

Faculty of Science

The Faculty of Arts and Science was created in 1908, making it the oldest faculty at the University of Alberta. Classes began at Queen Alexandra School with an enrolment of 45 students which included four graduate students in physics. The following year, instruction was offered at Strathcona High School and the first on-campus classes began at Athabasca Hall in the summer in 1911.

The combined Faculty of Arts and Science developed into the largest at the university and in 1963 the two were divided into separate faculties.

Science instruction in mathematics, chemistry, and physics began in 1908 but the development

of the scientific disciplines was slowed by the First World War and it was not until 1921 that the number of academic staff in the science departments reached 25, a figure which remained constant until 1946.

The faculty offers three main types of programs leading to the degree of Bachelor of Science: four-year honors program; four-year programs with specialization; and three-year general programs.

The honors programs are designed essentially for students who are interested in careers in scientific research. They provide preparation for admission to graduate studies, to a Master of Science program or even to a Doctor

of Philosophy program.

The general programs provide a general education with a scientific emphasis for students who want careers in business, teaching, medicine, dentistry and so on.

The four-year programs with specialization try to bridge the gap between the three-year programs and the honors programs. They can provide the background necessary for admission to Graduate Studies in some cases, and in any event do permit the attainment of a professional status.

In many cases the transfer from one program to another can be arranged to suit changing ambitions, needs, or academic qualifications.



Dean Ross

The Dean of Science at the University of Alberta is the producer of a film that was awarded a prize at the Italian Film Festival in 1972. The Emperor of Japan requested a print of the film and what he saw can be seen by open house visitors as the film will be projected every hour on the hour in the V-wing of Physics.

Dr. Donald Ross, Dean of the Faculty of Science is a zoologist and a leader in the study of the behavior of marine vertebrates. His years of research activities led him to produce the award winning 40-minute film dealing with the relationships formed by some of these water animals.

Dean Ross is noted for establishing a good balance between research activities and the many administrative duties which his position entails. Time is a strong indicator of his decision-making capacity. He has been Dean of the Faculty of Science since 1964, a departure from the five-year limit self-imposed by most Deans.

Dean Ross, who earned his PhD at Cambridge University, has 12 departments to look after, the highest number in the Faculty's history. The housing of these departments, which includes the recent construction of a new chemistry building and a new biological sciences building, constitutes one of his larger contributions to the university. And, as a member of the university's Board of Governors, he is actively engaged in implementing other beneficial policies.

X's and O's

Visitors to Chemical Engineering Chemical/Mineral Engineering, No. 3 on map will have a chance to test their skill against a computer in games such as X's and O's and nim in room 475. Undergraduate students will demonstrate experiments which are part of their engineering course program.

Books galore

The University of Alberta Bookstore, located in the Students' Union Building, (17 on centre fold map), will be open from 10 a.m. to 3 p.m. on Saturday, March 8th, Open House day.

Occupying approximately 25,000 square feet on the lower and main levels of the building, it offers a wide range of supplies for students. The spacious area furnishes university texts, recreational reading, trade books and paperbacks to its buyers.

It's the second largest university bookstore in Canada. At peak periods during the winter session, the stock of books totals more than 40,000 titles.

University-crested material ranging from pins and rings, to mugs and sports equipment meet the demand of the students. Records, magazines, posters, cards, and stationery, art and athletic supplies are sold and a variety of novelty items are also available on the main floor of the Bookstore. The lower level houses the rows of books shelved according to subject, and a small, but comfortable, reading and lounging area.

If you can't pry yourself away from Open House displays, why not come browse another time. It's open to the public. From September until April, regular weekly hours are 9 a.m. to 5 p.m. Monday to Friday and 10 a.m. to 1 p.m. on Saturday.

Electron Microscopy

Since the development of the electron microscope three decades ago great advances have been made in our understanding of the function and structure of cells and cellular components in biological research.

Visitors - in small groups - the electron microscope lab in Room CW-225 (centre wing of Biological Sciences - 15 on your map) will be able to see a demonstration of how material is prepared for observation as well as seeing the microscope in action.

SCIENCE

CHEMISTRY

- | | |
|-----------------------------|-------------------|
| 1) Analytical Chemistry | Chem East 12 1-48 |
| 2) Inorganic Chemistry | 1-40 |
| 3) Organic Chemistry | 1-26 |
| 4) Physical Chemistry | 1-22 |
| 5) Glassblowing | 1-60 |
| 6) Modern Mass Spectrometry | Bsmt.-38 |

COMPUTING SCIENCE

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|--------------------------------------|-----------------------|
| 1) Digital Picture Processing System | Gen. Ser. 16, Rm. 628 |
| 2) Computers | Rm. 669 |

LINGUISTICS

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|-------------------------|-----------------------|
| 1) Psychoacoustics Lab. | Gen. Ser. 16, Rm. 750 |
| 2) Phonetics Lab. | Rm. 751A |
| 3) Computer Room | Rm. 746 |

GEOGRAPHY

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|-----------------------------------|-------------------|
| 1) Climate in Caves | BioSci. 15A, M151 |
| 2) Ecology | M141 |
| 3) Soil Erosion in Badlands | M141 |
| 4) Lake Sediments | M141 |
| 5) Mapping | M141 |
| 6) Meteorology - weather, climate | M141 |

PSYCHOLOGY

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| 1) Color Display | Psych. 15E, 102 |
| 2) Self Regulation of Brain Waves | 120A |
| 3) Teaching Languages to disabled Children | 126 |
| 4) Human Learning and Memory Display | 116 |
| 5) Physiological Display | 121 |
| 6) Films & Gen. Display | 113 |
| 7) Slides of Selected Topics in Psychology | 104 |

MICROBIOLOGY

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|----------------------------------|--------------------|
| 1) Antibiotic Resistance | BioSci. 15A, M-245 |
| 2) Antibiotic Production | M245 |
| 3) Sewage Treatment | M245 |
| 4) Fish & Wildlife Diseases | M245 |
| 5) Microbial growth on crude oil | M245 |

GEOLOGY

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|-----------------------|-------------------|
| 1) Museum | Bsmt. Ag. Bldg. 9 |
| 2) Aerial Photography | 1st flr. W. wing |
| 3) Petroleum Geology | 1st flr. W. wing |
| 4) Ore Deposits | 1st flr. W. wing |
| 5) "Rock Show" | 1st floor |

BOTANY

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|--|---------------------------|
| 1) Alberta Ecological Survey | BioSci. 15A, M123 & Foyer |
| 2) Botanical Garden and Friends of the Garden | Foyer-Main 2nd flr. |
| 3) Greenhouses | 6th flr. |
| 4) Electron Microscope Lab. | CW-225 |
| 5) Displays | M-149 |
| 6) Class Room for Plant Physiology | CW-437 |
| 7) Class Room Demonstration for elementary students in biology | CW-210 |
| 8) Counselling Service | M-130A |

MATHEMATICS

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|----------------------|-------------------|
| 1) Videotapes | CAB 10, Main Flr. |
| 2) Films | BioSci. 15 |
| 3) Instant Insanity | CAB, Main Flr. |
| 4) Probability | CAB 331 |
| 5) Information booth | CAB Main Flr. |
| 6) Others | |

PHYSICS

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|---|-----------------------|
| 1) Teaching display | Physics 14, Main flr. |
| 2) Modern methods in Geographical Explorations | Main flr. |
| 3) Earthquake displays | 6th flr. |
| 4) Luminescence, Lasers & Strange properties of Light | 6th flr. |
| 5) Earth Magnetism | 6th flr. |
| 6) Astronomy and Astro-physics | 6th flr. |
| 7) Physics of very cold climate | 6th flr. |
| 8) Ancient variations in climate | 6th flr. |

GENETICS

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| 1) Cultural responses to major environment changes | BioSci. 15A, M.137 |
| 2) Plant Cell Culture | M.137 |
| 3) Genetic Studies in Multi-celled Organisms | M.137 |
| 4) Small Group Tours | C.W. 5th flr. W. |
| 5) Genetic Improvements of Cultivated Crops | M.137 |
| 6) Student Career Counselling | CW, Rm. M130A |

ZOOLOGY

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|-------------------------------------|--------------------|
| 1) Typical senior course in Zoology | BioSci. 15D, Z-305 |
| 2) Mammalian Hibernation | M.145 |
| 3) Animals of S.E. Alberta | Z-1011 |
| 4) Animal Behavior | M-145 |
| 5) Wildlife Parasitology | M-145 |
| 6) Marine Invertebrate behavior | V-Theatres 13 |
| 7) "Parasites on Moose" Video tape | CW-4th flr. |

Plant research - variety

A Plant ... what does it mean to you?

At first glance or thought probably not very much.

It's the second glance or second thought that really makes it impressive.

While standard dictionary definitions run something like "an organism of the vegetable kingdom, characteristically having cellulose walls etc."

A plant is much more than that it's the basis for the world's food supply, it supplies us with paper and many building products, it beautifies and protects our landscape, over millions of years it has become our major source of fuel and energy and exhibits at this open house will give you a glimpse at the vital role they play in our lives.

Exhibits of the department of plant science in the Faculty of Agriculture and Forestry all located in the Agriculture building, number 9 on your map will be located in rooms 327 and 341.

Illustrations of the quantities of food produced per acre for vegetable compared to field crops will be featured as well as studies examining the potential of potatoes to complement or substitute for wheat, flour and other cereal products.

By the genetic manipulation of certain plants great improvements in the quality, productiveness and hardness of crops have already been achieved. Plant breeding continues this work and through knowledge of botany, genetics, plant physiology, biochemistry, statistics and farm practice enables the plant breeder to

produce new varieties more acceptable and useful to both the consumer and the producer.

Plant pathology examines plant diseases, their causes, symptoms and methods used in developing controls and cures.

Other displays will show how simple ethylene is produced by fruits, leaves and other plant parts a hormonal factor which effects plants in such ways as the aging and falling of leaves and the ripening of fruit and the effects of ethylene on plants and plants parts.

Other displays will show the chlorophyll effects in mutations of barley; the effects of various kinds of field management resulting in varying productiveness of pastures in this region with a view to increase animal yield economically.

And, of course, our pesky friend the weed will not be overlooked.

Displays will show how they can interfere with crop growth and illustrate how they can have an "edge" over what we really want to grow; how they "cost" us economically and how they can even threaten human welfare in recreational activities, sewage disposal, and the loss of quality of our lakes.

Agriculture Engineering exhibits will show some aspects of farm and forest mechanization as well as illustrating the importance and improvements being made in irrigation and drainage; also the importance of farm buildings, their design, environmental control and the management of manure.