

USASK



UNIVERSITY OF
SASKATCHEWAN

Saskatoon | Canada | 2020–2021
Graduate and Postdoctoral Studies



Join us in seeking solutions to the world's greatest challenges

GRADUATE STUDIES AT THE UNIVERSITY OF SASKATCHEWAN

The University of Saskatchewan (USask) is a member of the U15, a group of the top research universities in Canada. We are home to more than 25,700 students from around the world.

We are known for our collaborative, inter-disciplinary approaches to tackling global challenges such as infectious disease, and food and water security. Study at USask is enhanced by world-class facilities on campus, including the Canadian Light Source synchrotron, VIDO-InterVac, the Global Institute for Food Security, the Global Institute for Water Security and the Sylvia Fedoruk Canadian Centre for Nuclear Innovation.

Our students work alongside internationally acclaimed faculty in diverse areas of study. As a student here, we will support you and celebrate your success. USask is committed to new and enhanced graduate programs, stemming from areas of research excellence and supporting growth in areas of local and global importance.



Ranked

Top 4

in Canada in the study of:

WATER RESOURCES #1

VETERINARY SCIENCES

**ENVIRONMENTAL SCIENCE
AND ENGINEERING**

AGRICULTURAL SCIENCES

(ARWU 2019 Subject Rankings)



COVER PHOTO:

More Than Meets The Eye

Runner-up, USask Images of Research 2019 competition

By Awang Hazmi Awang Junaidi, PhD Student In Veterinary Biomedical Sciences

The highlighted structures may first resemble floating lotus leaves and flowers, but they are actually single cells in a Petri dish. This scanning electron microscopy image shows cultured gonocytes, a population of male germline stem cells found in the newborn testis, which after maturity can ultimately give rise to sperm cells. Our research can provide valuable insights into the role of gonocytes in male fertility and the potential effect of environmental pollutants on future infertility.

The Images of Research competition provides a creative method of celebrating the groundbreaking research taking place at USask. Visit research.usask.ca/our-impact/research-in-images.php to see other submissions.

Saskatoon

City of Bridges

The University of Saskatchewan's historic main campus is recognized as one of the most beautiful in the country. Our campus is found at the heart of the vibrant city of Saskatoon, which has a growing population of more than 270,000 people.

Saskatoon offers many of the amenities of a large urban centre along with the friendliness and accessibility of a smaller city. There is plenty to do in Saskatoon every season, with live music events, festivals and cultural experiences offered year round. With its vibrant mix of many cultures, Saskatoon's blossoming culinary and local shopping scenes also stand out. This is a place of opportunity, diversity and innovation. As a student here and after you graduate, you will come to appreciate why so many have chosen to call this place home.



#18

on the *New York Times* list
of '52 Places to Go in 2018'



Located on
Treaty 6 Territory
and the Homeland
of the Métis



Good to excellent
air quality
across the province



One of Canada's
sunniest
Cities

Live and study in **Saskatchewan**

The benefits of living and studying in Canada are well-known, but there are additional advantages to choosing the province of Saskatchewan as your study destination.

HEALTH CARE

Free Saskatchewan government health insurance is available for full-time students with a valid study permit. As a full-time student, you also have access to extended health and dental benefits provided through the Graduate Student Association.

SASKATCHEWAN IMMIGRANT NOMINEE PROGRAM

Through the Saskatchewan Immigrant Nominee Program, the province invites residency applications from non-Canadians who want to make Saskatchewan their home. Successful applicants will be nominated to the federal government, so they can gain permanent residency in Canada. For more information visit saskatchewan.ca/immigration.

COST OF LIVING

Housing costs in Saskatchewan's cities and communities, including Saskatoon, are lower than in most major cities in Canada. The costs of transportation are also low, with the average commute time by car lasting only 20 minutes. As a student, you can enjoy unlimited public transit with the U-Pass included in your student fees.



Discovering solutions to global challenges

The University of Saskatchewan (USask) has a strong focus on collaborative, inter-disciplinary research aimed at solving pressing global issues such as infectious disease, and food and water security. Research at USask is enhanced by some of the most advanced research centres and facilities in the world. Here are some exceptional examples of how we are seeking solutions to the world's greatest challenges.

VACCINE AND INFECTIOUS DISEASE ORGANIZATION-INTERNATIONAL VACCINE CENTRE (VIDO-INTERVAC)

Developing vaccines for devastating diseases

USask's VIDO-InterVac, one of the world's largest and most advanced containment level 3 facilities is a global leader in infectious disease research and vaccine development, combatting dangerous pathogens in both animals and humans. VIDO-InterVac researchers are developing vaccines for new and re-emerging diseases such as Zika, respiratory infection MERS-CoV and tuberculosis, as well as diseases in cattle, pigs and poultry such as Johne's disease, bovine tuberculosis, lung plaque (Mycoplasma), African swine fever and the devastating pig virus PEDV. VIDO-InterVac has developed eight commercialized animal vaccines (six world firsts) and will launch a manufacturing facility for rapid vaccine production by 2020.

GLOBAL INSTITUTE FOR WATER SECURITY

Predicting and preparing for water threats in a changing climate

The Global Institute for Water Security (GIWS) supports the sustainable use of the world's water resources and protection against natural hazards like flood and drought. USask is ranked first in Canada and 19th in the world for water resources research (2019 ARWU Rankings). GIWS leads the Global Water Futures (GWF) network, the largest university-led water research program worldwide. GWF is transforming the way communities, governments and industries in Canada and other cold regions of the world prepare for and manage increasing water-related threats (including floods and droughts) in the face of global climate change.

GLOBAL INSTITUTE FOR FOOD SECURITY

Designing crops for global food security

As the world's population continues to grow, so does the demand for safe, reliable food. The Global Institute for Food Security (GIFS) is a partnership between government, private business and USask, and is working to find solutions to this global challenge. Researchers at GIFS have recently decoded the genomes for both bread wheat and durum wheat, discoveries that will benefit farmers globally. GIFS is also developing new technologies to enhance seed quality and make plants more robust and resilient to disease and insects, and creating perennial seed grains that will reduce the carbon footprint of farming operations, improve crop yields and other benefits.

CANADIAN LIGHT SOURCE

Lighting the way for research worldwide

The Canadian Light Source (CLS) is a national research facility of USask and Canada's only synchrotron. It produces the brightest light in Canada—millions of times brighter than even the sun. It is used by more than 1,000 scientists from around the world every year in ground-breaking health, agricultural, environment, and advanced materials research. Recently, scientists used the CLS to make structural changes to an antibody that is showing a lot of potential for reducing the growth of cancer tumours.



Community and Impact, first place, USask Images of Research 2018 competition
Steven Mamet, post-doctoral fellow in soil science

Our students and researchers come from around the world to work alongside our internationally acclaimed faculty in diverse areas of study. As a graduate student at USask you will learn, research and discover solutions that benefit the world. These are our young innovators' stories.



'Deep learning' software automatically detects diseases

PhD student Yi Wang's software makes diagnosis faster—it takes less than 30 seconds and is around 10 times faster than current technology. The software improves current computer-aided diagnosis (CADx) technology, which assists doctors to detect diseases from medical imaging scans such as ultrasound, computer tomography (CT) and retinal fundus imaging, which captures photos of the back of the eye. Wang and professor Seok-Bum Ko are teaching the software to detect lung and breast cancer from CT and ultrasound images with very positive results.



World's first wearable kidney the goal of USask-led research team

An artificial portable kidney that patients who have suffered renal failure could wear is to be created by a research team at USask. The artificial wearable kidney would reduce the need for hospital visits and decrease health care costs because dialysis could take place during a patient's regular routine. The research team is led by Amira Abdelrasoul, an assistant professor in the College of Engineering who leads USask's membrane science and nanotechnology research team.



USask study targets enzyme's role in breast cancer

PhD student Raghuvveera Goel's research may help limit the potential impact of the enzyme SRMS on the proliferation of breast cancer cells. The end goal is to offer better tools for early diagnosis and monitoring disease progression. Goel's initial research results showed that high SRMS levels correlated with more aggressive cancer and that SRMS appeared in the breast cancer cells of patients in larger quantities than in adjoining cells. Goel and professor Eriq Lukong have been the first to identify and map more than 660 proteins targeted by the SRMS enzyme. Together with professor Scott Napper, they customized a peptide array, a new screening tool that helps identify the role of enzymes in proteins. The array may be applied to determine targeted treatments by detecting how SRMS is active in a patient's cancer.



Mealworms may turn infected wheat into cash

USask researchers have found that tiny crawlers could help producers stuck with unsellable wheat—and make chickens happy. Fusarium fungus contamination in wheat caused more than \$1 billion in economic losses in Canada in 2016, affecting almost 80 per cent of Saskatchewan and Manitoba cereal crops. Master's student Carlos Ochoa and professor Fiona Buchanan have found that yellow mealworms can eat wheat infected with the fungus, whose mycotoxins are harmful. The worms remain unaffected after eating the grain, regardless of the level of mycotoxins that usually cause vomiting and abdominal pain in humans and affect the growth of livestock. The fattened mealworms, the offspring of a flightless beetle, could be a new, nutritious source of protein for chickens or fish.

 **118**
research chairs and distinguished professors

 **80+**
fields of graduate study

 **55**
research centres

Graduate scholarships and funding

DEAN'S SCHOLARSHIP

These scholarships are offered to students who have outstanding academic records, show research promise and are registering for the first time in a thesis-based graduate program.

MASTER'S	\$18,000/year for up to two years	DOCTORAL	\$22,000/year plus tuition for up to three years
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GRADUATE SCHOLARSHIPS

Graduate scholarships are offered through individual units (devolved funding) or through a university-wide competition (non-devolved funding). Devolved funding scholarship values may vary; contact the department/unit for more information. Current values for non-devolved funding are as follows.

MASTER'S	\$16,000/year for up to two years	DOCTORAL	\$20,000/year for up to three years
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GRADUATE TEACHING FELLOWSHIPS AND ASSISTANTSHIPS

Teaching fellowships and assistantships are available in most departments to qualified, full-time students who provide up to 12 hours of service per week to the university in the form of teaching assistance, marking, leading tutorials, etc.

GRADUATE TEACHING FELLOWSHIP	Up to \$17,000/year	GRADUATE TEACHING ASSISTANTSHIP	\$20.04/hour
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GRADUATE RESEARCH ASSISTANTSHIPS

University of Saskatchewan Graduate Research Assistantships are offered to University of Saskatchewan graduate students by faculty members holding research grants. The graduate student rate of pay is \$20.04 per hour.

VANIER CANADA GRADUATE SCHOLARSHIPS

Vanier Canada Graduate Scholarships are awarded by Canada's three research funding agencies:

- Canadian Institutes for Health Research (CIHR)
- Natural Sciences and Engineering Research Council of Canada (NSERC)
- Social Sciences and Humanities Research Council of Canada (SSHRC)

This scholarship program was created to attract and retain world-class doctoral students. Students must be nominated for these awards, valued at \$50,000 per year for three years. Visit vanier.gc.ca for more details.

SPECIAL SCHOLARSHIPS THROUGH PARTNERSHIP AGREEMENTS

There are several different supplemental scholarships available under various agreements between the University of Saskatchewan and our partners. Partnerships include China Scholarship Council (CSC), Vietnam International Education Development (VIED), and Ecuador Secretaría de Educación Superior, Ciencia, Tecnología e Innovación (SENESCYT). Visit grad.usask.ca for a full list of partnership agreements.

OTHER SCHOLARSHIPS AND AWARDS

Many departments have funding that is awarded to students based on academic merit. Students should write to the Graduate Chair of the department to inquire about the availability of funding.

There are numerous other awards administered through the College of Graduate and Postdoctoral Studies, including Endowed USask Scholarships and National Scholarships.

Bursaries are available for graduate students who take part-time/evening classes to develop their English writing and speaking skills.

Learn more and find how to apply at grad.usask.ca.

Graduate programs

FIELD	M	PhD
Accounting, Professional	■	
Agricultural Economics	■	■
Anatomy and Cell Biology	■	■
Animal Science	■	■
Anthropology	■	
Archaeology	■	
Art, Studio	■	
Biochemistry	■	■
Biological Engineering	■	■
Biological Psychiatry	■	■
Biology	■	■
Biomedical Engineering	■	■
Biostatistics	■	■
Business Administration	■	
Chemical Engineering	■	■
Chemistry	■	■
Civil Engineering	■	■
Community and Population Health Sciences	■	■
Computer Science	■	■
Curriculum Studies	■	
Economics	■	
Economics, Applied		■
Education, cross-departmental		■
Educational Administration	■	■
Educational Foundations	■	
Educational Psychology and Special Education	■	
Educational Technology and Design	■	

FIELD	M	PhD
Electrical Engineering	■	■
English	■	■
Environment and Sustainability	■	■
Environmental Engineering	■	■
Epidemiology		■
Finance	■	
Food Science	■	■
French	■	
Geography	■	■
Geological Sciences	■	■
Governance and Entrepreneurship in Northern and Indigenous Areas	■	
Health Sciences	■	■
History	■	■
Indigenous Studies	■	■
Kinesiology	■	■
Large Animal Clinical Sciences	■	■
Law	■	
Leadership in Post-Secondary Education	■	
Linguistics, Applied	■	
Marketing	■	
Mathematics	■	■
Mechanical Engineering	■	■
Microbiology, Applied	■	■
Microbiology and Immunology	■	■
Music	■	
Nursing	■	■
Nutrition	■	■

FIELD	M	PhD
Pharmacology	■	■
Pharmacy	■	■
Philosophy	■	
Physical Therapy	■	
Physics and Engineering Physics	■	■
Physiology	■	■
Plant Sciences	■	■
Political Studies	■	
Psychology	■	■
Public Administration	■	
Public Health	■	
Public Policy	■	■
Religion and Culture	■	
Small Animal Clinical Sciences	■	■
Sociology	■	■
Soil Science	■	■
Sustainable Environment Management	■	
Teaching English to Speakers of Other Languages	■	
Toxicology	■	■
Vaccinology and Immunotherapeutics	■	■
Veterinary Biomedical Sciences	■	■
Veterinary Microbiology	■	■
Veterinary Pathology	■	■
Water Security	■	
Women's, Gender and Sexualities Studies	■	
Writing	■	

GRADUATE CERTIFICATES

- Postgraduate Diploma (PGD)
- Postgraduate Degree Specialization Certificate (PGDSC)
- Graduate Certificate in Economic Analysis for Public Policy
- Graduate Certificate in Improving Teaching and Learning in Health Professions Education
- Graduate Certificate in Non-Profit Management
- Graduate Certificate in Public Management
- Graduate Certificate in Public Policy Analysis
- Graduate Certificate in Social Economy and Cooperatives
- Graduate Certificate in Quality Teaching in Health Professions Education



“My research holds promise for advancing regenerative medicine, especially for people who need organ replacements.”

ADAM MCINNES

VANIER CANADA GRADUATE SCHOLARSHIP RECIPIENT

MASTER OF SCIENCE IN BIOMEDICAL ENGINEERING STUDENT

RESEARCH: Develop a new gel to promote tissue growth for 3D printing of artificial organs that may one day be used for transplants.

Graduate admission requirements

ALL APPLICANTS

- A cumulative weighted average of at least 70% (USask grade system equivalent) in the last two years of full-time study (i.e. equivalent of 60 credit units at USask).
- Demonstrated ability for independent thought, advanced study and research.

MASTER'S PROGRAM APPLICANTS

A four-year undergraduate degree, or equivalent in an academic discipline relevant to the proposed field of study.

DOCTORAL PROGRAM APPLICANTS

A research-based master's degree, or equivalent, from a recognized university in an academic discipline relevant to the proposed field of study.

ADDITIONAL REQUIREMENTS FOR SOME GRADUATE PROGRAMS

Some graduate programs at the University of Saskatchewan have additional, program-specific admission requirements which may be higher than the minimum admission requirements of the College of Graduate and Postdoctoral Studies.

ENGLISH REQUIREMENTS

Applicants to graduate programs at the University of Saskatchewan must demonstrate English language proficiency. If you have a minimum of three consecutive years of full-time study or completion of a graduate degree at a recognized post-secondary institution where the exclusive language of instruction and examination of the program and/or institution is English, this requirement may be considered fulfilled. Applicants must otherwise demonstrate English language proficiency by completing an approved test, such as the common examples in the table below. All scores must be from one exam date, not to be combined with other exam dates. Tests are valid for two years after the testing date. Scores must be valid (no more than two years old) at the beginning of the student's first term of registration in the graduate program.

	FULLY QUALIFIED
IELTS Academic International English Language Testing System	Overall score: 6.5 No area below 6.0
TOEFL (Internet based) Test of English as a Foreign Language	Overall score: 86 No individual score below 19

ADMISSION TO LANGUAGE TRAINING PRIOR TO YOUR GRADUATE DEGREE PROGRAM

Applicants who do not meet the minimum English language proficiency requirement for admission to graduate programs may be conditionally admitted and can either submit a new test with satisfactory scores, or enroll in the University of Saskatchewan Language Centre. Please note that conditional admission may not be an option in all departments. Depending on the level of language training you require, you may need to request a deferral of your graduate program admission to a later term. Please note that not all programs allow deferrals of admission, so you must consult with the administrator in your program prior to pursuing this option.

- After you apply for admission to your graduate program, email the graduate administrators in your department and advise them that you do not currently meet the English language proficiency requirements, but will submit a new score, or attend the University of Saskatchewan Language Centre if you are granted conditional admission.
- If your application to graduate studies is successful, apply to the Language Centre.
- Once you have been admitted to the Language Centre, we will send you an admission letter for the English program. You can use this letter and your letter of conditional admission for your graduate program for your visa application.

Applicants who successfully complete the Language Centre program U-Prep 2 with a minimum score of 75% will be qualified to begin their graduate program at the next entry point. For more information about U-Prep and the Language Centre visit admissions.usask.ca/u-prep.php.

How to apply

1

FIND A PROGRAM

The University of Saskatchewan (USask) offers graduate programs in more than 80 fields of study. Explore at grad.usask.ca.

2

LEARN THE REQUIREMENTS AND DEADLINES

Application procedures vary between graduate programs. Decide on a program and review the program's page on grad.usask.ca for the following information:

Deadlines – Academic units set their own deadlines for applications. Academic units also make decisions on scholarships and fellowships at set times during the year. These vary from unit to unit and may be different from application deadlines.

Admission requirements – Requirements for graduate programs will vary. Check the program's webpage to confirm the specific requirements.

Application process – Some departments require you to identify a potential supervisor or research area before applying and some require additional documentation.

3

COMPLETE AN APPLICATION

Ready to apply? Visit grad.usask.ca to create an account and fill out an online application for admission.

To fill out and submit an application, you will need

- the names and email addresses of your referees,
- your educational history (including transcripts) from all post-secondary institutions you have attended, and
- Visa or MasterCard to pay the \$90 CAD application fee (this payment is non-refundable, and review of your application will not be done prior to the payment being received).

4

PRESENT PROOF OF ENGLISH LANGUAGE PROFICIENCY (IF REQUIRED)

See page 10 *Graduate admission requirements* for more details.

5

CHECK YOUR APPLICATION STATUS

Log in to your account to monitor your application status. Check when supplemental items have been received or whether additional items are needed, and see when a decision has been made on your application.

6

SUBMIT SUPPLEMENTAL ITEMS

When and how you submit your required documentation differs depending on the program to which you are applying. Refer to your specific program page on grad.usask.ca to view submission instructions. If you have applied to more than one program, you will need to submit documents for each program.

7

ACCEPT YOUR OFFER OF ADMISSION

If you receive an offer of admission, accept your offer online to officially become a USask student.

For more information on applying, visit grad.usask.ca.



Member of the
U15
group of top
Canadian research
universities



students from
132
countries

USASK BY THE NUMBERS



25,700+
students study here



3,300+
self-declared
Indigenous students



4,300+
graduate
students



3,400+
international
students



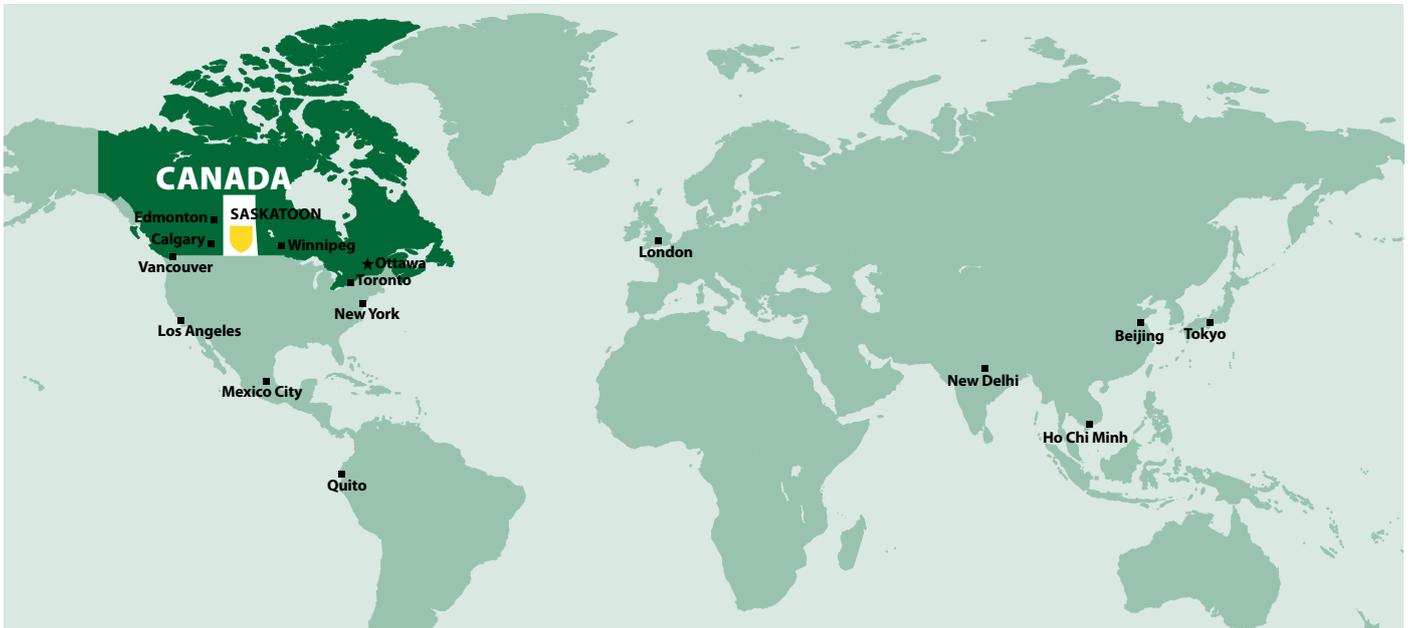
156,000+
alumni living
worldwide

Ranked
★ Top 4

in Canada in the study of:

WATER RESOURCES #1

VETERINARY SCIENCES
ENVIRONMENTAL SCIENCE
AND ENGINEERING
AGRICULTURAL SCIENCES



SASKATOON

POPULATION: 270,000+
CLIMATE: One of Canada's
sunniest cities

SPRING
8.9°C TO -3.3°C

SUMMER
24.3°C TO 10.5°C

FALL
9.2°C TO -2.6°C

WINTER
-10.2°C TO -20.7°C

CANADA

POPULATION: 37+ million
CAPITAL: ★ Ottawa
SIZE: 9.98 million km²



DRIVING DISTANCE

Vancouver: 1,580 KM
Edmonton: 525 KM
Calgary: 613 KM
Winnipeg: 780 KM



FLYING TIME

Vancouver: 1H 49M
Toronto: 3H 05M
New York: 4H 31M
Los Angeles: 6H 01M
Mexico City: 8H 25M
Quito: 15H 55M
London: 11H
New Delhi: 21H 40M
Tokyo: 15H 58M
Beijing: 17H 40M
Ho Chi Minh: 24H 33M

RECRUITMENT, ADMISSIONS AND TRANSFER CREDIT

✉ admissions@usask.ca
☎ (+1) 306-966-5788
🌐 grad.usask.ca
🌐 uofsask.cn

UNIVERSITY OF SASKATCHEWAN LANGUAGE CENTRE

✉ register.esl@usask.ca
☎ (+1) 306-966-4351
🌐 learnenglish.usask.ca

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👤 usaskofficial



EduCanada®
A world of possibilities
Un monde de possibilités

grad.usask.ca