



FOOD AND BIOPRODUCT SCIENCES

There has never been a better time to be a part of one of the largest industries around the world. Food science is a multidisciplinary field of study in which biology, physical sciences and engineering are used to study the nature of foods, the causes of their deterioration and the principles underlying food processing. Consider a career in Food and Bioproduct Sciences if you want to...

- create new exciting and nutritional products using unconventional ingredients
- develop functional foods that promote health benefits beyond basic nutrition
- work as a food inspector responsible for quality control and quality assurance
- create new specialty products that fill a gap in the market and meet the needs of people with food allergies and sensitivities
- investigate new methods to improve the safety of food handling, processing and packaging

HORTICULTURE SCIENCE

The emphasis on eating more fruits and vegetables as part of a healthy diet is drawing students to the multi-disciplinary study of horticulture. This field of study includes fruits, vegetables, greenhouses, confined environment production, urban agriculture and urban greening (ornamentals, landscape design, and turfgrass). Consider a career in Horticulture Science if you want to...

- introduce new fruit and vegetable crops with increased nutritional value, yield, storage ability, and better suited to a changing environment
- produce food crops in an environmentally sustainable manner
- design and maintain an urban forest and green spaces within urban areas



- improve people's livelihood through rural and urban food production
- work both locally and internationally to help increase food security
- improve people's lives through better nutrition and mental health, plus living in a healthier environment

SOIL SCIENCE

Soil Science is a fascinating area of study and is crucial for understanding how to grow food and biomass, the role of soil microorganisms in nutrient cycling and plant growth, how to reclaim disturbed landscapes from mining or spills as well as how soil can play a role in minimizing climate change. Consider a career in Soil Science if you want to...

- work in the outdoors
- evaluate nutrient and water availability for crop production
- enhance the productivity of agroecosystems for food and fibre while preserving soil health for future generations
- investigate how soil microorganisms improve plant production or rehabilitate contaminated sites
- have an in-depth understanding of the biological, chemical and physical processes in soil that affect ecosystems

ADMISSION REQUIREMENTS

Students must meet University of Saskatchewan admission requirements in regular or special admission categories and have completed Biology 30, Chemistry 30, and Foundations of Mathematics 30 (or Pre-Calculus 30) or equivalent. For more information on the required high school courses and applying to the program refer to admissions.usask.ca/requirements/deadlines.php.



BACHELOR OF SCIENCE AGRICULTURE

Agriculture represents the single largest use of the earth's resources. In this four-year applied life-science degree program, students learn a strong core of knowledge in basic scientific and technical theory, and how to apply that knowledge to real-world situations.



For more information:
agbio.usask.ca

AGRICULTURAL BIOLOGY

Agricultural Biology provides students with the ability to apply scientific principles to biotechnology, genetics, evolution and wildland ecology including but not limited to wildlife and conservation biology, toxicology and environmental conditions, and wildlife and domestic animals. Consider a career in Agricultural Biology if you want to...

- work as an aquatic biologist studying the ecology and behaviour of a wide range of microbes, animals and plants inhabiting inland fresh waters such as creeks, lakes, ponds, rivers and wetlands
- work as a field biologist focusing on plants in a variety of ecosystems to observe plant interactions within the environment, identify new plant species and look at wildlife and domestic animal behaviours and collect, document and analyze biological data
- work as a technical assistant in basic biological science research projects, applied government or university studies, and private agricultural-biotechnology companies

AGRICULTURAL ECONOMICS

A degree in Agricultural Economics provides students with the tools to look for practical solutions for economic, social and environmental issues. As the world's population grows, agricultural enterprises will be relied upon to supply the world with the food, feed, fibre and fuel the human population requires. Examine the effect of public policy on environmental quality, food safety, innovation, entrepreneurship and climate change as it relates to the production of agricultural and natural resources. Consider a career in Agricultural Economics if you want to...

- challenge agriculture policy and develop new policy strategies
- study markets and marketing to create risk management strategies
- examine the impact of innovation and technology on agriculture
- understand the business aspects of the world's largest companies and industries
- explore the influence of climate change and biotechnology on agriculture
- learn about globalization and trade in agricultural products
- identify problems and develop solutions to issues faced by agricultural managers
- analyze issues in natural resource and environmental economics and policy
- evaluate local and international trade opportunities and transportation logistics

AGRONOMY

Agronomy is the science of growing field crops and managing the soil. Students will integrate knowledge from the disciplines of Crop Science, Soil Science, Environmental Science and Agribusiness to provide efficient and sustainable practices to grow crops. Students in agronomy will expand their knowledge and critical thinking in crop physiology, soil science, crop genetics, crop pests, plant biology, cropping systems and agri-business. Consider a career in Agronomy if you want to be a...

- crop consultant – scout fields and provide advice for farmers on crop management
- field or lab researcher – exploring new solutions for crops
- agricultural communicator – provincial government and grower organizations employ agronomists to communicate the newest technology to farmers
- technical sales and development consultant – work for a chemical, fertilizer or seed company to market agricultural inputs
- farmer or farm manager – gain critical thinking, technical and business skills

ANIMAL SCIENCE

Discover the science behind animal behaviour, physiology, genetics and nutrition to improve the well-being of animals. Learn to integrate livestock, business and science, and prepare to meet the challenges that face agriculture. Students receive hands-on training experiences with the major livestock and companion animal species in state-of-the-art animal facilities. Consider a career in Animal Science if you want to...

- work with companion animals (cats, dogs, horses) and/or livestock (chickens, beef and dairy cattle and sheep)
- produce safe, healthy and affordable food
- focus on sustainable animal production
- enroll in veterinary medicine (see your advisor for admission requirements)

APPLIED PLANT ECOLOGY

Rangelands, forests, and wetlands provide critical ecosystem services to maintain a healthy environment. Applied plant ecology is a multidisciplinary field in which the principles of ecology, plant biology, agriculture, and soil science are applied to conserve, manage, and restore native ecosystems. Consider a career in Applied Plant Ecology if you want to...

- conserve and manage parks, protected areas, and other native plant communities
- manage sustainable livestock operations on native rangeland
- develop the field skills to identify and describe plants, soils, and ecosystems

- study the interactions between plants, animals and soils
- restore damaged or degraded lands

CROP SCIENCE

Crop Science is the study of plants for food, feed, fibre and industrial uses. It encompasses the scientific areas of genetics, plant physiology, plant breeding, plant protection, crop management and crop quality. Consider a career in Crop Science if you want to...

- select and manage crop plants to be productive under a range of challenging environments
- apply new technologies to solve problems in crop production and utilization
- study the structure, function, and evolution of plant genomes
- develop and produce healthier food and feed
- investigate issues of global concern, including health and nutrition, food security, and climate change



ENVIRONMENTAL SCIENCE

Environmental Science looks at how the earth's natural resources are used—including the study of a variety of ongoing and emerging environmental issues including land remediation, disposal of toxic chemicals, ground water contamination, overgrazing, pesticides and productions of greenhouse gases. Consider a career in Environmental Science if you want to...

- work locally, nationally and internationally preserving wetlands and other natural habitats
- discover how plants can clean up pollution
- reclaim soils that have been disturbed from mining or have been contaminated from a spill
- predict the impact of land management options on natural resources