th

lakeheadu.ca/doctoral-educational-studies

**INNOVATIVE
HANDS-ON APPROACH**



FACULTY OF ENGINEERING

Graduate programs in Engineering provide pathways for students to continue their education while working closely with faculty members on fundamental and translational research that crosses traditional boundaries. We are committed to providing educational opportunities to a diverse population as we train students for wide-ranging careers in engineering and to become leaders focused on developing technology to improve the human condition. Please note: applicants wishing to pursue a thesis-based program are strongly encouraged to find a supervisor before applying to their program of interest.

MASTER OF SCIENCE IN CIVIL ENGINEERING (MSc)

The MSc in Civil Engineering satisfies the demand for highly-qualified personnel in the field of Civil Engineering. This demand is fueled by the requirements to maintain an aging infrastructure and to preserve and develop natural resources with minimal environmental impact to natural systems. Sustainability and structural durability and the impact of climate change on civil engineering works have become increasingly important challenges in the field of civil engineering.

Areas of faculty research include, but are not limited to:

- ▶ Construction Engineering
- ▶ Rock Engineering
- ▶ Environmental Engineering
- ▶ Structural Engineering
- ▶ Fire Safety Engineering
- ▶ Transportation Engineering
- ▶ Geotechnical and
- ▶ Water Resources Engineering
- Geoenvironmental Engineering

lakeheadu.ca/masters-civil-engineering
lakeheadu.ca/graduate-program-civil-engineering

MASTER OF SCIENCE IN ELECTRICAL AND COMPUTER ENGINEERING (MSc)

The MSc in Electrical and Computer Engineering at Lakehead University provides students with the opportunity to develop specialized knowledge through a combination of coursework and research. The program offers two routes to the degree.

The thesis option fosters and develops the independent research abilities of students. This option is ideal for students seeking to continue on to doctoral studies as well as students interested in research and development careers within the industry.

The course-based option allows students broad exposure to advanced topics within the field. Optionally, students in the course-based MSc may apply for cooperative education/internship experience.

Areas of faculty research include, but are not limited to:

- ▶ Control Engineering
- ▶ Biomedical
- ▶ Circuits and Systems
- ▶ Software Engineering
- ▶ Electron Devices and
- ▶ Computer Engineering
- Semiconductors
- ▶ Communications and Networking

lakeheadu.ca/masters-elco-engineering
lakeheadu.ca/graduate-program-elco-engineering

MASTER OF SCIENCE IN MECHANICAL ENGINEERING (MSc)

Lakehead University's Master of Science in Mechanical Engineering program aims to foster students' independent research abilities through a combination of course work and systematic research. This program provides a dynamic and unique curriculum to train graduates to tackle mechanical engineering challenges faced by industries and communities effectively and efficiently. Graduate students in the MSc Mechanical Engineering program will benefit from small class sizes, friendly work environment, and close supervisor-student interactions.

Areas of faculty research include, but are not limited to:

- ▶ Mechatronics
- ▶ System State Prognostics
- ▶ Vibration and Control
- ▶ Design and Manufacturing
- ▶ Machinery Health Condition Monitoring
- ▶ Fluid and Thermal Dynamics
- ▶ Alternative Energy and Powertrain

lakeheadu.ca/masters-mechanical-engineering

lakeheadu.ca/graduate-program-mechanical-engineering



MASTER OF SCIENCE IN CHEMICAL ENGINEERING (MSc)

The Master of Science in Chemical Engineering program at Lakehead University satisfies the demand for highly qualified personnel who are prepared to address global challenges within the field of Chemical Engineering. Students in the MSc program have the opportunity to work collaboratively with world-class researchers, research facilities, and research institutes. Graduate students will benefit from participating in industrially driven projects, and close supervisor-student interactions.

This is a thesis program, which aims to foster the development of students' independent research abilities, and is ideal for students seeking to pursue doctoral studies as well as students interested in research and development careers within the industry.

Areas of faculty research include, but are not limited to:

- ▶ Cement chemistry
- ▶ Removal of inorganic gases from air by adsorption
- ▶ Membrane bioreactors
- ▶ Polymerization and polymer applications
- ▶ Wastewater treatment
- ▶ Biorefinery
- ▶ Biodiesel, renewable chemicals
- ▶ Fundamental and application of colloid and interface science
- ▶ Air pollution control
- ▶ Fluid mechanics
- ▶ Surface science and engineering

lakeheadu.ca/masters-chemical-engineering

MASTER OF SCIENCE IN ENVIRONMENTAL ENGINEERING (MSc)

This unique Master of Science in Environmental Engineering program provides a dynamic curriculum to train graduates from engineering and related natural sciences in providing effective solutions to environmental challenges faced by industries and communities. Our extensive research capabilities are supported by outstanding laboratory facilities, including a centralized instrumentation laboratory. Our faculty members and graduate students conduct cutting-edge research in both fundamental studies and applied science and engineering to address global environmental issues, such as climate change, water crisis, and energy crisis.

Areas of faculty research include, but are not limited to:

- ▶ Biorefinery and Bioenergy Production
- ▶ Water Resources Engineering
- ▶ Water and Wastewater Purification
- ▶ Geoenvironmental Engineering
- ▶ Utilization of Industrial Wastes and Byproducts
- ▶ Green Cements
- ▶ Greenhouse Gases Reduction

lakeheadu.ca/masters-enve-engineering

lakeheadu.ca/graduate-program-enve-engineering



DOCTOR OF PHILOSOPHY IN ENGINEERING (PhD)

• Electrical & Computer Engineering

Our PhD program is designed to train independent researchers. Our students are called upon to perform highly specialized and original research that makes a distinct contribution of knowledge to one of the major fields within our program. Expertise spans across the disciplines including highly recognized research in areas such as:

- ▶ Circuits
- ▶ Natural language processing
- ▶ Energy Systems
- ▶ Semantic web
- ▶ Semiconductors
- ▶ Artificial intelligence
- ▶ Communications
- ▶ Neural networks

Under the direct supervision of one of our faculty members, our PhD candidates learn to review the state of current technical knowledge in an engineering research area, to identify strengths and weaknesses in this research and to devise a new research initiative to contribute to the area. Students must carry out this research project with objectivity and care, and they are expected to document and publish their results in internationally recognized journals and present their research at conferences. Our graduates can choose to stay here and become leaders in the booming technology sector of Northwestern Ontario, or move on to R&D careers in companies across Canada and worldwide.

lakeheadu.ca/doctoral-programs

lakeheadu.ca/graduate-programs-engineering

FACULTY OF HEALTH & BEHAVIOURAL SCIENCES

The Faculty of Health and Behavioural Sciences is comprised of several departments and schools, all of which share a dedication to human health and well-being. It is our goal to offer educational programming and inspire innovative research that will meet the ever changing demands of the Canadian health care sector, with special emphasis and sensitivity to rural, remote, Indigenous and northern health issues.

HEALTH SCIENCES

MASTER OF HEALTH SCIENCES (MHSc)

The Department of Health Sciences offers an on-campus, thesis-based, Master of Health Sciences (MHSc) program that is designed to provide students with the knowledge and skills to undertake supervised research study in a relevant area of concern, within the broad definition of health.

Areas of Faculty research include, but are not limited to:

- ▶ Work disability prevention and occupational health epidemiology
- ▶ Social justice and determinants of health
- ▶ Indigenous, northern, and rural health
- ▶ Sustainability and health
- ▶ Dementia, aging, and health
- ▶ Ecosystem and place-based approaches to health
- ▶ Geographic information systems (GIS)
- ▶ Health and social service utilization of vulnerable populations
- ▶ Prevalence and management of chronic diseases and multi-morbidity
- ▶ Determinants of safe and unsafe driving
- ▶ Food systems and health

Several specializations are offered in the MHSc program, please see back cover for further details

lakeheadu.ca/masters-health-sciences

lakeheadu.ca/masters-specialization-gerontology

MASTER OF PUBLIC HEALTH (MPH)

In the Master of Public Health degree, students will focus on current issues in the science and/or service of public health, so that they may gain experience through opportunities in any of the fundamental disciplines that underlie public health. The program is primarily intended to prepare graduates for a career in public health practice. This program is delivered using a unique blend of on-campus and distance technology and includes a 400 hour practicum component. Several specializations are offered in the MPH program. With the exception of Master of Public Health programs with Specialization in Nursing (with or without Nurse Practitioner Electives), students may apply to either a course-based or thesis option.

lakeheadu.ca/masters-public-health

lakeheadu.ca/masters-specialization-gerontology

INTERDISCIPLINARY SPECIALIZATION IN GERONTOLOGY

Gerontology, the study of aging, is dynamic and diverse; the interests and needs of an aging population are complex. Older people are concerned with a variety of subjects from social and financial issues to education and health care. In addition to understanding how seniors can maintain a healthy, active lifestyle, gerontologists are interested in issues such as learning, retirement, care giving, illness, employment, sexuality and coping strategies.

The Gerontology Program is Interdisciplinary and involves collaboration with the following academic departments:

▶ Anthropology	▶ Psychology	▶ Education
▶ Kinesiology	▶ Social Work	▶ Public Health
▶ Nursing	▶ Sociology	
▶ Philosophy	▶ Women's Studies	

Students experience an innovative, interdisciplinary learning perspective, have the opportunity to access multifaceted resources and work together with complementary disciplines.

lakeheadu.ca/masters-specialization-gerontology

SOCIAL WORK

MASTER OF SOCIAL WORK (MSW)

Lakehead University offers a Master of Social Work (MSW) degree, which emphasizes an advanced generalist practice approach to working with individuals, families, communities, organizations, and political systems based on an ecological view of social work practice. The curriculum focuses on the knowledge, values, and skills necessary for professional practice in environments characterized by urban regional centres, rural and remote communities, large geographic distances, low population density, diverse First Nations communities and people, and a mix of formal services. Please note: students will initially be accepted into the project track, then after consultation with their faculty supervisors, students who prefer the thesis track may request a change in program. **Applicants must be completing or hold an Honours Bachelor of Social Work degree to be considered for admission.**

lakeheadu.ca/masters-social-work

lakeheadu.ca/masters-specialization-gerontology

lakeheadu.ca/masters-specialization-womens-studies

PSYCHOLOGY

Applications for Clinical Psychology programs are due **December 15th**

The Department of Psychology offers Master's and PhD programs in Clinical Psychology and in Psychological Science.

Areas of faculty research areas include, but are not limited to:

- ▶ Indigenous mental health and addiction
- ▶ Cognitive-behavioural considerations in eating disorders, self-regulatory processes in eating behaviour, body image, and stress
- ▶ Cognitive processes, problem solving, and memory
- ▶ Mood and anxiety disorders, problem gambling, chronic pain, evolutionary psychology
- ▶ Vision, attention, multisensory integration, face perception and biorhythmicity
- ▶ Cultural clinical psychology, gender and depression, suicide and nonsuicidal self-harm, resilience, student mental health
- ▶ Social cognition, systems thinking, and the self; application of social and personality theory
- ▶ Mental health and addiction services, systems, and policy; outcomes research; health behaviour
- ▶ Behavioural endocrinology, women's health, clinical neuropsychology
- ▶ Psychological strengths and positive youth development
- ▶ Mental illness stigma, clinical, ethical, and professional issues

MASTER OF ARTS IN CLINICAL PSYCHOLOGY (MA)

The goal of the MA Clinical Psychology program is to prepare students for doctoral-level training in clinical psychology. The clinical programs focus on the scientific understanding of the behaviour of individuals, groups and social systems, and the application of this understanding to enhance the functioning and well-being of individuals, groups, and societies. The program of study includes foundational and professional courses, thesis work, and practicum training.

lakeheadu.ca/masters-psychology-clinical
lakeheadu.ca/masters-specialization-gerontology
lakeheadu.ca/masters-specialization-womens-studies

MASTER OF SCIENCE IN PSYCHOLOGICAL SCIENCE (MSc)

The Master of Science in Psychological Science is a research-intensive program that addresses all areas of psychology including biological, cognitive, and individual and social bases of behaviour. The Psychological Science curriculum is based on an apprenticeship model, which includes flexible core courses that are appropriate to a student's area of research.

lakeheadu.ca/masters-psychological-science

lakeheadu.ca/masters-specialization-gerontology

lakeheadu.ca/masters-specialization-womens-studies

DOCTOR OF PHILOSOPHY – CLINICAL PSYCHOLOGY (PhD)

The PhD Clinical Psychology program trains students at a doctoral level in clinical and research skills, and allows graduates to pursue a career in professional practice. The clinical programs provide generalist training that allows career flexibility in urban or rural practice settings, and in academic institutions. The program of study includes coursework and practical training in core content areas, historical and scientific foundations of psychology, foundations of professional practice, and specific professional skills. The PhD program is accredited by the Canadian Psychology Association and graduates can pursue professional licensure/registration.

lakeheadu.ca/doctoral-psychology-clinical

DOCTOR OF PHILOSOPHY – PSYCHOLOGICAL SCIENCE (PhD)

The PhD program in Psychological Science is a research-intensive program that advances the student's Master's level knowledge and skills in psychology research through an apprenticeship model appropriate to the student's area of focus.

lakeheadu.ca/doctoral-psychological-science



KINESIOLOGY

GRADUATE DIPLOMA IN PROFESSIONAL KINESIOLOGY (GDIP)

The Graduate Diploma in Professional Kinesiology provides professional training and clinical skill upgrading for current and future practitioners of Kinesiology. Individuals will gain advanced theoretical knowledge and practical experience to help prepare them to work within the scope of practice of a Kinesiologist.

The diploma program is offered over a 12-month time frame commencing in September. The program includes four online courses that run consecutively, and four 5-day on-site practical courses. The program also includes a 200-hour placement that may occur within the province, the country, or internationally, provided a suitable setting is identified with an appropriate supervisor.

Content in the program includes the following advanced level topics: assessment skills related to peripheral and spinal joints; exercise prescription for both healthy individuals and those with chronic disease; communication and leadership in the context of ergonomics; and disability management, and business, ethics, and risk management related to kinesiology.

lakeheadu.ca/diploma-kinesiology

**EXCEPTIONAL.
UNCONVENTIONAL.**

MASTER OF SCIENCE IN KINESIOLOGY (MSc)

This degree program employs a multi-disciplinary approach to focus on the study of human performance from a scientific perspective. The program centres around nine content areas including: adapted physical activity; biomechanics; applied ergonomics and occupational performance; exercise physiology; gerontology; health promotion; motor control and learning; psychology of sport and physical activity; and sports medicine/rehabilitation. As part of this two-year program, students complete five courses related to their chosen content area in addition to a thesis-based project.

Areas of Faculty research include:

- ▶ Achievement related to sport; perfectionism
- ▶ Biomechanical and physiological aspects of movement and performance
- ▶ Exercise physiology, sports medicine, and interprofessional education
- ▶ Health promotion and health psychology; motivational interviewing and health coaching; lifestyle interventions
- ▶ Adapted physical activity; psychometric issues in assessment and measurement
- ▶ Rehabilitation and sports medicine (clinical, biomechanical, and physiological aspects)
- ▶ Applied ergonomics; occupational task performance; sex/gender and work health
- ▶ Biomechanics; modeling and simulation; measurement
- ▶ Clinical and environmental exercise physiology; cerebral and neuromuscular performance; nutrition
- ▶ Human motor control; motor coordination during movement; functional motor recovery after neurotrauma

lakeheadu.ca/masters-kinesiology

lakeheadu.ca/masters-specialization-gerontology





FACULTY OF NATURAL RESOURCES MANAGEMENT

Modern Natural Resources Management is about people, science and technology, and applying natural and social sciences to the management of the environment for the benefit of society. Our professional programs offer a balanced view of sustainable ecosystem management with respect to the many social, economic and environmental challenges and opportunities facing us now and in the future. While our location in the midst of Canada's vast boreal forest is unbeatable, we also recognize the need to ensure you are aware of, and prepared for, stewardship on a global scale.

MASTER OF SCIENCE IN FORESTRY (MScF) - 1 YEAR

The emphasis of the course-based offering of the MScF is professionalism, communication and planning at a strategic level beyond basic natural resources management. This program includes an internship, and participation in Field School in an international or domestic setting. The research internship will be closely coordinated by the Faculty and may involve local, regional, national as well as international collaborators.

lakeheadu.ca/masters-forestry

MASTER OF SCIENCE IN FORESTRY (MScF) - 2 YEAR

The MScF thesis-based program is a research-oriented degree designed to give graduates a firm foundation in the process of scientific inquiry. Most research projects are undertaken in one or more of the biophysical forest sciences, but social science research may also be undertaken. Research projects are designed jointly by the student, a Research Supervisor, and the faculty member who serves as the student's Faculty Supervisor.

lakeheadu.ca/masters-forestry

DOCTOR OF PHILOSOPHY IN FOREST SCIENCES (PHD)

The PhD in Forest Sciences is a research-based program focused on the development of researchers in the field of forest sciences, including, but not limited to the following subject areas:

- ▶ Management planning
- ▶ Integrated forest resources management
- ▶ Fish and wildlife
- ▶ Regulation and scheduling
- ▶ Policy and legislation
- ▶ Soils / hydrology
- ▶ Pathology
- ▶ Entomology
- ▶ Fire management and ecology
- ▶ Dendrology
- ▶ Ecology/silvics
- ▶ Genetics / tree improvement
- ▶ Remote sensing
- ▶ Photogrammetry
- ▶ Geographic information system
- ▶ International forestry
- ▶ Wood technology/ utilization
- ▶ Harvesting/mechanization/ roads
- ▶ Economics
- ▶ Business principles
- ▶ Operations research
- ▶ Mensuration
- ▶ Statistics/experimental design/research methods
- ▶ Restoration ecology
- ▶ Watershed management
- ▶ Invasive species control

lakeheadu.ca/doctoral-forest-sciences

FACULTY OF SOCIAL SCIENCES & HUMANITIES

Our graduates are entrepreneurial, creative and highly adaptable to new and ever-changing workplace environments, possessing essential skills and knowledge sought after by employers, particularly in the area of critical thinking and advanced communication and research. Your Lakehead University education will prepare you for a wide range of career choices.

MASTER OF ARTS IN ENGLISH (MA)

Our MA program offers students the opportunity to pursue their scholarly interests in the way that best suits them, as we offer a number of different program options: the traditional thesis option for those students who want the experience of writing an in-depth study on their topic of choice; a coursework option that provides students with coverage of many fields and the experience of working with a greater number of professors; and a research-project option that combines the two. We also offer a creative-project option, which allows students to write a creative work, while still engaging in critical analysis of the genre and form in which they are writing. Past creative projects have included works in fantasy, children's literature, poetry, and creative non-fiction.

lakeheadu.ca/masters-english

lakeheadu.ca/masters-specialization-womens-studies

MASTER OF ARTS IN HISTORY (MA)

Historians seek to bring the past to life with the understanding that what we know of the past is not static but constantly evolving. Our Master's program offers the option of a Major Research Project/Paper, Course-Work, or Thesis Program. It provides excellent preparation for further graduate studies at the Ph.D. level.

The specializations of members of the Department of History are geographically and thematically broad with a focus on the 19th and 20th centuries.

Areas of faculty research include, but are not limited to:

- ▶ Canada with an emphasis on political and labour history
- ▶ Modern South Asia with an emphasis on people and the environment
- ▶ Latin America with an emphasis on immigration and racism
- ▶ Western Europe with an emphasis on the Holocaust and human rights
- ▶ Eastern Europe with an emphasis on political and social movements
- ▶ Canada with an emphasis on the military and external relations

For more information about the Department of History and the research and teaching interests of faculty members, along with a list of completed theses, papers, and where our grads are now, please visit:

lakeheadu.ca/masters-history

lakeheadu.ca/graduate-program-history

lakeheadu.ca/academics/departments/history/our-alumni

MASTER OF ARTS IN SOCIAL JUSTICE (MA)

If you have ever wondered: 'What can I do? How can one person make a difference?' then this program is for you. Social Justice is an interdisciplinary graduate program that allows students to tailor their education to best fit their scholarly and activist interests. Our program is designed to empower students with the practical and academic skills necessary to challenge the current status quo and work towards making positive change.

lakeheadu.ca/masters-social-justice

lakeheadu.ca/graduate-program-socialjustice

lakeheadu.ca/masters-specialization-womens-studies

MASTER OF ARTS IN SOCIOLOGY (MA)

We offer expertise in a number of theoretical and substantive research areas in Sociology, and offer training in both qualitative and quantitative research methods. Our faculty have been very successful in garnering publications and research grants, and enjoy global reputations for their scholarly contributions. Our main research streams include: Health, Aging and the Body; Media, Culture and Technology; and Social Justice and Northern communities. We also offer specializations with the programs of Gerontology and Women's Studies. Our students have obtained funding support through internal and external scholarships, as well as research and teaching assistant positions. Through our professional training, they have also presented at academic conferences, published in peer-reviewed journals, and moved on to PhD programs and professional careers.

lakeheadu.ca/masters-sociology

lakeheadu.ca/masters-specialization-gerontology

lakeheadu.ca/masters-specialization-womens-studies

INTERDISCIPLINARY SPECIALIZATION IN WOMEN'S STUDIES

Your interdisciplinary work will critically assess the relevance of existing models of knowledge in reflecting experience and scholarship on women, gender, and sexuality. The program allows you to develop and integrate feminist teaching, learning, and research in the university and the community. Our graduates hold careers in a broad range of fields, and use their training to engage in anti-oppressive, diversity-driven, gender-related work. Faculty research areas include law, law and literature, the body, anti-violence work, fan studies, cultural studies, women in leadership, reproduction and technology, and more.

lakeheadu.ca/masters-specialization-womens-studies



FACULTY OF SCIENCE & ENVIRONMENTAL STUDIES

Our Faculty of Science & Environmental Studies (SES) has ten departments: Anthropology, Biology, Chemistry, Computer Science, Economics, Geography and the Environment, Geology, Mathematical Sciences, Sustainability Sciences, and Physics. We have disciplinary-based and interdisciplinary programs at the Master's level and two interdisciplinary PhD programs in Biotechnology and Chemistry and Material Science. Some Master's programs are available as course-based options. Applicants interested in thesis-based programs are encouraged to contact potential supervisors directly before submitting an application for graduate study.

MASTER OF SCIENCE IN ARCHAEOLOGICAL SCIENCES (MSc)

This 2-year thesis based MSc in Archaeological Sciences focuses upon the application of science and technology to studying humans and their biological origins, histories and cultures.

Areas of faculty research include, but are not limited to:

- ▶ Paleoanthropology
- ▶ Biological anthropology
- ▶ Human osteology
- ▶ Zooarchaeology
- ▶ Morphometrics
- ▶ Forensics
- ▶ Stable isotopes, trace elements
- ▶ Paleoenvironmental analysis
- ▶ Archaeobotany (micro and macro botanical analysis)
- ▶ Pleistocene geomorphology
- ▶ Geoarchaeology
- ▶ Field Archaeology
- ▶ Cultural Heritage Management
- ▶ Material Culture studies
- ▶ Residue and use-wear
- ▶ Micro-botanical residues
- ▶ Microscopy, hair and fibre analysis
- ▶ Near-surface geophysics and site prospection
- ▶ 3D modelling and printing
- ▶ UAV mapping, photogrammetry
- ▶ Remote Sensing, Spatial Analysis

lakeheadu.ca/masters-archaeological-science
lakeheadu.ca/graduate-program-archaeological-science

MASTER OF SCIENCE IN BIOLOGY

The Department of Biology maintains modern laboratories and animal care facilities, unique field sites, and access to a wide spectrum of analytical services.

Areas of faculty research include, but are not limited to:

- ▶ Aquatic Ecology and Fisheries Biology
- ▶ Biomedical Science
- ▶ Biorefining and Bioenergy
- ▶ Cancer Biology
- ▶ Conservation Biology
- ▶ Environmental Microbiology and Microbial Ecology
- ▶ Evolutionary Ecology
- ▶ Food Microbiology
- ▶ Herpetology
- ▶ Immunology and Microbiology
- ▶ Ornithology
- ▶ Parasitology
- ▶ Physiology and Cell Biology
- ▶ Plant Ecology
- ▶ Plant Physiology and Biochemistry

lakeheadu.ca/masters-biology
lakeheadu.ca/biology-research

MASTER OF SCIENCE IN CHEMISTRY (MSc)

Our Department of Chemistry offers a graduate program that provides students with diverse opportunities across the sub-disciplines of analytical, biochemical, inorganic, organic, and physical chemistry.

Areas of faculty research include, but are not limited to:

- ▶ Electrochemistry and surface analysis
- ▶ Photochemistry
- ▶ Material science
- ▶ Environmental and medicinal chemistry
- ▶ Molecular design
- ▶ Food Chemistry
- ▶ Pulp and paper research
- ▶ Radiochemistry
- ▶ Organometallic chemistry and catalysis
- ▶ Medical Imaging
- ▶ Organic synthesis
- ▶ Colloid and Interface Science
- ▶ Aqueous silicon chemistry
- ▶ Separation Science and Technology

lakeheadu.ca/masters-chemistry

MASTER OF SCIENCE IN COMPUTER SCIENCE (MSc)

The MSc in Computer Science provides an opportunity to explore the breadth and depth of advanced knowledge in the discipline. Faculty, staff, and students are equipped with state-of-the-art computing facilities including smart lecture rooms, labs, and a variety of computing technologies (e.g. virtual reality, parallel computing). Students benefit from a selection of advanced courses and a chance to pursue research that aligns with their interests and aspirations.

A co-op option is available after completion of two terms (four half graduate courses). Suitability for the co-op option will be based on academic performance in the program.

lakeheadu.ca/masters-comp-sci

MASTER OF ARTS IN ECONOMICS (MA)

The Economics program offers training in core economic theory courses as well as a number of field options. Most students opt for the non-thesis option given that it is the standard in most graduate Economics programs in North America. This option consists of eight half courses and an extended research paper.

A co-op option is available after completion of three full graduate courses. Suitability for the co-op option will be based on academic performance in the program.

lakeheadu.ca/masters-economics

MASTER OF ENVIRONMENTAL STUDIES (MES)

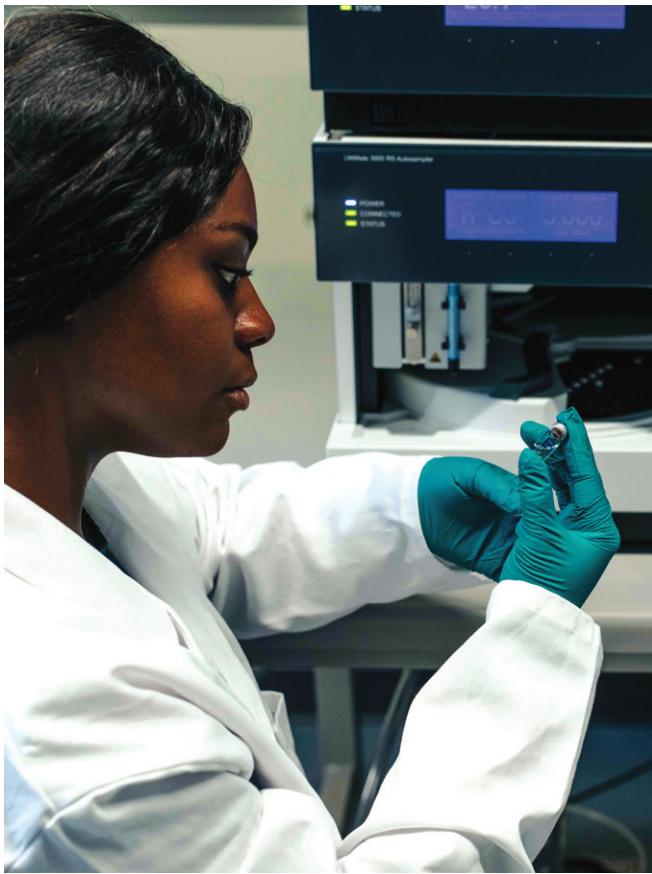
The thesis-based 2 year MES focuses on field training and interdisciplinary study, focusing on challenges in the relationships between humans and the natural environment.

Areas of faculty research include, but are not limited to:

- ▶ Sustainable communities
- ▶ Economic development
- ▶ Indigenous land use and occupancy
- ▶ Protected areas
- ▶ Social impacts of natural resource extraction
- ▶ Conservation
- ▶ Colloid and Interface Science
- ▶ Traditional subsistence
- ▶ Organic synthesis
- ▶ Paleo-ecology
- ▶ Separation Science and Technology
- ▶ Climate change
- ▶ Aqueous silicon chemistry
- ▶ Biological and aquatic remediation
- ▶ GIS, remote sensing
- ▶ Culture and identity

lakeheadu.ca/masters-mes





MASTER OF SCIENCE IN GEOLOGY (MSc)

The Master of Science in Geology has a strong focus on various aspects of Precambrian geology with a secondary focus on soil science, terrestrial biogeochemistry and environmental geology.

Areas of faculty research include, but are not limited to:

- ▶ Mineralogy and petrology
- ▶ Geochemistry
- ▶ Structural Geology
- ▶ Mapping and tectonics
- ▶ Sedimentology and Basin analysis
- ▶ Economic geology
- ▶ Terrestrial biogeochemistry and soil science

lakeheadu.ca/masters-geology

MASTER OF SCIENCE IN MATHEMATICAL SCIENCES (MSc)

Graduate students in the Mathematical Sciences program will work on research in the area of expertise of one or more of our faculty members.

Areas of faculty research include, but are not limited to:

- ▶ Algebra
- ▶ Graph theory
- ▶ Functional analysis
- ▶ Harmonic analysis
- ▶ Numerical analysis
- ▶ Operator algebras
- ▶ Optimization
- ▶ Operations research
- ▶ Partial differential equations
- ▶ Probability and statistics

lakeheadu.ca/masters-mathematics

MASTER OF SCIENCE IN PHYSICS (MSc)*

MSc Physics students benefit from close working relationships with their advisors, and these relationships help to facilitate students' research in Condensed Matter & Optical Physics:

▶ Semiconductor	▶ Soft-condensed matter
▶ Surface science	▶ Fibre optics

Also, our collaboration with the medical physics staff at the Regional Cancer Centre in Thunder Bay provides a number of applicable research opportunities with medical physics professionals. As well as the regular core courses, students are provided with special topics courses. This combination of general and thesis-specific courses prepares students for further graduate work and provides a solid background in their area of specialization.

*Students enrolled in the MSc Physics program may take the co-operative option subject to the approval of the Department.

lakeheadu.ca/masters-physics

DOCTOR OF PHILOSOPHY IN BIOTECHNOLOGY (PhD)

The PhD in Biotechnology is a research-based, interdisciplinary program with two areas of specialization:

Environmental Biotechnology

- ▶ Biorefining
- ▶ Community ecology of altered environments and aquatic toxicity
- ▶ Microbial engineering
- ▶ Pollutant degrading microorganisms
- ▶ Pulp and paper biofilm analysis
- ▶ Renewable bioenergy
- ▶ Wastewater treatment
- ▶ Pathogenic microorganisms/ Infectious disease

Medical Biotechnology

- ▶ Bioinformatics/genomics/ protein folding
- ▶ Biosurveillance/computer modelling
- ▶ Cancer biology - targeted therapies and synthetic vaccines
- ▶ Cardiac and skeletal muscle dysfunction
- ▶ Medical imaging/optical fibre lasers
- ▶ Medicinal plants/natural compounds as anti-cancer and anti-oxidant agents

lakeheadu.ca/doctoral-biotechnology

DOCTOR OF PHILOSOPHY IN CHEMISTRY AND MATERIALS SCIENCE (PhD)

The PhD in Chemistry and Materials Science is an interdisciplinary research-intensive graduate program focused on the intellectual development and advanced training of scientists in two fields of specialization: physical chemistry - the study of physical principles which govern the behaviour and properties of chemical systems; and molecular and materials science - the synthesis and characterization of novel compounds and materials.

Areas of faculty research include, but are not limited to:

- ▶ Surface analysis
- ▶ Molecular design
- ▶ Pulp and paper research
- ▶ Organometallic chemistry and catalysis
- ▶ Organic synthesis
- ▶ Aqueous silicon chemistry
- ▶ Photochemistry
- ▶ Environmental chemistry
- ▶ Medicinal chemistry
- ▶ Food Chemistry
- ▶ Radiochemistry
- ▶ Medical Imaging
- ▶ Colloid and Interface Science
- ▶ Separation Science and Technology

lakeheadu.ca/doctoral-chemistry-material-science

Program Offerings

	Thesis	Course	Research Project	Creative Project	Portfolio	Start Terms		
						Sept	Jan	May
Faculty of Business Administration and Commerce								
Master of Business Administration (MBA) (12 months/16 months) ★		•				•		
Master of Science Management (MScMgt) ▲	•		•			•		
Graduate Diploma in Accounting (GDA)* (1 term/3 months)		•				•		
BEng/MBA*								
Faculty of Education								
Master of Education in Educational Studies (MEd)**	●	■	○	▲		•	•	•
Master of Education in Education for Change (MEd)								
Environmental and Sustainability Education**	●	■	○	▲		•	•	•
Indigenous Education**	●	■	○	▲		•	•	•
Social Justice Education**	●	■	○	▲		•	•	•
Joint Doctor of Philosophy in Educational Studies (PhD)							•(July)	
Faculty of Engineering								
Master of Science in Chemical Engineering (MSc)	•					•	•	•
Master of Science in Civil Engineering (MSc)*** ♦	•	•				•		
Master of Science in Electrical and Computer Engineering (MSc)*** ♦	•	•				•		
Master of Science in Environmental Engineering*** ♦	•	•				•		
Master of Science in Mechanical Engineering (MSc)*** ♦	•	•				•		
Doctor of Philosophy in Engineering (PhD):								
Electrical and Computer Engineering						•	•	
Faculty of Health & Behavioural Sciences								
Master of Health Sciences (MHSc) ● □ ▲ ♦ ▲	•					•		
Master of Public Health (MPH) ● □ ○ ▲ ○ ♦	•	•				•		
Master of Science in Kinesiology (MSc) ●	•					•		
Graduate Diploma in Professional Kinesiology (GDIP) ▲		•				•		
Master of Arts in Clinical Psychology (MA) ● □	•					•		
Master of Science in Psychological Science (MSc) ● □	•					•		
Doctor of Philosophy in Psychology - Clinical Psychology (PhD)						•		
Doctor of Philosophy in Psychology - Psychological Science (PhD)						•		
Master of Social Work (MSW) ● □	•		•			•		
Faculty of Natural Resources Management								
Master of Science in Forestry (MScF) (1yr) ▲		•				•		
Master of Science in Forestry (MScF) (2yr)	•					•	•	•
Doctor of Philosophy in Forest Sciences (PhD)						•	•	•
Faculty of Social Sciences & Humanities								
Master of Arts - English (MA) □	•	•	•	•		•		
Master of Arts - History (MA)	•	•	•			•		
Master of Arts - Social Justice (MA) □ ♦	•	•	•	•		•		
Master of Arts in Sociology (MA) ● □ (research paper option available)	•					•	•	
Faculty of Science & Environmental Studies								
Master of Science in Archaeological Sciences (MSc)	•					•		
Master of Science in Biology (MSc)	•					•	•	•
Master of Science in Chemistry (MSc)	•					•	•	•
Master of Science in Computer Science (MSc) ♦	•	•				•		
Master of Arts in Economics (MA) ♦		•				•		
Master of Environmental Studies (MES)	•					•		
Master of Science in Geology (MSc)	•					•	•	•
Master of Science in Mathematical Sciences (MSc)	•	•				•		
Master of Science in Physics (MSc) ♦	•					•	•	
Doctor of Philosophy in Biotechnology (PhD)						•	•	•
Doctor of Philosophy in Chemistry and Materials Science (PhD)						•	•	•

STAY CONNECTED



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to learn more visit:
graduatestudies.lakeheadu.ca

- Specialization in Gerontology
- Specialization in Women's Studies
- ▲ Specialization in Indigenous & Northern Health
- Specialization in Nursing
- Specialization in Epidemiology
- ♦ Specialization in: Social-Ecological Systems, Sustainability and Health
- ▲ Flex-Time Option Available
- ★ Part-Time Option Available
- Online Option Available
- ◆ Co-op or Practicum Streams Available
- ▲ Fieldwork and/or Placement

*See page 12 for eligibility.

**Please note, the Women's Studies specialization is not available as an online option.

***Co-op opportunities are available in course-based programs only.

The Senate of Lakehead University reserves the right to change regulations, program start terms, and course requirements, as outlined in this Viewbook, without prior notice.

Lakehead University also offers a variety of undergraduate and professional programs - for a detailed list please visit mylakehead.ca