

Courses offered at UBC after the First World War

Part One

The *Descriptive Outline of Courses Offered* reproduced here was published by the UBC Extension Committee in January 1919, a time when Vancouver was welcoming home the Canadian soldiers who had fought in the Great War and who were returning to pick up their lives and careers. For many, this meant going back to school to acquire the training and credentials that would enable them to find jobs in a rapidly growing economy. This pamphlet set out to provide an overview of the courses provided by the young university, emphasizing the practical utility of course content and outcomes, and drawing attention to the short courses that were largely intended for the returning vets seeking vocational training.

Demobilization brought a significant increase in UBC registration: from a total of 917 students in 1918/19 to a total of 1,538 in 1919/20. Much of this rise occurred in the short courses, where enrolment leapt from 379 to 640. Many of these courses were offered through the University Extension Committee, which became a department in 1936 and eventually grew into Continuing Education (now Extended Learning).

From signatures on several pages, it's evident that this copy of the *Descriptive Outline* belonged to Blythe Eagles or his family. Eagles was a UBC alumnus (Arts and Science 1922) who became Head of the Department of Dairying in 1933 and Dean of the Faculty of Agriculture in 1949.

Most of the photographs in the original have been removed because of space limitations on this site.

Worthy Gages!

U. E. C. No. 2



The University
of
British Columbia

Descriptive Outline of
Courses Offered

Prepared by
THE UNIVERSITY EXTENSION COMMITTEE



THE UNIVERSITY OF BRITISH COLUMBIA
VANCOUVER, JANUARY, 1919

COLLEGE OF ARTS AND SCIENCE.



REGULAR COURSES.

AGRICULTURE. It has been recognized as desirable that instruction in the principles of agriculture be made available for students in Arts. Accordingly an introductory course is offered, designed to familiarize the student with the basic principles underlying scientific agriculture.

A detailed statement of the complete range of courses offered in agriculture is given under "College of Agriculture."

BACTERIOLOGY. In this Department two courses are offered. The first course deals with the fundamental principles of the science of Bacteriology. More and more it is coming to be recognized that the minute forms of life are of tremendous importance; not only since they act as a cause of certain infectious diseases, but because they are also concerned in many of the vital processes that occur in Nature. In this course, particularly, attention is paid to the manner in which these infectious diseases are produced, the general principles which underlie their spread, and the methods which are best adapted for their prevention and control. The relationship which bacteria have to food, particularly milk and water, are indicated. In the time available general principles only can be enunciated. It is the intention to provide those who take this course with an adequate idea of the best methods of protecting themselves, their immediate families and their neighbours, from the ravages of infectious diseases. At the same time the course gives excellent opportunity for cultivating the powers of observation and expression by those studying these very minute forms.

The second course is a more detailed study of the particular organisms which cause disease, and is suited for those intending to make the study of disease a life-work. To-day Bacteriology is a vocation as well as a science, proficiency therein qualifying for certain activities relating to Public Health. The course is designed to give the necessary vocational training for this career.

BOTANY AND ZOOLOGY. The importance of a knowledge of the principles of life is obvious. Biology forms the basis for the study of Applied Sciences, such as Medicine, Agriculture, Forestry, and of Fisheries. The first course in Biology is a general survey of the field, being a study of animal and plant life in its various aspects. This includes life processes, energy and chemical changes, structure of cells and organs, relation to environment, and life-histories. More advanced

courses amplify one or more of these subdivisions. Emphasis is placed throughout on laboratory work.

At present there are students in attendance looking towards Medicine and Agriculture, and a course is arranged in Forest Botany for a Vocational Class of Returned Soldiers.

During the past summer a Preliminary Survey of the Grazing Lands of the Province was made for the Provincial Government. Frequent examinations of specimens of Spruce wood have been made for the Munitions Board. Poisonous, medicinal, and other economic plants, submitted from all parts of British Columbia, have been identified.

CHEMISTRY. (See Statement of Chemistry Department under "College of Applied Science.")

CLASSICS. The Department of Classics offers courses in the Literature, History, and Antiquities of Greece and Rome. In the classes of the first two years the attention of the student of Latin is directed to the works of the great writers of the later Republic and of the Augustan age, Cicero, Horace, Virgil, and Livy. In the later years the range of instruction is somewhat wider, reaching out on the one hand to Plautus and Terence; on the other, to Juvenal and Pliny, Seneca and Tacitus. In dealing with the Antiquities and History of Rome a more chronological distribution of effort obtains.

The courses in Greek follow similar lines—Euripides, Lucian, and Homer in the earlier years; Thucydides, Aeschylus, and Sophocles in the later; and Plato in all.

The Classics are of direct practical value to the student who intends to become teacher or preacher, lawyer or journalist, but, more than all, they provide the student with a lofty standard of taste, give him a rigorous training in logic, enable him to look upon the literature, language, and civilization of his own age from an external point of view, and give him a first-hand knowledge of the sources of much that is most worth while in our modern world.

ECONOMICS, SOCIOLOGY, AND GOVERNMENT. Economics, a comparatively new subject in the curricula of colleges and universities, has made such progress during the past few decades that it now occupies a prominent place in the course of training at the younger British universities, such as those of London, Birmingham, and Manchester, and at the universities of the United States and Canada.

The appeal of Economics, as with many other subjects in a university curriculum, is twofold in its nature; it may be along the line of culture and intellectual discipline, or along that of utility. The latter appeal rests fundamentally on the need of an enlightened exercise of the art of citizenship, which in a democracy is also the art of government.

The scope of the field of Economics may be indicated by an enumeration of certain of the topics receiving attention. These include: A history and

B. Eagles *B. Eagles* :

analysis of modern industrial society, the problem of labour and capital, of value and prices, of money and banking, the tariff, taxation, corporations and trusts, socialism, social and industrial reform, crises and panics. In the closely allied fields of Sociology and Government a study is made respectively of the origin and development of social institutions and of the agencies and problems of government, imperial, federal, provincial, and local.

ENGLISH. The study of English is, in a peculiar and literal sense, fundamental to all other studies. Consequently, many interests of the Department of English are, in a peculiar and literal sense, the interests of every other department. Courses flexible and varied enough to make these beliefs fully operative cannot as yet be offered.

The general aims of English teaching may be stated as follows: To aid students in forming the habits of plain and correct utterance; to give them an approach, at least, to an intelligent appreciation of literature; to present a history in outline of the chief periods and types of English letters; to direct students who have special interest in literary study.

The work of the first year, required of all candidates for a University degree, involves practice in simple expository composition, and elementary study of such forms as the essay, the short story, and some of the less complex sorts of poetry. The second-year course, required of all regular students in Arts and Agriculture, is devoted to a sketch of the main periods of English literary history. For students of the last two years in Arts, the Department offers elective courses which attempt to present, in considerable detail, the nature and development of certain outstanding movements and types in English literature. It is hoped, too, that there will be arranged, in the near future, special work for students in Honours. Finally, the Department undertakes to direct a year of graduate study leading to the degree of Master of Arts.

GEOLOGY AND MINERALOGY. Geology is a science which treats of the composition and structure of the earth; of the laws governing its activities; of its history from the earliest recorded times; of the origin of its plants, animals, and of man; and of its future. The cultural value of geology makes it a desirable study, but it is its utility that makes it of such practical importance. Within the last ten years the science has grown so rapidly that it now forms a necessary part of the training in branches of engineering, of agriculture, and of those phases of industrial life that deal with the natural resources. In British Columbia, where the future of the Province is largely dependent upon the development of these resources, geology is of particular importance.

Well-trained geological engineers are in world-wide demand. The University of British Columbia, located in a Province where students can get exceptional facilities for practical training, should be able to train men singularly well as geological engineers.

The courses given include: General Geology, General Mineralogy, Petrology, Economic Geology, and Field Geology.

W. Eagles

In addition to the above, there are two short courses open to the general public regardless of their previous training. These are: Ore deposits and Rock and Mineral Study.

HISTORY. The work of this Department includes courses in Ancient, Mediæval, and Modern History. Greater emphasis is placed upon Modern, including British and Canadian, than upon either Ancient or Mediæval History, for the reason that, in interpreting the present, the student naturally turns to the recent rather than to the remote.

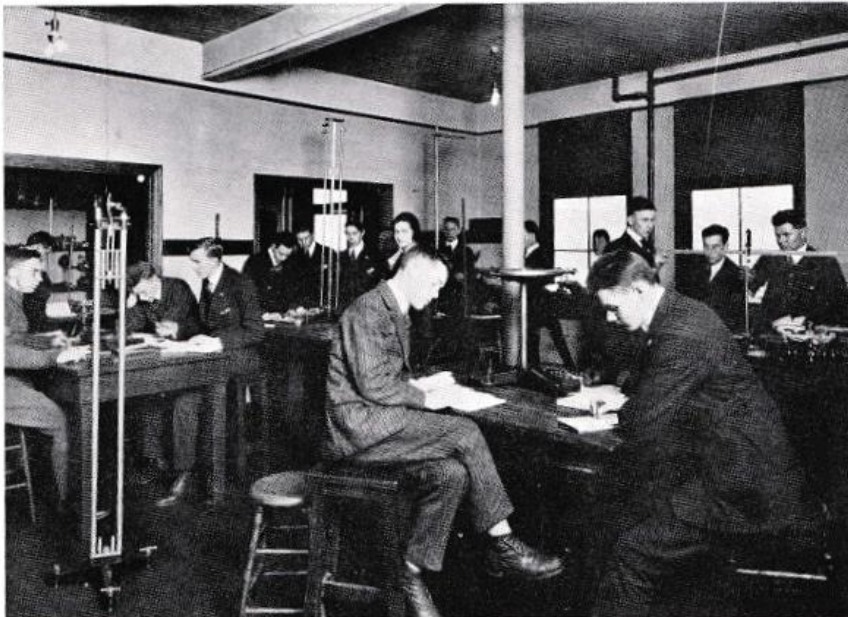
The purpose of the courses in History is twofold: In the first place, it seeks to enable the student to gain a knowledge of the development of nations and a comprehension of the conditions creating modern civilization. Illustrative of the subjects treated are the following: The Reformation, the French Revolution, the use of Cabinet Government in England; and the character and influence of the great men of history—Charlemagne, Luther, Napoleon, Gladstone, Lincoln. Further, the study of history cultivates judgment, through the collection, arrangement, and valuation of evidence. It gives a broader outlook, a more sympathetic understanding of civilizations and peoples, and a more intelligent comprehension of present tendencies.

MATHEMATICS. The place of Mathematics in any scheme of liberal education and in all courses of Applied Science has always been recognized. Its practical application is very wide, there being scarcely any branch of activity in which some knowledge of the subject is not necessary. In many departments it is of first importance, as, for example, in the various branches of Engineering and in Architecture. Mathematics is also a necessary instrument of investigation in the other sciences. This is especially true of Physics and Astronomy, but all are indebted to it, and any science approaches perfection only to the extent that its ideas are mathematical. But Mathematics—often called the Queen of Sciences—is a worthy study in itself, presenting to the student many striking and beautiful truths. Its chief value lies in its inherent interest, and in the fact that it constitutes such a wide field of pure knowledge.

Modern Languages. The courses in French include: Language, Composition, Translation, Literature. The Literature courses are not limited to literary history. Based on authors read in class, they aim to give a knowledge of the people of France—their history, character, customs, and ideals. Careful translation is not only an excellent mental training, but the very best way of learning to use accurately one's mother-tongue. For full benefit to be obtained from such work, however, some degree of proficiency is required in both languages. The necessary proficiency in a modern language can be attained during the University career. Meanwhile, a student is becoming acquainted, as he reads, with the great writers of France from 1600 to the present day. This in itself is a liberal education, opening the way to post-graduate reading in the University or in the home. The practical value of any study is a combination of its

value as mental training and its utility in daily life. French as a study stands high from both points of view. As funds permit, additions will be made to the staff to provide more and more practice in spoken French. The training is excellent. Instead of quoting from memory what other people have said, the student is required to express his own thoughts in a strange language. Thought must be rapid, the idea to be expressed reduced to its simplest form, verbiage is seen to be the vice it really is. A modern language man learns to think, understand, and reply rapidly.

—**SPANISH.** At present only a one year's course is offered, but it is hoped to extend this as the call for the subject becomes greater.



AN ELEMENTARY PHYSICS LABORATORY.

—**GERMAN.** In this subject the University offers a full course of the scope outlined for French (*see* above), with the addition of a course in German for beginners. In French schools and universities the development of the teaching of German dates from the war of 1870. The French, vanquished, attributed a good part of their defeat to their ignorance of German and the Germans, and with the logic for which they are justly famous they set to work to overcome their repugnance to the language. For this they have had cause to congratulate themselves before and during the recent war.

If we wish to be patriotic and far-seeing we should prevent the Germans from learning English. Preventing ourselves from learning German is merely punishing ourselves, and leaving the Germans in possession of a secret code for business and intelligence work.

It is easier to compete with a man you understand than with a mystery. The German department imparts knowledge of German and the Germans. The subject is not compulsory, and any student who finds he is in danger of learning to admire the Germans can at once change to another subject.

PHILOSOPHY. Philosophy has been defined as the "science of the whole, or of reality as a whole." One aim of Philosophy is to co-ordinate, or bring together into one system, the results of the different sciences, and to show that truth is one. The different sciences deal with separate aspects or parts of the real world; Philosophy deals with reality as a whole. It thus corrects the tendency to extreme specialism, and the narrowness of outlook which is often found in men who devote themselves exclusively to one science or one pursuit. The courses offered at present are: Psychology, Logic, Ethics, and the History of Philosophy.

Psychology seeks to describe and explain mental processes, just as the natural sciences explain the facts and processes of nature. Its primary purpose is not practical, but it is probable that all improvement in efficiency will depend largely on knowledge of psychological laws and conditions.

Formal Logic seeks to discover and formulate the laws of thought—the laws which must be obeyed if we are to think correctly or validly.

Ethics is a science of the same kind as Logic. It seeks to discover and state the laws of conduct—the laws we must obey if we are to act rightly.

The History of Philosophy gives an account of the theories of the Universe, or the attempts to explain the world as a whole which have been put forward by the great thinkers of the past.

PHYSICS. The science which deals with the fundamental characteristics of matter and energy is Physics, and as a consequence it forms the corner-stone of all the engineering professions. And even if one is not adopting an engineering profession as a vocation, he of necessity has to live in the present physical age. For his own greater security and happiness, therefore, one needs such knowledge as is given by a study of elementary Physics. Physics has an unquestioned cultural value, affording means of valuable mental training. It teaches scientific methods and helps to co-ordinate the activities of hand and mind.

The study of Physics not only provides the fundamental training for modern engineers, but its students must ever be seeking the laws of nature yet unknown, which will form the basis of new engineering practice. Recognition of this fact underlies the physical research work of the modern university, and has also led large engineering firms to establish, as part of their equipment, research laboratories.

The Department is provided with lecture-rooms and laboratories, the largest of the former being capable of seating over 200 students. The laboratories in Mechanics, Heat, Light, Sound, and Electricity are equipped with modern and approved apparatus. The Department already has a good equipment for demonstration and laboratory work, and new apparatus is being added as demands arise and circumstances permit.

COLLEGE OF APPLIED SCIENCE.



REGULAR COURSES.

CHEMISTRY AND CHEMICAL ENGINEERING.

The courses in Chemistry are arranged to prepare students for technical positions, and to give them a thorough grasp of the subject from the theoretical side. In the first two years the fundamental principles of Chemistry and Physics are emphasized; in the third and fourth years organic, analytical, and physical Chemistry are taught, both from the standpoint of pure science and from that of their relations to various industries. In the fourth year considerable time is spent on research-work.

A course in Chemical Engineering is given, combining courses in designing, construction, and installation of machinery with the study of chemistry.

The Chemistry Building contains a large laboratory, with 144 work-places and an adjoining balance-room for elementary chemistry; a laboratory for analytical chemistry, with space for sixty-four students, connected with a balance-room and working library; a lecture-room with a seating capacity of over 100; smaller laboratories for organic and physical chemistry; store and cloak rooms.

The laboratories are well equipped. Each student's desk is provided with gas, electricity, water, and suction, while compressed air is available for more advanced work. High vacuum pumps, compressed gases, sensitive electrical measuring instruments, pyrometers, and calorimeters are provided, and are being added to from time to time.

The students in Chemistry have a Chemical Society, which meets fortnightly.

CIVIL, ELECTRICAL, AND MECHANICAL ENGINEERING.

During the year 1918-19 only the first two years of these engineering courses were offered. It is hoped that the other two years' work in these Departments will be established at an early date.

The courses required are the same in each of these branches of engineering for the first two years. The aim is to give the student a sound training in the fundamental scientific principles on which the practice of these engineering professions is based. The instruction is given by means of lectures and practical work in the field, the draughting-room, and the laboratory, and by visits to commercial engineering establishments in tutorially conducted class excursions. The work in these two years includes courses in mathematics, chemistry, mechanical drawing, general engineering, structural engineering, mechanics, mechanical engineering, physics, shop-work, mapping, surveying, and field-work.

MINING AND METALLURGY. The Department of Mining and Metallurgy deals chiefly with subjects directly connected with the arts of Mining and Smelting—namely, the Principles, Practice, and Economics of Mining and Smelting, with such auxiliary subjects as Fire Assaying, Ore Dressing, and Mine Surveying. These are begun in the student's junior year, while in his senior year a large portion of his time is spent in laboratory and lecture work covering these subjects. Most of this work is not only very interesting in itself, but involves the application of a great variety of knowledge to practical ends, and is therefore of high educational value in a broad way, as well as in giving specialized training in the particular profession of Mining.

The Assay Laboratory is well equipped. The Milling Laboratory is now being reorganized and more equipment added, all on a small scale as yet, but sufficient to handle many of the ordinary problems in ore concentration. Specialization on the Flotation Process is one of the features.

There is no Metallurgical Laboratory at present, but it is expected that this will be added before long. It is also hoped that a Professor of Metallurgy will shortly be appointed.

British Columbia is a great mineral Province, the wealth of which is as yet largely undeveloped, and offers a splendid field for the trained mining engineer. Experience has shown, however, that the Province has many problems peculiar to itself, which engineers from the outside have often failed in solving. The University of British Columbia offers a training which fits the student to meet and solve the special problems of this Province.

