CALENDAR

University
— OF —
British Columbia

SIXTH SESSION
1920-1921

VANCOUVER, BRITISH COLUMBIA

1920

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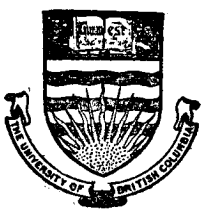

VANCOUVER, BRITISH COLUMBIA
1920

THE UNIVERSITY OF BRITISH COLUMBIA

VISITOR.

HON. EDWARD GAWLER PRIOR, P.C., Lieutenant-Governor of British Columbia.

CHANCELLOR.

R. E. MCKECHNIE, ESQ., M.D., C.M.

PRESIDENT.

L. S. KLINCK, ESQ., M.S.A.

GOVERNORS.

R. E. MCKECHNIE, ESQ., M.D., C.M. (ex officio).
L. S. KLINCK, ESQ., M.S.A. (ex officio).
S. DUNN SCOTT, ESQ., M.A., LL.D., Vancouver. Term expires 1921.
ROBERT P. MCLENNAN, ESQ., Vancouver. Term expires 1921.
RODERICK FRASER, ESQ., M.D., Victoria. Term expires 1921.
EVELYN F. K. FARRIS, M.A., Victoria. Term expires 1923.
HON. DENIS MURPHY, Vancouver. Term expires 1923.
ROBIE L. REID, ESQ., K.C., Vancouver. Term expires 1925.
CAMPBELL SWEENY, ESQ., Vancouver. Term expires 1925.
CHRISTOPHER SPENCER, ESQ., Vancouver. Term expires 1925.

SENATE.

(a.) The Minister of Education, the Honourable JOHN DUNCAN MACLEAN, M.D., C.M.
The Superintendent of Education, S. J. WILLIS, ESQ., B.A.
The Chancellor.
The President (Chairman).
(*b.*) Dean of the Faculty of Agriculture, F. M. CLEMENT, ESQ., B.S.A.
Dean of the Faculty of Applied Science, REGINALD W. BROCK, ESQ., M.A, F.G.S., F.R.S.C.
Dean of the Faculty of Arts.
Dean of the Faculty of Forestry.
Representatives of the Faculty of Agriculture: J. A. MCLEAN, ESQ., B.A., B.S.A.; P. A. BOVING, ESQ., C.P., C.A.A.A.
Representatives of the Faculty of Applied Science: L. KILLAM, ESQ., M.A., B.Sc.; D. MCINTOSH, ESQ., M.A., D.Sc., F.R.S.C.
Representatives of the Faculty of Arts: T. H. BOGGS, ESQ., M.A., Ph.D.; H. ASHTON, ESQ., M.A., D. Lett., D. Litt.
Representatives of the Faculty of Forestry.

(*c.*) Appointed by the Lieutenant-Governor in Council:—
Rev. WILLIAM LESLIE CLAY, B.A., D.D., Victoria, B. C.
The Right Rev. A. U. DE PENCIER, M.A., D.D., Vancouver, B.C.
LEMUEL FERGUS ROBERTSON, Esq., M.A., Vancouver.

(*d.*) The Principal of Vancouver Normal School,, WM. BURNS, Esq., B.A.
The Principal of Victoria Normal School, D. L. MACLAURIN, Esq., B.A.

(*e.*) Representative of High School Principals, T. A. BROUGH, Esq., B.A.

(*f.*) Representative of Provincial Teachers' Institute.

(*g.*) Representative of Affiliated Colleges.

(*h.*) Elected by Convocation:—
His Honour F. W. HOWAY, LL.B., New Westminster, B.C.
W. D. BRYDONE-JACK, Esq., B.A., L.R.C.P., L.R.C.S, Vancouver, B.C.
J. S. GORDON, Esq., B.A., Vancouver, B.C.
J. F. CLARK, Esq., B.S.A., Ph.D., Vancouver, B.C.
N. WOLVERTON, Esq., B.A., LL.D., Nelson, B.C.
E. B. PAUL, Esq., M.A., Victoria, B.C.
W. P. ARGUE, Esq., B.A., Vancouver, B.C.
H. C. SHAW, Esq., B.A., Vancouver, B.C.
Miss A. B. JAMIESON, B.A., Vancouver, B.C.
R. E. WALKER, Esq., M.D., C.M., New Westminster, B.C.
J. H. SENKLER, Esq., B.A., Vancouver, B.C.
Rev. W. H. VANCE, M.A., Vancouver, B.C.
Miss S. P. CLEMENT, B.A., Vancouver, B.C.
Hon. GORDON HUNTER, B.A., Victoria, B.C.
J. M. TURNBULL, Esq., B.A.Sc., Vancouver, B.C.

OFFICERS AND STAFF.

LEONARD S. KLINCK, B.S.A. (Guelph), M.S.A. (Ames), President.
(To be appointed)—Dean of the Faculty of Arts and Science.
REGINALD W. BROCK, M.A. (Queen's), F.G.S., F.R.S.C., Dean of the Faculty of Applied Science and Professor of Geology.
F. M. CLEMENT, B.S.A. (Guelph), Dean of the Faculty of Agriculture and Professor of Horticulture.
STANLEY W. MATHEWS, M.A. (Queen's), Registrar.
JOHN RIDINGTON, Acting Librarian.
F. DALLAS, Bursar.

Department of Agronomy.

P. A. BOVING, Cand. Phil. (Malmo, Sweden), Cand. Agr. Alnarp. Agriculture (Sweden), Professor of Agronomy and Head of Department.
G. G. MOE, B.S.A. (Macdonald College), Assistant Professor of Agronomy.
(New appointment, 1920-21)—Assistant Professor of Agronomy.
J. D. NEWTON, B.S.A. (Macdonald College), Assistant

Department of Animal Husbandry.

J. A. McLEAN, B.A. (McMaster), B.S.A. (Ames), Professor of Animal Husbandry and Head of Department.

H. M. KING, B.S.A. (Guelph), Assistant Professor of Animal Husbandry.

(New appointment, 1920-21)—Assistant Professor of Animal Husbandry.

H. R. HARE, B.S.A. (Guelph), Extension Assistant under Burrell grant.

(New appointment, 1920-21)—Lecturer in Veterinary Medicine.

Department of Bacteriology.

R. H. MULLIN, B.A., M.B. (Toronto), Professor of Bacteriology and Head of Department.

(New appointment, 1920-21)—Lecturer in Bacteriology.

MISS OLIVE C. E. McLEAN, B.A. (Brit. Col.), Assistant in Bacteriology.

Department of Biology.

ANDREW H. HUTCHINSON, M.A. (McMaster), Ph.D. (Chicago), Associate Professor of Botany.

(New appointment, 1920-21)—Associate Professor of Zoology.

C. McLEAN FRASER, B.A. (Toronto), Ph.D. (Iowa), F.R.S.C., Lecturer in Zoology.

(New appointment, 1920-21—Assistant Professor of Plant Pathology.

JOHN DAVIDSON, F.L.S., F.B.S.E., Botanist in charge of Herbarium and Botanical Gardens.

JOHN ALLARDYCE, B.A. (Brit. Col.), Assistant in Zoology.

Miss I. MOUNCE, B.A. (Brit. Col.), Assistant in Botany.

Department of Chemistry.

D. McINTOSH, B.A. (Dal.), M.A. (Cornell), D.Sc. (McGill), F.R.S.C., Professor of Chemistry and Head of Department

E. H. ARCHIBALD, B.A. (Dal.), A.M. (Harvard), Ph.D. (Harvard), F.R.S.E. & C., Professor of Analytical Chemistry.

ROBERT H. CLARK, M.A. (Toronto), Ph.D. (Leipzig), Associate Professor of Chemistry.

(New appointment, 1920-21)—Associate Professor of Chemistry.

JOHN ALLARDYCE, B.A. (Brit. Col.), Assistant in Chemistry.

MISS RUTH FULTON, B.A., M.A. (Brit. Col.), Assistant in Chemistry.

(New appointment, 1920-21)—Assistant in Chemistry.

Department of Civil Engineering and Surveying.

(New appointment, 1920-21)—Professor of Civil Engineering and Head of Department.

E. G. MATHESON, B.A.Sc. (McGill), M.E.I.C., M.Am.S.C.E., Associate Professor of Civil Engineering.

W. H. POWELL, B.Sc. (McGill), Assistant.

G. M. IRWIN, B.Sc. (McGill), Assistant in Descriptive Geometry.

H. F. G. LETSON, B.Sc. (Brit. Col.), Assistant in Descriptive Geometry.
(New appointment, 1920-21)—Assistant.
(New appointment, 1920-21)—Assistant.

Department of Classics.

L. F. ROBERTSON, M.A. (McGill), Professor of Classics and Head of Department.
O. J. TODD, Ph.D. (Harvard), Associate Professor of Classics.
H. T. LOGAN, B.A. (McGill and Oxon.), M.A. (Oxon.), Assistant Professor of Classics.
A. N. ST. JOHN MILDMAY, M.A. (Oxon.), Assistant in Classics.

Department of Dairying.

WILFRID SADLER, B.S.A. (Macdonald College), M.Sc. (McGill), N.D.D., British Dairy Institute, University College, Reading, England, Associate Professor of Dairying.
R. L. VOLLUM, B.A. (Brit. Col.), Assistant under Advisory Council for Scientific and Industrial Research.
(New appointment, 1920-21)—Assistant Professor of Dairying.

Department of Economics, Sociology and Political Science.

THEODORE H. BOGGS, B.A. (Acadia and Yale), M.A., Ph.D. (Yale), Professor of Economics and Head of Department.
(New appointment, 1920-21)—Associate Professor of Economics.
HENRY F. ANGUS, B.A. (McGill), B.C.L., M.A. (Oxon.), Assistant Professor of Economics.

Department of English.

G. G. SEDGEWICK, B.A. (Dal.), Ph.D. (Harv.), Professor of English and Head of Department.
W. L. MACDONALD, B.A. (Toronto), M.A. (Wisconsin), Ph.D. (Harvard), Assistant Professor of English.
J. K. HENRY, B.A. (Dal.), Assistant Professor of English.
FREDERICK G. C. WOOD, B.A. (McGill), A.M. (Harvard), Assistant Professor of English.
THORLEIF LARSEN, B.A., M.A. (Toronto), B.A. (Oxon.), Assistant Professor of English.
(New appointment, 1920-21)—Assistant Professor of English.

Department of Forestry.

(New appointment, 1920-21)—Professor of Forestry.

Department of Geology and Mineralogy.

R. W. BROCK, M.A. (Queen's), F.G.S., F.R.S.C., Professor of Geology and Head of Department.
(New appointment, 1920-21)—Professor of Physical and Structural Geology.

EDWIN T. HODGE, M.A. (Minnesota), Ph.D. (Columbia), Assistant Professor of Geology.

(New appointment, 1920-21)—Associate Professor of Paleontology.

W. L. UGLOW, B.A., M.A. (Queen's), B.Sc. (School of Mining, Kingston), M.S., Ph.D. (Wisconsin), Assistant Professor of Geology.

Department of History.

MACK EASTMAN, B.A. (Toronto), Ph.D. (Columbia), Associate Professor of History.

W. N. SAGE, B.A. (Toronto) and (Oxon.), M.A. (Oxon.), Assistant Professor of History.

Department of Horticulture.

F. M. CLEMENT, B.S.A. (Guelph), Professor of Horticulture and Head of Department.

A. F. BARSS, A.B. (Rochester), B.S. in Agriculture (Cornell), M.S. (Oregon Agricultural College), Associate Professor of Horticulture.

(New appointment, 1920-21)—Assistant Professor of Horticulture.

W. A. MIDDLETON, B.S.A. (Macdonald College), Extension Assistant under Burrell grant.

Department of Mathematics.

(New appointment, 1920-21)—Professor of Mathematics and Head of Department.

GEORGE E. ROBINSON, B.A. (Dal.), Associate Professor of Mathematics.

E. H. RUSSELL, B.A. (Queen's), Assistant Professor of Mathematics.

E. E. JORDAN, M.A. (Dal.), Assistant Professor of Mathematics.

L. RICHARDSON, B.Sc. (London), Assistant Professor of Mathematics.

JOHN HENRY, B.A. (Cambridge), Instructor in Mathematics.

Department of Mechanical Engineering.

(New appointment, 1920-21)—Professor of Mechanical Engineering and Head of Department.

L. KILLAM, M.A. (Mt. Allison), B.Sc. (McGill), Associate Professor of Mechanical Engineering.

CEDRIC C. RYAN, M.Sc. (McGill), Assistant in Mechanical Engineering.

J. HOGARTH, Assistant.

J. CROWLEY, Assistant.

J. W. FAULKNER, Assistant.

F. MCCRADY, Assistant.

S. NORTHROP, Assistant.

H. TAYLOR, Assistant.

(New appointment, 1920-21)—Assistant.

Department of Mining and Metallurgy.

J. M. TURNBULL, B.A.Sc. (McGill), Professor of Mining and Head of Department.

H. N. THOMSON, B.Sc. (McGill), Professor of Metallurgy.

GEORGE A. GILLIES, M.Sc. (McGill), Assistant Professor of Mining.

(New appointment, 1920-21)—Assistant Professor of Metallurgy.

(New appointment, 1920-21)—Assistant.

Department of Modern Languages.

H. ASHTON, M.A. (Cantab.), D. Lett. (Univ. Paris), D. Litt. (Birmingham), Officer de l'Instruction Publique (France), Professor of French and Head of Department.

A. F. B. CLARK, B.A. (Toronto), Ph.D. (Harvard), Associate Professor of French.

ISABEL MACINNES, M.A. (Queen's), Assistant Professor.

G. GROJEAN (Licencie es Lettres), Licencie en Droit (Toulouse), Assistant Professor in Modern Languages.

Mrs. A. F. B. CLARK, B.A. (Toronto), Instructor in Modern Languages.

Mlle. HELENE KARR-SIMPSON, B.A. (Vassar), M.A. (California), Instructor in Modern Languages.

(New appointment, 1920-21)—Instructor in French.

(New appointment, 1920-21)—Instructor in French and Spanish.

Department of Nursing.

Miss ETHEL I. JOHNS, In charge of Nursing Department.

Department of Philosophy.

(New appointment, 1920-21)—Professor of Philosophy and Head of Department.

JAMES HENDERSON, M.A. (Glasgow), Associate Professor of Philosophy.

Department of Physics.

(New appointment, 1920-21)—Professor of Physics and Head of Department.

T. C. HEBB, M.A., B.Sc. (Dal.), Ph.D. (Chicago), Associate Professor of Physics.

A. E. HENNINGS, M.A. (Lake Forest College, Ill.), Ph.D. (University of Chicago), Associate Professor of Physics.

J. G. DAVIDSON, B.A. (Toronto), Ph.D. (Cal.), Associate Professor of Physics.

P. H. ELLIOTT, M.Sc. (McGill), Instructor in Physics (absent on leave).

Department of Poultry Husbandry.

(To be appointed)—Associate Professor of Poultry Husbandry.

(New appointment, 1920-21)—Assistant Professor of Poultry Husbandry.

ACADEMIC YEAR 1920-1921.

1920. Wednesday, August 25th.	Supplemental Examinations in Applied Science begin.
Thursday, August 26th.	Registration Day for First, Second, and Third Year Applied Science.
Friday, August 27th.	Summer School in Drawing, Shop-work, and Surveying opens.
Wednesday, September 15th.	Matriculation Supplemental Examinations begin. Supplemental Examinations in Arts begin.
Friday, September 24th.	Last day for Registration.
Monday, September 27th.	Meeting of the Faculty at 10 a.m.
Tuesday, September 28th.	Lectures begin.
Wednesday, October 20th.	Meeting of the Senate.
Friday, December 10th.	Last day of Lectures for Term.
Tuesday, December 14th.	Examinations begin.
Wednesday, December 15th.	Meeting of the Senate.
Thursday, December 23rd.	Examinations end.
1921. Tuesday, January 4th.	Meeting of the Faculty at 10 a.m.
Monday, January 10th.	Second Term begins.
Wednesday, February 16th.	Meeting of the Senate.

Friday, April 15th.	Last day of Lectures.
Tuesday, April 19th.	Sessional Examinations begin.
Friday, May 6th.	Meeting of the Faculty at 10 a.m.
Wednesday, May 11th.	Meeting of the Senate.
Thursday, May 12th.	Congregation.
Monday, June 20th.	Matriculation Examinations begin.

SUPPLEMENTAL EXAMINATION.

Junior Matriculation Supplemental Examination Time-table, September, 1920

Date	A.M.	Subject	P.M.	Subject
Wednesday, September 15th.	9 to 11	History	1 to 3 3 to 5	English Literature. German Literature.
Thursday, September 16th...	9 to 11	Latin Authors	1 to 3 3 to 5	Latin Grammar and Composition Agriculture.
Friday, September 17th	9 to 11	French Literature.....	1 to 3	French Language.
Saturday, September 18th ...	9 to 11	Physics		
Monday, September 20th....	9 to 11	Geometry	1 to 3 3 to 5	Chemistry. German Language.
Tuesday, September 21st....	9 to 11	Algebra	1 to 3 3 to 5 3 to 5	English Composition. Botany. Greek.

EXAMINATION TIME TABLE.

Faculty of Arts, Supplemental Examinations, September, 1920

Date	Hour	Supp. to First Year Sessional	Supp. to Second Year Sessional	Supp. to Third Yr. Sessional
Wednesday, Sept. 15th	9 a.m.	Trigonometry, Greek	English Literature	To be arranged.
	2 p.m.	Algebra	English Composition	
Thursday, Sept. 16th..	9 a.m.	Latin Authors	Latin Authors	
	2 p.m.	Latin Composition, Sight Translation and History	Latin Composition, Sight Translation, History and Literature	
Friday, Sept. 17th.....	9 a.m.	French	French	
	2 p.m.	French	French	
Saturday, Sept. 18th...	9 a.m.	Chemistry 1	Chemistry 2	
Monday, Sept. 20th....	9 a.m.	English Literature	Economics 1, History 2	
	2 p.m.	English Composition	Logic	
Tuesday, Sept. 21st....	9 a.m.	Geometry, German	Greek	
	2 p.m.	Physics	Physics, Psychology	
Wednesday, Sept. 22nd	9 a.m.	History	Geometry, German	
	2 p.m.	Geology 1, Biology 1	Algebra, Biology 1	

The University of British Columbia

HISTORICAL SKETCH.

The establishment of a University in British Columbia was first advocated by Superintendent Jessop in 1877, when he called public attention to the urgent need for providing the youth of the Province with an education which would adequately equip them for their various activities in the life of the Province. It was several years, however, before active steps were taken in this direction.

In 1890 the Provincial Legislature passed an Act establishing a body politic and corporate named the University of British Columbia. The first Convocation was held in Victoria on August 26th, 1890, when the Hon. John Robson, Provincial Secretary, presided. There were present seventy certified members of Convocation, who elected three members of Senate.

In 1891 the Act was amended by the addition of a clause requiring a meeting of the Senate to be held within one month after the election of Senators by Convocation. The Senators having been elected on June 2nd, the Chancellor, Dr. I. W. Powell, of Victoria, called a meeting of Senate for July 2nd. A quorum failed to assemble, and the first attempt to establish a University proved futile.

There being no immediate prospect of a Provincial University, some friends of higher education conceived the idea of bringing a university education—at least in part—within the reach of the youth of the Province by establishing relations with some one of the existing Canadian universities.

Owing to their efforts, an Act was passed in 1894 which empowered the affiliation of high schools in the Province to recognized Canadian universities; and this was supplemented in 1896 by an Act providing for the incorporation of affiliated high schools as colleges of the universities to which they were affiliated.

Under these enactments, Vancouver High School was admitted to affiliation with McGill University for the first year in Arts, and began University work under the name of Vancouver College

in the year 1899. (The man to whom more than any other the credit is due for the inauguration and successful organization of the scheme of affiliation was the late Mr. J. C. Shaw, M. A., formerly Principal of Vancouver High School, and later Principal of Vancouver College, and of McGill University College.)

In 1902 an extension of affiliation was granted to cover the second year in Arts, and in the same year Victoria High School also became affiliated to McGill University for the first year in Arts under the name of Victoria College.

As the work grew, still closer connection with McGill University became necessary, and in 1906 an Act was passed incorporating the Royal Institution for the Advancement of Learning of British Columbia. In the same year the Royal Institution established at Vancouver the McGill University College of British Columbia, taking over (by agreement with the Vancouver Board of School Trustees) the Arts work previously done by the Vancouver College, increasing the number of options allowed, and adding two years of Applied Science.

In 1908 the course was further extended to include the third year in Arts.

In 1907 Victoria College came also under the control of the Royal Institution as a part of the McGill University College of British Columbia, with power to give courses in the first two years in Arts.

The instruction given was similar to that of McGill University, the standards were identical, and the University examined and accepted the undergraduates *ad eundem statum.*

During the last year of its existence the McGill University College enrolled 292 students at Vancouver and 70 at Victoria.

These institutions were maintained mainly by grants from the School Boards of Vancouver and Victoria, supplemented in the earlier stages by contributions from Sir William Macdonald, of Montreal, and many public-spirited citizens of British Columbia, and later by grants from the Provincial Government, the City of Vancouver, and the University of British Columbia.

When the University of British Columbia opened its doors in the fall of 1915 these colleges ceased to exist, and at the same time the connection of the Province with McGill University in higher education—a connection which had existed for a period of

sixteen years and was alike creditable to McGill and advantageous to the Province—was also brought to a close.

Meanwhile efforts for the establishment of a Provincial University had been renewed, and in 1907 the Hon. Dr. H. E. Young, Minister of Education, took definite steps to establish a University by introducing a "University Endowment Act," which was passed by the Legislature. By this Act (slightly amended in 1911 and 1913) the setting apart of 2,000,000 acres of land, by way of University endowment, was authorized.

Constitution of Present University.

In 1908 an Act establishing and incorporating the University of British Columbia and repealing the old Act of 1890-1 was passed. The Act of 1908 provides:—

> That the University shall consist of a Chancellor, Convocation, Board of Governors, Senate, and the Faculties; that the first Convocation shall consist of all graduates of any university in His Majesty's dominions resident in the Province two years prior to the date fixed for the first meeting of Convocation, together with twenty-five members selected by the Lieutenant-Governor in Council. After the first Convocation it shall consist of the Chancellor, Senate, members of the first Convocation, and all graduates of the University; that the Chancellor shall be elected by Convocation; that the Board of Governors shall consist of the Chancellor, President, and nine persons appointed by the Lieutenant-Governor in Council; that the Senate shall consist of: (*a*) The Minister of Education, the Chancellor, and the President of the University, who shall be Chairman thereof; (*b*) the deans and two professors of each of the Faculties elected by members of the Faculty; (*c*) three members to be appointed by the Lieutenant-Governor in Council; (*d*) the Superintendent of Education, the principals of the normal schools; (*e*) one member elected by the high-school principals and assistants who are actually engaged in teaching; (*f*) one member elected by the Provincial Teachers' Institute organized under subsection (*e*) of section 8 of the "Public

Schools Act"; (*g*) one member to be elected by the governing body of every affiliated college or school in this Province; (*h*) fifteen members to be elected by Convocation from the members thereof;

That the University shall be non-sectarian:

That instruction in Arts shall be free to all regular students matriculated in the University:

That women students shall have equality of privilege with men students:

That no other university having corporate powers capable of being exercised within the Province shall be known by the same name, or have power to grant degrees.

Instruction.

The Act of 1908 (consolidated August 2nd, 1912) provides for:—

(a) Such instruction in all branches of a liberal education as may enable students to become proficient and qualify for degrees, diplomas, and certificates, in Science, Commerce, Arts, Literature, Law, Medicine, and all other branches of knowledge; (*b*) such instruction especially, whether theoretical, technical, artistic, or otherwise, as may be of service to persons engaged in the manufactures, or the mining, engineering, agricultural, and industrial pursuits of the Province; (*c*) facilities for the prosecution of original research in Science, Literature, Arts, Medicine, Law, and especially the applications of Science; (*d*) such fellowships, scholarships, exhibitions, prizes, rewards, and pecuniary and other aids as shall facilitate or encourage proficiency in the subjects taught in the University, and also original research in every branch; (*e*) such extra-collegiate and extra-university instruction and teaching as may be recommended by the Senate.

Selection of a Site.

Under authority of an Act passed by the Legislature in 1910, the Lieutenant-Governor in Council appointed a Site Commis-

sion whose decision was to be final. The personnel of the Commission was as follows:—

Dr. R. C. Weldon, Dean of Law School, Dalhousie University, Chairman.

Rev. Canon G. Dauth, Vice-Rector, Laval University, Montreal.

Dr. Walter C. Murray, President, University of Saskatchewan.

Dr. Oscar D. Skelton, Professor of Economics, Queen's University.

Dr. Cecil C. Jones, Chancellor, University of New Brunswick.

The Commission held its first meeting on May 25th, 1910, in Victoria, and after an exhaustive examination of the Province presented the following unanimous report:—

Victoria, B.C., June 28th, 1910.

To His Honour the Lieutenant-Governor in Council:

Sir,—The University Site Commission begs to submit the following report:—

In accordance with the provisions of the "University Site Commission Act, 1910," your Commissioners have visited and made a careful examination of the several cities and rural districts in the Province suggested as suitable University sites, and have selected as the location for the University the vicinity of the City of Vancouver.

Accompanying the main report was the following supplementary report:—

The University Site Commission are strongly of the opinion that the University should not be placed on a site which may in time be completely surrounded by a city. They respectfully suggest that not less than 250 acres be set apart for the University campus, and 700 acres for experimental purposes in agriculture and forestry. This is exclusive of a forest reserve for forestry operations on a large scale.

The Commission are of the opinion that the most suitable site is at Point Grey, unless the soils there and those of the delta land adjacent are found to be unsuitable for the experimental work of the College of Agriculture. Should Point Grey prove impossible, the Commissioners suggest: First, a site along the shore of North Vancouver, provided the tunnel and bridge are constructed; second, St. Mary's Hill, overlooking the Pitt, Fraser, and Coquitlam Rivers, provided residences are erected for the students. Central Park, though

conveniently situated, will probably be surrounded by the Cities of Vancouver and New Westminster, and because of this and of the absence of outstanding scenic advantages is undesirable.

While the Commissioners are firmly convinced that it is of the highest importance to have all the Faculties of the University doing work of University grade located together, they believe that the diverse conditions of agriculture in this Province make it advisable to divide the work of agricultural education between the College of Agriculture and Schools of Agriculture of secondary grade located in different centres. The College of Agriculture should conduct researches, provide courses leading to a degree, and supervise the extension work and Schools of Agriculture. These schools should be established in conjunction with the Demonstration Farms in typical centres, and should provide short courses (extending over the winter months) of two or three years for the sons of farmers. Each school might specialize in one or more branches, such as horticulture, dairying, etc.

Similarly, Technical Evening Schools might be opened in the different coal-mining centres for the preparation of candidates for mining certificates, and in the metal-mining districts for the assistance of prospectors and others.

The Commissioners have been greatly impressed by the marvellous richness, variety, and extent of the natural resources of this Province, and by the very generous provision made for the endowment of the University; and they are of the opinion that, if the University adopts a policy of offering salaries ranging from $3,800 to $5,000 to its professors, it will attract men of the highest ability, who, by their scientific investigations and outstanding reputations, will not only materially aid in developing the resources of the Province, but will also place the University on an equality with the best universities of America.

In the autumn the Executive Council, after a careful survey of the sites proposed, decided to locate the University at Point Grey, the site which the Commission named as its first choice.

In 1911 the Legislature passed an Act authorizing the Lieutenant-Governor in Council to grant this site to the University. In 1913 this grant was increased by a few acres.

The site at present consists of 250 acres lying upon the extremity of the headland of Point Grey at an elevation of approximately 300 feet above the sea. The waters of the Gulf of Georgia form more than half the boundary of the site, while the remaining sides are bounded by a tract of some 3,000 acres of Government land. It is accessible by water for passenger and freight service, and is within a mile and a half of the existing electric tram service, which will be extended to the

grounds. The site has now been cleared and the main campus and some of the roads have been graded.

First Convocation.

Between May 1st and July 31st, 1912, 849 members of Convocation were registered, of whom twenty-five had been appointed by the Lieutenant-Governor in Council. The first Convocation, held August 21st of the same year, chose Mr. Francis Carter-Cotton as first Chancellor of the University and elected certain Senators.

Plans for Buildings.

In February, 1912, the Hon. H. E. Young, Minister of Education, called for competitive plans which should include plans in detail of four buildings to be erected immediately, and a block plan exhibiting the completed buildings as a beautiful and harmonious scheme in keeping with the site, one of the finest in the world.

The first prize was $5,000 and the probability of being engaged as the University architect; the second, third, and fourth, $2,000, $2,000, and $1,000 respectively. The competition was closed in November, and the first prize awarded to Messrs. Sharp & Thompson, of Vancouver, by a Board of Assessors consisting of: Hon. H. E. Young, Minister of Education; F. Carter-Cotton, Chancellor; A. Arthur Cox, Samuel Maclure, and W. Douglas Caröe.

The President and Governors.

In March, 1913, the Lieutenant-Governor in Council appointed the President, F. F. Wesbrook, M.A., M.D., C.M., LL.D., and shortly after the following Governors:—

George H. Barnard, Esq., K.C., M.P.
Robert F. Green, Esq., M.P.
Robert E. McKechnie, Esq., M.D., C.M.
Robert P. McLennan, Esq.
Lewis G. McPhillips, Esq., K.C.
Robie L. Reid, Esq., K.C.
S. Dunn Scott, Esq., M.A., LL.D.
Campbell Sweeny, Esq.
George I. Wilson, Esq.

Buildings and Grounds.

The University architects are Messrs. Sharp & Thompson, of Vancouver, B. C., who obtained the award in the competition held in 1912. In November, 1913, Dr. C. C. James, Commissioner of Dominion Agricultural Instruction, met with a Commission appointed to examine and report upon the general design for the University. A general plan was prepared by this Commission and approved by the Board of Governors.

The report accompanying the plan presented a statement of the problem to be solved and the solution proposed by the Commission, and pointed out the practical and artistic possibilities of the design. With it were submitted drawings showing the building areas for the various constituent portions of the University, and the location proposed for the buildings which are to be constructed at once. The design is a comprehensive one, and provides for the needs of an institution potentially great, the relatively small beginnings of which must be arranged with due regard for present economy and efficiency, yet in such a manner as to ensure co-ordination with a properly planned and steadily developing scheme.

The Commission consisted of:—

Dr. Thomas H. Mawson, City Planner and Landscape Artist, of London, England.

Mr. Warren Powers Laird, Professor and Head, School of Architecture, University of Pennsylvania, and Advisory Architect to the University of Wisconsin.

Mr. Richard J. Durley, late Professor and Head of the Department of Mechanical Engineering, McGill University.

Messrs. Sharp & Thompson, the University Architects.

In accordance with the recommendations of the Commission's report, detailed plans and specifications are being prepared for the various buildings, and the Science Building is under construction.

This building is planned for the temporary accommodation of Physics, Chemistry, Biology and certain other Sciences, but it is intended ultimately for the sole use of Chemistry. With its equipment it is expected to cost about $600,000.

Preparations for Work.

In 1914 the Legislature voted $500,000 and the Government promised $1,000,000 for the following year, thus enabling the Board to proceed with actual work on the University. The clearing of the site was completed and necessary grading done; the steel-concrete work of the Science Building was completed; the Deans of Agriculture and Applied Science and some professors were appointed, and in general the necessary preliminary preparations were made for beginning University work in the fall of 1915.

War Conditions.

Upon the outbreak of war in August, 1914, the Board of Governors, feeling that it would be shortsighted and unpatriotic to commit the public to a large capital expenditure and heavy fixed charges when every available dollar in the country might be required in the struggle to preserve the rights and liberties of free peoples, decided to withhold the contract for the completion of the Science Building, to make no further contracts or appointments to the staff, and to postpone large expenditures upon the library and grounds. By this action the grant for the year largely reverted to the Provincial Treasury, and the people were not committed to a heavy outlay in 1915.

In 1915 the Legislature voted sufficient funds to enable the University to take over and carry on the work of McGill University College, and to add a year's work to it, thus giving a complete Arts Course leading to a degree and the first three years in a course in Applied Science. Funds were also voted to enable Dean Klinck to prepare and put under cultivation a small portion of the campus to be ready for experimental work by the time agricultural classes can be undertaken.

Students at the Front.

A number of the students of the University having volunteered for the Front, certain conditions arose which were dealt with at a meeting of the Senate held on February 16th, 1916. At this meeting the following resolutions were carried with regard

to the standing to be granted students enlisting for overseas service:—

(1.) "That students who leave in their fourth year be given their degree at the end of the session.

(2.) "That those who attend for the major part of any year be given their standing for that year.

(3.) "That it be made possible for those who leave before the end of the first term to graduate when they have completed three full years at the University.

(4.) "That former students of the McGill University College of British Columbia at present at the Front who would otherwise be now enrolled in the University of British Columbia be given an opportunity of enrolling as students of the University of British Columbia without payment of fees."

First Session (1915-1916).

The University opened, as announced, on September 29th, 1915. Three hundred and seventy-nine students were enrolled, which, with fifty-six students at the Front, made a total student body of 434.

The students in attendance came from forty localities in British Columbia, three other Canadian Provinces, and six other countries.

A successful session was brought to a close by Congregation held on May 4th, at which forty students were granted the degree of B.A.

THE UNIVERSITY AND THE PROVINCE.

The University of British Columbia is an integral part of the public educational system of the Province. As such it completes the work begun in the public and high schools.

By prescribing a large number of studies during the first years of undergraduate work, and by leaving a wide choice under a definite system to the student during his final years, the University endeavours to give a wise measure of direction, and at the same time to encourage individual initiative and special development.

In addition to fostering the general educational interests of the Province, it is the policy of the University to render service to its constituency through three generally recognized channels —viz., teaching, research, and extension. The University undertakes to furnish instruction in the various branches of a liberal education, and in those technical departments which are most directly related to the life and industries of the Province. That its teaching may be vitalized, and that it may do its share in contributing to the advancement of knowledge, the University aims to encourage research in all departments. When a sufficiently firm foundation has been laid in these two departments of University activity, extension work will be organized. Through this channel new truths discovered in this or in other institutions of learning will be presented in popular form in many centres throughout the Province. By this means those whose circumstances deprive them of the opportunity of attendance at the University may avail themselves of the latest contributions to knowledge, as well as of the most recent lessons of practical experience.

ENDOWMENTS.

The "University Act" of 1908 (slightly amended in 1912) provides that:—

> "Any person or corporation may, with the approval of the Senate, found one or more professorships, lectureships, fellowships, scholarships, exhibitions, prizes, or other awards in the University, by providing a sufficient endowment in land or other property, and conveying the same to the University for such purposes, and every such endowment of lands or other property shall be vested in the University for the purpose or purposes for which it is given."

THE LIBRARY.

Acting Librarian: John Ridington.

Order, Catalogue, and Loan Departments { Cataloguer: Dorothy M. Jefferd. Loans: Lionel Haweis. Sadie Brown.

The University Library consists of 33,000 volumes and about 10,000 pamphlets. It includes representative works in Chemistry, Classics, Economics, Geology, History, Modern Languages, Philosophy, Physics, Technology, and a growing collection of works of General Reference. It also possesses a fair number of periodical publications devoted to literature and the sciences, and of the transactions of learned societies.

Small working reference libraries are maintained in the Chemistry and Geology Departments. The number of books added to the Library during 1919, exclusive of unbound periodicals for that year, was 3046. Two hundred and ninety magazines and periodical publications are regularly received.

The Library is classified throughout on the congressional system. The classification is complete except in Religion (BL-BV) and Classics (PA), the schedules for which have not yet been issued. In these sections the books are at present grouped in main classes, and arranged in alphabetical order by name of author.

The Main and Subordinate Catalogues, making available the resources of the Library, total over 190,000 cards. Of these 88,000 are in the Main Catalogue in the Reading Room, and make all classified portions of the Library referable by Author, Title and Subject, with necessary analyticals.

The Reading Room has accommodation for 102 readers. Additional facilities for 14 students, engaged in work requiring frequent shelf reference, are provided in the Stack Room.

During the session the Library is open from 8:45 a.m. to 9:30 p.m.; on Saturdays from 8:45 a.m. to 5 p.m. In vacation it is open from 9 a.m. to 5 p.m., except on Saturdays, when the hours are from 9 a.m. to noon.

Books to which the Teaching Staff have specially referred their classes for consultation are placed in a "Reserved" class. These are separately shelved in the Reading Room, and to them open access is given all students. Reserved books may be loaned only for periods when the Library is closed. Other works, to the number of two, may be borrowed by students for a period of seven days, or for a shorter time should the volume be in general demand.

Unbound periodical publications are not loaned. Works that are costly, rare, or unsuitable for general circulation, are loaned only under special conditions.

A number of valuable contributions to the Library are made each year by governments, institutions, corporations, and private friends of the University. Many of these gifts are of great value. The following is a list of the more important of these since the issue of the Calendar for 1919-20:

The Government of Great Britain and Ireland.
- Debates, House of Lords.
- Debates, House of Commons.
- Departmental Reports, Blue Books, Pamphlets, etc.

The Government of the Dominion of Canada.
- Debates, Senate.
- Debates, House of Commons.
- Sessional Papers.
- Commission of Conservation.
- Imperial Munitions Board.
- Bureau of Statistics.

The Government of the Commonwealth of Australia.
- Publications of Bureau of Census and Statistics, Year Books, and other Official Publications.

The Government of the Dominion of New Zealand.
- Official Publications.

The Government of the United States of America.
- Reports and Official Publications.
- Surgeon-General's Office, Library Index Catalogue.
- National Museum—Annual Reports.
- Annual Report, Bureau of American Ethnology.

The Government of British Columbia.
- Statutes, Departmental Reports, and Official Publications.
- Botanical Office—Library.

The Government of the Province of Ontario.
Official Publications.

The State of Minnesota—Board of Control.
Reports.

Dominions Royal Commission, London.
Reports.

American Association of International Conciliation.
Reports.

University of Wisconsin.
Studies in Social Sciences and History.
Studies in Language and Literature.

Carnegie Endowment for International Peace, Washington, D. C.
"Diplomatic Correspondence between United States and Belligerent Governments," 3 vols.
Reports and Publications.

Carnegie Institute, Washington, D. C.
Current Publications.

Carnegie Foundation for the Advancement of Learning.
Publications.

Franklin Institute, Philadelphia, Penn.
Publications.

League to Enforce Peace, N.Y.C.
Publications.

Royal Society of Canada.
Proceedings.

Smithsonian Institute, Washington, D.C.
Publications.

Bibliographical Society of America.
"Census of the 15th Century Books owned in America, etc."

American Society for Labour Legislation.
Reports and Publications.

Linguistic Survey of India.
Sir George A. Grierson. The linguistic survey of India and the Census of 1911.

Puget Sound Biological Station.
Publications.

New York Public Library.
"Armenia and the Armenians."

New York State Library.
Reports.

Kyoto Imperial University, Japan.
Catalogue of European Books, 1897-1913.

University of Wisconsin.
"Classical Studies in honour of Charles Forster Smith."

University of Calcutta.
"Post-graduate teaching in the University of Calcutta."

The Brown University Library, Providence, Rhode Island, U.S.A.
Thayer:—"Democracy."

The following sets and continuations of Herd and Stud Books, etc., have very largely been donated to the Library through the kindness and influence of Prof. McLean.

American Jersey Cattle Club.
Herd Register.

Canadian National Live Stock Records.
Publications:—
Canadian Ayrshire Herd Book.
Canadian Percheron Stud Book.
Canadian Swine Breeders' Record.
Dominion Shorthorn Herd Book.

Holstein Friesian Association of Canada.
Herd Books.

The Michigan Experiment Station, East Lansing, Mich.
Reports.

The National Council of Young Men's Christian Association of Canada.
English for New Canadians.

The Metropolitan Life Assurance Co., New York City.
Mortality Statistics of Insured Wage-Earners.

R. F. Adams, Esq.
Adams: Poems of the Canadian West.

E. H. Archibald, Ph.D.
Royal Society of Edinburgh Transactions.

Mrs. C. Berkeley.
Jenner: Handbook of the Cornish Language, 1904.

H. Chodat, Esq.
Rose: The Origins of the War.
Oliver Goldsmith: Beaux and Belles of England, Beau Nash.
Illustrated War News (File).
Turquant: The Wife of Bonaparte.
" The Empress Josephine.
" The Love Affairs of Napoleon.

Vizetelly: The Anarchists.
Lowell: The Eve of the French Revolution.
Angell: The Foundations of National Polity.
Van Stockum: Sport, Attempt at a Bibliography.
Moring: One Hundred Book Plates.
Vassili: Behind the Veil at the Russian Court.

Ernest A. Cleveland, Esq.

Engineering Magazine, v. 1-33, Apr. 1891—Sept. 1907. Bound.

John Davidson, Esq.

Botanical Periodicals.

Major F. V. Longstaff.

Atteridge: Marshal Ferdinand Foch.
Atteridge: The Book of the Machine Gun.
Foch: Principles of War.

Mrs. LeRoy (In memory of Captain LeRoy).

Canadian Mining Institute Transactions, 1908-1914, and Index.

Miss Isabel MacInnes.

Carlyle: Friedrich der Grosse.

D. McIntosh, Ph.D.

Royal Society of Canada, vol. 12.

J. Porter, Esq.

Croker: The Correspondence and Diaries of John Wilson Croker.

R. L. Reid, Esq., K.C.

Prema Sagara.
G. Eaton: History of King's County.

Prof. L. F. Robertson.

A. E. R. Boak: The Master of the Officers in the later Roman Empire.

W. N. Sage, Esq.

Sage: The World War for Democracy.

G. G. Sedgewick, Ph.D.

Commemoration of the Centennary of the Birth of James Russell Lowell, 1919.

Williams: How to study the best Short Stories.

Mrs. Snider.

The Works of J. Snider, Esq. 17 vols.

J. S. Woodsworth, Esq.
Tichener: An Outline of Psychology.
Wundt: Outlines of Psychology.
Selby-Bigge: British Noodists. 2 vols.

Vancouver Daily Province.
Two copies daily.

Vancouver Daily Sun.
Two copies daily.

Vancouver Daily World.
Two copies daily.

HERBARIUM AND BOTANICAL GARDENS.

The University possesses a Herbarium of over 10,000 sheets illustrating the Provincial flora, including algæ, fungi, mosses, ferns, flowering plants. This has been accomplished largely through the co-operation of residents in all parts of British Columbia, in return for assistance in identification, or information regarding the usefulness or otherwise, of native species.

There are several sets of specimens illustrative of poisonous and medicinal species, plants used by Indians, weeds, native trees, shrubs, and other species of economic importance.

The value of the Herbarium has been greatly enhanced by several donations of private herbaria. These include (1) the "Eli Wilson collection" of between 1000 and 2000 specimens; (2) the "A. J. Hill collection" of about 2500 specimens, and 100 water-colour illustrations of fungi; and (3) the "A. E. Baggs collection" of nearly 1000 specimens.

The late Mr. A. E. Baggs came to Vancouver in 1911 from the Royal Botanic Gardens, Kew (Eng.), where he received his horticultural training, joined the staff of the Vancouver Parks Board, and became an enthusiastic member of the B. C. Mountaineering Club Botanical Section, of which he was Hon. Secretary at the time of his enlistment in the 72nd Batt., Seaforth Highlanders, in 1915. He went overseas in 1916, and was killed in action 4th March, 1917.

His collection, comprising specimens from the mountains and valleys adjacent to Vancouver, including the Garibaldi Mountain Region, was presented in April, 1919, by his mother, Mrs. E. Baggs, Vancouver, B. C.

The Herbarium is at present located in the Arts Building, where fire-proof accommodation has been provided.

Botanical Garden.

The Botanical Garden is situated on the University site, Point Grey, and occupies 5 acres on the west side of the Campus. Here may be seen over 1,000 different species of native plants collected from all parts of British Columbia, including dry-belt, alpine, and coast species. One part of the garden is devoted to the herbaceous collection, where plants are systematically ar-

ranged according to their families; another part is reserved for a native arboretum to illustrate the British Columbia species of trees and shrubs; another constitutes the nursery where duplicates are raised and plants for systematic research are assembled.

The economic flora is represented by several beds of medicinal plants, the nucleus of a Salicetum containing some of the best species and varieties of willows for basketry and ornamental purposes, the latter a donation of about fifty species from E. Versin, France.

Through the co-operation of Provincial correspondents numerous donations of seeds and plants are annually received; such donations help to make the native collection more complete.

Seeds of several hundreds of species of plants—mostly Himalayan—have been donated by Lieutenant Dr. A. T. Gage, Director of the Botanical Survey of India, and as a result the University has the nucleus of a collection of Indian plants which are being acclimatized in British Columbia; these include some beautiful and interesting species of value in connection with the University classes in Botany.

The University, through this Department, offers assistance in the identification of native species, and desires to secure the co-operation of all interested in the flora, in the hope that such assistance and co-operation will aid in filling existing gaps in the collections of the Herbarium and Botanical Gardens.

Short Courses in Botany.

1. *A Course in General Botany* is offered to all those interested in the study of plants. Evening classes of two hours' duration are conducted every Tuesday during the University session; the first hour is devoted to elementary work; the second hour to more advanced botany. Summer excursions, under direction, are regarded as a regular part of the course.

A detailed statement of requirements, and work covered in this course, is issued as a separate circular. Copies may be had on request.

2. *Forest Botany for Returned Soldiers.*—A course of three hours per week for five months is offered in connection with the Soldiers' Civil Re-establishment Course in Forestry.

DEPARTMENT OF THE INTERIOR.
FOREST PRODUCTS LABORATORIES OF CANADA.
VANCOUVER LABORATORY.

LOREN L. BROWN, B.Sc. (Idaho), A.M.E.I.C., Superintendent.

The above Laboratory was established in 1918 by the Forestry Branch of the Department of the Interior.

The purpose of this Laboratory is the testing of Canadian woods to establish their correct mechanical and physical properties.

A scheme of co-operation exists between the Laboratory and University by which students of the University have access to the Laboratory to watch the work being carried on, and by which the apparatus may be used at times in testing the strength of materials in order to extend the limits of the knowledge of the strength of materials produced by and used in the Province of British Columbia.

The main apparatus at present consists of one Olsen 30,000-lb. Universal Testing Machine and one Hat-Turner Impact Machine having three weights of 50, 100 and 250 lb. each and a drop of 6 feet. Wood-working machinery consisting of saw-table, buzz planer, thickness planer, borer, etc., is also installed in connection with the Laboratory for the preparation of test specimens.

UNIVERSITY EXTENSION COMMITTEE.

The University Extension Committee is arranging to send lecturers in popular subjects to all parts of the Province. These lecturers will go out during the winter under the auspices of organizations applying for them. The Committee will defray the cost of travelling and hotel expenses, all local expense (hall, publicity, etc.) being borne by the local organization.

The Committee reserves the right to arrange dates so as to permit a lecturer to visit several places in the same district on succeeding days and thus to save time and travelling expenses. The number of lecturers sent to any one place will depend entirely upon the interest shown in that locality and upon the funds at the disposal of the Committee.

A list of subjects and lecturers can be obtained on application to the Secretary of the Extension Committee.

Illustrated pamphlets on the general work of the University are at the disposal of persons interested in educational progress in the Province. Applications for copies of these should be made to the Registrar.

REGULATIONS AS TO M.A. AND M.Sc. COURSES

1. Candidates for the M.A. or M.Sc. degree must hold a B.A. or B.Sc. degree from this University, or its equivalent.

2. Candidates with approved degrees who proceed to the M.A. or M.Sc. degree shall be required:—

(*a.*) To spend one year in resident graduate study; or

(*b.*) In the case of graduates of this institution, to do two or more years of private work, under University supervision, such work to be equivalent to one year of graduate study.

3. One major and one minor shall be required.

4. (*a.*) A thesis must be prepared on some approved topic in the major subject.

(*b.*) Written and oral examinations may also be required.

5. Candidates for the Master's degree, whether in residence or extramural, shall pay an annual registration fee of $10. Application for admission, accompanied by official credentials, giving details of courses taken, shall be made to the Registrar by October 1st.

6. Three typewritten or printed copies of each thesis shall be filed with the Registrar on or before the last day of lectures, one copy of which shall be deposited with the Librarian.

GENERAL INFORMATION

Degrees

The University Act gives the University full powers to grant such degrees in the several Faculties and different branches of knowledge as the Senate may from time to time determine. The Act reserves for the University the sole right in this Province to confer degrees, except in Theology.

Courses of Study

For the Session 1920-21 the University offers instruction in the four years of the Arts Course, leading to the degree of Bachelor of Arts, which will be conferred upon those who successfully complete the course; in the four years of Courses in Applied Science, leading to the degree of Bachelor of Science; in the four years of the Course in Agriculture, leading to the degree of Bachelor of Scientific Agriculture; and in the two years of the Academic portion of the Course in Nursing.

The Session

The University year or session is divided into two terms, the first extending to the Christmas vacation, and the second from the end of the Christmas vacation to the end of the Sessional Examinations in April.

The Session of 1920-21 will begin on Tuesday, September 28th.

Two Matriculation Examinations will be held, one commencing on Wednesday, September 15th, 1920, and the other on June 20th, 1921.

Building

Since there is no accommodation at present on the University site at Point Grey, the work for the coming session, with the exception of laboratory work in agriculture, will be conducted in buildings on the site of the Vancouver General Hospital. These consist of one large modern fire-proof building, containing classrooms and offices, and several commodious frame buildings. These latter include separate buildings for Physics, Chemistry, Geology, and Mining, an Assembly Hall, and Workshops.

Equipment

Laboratories and equipment are available for courses in the work undertaken. Facilities for field-work in Physical Geography, Geology, and Mining exist in the immediate vicinity of Vancouver. Climatic conditions permit class excursions to be made throughout the session.

Church Attendance

All students are expected to attend a church of the denomination to which they adhere.

Students are requested to report to the President in writing the churches which they intend to make their places of worship. The reports will be used as the basis for notification to the various churches.

Physical Examination

In order to promote as far as possible the physical welfare of the student body, every student, on entering the University, will be required to pass a physical examination, to be conducted by, or under the direction of, a specially qualified medical practitioner.

By such an examination physical defects and weaknesses, amenable to treatment, may be discovered. The student would then be expected to apply to his physician for such remedial measures as his case may require. The appropriate form of exercise or athletic activity will then be recommended.

Board and Residence

Good board and lodging can be obtained in the vicinity of the College buildings at a cost of from $35 per month upwards; or, separately, board at $30 to $40 per month; rooms at $8 to $12 per month.

Lists of approved boarding-houses, accessible to the University, the moral and sanitary conditions of which are satisfactory, may be obtained from the Registrar. Requests for these should state whether they are for men or women students.

Men and women students are not permitted to lodge in the same house, unless they are members of the same family, or receive special permission from the Senate.

Student Advisers

Upon entrance each student is assigned to a member of the Faculty, who acts as his adviser in the matter of studies. Each term the student is requested to consult his adviser concerning the choice of studies.

The special advisers for women students will be glad to give counsel and advice on any matters on which they may be consulted.

Academic Dress

The Undergraduate's gown shall be black in colour and of the ordinary stuff material, of ankle length, and with long sleeves and the yoke edged with khaki cord. Graduate's gown the same, without cord.

Bachelor's hood shall be of the Cambridge pattern, black bordered with the distinctive colour of the particular Faculty; the Master's hood to be lined with the same colour. The colours are, for Arts, University blue; for Science, red; for Agriculture, maize.

Chancellor's robe scarlet, Oxford D.C.L. pattern, cloth, hood scarlet-lined with white swan's down.

President's robe the same.

ADMISSION TO THE UNIVERSITY

ADMISSION BY MATRICULATION EXAMINATION OR ITS EQUIVALENT.

I. REGULATIONS.

All inquiries relating to the examinations should be addressed to the Registrar.

1. A special regulation to govern admission of Matriculation students who have enlisted for overseas service:—

> A Matriculation student, whose work is certified as up to standard by the Principal of his school, will be allowed to enter the First Year without further examination.

The above conditions shall also govern the admission of Senior Matriculation students to the Second Year.

2. The regular Matriculation Examination will be held beginning June 20th, 1921, at all the centres in British Columbia at which high-school examinations are now held, that is to say: Abbotsford, Agassiz, Armstrong, Belmont, Bridgeport, Chilliwack, Cloverdale, Cranbrook, Creston, Cumberland, Duncan, Enderby, Esquimalt, Fernie, Golden, Grand Forks, Greenwood, Hedley, Kamloops, Kaslo, Kelowna, Ladner, Ladysmith, Maple Ridge, Matsqui, Merritt, Mission, Nanaimo, Nelson, New Westminster, Oak Bay, Peachland, Penticton, Point Grey, Port Alberni, Prince George, Prince Rupert, Quesnel, Revelstoke, Rossland, Salmon Arm, Sidney, Summerland, Trail, Vancouver, (Britannia, King Edward and King George), North Vancouver, South Vancouver, Vernon and Victoria, and at any other high school established during the year.

3. A second examination will be held in September, but only for extra-provincial students, and such students resident in the Province as may have been granted the privilege of taking a supplemental examination by the Matriculation Board of Examiners. It will be held only at Vancouver and Victoria.

4. Every candidate for examination is required to fill up an application form and return the same to the Registrar with the necessary fee (for which see page 41) one month before the examination begins. Blank forms may be obtained from the Registrar.

5. Candidates will not be considered as having passed on the Matriculation Examination unless they obtain at least 50 per cent. on the aggregate and at least 40 per cent. on each paper.

This regulation applies also in the case of candidates who present certificates.

Supplemental Examination.—In order to pass, candidates must obtain an average of 50 per cent. on the Supplemental Examination. If the candidate writes on more than one subject, not less than 40 per cent. must be obtained on each subject, with an average of 50 per cent. on the supplementals as a whole.

6. Candidates for admission to the Faculties of Arts and Applied Science who have failed, by a small margin, to complete the Matriculation requirements may be allowed to enter the first year as conditioned undergraduates on the recommendation of the Committee on Admission, Standing, and Courses.

This regulation applies also to candidates who seek to satisfy the Matriculation requirements by means of certificates granted by other recognized examining bodies.

7. Matriculation certificates will be issued to candidates who have passed the Entrance Examination conducted by the University, but not to those who have qualified by means of certificates, except when the greater part of the requirements have been satisfied by passing the University examination.

8. Certificates and diplomas covering the Matriculation requirements of other universities will, if submitted to the Registrar, be accepted *pro tanto* in lieu of the Matriculation Examination; i.e., in so far as the subjects and standard of the examination taken to obtain them are, to the satisfaction of the Matriculation Board, equivalent to those required for the Matriculation Examination of this University. Candidates offering certificates which are not a full equivalent will be required to pass the Matriculation Examination in such of the necessary subjects as are not covered thereby.

Intending students who wish to enter by certificates other than those issued by the University of British Columbia should under no circumstances come to the University without having first obtained from the Registrar a statement of the value of the certificates they hold, as many of these may lack one or more essential subjects, or the work done in a subject may not be adequate, or, again, the percentage gained may not be sufficiently high. (See *Regulation* 5.) *Moreover, it must be remembered that a certificate may admit to one Faculty and not to another. When an applicant's diploma or certificate does not show the marks obtained in the several subjects of the examination, he must arrange to have a statement of his marks sent to the Registrar by the Education Department or University issuing such diploma or certificate.*

II. MATRICULATION EXAMINATION FEES.

For the first Examination, Junior Matriculation ..... $ 5.00
For the first Examination, Senior Matriculation 10.00
For a subsequent Examination, Junior or Senior Matriculation, per paper 2.00
For examination of certificates, in respect of which candidates are exempted from the whole or part of the Junior or Senior Matriculation Examination 2.00

Matriculation Examination fees must be sent to The University Registrar at the time of application for examination. No application will be accepted unless accompanied by the regular fee.

Certificates will be issued to successful candidates without additional fee.

For furnishing a duplicate of a lost certificate 1.00

III. SUBJECTS OF EXAMINATION.

FACULTY OF ARTS.

JUNIOR MATRICULATION.

The subjects for Junior Matriculation (that is, for entrance into the Faculties of Agriculture and Arts) are as follows:—

1. **English.**
2. **History and Historical Geography.**
3. **Mathematics; Algebra and Arithmetic, Geometry.**

4. **French, or German, or Latin.**
5. **Agriculture, or Botany, or Chemistry, or Greek, or Physics**, or one of the languages in 4 not already taken.
6. One of the languages in 4 not already taken, or two of the sciences in 5 not already taken.

Greek can be taken only by students offering Latin.

Senior Matriculation.

The subjects for the Senior Matriculation (that is, for entrance into the Second Year in Arts) are as set forth on pages 51, 52, and 53. Candidates must furnish evidence of having passed Junior Matriculation, or its equivalent.

FACULTY OF APPLIED SCIENCE.

The requirements for Matriculation in Applied Science are the same as for Senior Matriculation. Students who have passed the First Year in Arts are admitted to the First Year in Applied Science without further examination.

Candidates for a Senior Matriculation certificate will not be considered as having passed unless they obtain at least 50 per cent. on the aggregate and at least 40 per cent. in every paper.

For Returned Soldiers entering the Faculty of Applied Science, the requirements are:—

1. English (as on page 43).
2. History and Historical Geography (as on page 44).
3. One of the following:—
   French, German, Latin (as on pages 45 and 46).
4. Algebra and Arithmetic:
   Hall & Knight's Elementary Algebra (omitting Chapters 40, 41, 42), or the same subject-matter in similar text-books. Two papers.
5. Geometry:
   As in Hall & Stevens' School Geometry, London Edition. Two papers.

6. Trigonometry:

Hall & Knight's Elementary Trigonometry to page 210, and Chapter 19; nature and use of logarithms (Bottomley's four-figure tables). One paper.

7. One of the following:—

Botany, Chemistry, Physics, a language not already chosen (as on pages 44 and 47).

REQUIREMENTS IN EACH SUBJECT.

FOR JUNIOR MATRICULATION.

English.

A. *Composition and Reading.*—The principles of English composition, as in Sykes' Elementary Composition, with short essays on a general subject and other subjects based on works prescribed for reading as follows: (*a.*) Prose (two books to be selected)—Washington Irving, The Sketch Book (ed. Lichfield, Ginn & Co.); Scott, Kenilworth; George Eliot, Silas Marner (ed. Witham, Ginn & Co.); Southey, Life of Nelson (Everyman's Library). (*b.*) Poetry (one to be selected)—Shakespeare, As You Like It (Macmillan or Ginn); Tennyson, Gareth and Lynette (Macmillan or Ginn).

The editions are merely recommended, not required.

The books to be selected should be read carefully, but the student's attention should not be so fixed upon details that he fails to appreciate the main purpose and beauty of the work.

Frequent practice in composition is essential.

B. *Literature* (for critical study).—Shakespeare, Merchant of Venice *or* Henry V.; Poems of the Romantic Revival (Copp, Clark Co.), omitting the selections from Coleridge and Byron.

Candidates will be expected to memorize some of the finest passages.

Two examination papers of two hours each.

Spelling will be tested by the candidate's papers in English. Examiners in other subjects will also take note of misspelled words and will report flagrant cases to the Board.

History and Historical Geography.

The essentials of European history, ancient, mediæval, and modern (to the eighteenth century), as presented by Breasted & Robinson in their Outlines of European History, Part I. (Ginn & Company).

The geography required will be that relating to the history prescribed.

One paper of two hours.

Mathematics.

1. *Algebra and Arithmetic.*—Algebra: as in the first thirty-one chapters, and the graphical work of Articles 411 to 428, inclusive, Hall & Knight's Elementary Algebra, omitting the articles in Chapter 29 marked with an asterisk. Arithmetic: Vulgar and Decimal Fractions, Square and Cube Root, Commercial Arithmetic, Metric System.

2. *Geometry.*—Parts I., II., III., and IV. of Hall & Stevens' School Geometry, London Edition.

Two papers of two hours each.

Physics.

The general principles of physics as given in any standard text-book of High School Physics. The examinations will be based on the Ontario High School Physics (Merchant & Chant) and The Ontario High School Laboratory Manual in Physics.

Chapter 1.

Chapters 10-12.

Chapters 18, 19 and Chapter 20 to the end of Section 206, omitting Sections 198 and 199.

Chapters 24, 25, 26, 31, omitting Section 261.

The exercises in the Laboratory Manual, covering the above work, should be performed, with the exception of numbers 6, 36, 37, 39.

Chapter 13 (beginning at page 111) and Chapter 14.

Chapters 27, 28, 29.

Chapters 32, 33, 35, 36, 37, 38.

Chapters 41, 42, 43, 44, 45, 46, 47, 48, omitting Sections 460-462 and Section 529.

Exercises as in the Laboratory Manual, omitting exercises 33, 34, 51, 52, 58, 69, 77, 78, 83, 96, 97, 99, 107.

Latin.

Texts:—For 1921 and alternate years—

Caesar Book IV., Chapters 20 to the end.

Caesar Book V., Chapters 1 to 23, inclusive.

Virgil Aeneid I., Lines 1 to 512.

For 1922 and alternate years—

Caesar Book IV., Chapter 20 to the end.

Caesar Book V., Chapters 1 to 23, inclusive.

Virgil Aeneid II., Lines 1 to 505.

Grammar.—Knowledge of grammar will be tested by translation and composition, and by questions based on the specified texts.

Translation at sight from Latin to English.

Composition.—Translation into Latin of detached English sentences and easy narrative based on the prescribed texts, as in Matriculation Latin, Carruthers & Robertson.

Two papers of two hours each; one on composition and grammar, the other on prescribed texts and translation at sight.

NOTE.—The Roman method of pronouncing Latin is recommended.

Greek.

Lessons 1-48 of White's First Greek Book (Ginn & Co.).

One paper of two hours.

NOTE.—This course can be covered successfully in one year.

French.

Grammar.—Candidates will not be required to state in writing grammatical rules or to reproduce tables of verbs, regular or irregular. They will be expected to have a thorough *practical*

knowledge of French accidence and of such points of syntax as are of frequent occurrence in ordinary prose style.

This knowledge will be tested by asking candidates to modify sentences given, to fill in words necessary to complete sentences, or to change infinitives to the tense required by the context. They may be asked to form sentences from elements given.

The book recommended is Siepmann's Primary French Course, Part II. (Macmillan Co., Canada).

Translation at sight into English of a French passage of moderate difficulty, dealing with French life, trades, industries, history, travel. A knowledge of useful words is required.

Translation into French of detached sentences—chiefly common idioms (not rare idioms and little used proverbs) and an easy English passage. The latter may be a dialogue. It will be selected with a view to testing the candidate's knowledge of French, not of grammatical exceptions.

Two papers of two hours each.

German.

Reading and speaking.

Candidates will be expected to have a fair knowledge of German sounds and pronunciation. They must be able to read with ease German prose or verse of ordinary difficulty and to answer correctly in German simple questions based on the reading prescribed.

Grammar.—They will be expected to have a thorough *practical* knowledge of German accidence and of such points of syntax as are of frequent occurrence in ordinary prose style.

This knowledge will be tested by asking them to modify sentences given, to fill in words necessary to complete sentences, or to change uninflected words to forms required by context, etc.

Translation at sight into English of a German passage of moderate difficulty, dealing with German life, ways, and customs. A knowledge of useful words will be required.

Translation into German of detached English sentences and of an easy English passage. A knowledge of simple idiomatic and colloquial German expressions will be required.

Books recommended: (*a*) Siepmann, Primary German Course (Macmillan); (*b*) Allen, German Life (Holt); (*c*) Goebel, Rübezahl (Macmillan).

N.B.—Teachers should insist upon correct pronunciation, and use the language as much as possible in class instruction.

Two papers of two hours each.

Chemistry.

As in Chemistry—A Text-Book for High Schools, Cornish (Macmillan), and A Laboratory Manual in Chemistry, Cornish and Smith (Macmillan).

One paper of two hours.

Botany.

Upon application of schools giving a matriculation course in Botany, the following outline of the course will be supplemented by supplying lists of British Columbia plants which may be used in illustration and with specific references to sections in the books mentioned below.

Emphasis is placed upon comprehension of principles rather than mastery of detail, and upon observation rather than book knowledge.

A. *Plant Structures and the Part taken by each in carrying on Life Professes.*

1. *Root.*

(*a.*) Food storage; examples of food storage in roots.

(*b.*) Anchorage; forms of roots in relation to anchorage.

(*c.*) Absorption of food materials from the soil; root-hairs; osmosis experiment.

2. *Stem.*

(*a.*) Support of leaves and flowers; forms of stems considered in this relation.

(*b.*) The conduction of food and food materials; the general structure of the stem and its relation to conduction.

(*c.*) Storage of food; examples.

3. *Leaves.*

(*a.*) Manufacture of food from raw food materials; experiments to illustrate; the importance of light; the light relation of leaves; leaf form and structure.

(*b.*) Transpiration of water; experiments to illustrate.

(*c.*) Food storage; examples.

4. *Flower.*—Reproduction; the parts of a flower; the structure and rôle of each; structures related to pollination.

5. *Seed.*

(*a.*) Food storage; and

(*b.*) Protection of young plant during its dormant period; the structure of the bean-seed and corn.

6. *Fruits.*

(*a.*) Protection; and

(*b.*) Dispersal of seeds; classification of fruits on these bases.

B. *Plants in Relation to their Environment.*

1. *Plant Associations.*—Based upon conditions of temperature, amount of available water, light, intensity, nature of soil.

2. *Modifications* in form and structure of roots, stems, and leaves in response to conditions.

3. *The Interrelation of Plants and Animals.*—Insect pollination; distribution of seeds.

4. *Movement responses;* growth movements; "day and night" movements; the sensitive plant.

C. *Classification of Plants based on Structure and Development; Reproduction and Life Histories.*

1. *Thallophytes.*—Recognition of algæ (green, red, brown), lichens, fungi.

2. *Bryophytes.*—Moss; description of plant.

3. *Pteridophytes.*—Recognition of Horsetails and Lycopods; description of a fern.

4. *Spermatophytes.*

(*a.*) *Gymnosperms.*—Conifers; at least five examples. Study of leaves, cones, and general habit.

(*b.*) *Angiosperms.*—Familiarity with the local flora; particularly examples of the following families: (*Monocotyledons*) Gramineæ, Cyperaceæ, Liliaceæ (*Dicotyledons*) Salicaceæ, Ranunculaceæ, Cruciferæ, Rosaceæ, Leguminosæ, Ericaceæ, Scrophulariaceæ, Labiateæ, Compositæ.

A collection is recommended.

D. *Economic Plants of British Columbia,*—Weeds, medicinal and poisonous plants.

Student's Reference Book.—Bergen & Caldwell: Practical Botany (Ginn & Co.). This book is recommended as most nearly fulfilling text-book requirements.

Teacher's Reference Books.

Coulter, Barns & Cowles: Text Book of Botany, Vols. I. & II. University of Chicago Press.

Ganong: A Text Book of Botany. (Macmillan, 1916.)
Curtis: Nature and Development of Plants. (H. Holt, 1915.)
Henry: Flora of Southern British Columbia. (Gage, 1915.)
One paper of two hours.

Agriculture.

Soil Studies.—Origin and classification; water, air, and bacteria in soil; drainage; drainage surveys; physical analysis; composition; plant-foods; humus and fertilizers.

Soil Management.—Tillage, manuring and rotation of crops; humid and dry farming.

Vegetable Gardening.—Hot beds and cold frames; their preparation and use; selection of garden seeds; choice of varieties; cultural methods.

Small Fruits.—Origin and evolution; soil and cultural requirements; picking and marketing.

Landscape Gardening.—Plans for beautifying home and school grounds; making and care of lawns, walks, and flower beds; best adapted ornamental trees, shrubs, and flowering plants.

Orcharding.—Origin, history, and adaptability of standard varieties; location, planting, and management; harvesting and marketing.

Insect Study.—Identification and life-history of field, garden, and orchard insects; remedial measures.

Field Crops.—Selection, cultivation, harvesting, and disposition.

Live Stock.—Necessity of live stock in good farming; history, adaptability, and management of the principal classes.

Poultry.—Breeds, housing, feeding, and management.

Rural Economics.—Laws relating to agriculture; agricultural organization; co-operative associations; the country-life movement.

One paper of two hours.

SENIOR MATRICULATION.

The subjects for Senior Matriculation are as follows:—

1. English and History.
2. Mathematics (Algebra, Geometry, and Trigonometry).
3. Physics.
4. Two of the following: Chemistry, French, German, Greek Latin.

REQUIREMENTS IN EACH SUBJECT.

English.

1. *Literature*—

   1. Chaucer's Prologue to the Canterbury Tales.
   2. Spenser's Faerie Queene, Book I.
   3. Milton's Comus.

      These can be obtained in Macmillan's Pocket Classics.

   4. Halleck's History of English Literature, New Edition (American Book Co.), pages 1-261, with such illustrations as time may permit. Suitable illustrative material will be found in Chambers' Cyclopedia of English Literature.

2. *Composition.*—Fundamental principles—words, sentences, paragraphs, the composition as a whole. The Study and Practice of Writing English, by Lomer & Ashmun (Houghton, Mifflin & Co.), indicates the ground covered. Regular practice in Composition is essential.

History.

The evolution of modern European society is interpreted by Robinson & Beard in their Outlines of European History, Part 2 (Ginn & Co.).

Mathematics.

Algebra.—Hall & Knight's Elementary Algebra (omitting Chapters 40, 41, 42), or the same subject-matter in similar textbooks.

Plane and Solid Geometry.—As in Hall & Stevens' School Geometry.

Trigonometry.—Hall & Knight's Elementary Trigonometry to page 210, and Chapter 19; nature and use of logarithms (Bottomley's four-figure tables).

Physics.

A general study of the principles of mechanics, properties of matter, heat, light, sound, and electricity. The course has two

objects: (1) To give the minimum acquaintance with physical science requisite for a liberal education to those whose studies will be mainly literary; (2) to be introductory to the courses in Agriculture, Chemistry, Engineering, and Physics. Students must reach the required standard in both theoretical and practical work and are required to submit a certified laboratory note-book.

Text-books: Ontario High School Physics, and Ontario High School Laboratory Manual in Physics.

Chemistry.

1. *General Chemistry.*—This course is arranged to give a full exposition of the general principles involved in modern Chemistry, and comprises a systematic study of the properties of the more important metallic and non-metallic elements and their compounds, and the application of Chemistry in technology.

Students must reach the required standard in both theoretical and practical work and are required to submit a certified laboratory note-book.

Book recommended: General Chemistry for Colleges (Alexander Smith; Century Co.).

French.

(*a.*) *Literature.*—A general view of French Literature based on passages in Siepmann's Primary French Course, Third Part (Macmillan, Canada), 2nd Edition, 1915. Corneille, Racine, Molière, La Fontaine, Boileau, Rousseau, Voltaire, Chateaubriand, Sand, Balzac, Hugo, Lamartine, Musset.

(*b.*) *Language.*—The passages from the above-mentioned authors in Siepmann, Part III., and the exercises thereon, with the exception of (1) those marked V. Free Composition, pages 143-219, (2) the test papers in composition, pages 259-265, and (3) the passages for translation into French, pages 266-270. Siepmann's Short French Grammar should be used in conjunction with Part III., and special attention paid to the accidence and syntax of the verb. In using the exercises in Part III. attention will be paid to the following: Conjugation of verbs, transitive and intransitive verbs, verbs conjugated with être, agreement of verbs, ordinary uses of tenses, common uses of

subjunctive, agreement of past participle, use of pure infinitive, every-day uses of infinitive with à and with de.

(*c.*) *Conversation.*—Practice in conversation will be based on Andre Laurie, Une année de collège à Paris (Macmillan). Students should procure W. E. Weber's Cahier français de notes diverses (Cambridge University Press).

German.

(*a.*) *Composition, Conversation, etc.* — Pope, Writing and Speaking German, Part I. (Holt).

(*b*). *Reading.*—Storm, Immensee (Holt); Keller, Legenden (Holt); Moser, Der Bibliothekar (Ginn); Freytag, Die Journalisten (Ginn).

Greek.

Texts.—Lucian, Extracts (Bond & Walpole, Macmillan); Euripides, Alcestis (Blakeney, Bell's Illustrated Classics).

Composition and Grammar. — White's First Greek Book (Copp, Clark Co.).

History.—Athenian Empire (Cox, Epoch Series, Longmans).

Latin.

Texts.—For 1920 and alternate years—

Cicero, Pro Lege Manilia (W. J. Woodhouse, Copp, Clark Co., Ltd.).

Virgil, Aeneid II. and IV. (Page, Macmillan).

For 1921 *and alternate years*—

Cicero, De Senectute (Warman, Bell & Sons).
Virgil, George IV. (Page, Macmillan).
Ovid, Elegiac Selections (Smith, Bell & Sons).

Composition.—Latin Composition (Mitchell, Macmillan, Canadian School Series).

History.—Outlines of Roman History to 133 B.C. (Pelham, Rivingtons).

Two papers of three hours each.

ADMISSION TO ADVANCED STANDING.

A student of another university applying for exemption from any subject or subjects which he has already studied is required to submit with his application a Calendar of the University in which he has previously studied, together with a complete statement of the course he has followed and a certificate of the standing gained therein in the several subjects. The Faculty will determine the standing of such a student in this University. The fee for examination of certificates, in respect of which candidates are granted exemptions, is $2.00.

AGE OF ADMISSION.

Except under special circumstances, no student under the age of sixteen is admitted to the First Year Courses in Arts, Applied Science or Agriculture, or under the age of seventeen to the Second Year.

REGISTRATION AND ATTENDANCE

Registration

APPLICATION FOR ADMISSION.

Those who intend to register as students of the University for the Session 1920-21 *are required to make application to the Registrar before the beginning of lectures, on forms to be obtained from the Registrar's office.*

Friday, September 24th, will be the last day of registration for all students.

Lectures will commence on Tuesday, September 28th.

The complete regulations regarding registration follow:—

1. Candidates entering on a course of study in any Faculty, whether as undergraduates, conditioned students, or partial students, are required, before the beginning of the session, to furnish the information necessary for the University records, to register for the particular classes which they wish to attend, and to sign the following declaration:—

"I hereby accept and submit myself to the statutes, rules, regulations, and ordinances of the University of British Columbia, and of the Faculty or Faculties in which I am registered, and to any amendments thereto which may be made while I am a student of the University, and I promise to observe the same."

2. Students who for any reason have failed to register by the date specified above will be permitted to do so within a limited time thereafter, but only on payment of a fee of $2 for late registration.

3. The Registrar is empowered to register all students whose records show that they are entitled to attend the classes applied for. To enable him to determine this, new students must present certificates at time of registration. (*See* paragraph 8, pages 40 and 41.) All doubtful cases will be dealt with by the Faculty.

4. The names of those who have registered for separate classes will be sent by the Registrar to the Instructors on registration day, and *only those for whom cards have been received by an Instructor will be admitted to his class.* To students whose standing cannot be determined at the time of registration, special tickets will be issued, which will give them the right of admission to classes until such time as their status is ascertained.

5. Students desiring to make a change in their choice of studies must make application to the Registrar, on standard form for "change of course." This application must be approved by the Committee on Courses, whereupon due notice will be sent by the Registrar to all parties concerned. *No change in registration will be allowed, except under special circumstances, after the fifteenth day of the session.*

6. Persons who wish to pursue courses in the University without a view to qualifying for a degree will be classified as *partial* students and shall not be admitted to any course until they have obtained the permission of the Instrucor concerned. Their application must then be approved by the Committee.

7. In the Faculty of Arts, where there is a choice of courses, students in attendance shall be required to choose their electives for the next year before the close of the preceding session, or (in cases where this cannot be done) not later than one week before the opening of the session.

Attendance

1. Students are required to attend at least seven-eighths of the total number of lectures in each course. Those whose unexcused absences exceed one-eighth of the total number of lectures in a course shall not be permitted to come up for the examination in that course, but may sit for supplemental examination; those, however, whose unexcused absences exceed one-fourth of the total number of lectures in any course must repeat the work in that course.

Excuses on the ground of illness or domestic affliction will be dealt with only by the Dean. *Medical certificates must be presented immediately on return to University work.*

2. A record will be kept by each professor or lecturer, in which the presence or absence of students will be carefully noted. This record will be submitted to the Faculty when required.

3. Credit for attendance at any lecture or class may be refused on the grounds of lateness, inattention, neglect of study, or disorderly conduct in the class-room or laboratory.

The following special regulations with regard to marking the attendance of students have been adopted:—

Lectures will commence on the hour, or at the conclusion of the roll-call. After the commencement of a lecture students are not allowed to enter, except with the permission of the Instructor. If permitted to enter, they will, on reporting themselves at the close of the lecture, be marked "late." Two "lates" will count as one absence. Lectures end at five minutes before the hour.

CLASSES OF STUDENTS

There are three classes of students:—

(1,) Undergraduates—students who have passed the Matriculation Examination and, in the case of Second Year and Third Year students, all the examinations of their course in the years below that in which they are registered.

(2.) Conditioned undergraduates — those with defective entrance qualifications or those who have failed in one or more of the subjects of their course in the year previous to that in which they are registered.

(3.) Partial students—comprising all those who, not belonging to one of the above classes, are taking a partial course of study. Except as provided below, such students may (subject to the approval of the Head of the Department and the Committee on Courses) attend any class without previous examination.

FEES

General Regulations

1. Fees should be paid at the time of registration. The sessional fees are:—

Registration and Class Fees	$40 00
Alma Mater	5 00
Caution Money	5 00

Registration and Class Fees may be paid in two instalments, the first not later than October 9th and the second not later than January 20th. *After these dates an additional fee of $2 will be exacted of all students in default.*

At the request of the students themselves, and by the authority of the Board of Governors of the University, $5 additional will be exacted from all students for the Alma Mater Society.

A deposit of $5 as caution-money is required from each student. The deposit is returned at the end of the session, after deductions have been made to cover breakages, wastage, and use of special materials in laboratories, etc. In case the balance of the deposit remaining to the credit of a student falls below $1.50, a second deposit of $5.00 may be required.

2. Immediately after October 20th the Registrar shall send to the Instructors a list of the students applying for a course who have not paid their fees, on receipt of which their names shall be struck from the registers of attendance, and such students cannot be readmitted to any class except on presentation of a special ticket, signed by the Registrar, certifying to the payment of fees.

Students registering after October 9th shall pay their fees at the time of registration, failing which they become subject to the provisions of Regulation 2.

Special fees are:—

A regular supplemental examination in any course, or part of a course in which separate examinations are held.	$5 00
Fee for special examination in any subject	7 50
Graduation fee	20 00

PRIZES, MEDALS AND SCHOLARSHIPS

1. General Proficiency Scholarships are open to candidates in both the Faculties of Arts and Applied Science.

2. No scholarship, medal, or prize will be awarded to any candidate who has failed to take 75 per cent. of the marks obtainable in the subject or subjects to which the award is attached.

3. No candidate will be permitted to hold more than one scholarship, but any one who would, but for this provision, have been entitled to a second scholarship will have his name published in the lists.

4. When the scholarship cannot be awarded for this reason to the candidate obtaining the highest number of marks, it will be granted to the candidate ranking second, provided the requisite number of marks has been obtained.

5. All winners of scholarships must attend lectures for the academic year immediately following the award. The Faculty may, upon satisfactory reasons being shown, permit a scholar to postpone attendance for a year. If at the end of a year a further postponement is necessary, special application must again be made. In every such case the payment of scholarship will be postponed in like manner.

6. The scholarships will be paid in three instalments during the session following their award—on the 15th of November, the 15th of January, and the 15th of March—and each scholar is required to send to the Registrar a certificate of attendance upon lectures at least three days before the date of each payment.

7. Winners of scholarships who desire to do so may resign the monetary value, while the appearance of their names in the University lists enables them to retain the honour. Any funds thus made available will be used for additional scholarships or student loans.

8. Scholarships, medals, and prizes will be awarded at the close of the session, and in case of Matriculation Examinations, after the June examination.

For 1921 the following scholarships, prizes, and medals will be offered:—

THE GOVERNOR-GENERAL'S MEDAL.

A gold medal, presented by His Excellency the Governor-General of Canada, will be awarded to the Arts student standing at the head of the graduating class.

ROYAL INSTITUTION SCHOLARSHIPS AND LOANS.

(a) Matriculation Scholarships

1. Seven General Proficiency Scholarships will be awarded on the result of the Junior Matriculation Examinations.

A. One of $150 to be awarded to the British Columbia candidate for matriculation who obtains the highest standing.

B. Six of $100 each, one for each of the following districts, to be awarded to the candidate from each of such districts who obtains the highest standing among the candidates from the district:—

1. Victoria District.
2. Vancouver Island (exclusive of Victoria District) and Northern Mainland.
3. Vancouver District.
4. Fraser Delta (exclusive of Vancouver District, but including Agassiz).
5. Yale.
6. Kootenays.

NOTE.—*In the district from which the winner of A comes, B will be awarded to the candidate standing second.*

2. A student who wins a Junior Matriculation Scholarship and proceeds to Senior Matriculation in his own district high school may have the scholarship reserved for him for one year, to be awarded subject to his obtaining satisfactory standing in the Senior Matriculation Examination.

3. Sums accruing from unawarded Matriculation Scholarships shall be used, at the discretion of Faculty, in the form of bursaries or loans to assist returned soldiers.

(b) First Year Scholarships

Four scholarships of $75 each (three in Arts and one in Applied Science) will be awarded for general proficiency in the work of the First Year.

(c) Student Loans

A fund is provided from which a loan not to exceed $100 may be made to a deserving student who is in need of pecuniary assistance. Application for such a loan will be addressed to the President on a form which will be supplied by the Registrar.

UNIVERSITY SCHOLARSHIPS, ETC.

1. A scholarship of the value of $200 may be awarded to a graduate student who shows special aptitude for post-graduate studies. (Application to be made not later than May 15th.)

2. Two scholarships in Arts of $75 each will be awarded to students proceeding to the Fourth Year, the award to be based on the work of the Third Year.

3. Three Scholarships (two in Arts and one in Applied Science) of $75 each will be awarded to students proceeding to the Third Year, the award to be based on the work of the Second Year.

4. A Scholarship in Agriculture of $75 will be awarded to a student proceeding to the Second Year, the award to be based on the work of the First Year.

5. Two Scholarships of $75 each may be awarded to returned soldiers taking the work of the First Year, the award to be based on the work of the year.

6. One Scholarship of $75 will be awarded upon the results of the Senior Matriculation Examination.

7. The Scholarships mentioned in the above sections will be awarded for general proficiency in the work of the respective years.

8. Two book prizes of the value of $25 each, open to all students of the University, will be awarded for essays on special subjects, one literary and one historical or economic, to be announced at the beginning of the session.

DONATED SCHOLARSHIPS AND PRIZES.

The Shaw Memorial Scholarship

This Scholarship of $137.50, founded by friends of the late James Curtis Shaw, Principal of Vancouver College, and afterwards of McGill University College, Vancouver, will be paid throughout his undergraduate course to any child of the late Principal Shaw who is in regular attendance at the University as a fully matriculated student; when there is no such candidate, it will be awarded upon the results of the examination of the Second Year in Arts to the undergraduate student standing highest in any two of the following three subjects, English, Latin, Greek, and proceeding to the work of the Third Year.

The McGill Graduates' Scholarship

This Scholarship of $137.50, founded by the McGill Graduates' Society of British Columbia, will be awarded upon the results of the examinations of the Second Year in Arts to the undergraduate student standing highest in English and French, and proceeding to the work of the Third Year.

The Dunsmuir Scholarship

This Scholarship of $165, founded by the Hon. James Dunsmuir, will be awarded upon the results of the examinations of the Third Year in Applied Science to the undergraduate student standing highest in the Mining Engineering Course, and proceeding to the work of the Fourth Year.

NOTE.—The above three scholarships were originally donated to the Royal Institution, and have, with the consent of the donors, been transferred by the Board of Governors of that institution to the University of British Columbia.

Convocation Scholarship.

This scholarship of the value of $50.00, donated by Convocation of The University of British Columbia, will be awarded annually to the student obtaining first place in the Fourth Year of Applied Science.

The Terminal City Club Memorial Scholarship

This Scholarship, founded by the members of the Terminal City Club as a memorial to those members of the Club who lost their lives in the Great War, will be awarded upon the results of the examinations of the Second Year in Arts to the undergraduate student standing highest in English and Economics, and proceeding to the work of the Third Year.

The Anne Wesbrook Scholarship.

This Scholarship of the value of $100, given by the Women's Club of the University, will be open to both men and women graduates of this University who intend to pursue post-graduate study in this or any other approved University.

Applications for this Scholarship should be made to the Registrar not later than the last day of the final examinations.

The Arts '19 Scholarship

This Scholarship of the value of $150, given by the students of Arts '19, will be awarded on the recommendation of the Faculty Committee on Scholarships to a Third Year student in Arts proceeding to the Fourth Year.

The award will be based on (1) literary and scholastic attainments, and (2) exhibition of moral force of character and instincts to lead and take an interest in fellow-students and in University activities.

This Scholarship will be paid in full to the winner at the beginning of the session.

The Women's Canadian Club Prize

This prize of the value of $50, given by the Women's Canadian Club, will be awarded in 1920 to the student obtaining first place in Canadian History.

The Gerald Myles Harvey Prize.

A book prize of the value of $50, given by J. N. Harvey, Esq., in memory of his son, Gerald Myles Harvey, who died on active

service, will be awarded to the student of the Third Year in Arts who submits the best essay on a specified subject in Economics or Political Science.

The Women's Liberal Association Prize

This prize of the value of $25, given by the Women's Liberal Association, will be awarded in 1920 to the student of First Year Arts obtaining first place in English Literature.

The Historical Society Prize.

Through the generosity of R. L. Reid, Esq., K.C., the newly organized Historical Society of the University has been able to offer for the Session 1919-20 a prize of $25, open to all students in Arts, for the best essay on any one of three subjects announced by the Executive of the Society.

Captain Leroy Memorial Scholarship.

Subject to the approval of Senate, this scholarship of the value of $250 will be donated by the Universities Service Club and will be awarded for the academic year 1920-21 to a returned soldier student at the University of British Columbia. The details will be announced later.

THE RHODES SCHOLARSHIP.

In addition to the above scholarships, the University will award the Rhodes Scholarship assigned by the trustees of the late Mr. Cecil J. Rhodes to the Province of British Columbia.

The following are excerpts from the regulations laid down by the trustees:—

The election of scholars in Canada under the Rhodes bequest will take place each year during the month of January. The scholars will begin residence at Oxford in October of the year for which they are elected.

Each scholarship is tenable for three years, and is of the value of £300 per annum.

Candidates shall be British subjects and unmarried. They must have passed their nineteenth but not their twenty-fifth birthday on October 1st of the year for which they are elected.

An elected scholar must have reached at least the end of his sophomore or second year's work at some recognized degree-granting university or college of Canada.

Candidates may elect whether they will apply for the scholarship of the Province in which they have acquired any considerable part of their educational qualification, or that of the Province in which they have their ordinary domicile, home, or residence. They must be prepared to present themselves for examination or election in the Province they select. No candidate may compete in more than one Province, either in the same or in successive years.

Only candidates who have passed an equivalent to the Oxford Responsions Examination or those who are exempted from Responsions by the Colonial Universities' Statute are eligible for election.

In accordance with the wish of Mr. Rhodes, the trustees desire that "in the election of a student to a scholarship regard shall be had to (i) his literary and scholastic attainments; (ii) his fondness for and success in manly outdoor sports, such as cricket, football, and the like; (iii) his qualities of manhood, truth, courage, devotion to duty, sympathy for and protection of the weak, kindliness, unselfishness, and fellowship; and (iv) his exhibition during school-days of moral force of character and of instincts to lead and to take an interest in his schoolmates." Mr. Rhodes suggested that (ii) and (iii) should be decided in any school or college by the votes of fellow-students, and (iv) by the head of the school or college.

Additional information will be furnished to intending candidates on application to the President of the University.

The Committee by whom the Rhodes scholar is elected is at present constituted as follows:—

President Klinck, Geo. E. Robinson, Esq., Dr. Alexander Robinson, and Chief Justice Hunter.

SUGGESTED LOCAL SCHOLARSHIPS.

The number of Junior Matriculation Scholarships offered at present is quite inadequate to the needs of the Province, and opportunity is here taken to recommend a scheme for adding to their number.

This scheme is the establishment of local or district University Entrance Scholarships by City or Municipal Councils or other public bodies, as well as by private benefactors. These scholarships would be awarded by a local authority, the University reserving to itself the right of confirmation.

In the award of such scholarships, standings in the Matriculation Examination, while important, need not be the only consideration; it is desirable that regard should be had also to financial circumstances, character, and intellectual promise.

In the large universities, both of Great Britain and the United States, such district scholarships have proved a strong bond between the community and the University, have brought the University close to the life of the young, and opened up the prospect of a university education to many who would not otherwise have contemplated it.

Scholarships may be offered to students taking a particular course; in this way the study of such sciences and technical branches of knowledge as have a bearing on the industries of the district will be encouraged and native sons prepared to assist in developing the resources of the Province.

The scheme has great possibilities both for the growth of the University and the prosperity of the Province, and it is earnestly recommended to consideration.

FACULTY OF ARTS

INFORMATION FOR STUDENTS IN ARTS.

COURSES LEADING TO THE DEGREE OF B.A.

The degree of B.A. is granted only after four sessions of class-room work from Junior Matriculation. Students who enter with Senior Matriculation may complete their course in three years.

A double course leading to the degrees of B.A. and B.Sc. (Applied Science) is offered. (*See* page 135.)

The curriculum as laid down in the following pages may be changed from time to time as deemed advisable by the Faculty.

The Courses in Arts are arranged on the unit system.

Definition of a Unit.—A unit is one lecture hour per week, or one continuous laboratory period of not less than two or more than three hours per week, throughout the College year.

Students in any affiliated Theological College who file with the Registrar a written statement expressing their intention of graduating in Theology, will be allowed to offer in each year of their Arts Course one of the following subjects (for details see Calendar of Theological Colleges): Hebrew, Biblical Literature, New Testament Greek, Church History, Christian Ethics and Apologetics.

(For the curriculum effective in 1921-22, *see* page 118.)

FIRST YEAR.

1. English 1 and 2, and History 1.
2. Mathematics 1.
3, 4, 5. *Three* of the following, one of which must be a language offered for Matriculation:—

Latin 1, Beginners' Greek, Greek 1, French 1, Beginners' German, German 1, Spanish 1, Biology 1, Chemistry 1, Geology 1, Physics 1. (Physics must be taken by students intending to enter the Faculty of Applied Science. *See* page 122.)

1. *Distinction Courses.*—

(*a.*) Distinction Courses and attendance at Distinction Lectures shall be optional.

(*b.*) Examination results in each course shall be published in two lists, one for Pass Students, one for those in Distinction.

(*c.*) Distinction classes shall carry value to the extent of an additional one-fourth in the award—

1. of general standing for the year,
2. of scholarships and prizes.

2. No student in his first year shall elect more than one beginner's course in language.

SECOND YEAR.

I. English 3, 4.

II. French 2; or German 1 or 2; or Spanish 2; or Greek 1 or 2; or Latin 2. The language must have been taken in the First Year.

III. One subject from each of *three* of the following groups:

(*a.*) Another language from II. if taken in the First Year.

(*b.*) Chemistry 1 or 2; Geology 1 or 3 or 4 or 5, or a third language which must have been taken in the First Year.

(*c.*) Physics 2; Philosophy 1.

(*d.*) History 2; Mathematics 2.

(*e.*) Economics 1; Biology 1, and Botany or Zoology.

1. *Distinction Courses.*—

(*a.*) Distinction Courses and attendance at Distinction Lectures shall be optional.

(*b.*) Examination results in each course shall be published in two lists, one for Pass Students, one for those in Distinction.

(*c.*) Distinction classes shall carry value to the extent of an additional one-fourth in the award—

1. of general standing for the year
2. of scholarships and prizes.

(*d.*) Students looking forward to an Honour Course are required (during the Second Year) to take Distinction in their proposed specialty or specialties.

2. A beginner's language course offered in the First Year must be continued in the Second.

THIRD AND FOURTH YEARS.

All students should select, before the end of March of their Second Year, the subjects to which they wish to give special attention during their Third and Fourth Years. In order that each student shall do a considerable amount of connected work in some one subject without erring on the side of too narrow specialization, a group system of courses has been adopted. The groups, which are as follows, include all subjects open to candidates for the B.A. degree:—

Group I.—Agriculture; Bacteriology; Biology; Chemistry; Geology and Mineralogy; Physics.

Group II.—English; French; German; Greek; Latin; Spanish.

Group III.—Economics; History; Mathematics; Philosophy.

One subject taken in the Second Year must be continued through the Third and Fourth Years to the extent of not less than eight units in the last two years. The head of the department concerned should be consulted with a view to arranging a well-balanced course.

Of the remaining twenty-two units, eight at least must be chosen from one or both of the other groups.

The Curriculum of the Third and Fourth Years in Arts shall consist of at least 30 units of work, of which students shall take, in their Third Year, not less than 15 units or more than 18.

When courses of the Second Year are elected by Third or Fourth Year students, the distinction hour in such courses shall become obligatory upon such students.

	Units.
Agriculture	2
Bacteriology 1	2
" 2	2
" 6	½
Biology 2	2
" 3	2
" 4	1
Botany 10 (*a*)	2
" 10 (*b*)	2
" 10 (*c*)	1
" 11 (*a*)	2
" 11 (*b*)	1
" 12 (*a*)	2
" 12 (*b*)	1
" 13 (*a*)	2
Chemistry 2	3
" 3	3
" 4	1
" 5	3
" 6	2
" 7	3
" 8	1½
" 9	3
Economics 1	3
" 2	3
" 3	3
" 5	3
" 6	3
Government 1	3
" 2	3
English, 6	2
" 8	2
" 9	3

	Units.
English 10	3
" 11	2
" 12	2
" 13	3
" 14	3
" 16	3
" 17	3
" 18 (*b*)	2
" 19	3
" 20	3
" 21 (*a*)	2
" 21 (*b*)	1
" 22	1
" 24	2
French 2	3
" 3 (Pass)	3
" 3 (Honours)	3
" 4 (Pass)	3
" 4 (Honours)	3
Geology 2	3
" 3	1
" 4	1
" 5	3
" 6	4
" 7	4
" 8	4
" 9	2
" 10	1
" 12	1½
German 2	3
" 3	3
Greek 2	3
" 3	3
" 4	2
History 3	2
" 4	3
" 5	3
" 6	3

	Units.
History 7	3
Latin 2	3
" 3	3
" 5	3
" 8	1
Mathematics 2	3
" 3	2
" 4	1
" 5	3
" 6	1
" 7	2
" 8	2
" 9	2
" 11	1
" 12	1
Philosophy 2	4
" 4	2
Physics 2	3
" 3	3½
" 4	3½
" 5	2
" 6	2
" 7	2
" 9	2
" 10	3 to 6
Spanish 1	3
" 2	4
Zoology 20 (*a*)	1½
" 21 (*a*)	2
" 21 (*b*)	1
" 23 (*a*)	2
" 24 (*a*)	2

No credit will be given for a First Year language taken in the Third Year unless it is continued in the Fourth Year.

EXAMINATIONS IN ARTS.

1. There are two examinations in each year—one at Christmas and the other at the end of the session. Successful students are arranged in three classes, as follows: First class, those who obtain 80 per cent. or more; Second class, 65 to 80 per cent.; Passed, 50 to 65 per cent.

Christmas examinations will be held in all subjects, and are obligatory for all students.

Any student whose record is found to be unsatisfactory may at any time be required to withdraw from the University.

2. The following are the regulations for advancement to the Second, Third, and Fourth Years of the undergraduate course:—

Advancement to the Second Year.—In order that a student may proceed to the Second Year of his course, he must have completed his Matriculation, and have passed in all, or all but one, of the subjects of the preceding year, but may not continue in the Second Year in the subject in which he has failed to make good his standing, except in the cases of compulsory subjects for the Second Year.

Advancement to the Third Year.—In order that a student may proceed to the Third Year, he must have completed his First, and have passed in all, or all but one, of the subjects of the preceding year, but he may not continue the subject in which he has failed to make good his standing.

Advancement to the Fourth Year.—In order that a student may proceed to the Fourth Year, he must have completed all the subjects of the preceding years.

N.B.—A conditioned student will not be allowed to continue the subject in which he is conditioned, unless it is a compulsory subject.

Repeating Year.—By special permission of the Faculty, a student who is required to repeat his year will, *on application in writing,*—

(*a.*) Be exempted from attending lectures and passing examinations in the subjects in which he has already passed, provided he has made therein a standing of 60 per cent. or over.

(*b.*) And if so exempted, be permitted to take, in addition to the subjects in which he has failed, one of the subjects of the following year of his course.

SUPPLEMENTAL EXAMINATIONS.

3. Examinations supplemental to the sessional examinations will be held in September, simultaneously with the matriculation examinations. The time for each supplemental examination will be fixed by the Faculty; the examination will not be granted at any other time, except by special permission of the Faculty, and on payment of a fee of $7.50.

4. A list of those to whom the Faculty has granted supplemental examinations in the following September will be published after the sessional examinations.

5. *Applications for supplemental examinations,* accompanied by the necessary fees (*see* page 59), should be in the hands of the Registrar at least two weeks before the date set for the examinations.

HONOUR COURSES.

Honours will be awarded in any of the following Honour Courses:—

Biology;
Chemistry;
Geology;
Biology and Bacteriology;
Biology and Geology;
Chemistry and Biology;
Chemistry and Physics;
Chemistry and Geology;
Mathematics;
Physics;
Mathematics and Physics;
English Language and Literature;
English and History;
English and French;
English and Latin;
English and Philosophy;

Economics, Political Science and Sociology;
History and Economics;
History and Philosophy;
History and French;
History and German;
History and Latin;
French and Latin;
French and German;
French and Spanish;
French and Philosophy.

GENERAL REGULATIONS.

1. Honour Courses shall be begun at the close of the Second Year and continued until the end of the Fourth Year.

2. Students must obtain the consent of the departments concerned before they enter upon any Course in Honours; and, under normal conditions, consent will not be granted unless they present, at the end of the Second Year, a clear academic record, and unless they have obtained at least Second Class standing in the subject or subjects of specialization. Except with special permission from the Head of the Department, none but those who have taken a Distinction Course in a subject will be allowed to take Honours in that subject.

3. A student electing Honours in one subject is required to take at least 18 units in that subject and at least 6 units outside it; a student electing a combination Honour Course is required to take at least 12 units in each subject. Credit for the graduating essay will be not less than 3 or more than 6 units.

4. All students in Honours must present a graduating essay or thesis embodying the results of some investigation that they have made independently.

5. All candidates for Honours are required, at the end of their Fourth Year, to take a general examination, oral or written, or both, as the department or departments concerned shall decide. This examination is designed to test the student's knowledge of his chosen subject or subjects as a whole and is in addition to the ordinary class examinations of the Third and Fourth Years.

6. Honours are of two grades—First Class and Second Class. Students who, in the opinion of the departments concerned, have not attained a sufficiently high ranking may be awarded a pass degree.

SPECIAL REGULATIONS.

Biology.

Prerequisites:—Students are advised to take Chemistry 1; Biology 1; Botany 10 (*a*); Zoology 21 (*a*), with distinction.

Course:—To be chosen in accordance with the general regulations and on the approval of the departments from the following:—

		Units.
Biology	3	2
"	4	1
Botany	10 (*b*)	2
"	10 (*c*)	2
"	11 (*a*)	2
"	12 (*a*)	2
"	13 (*a*)	2
Zoology	20 (*a*)	2
"	21 (*b*)	1
"	23 (*a*)	2
"	24 (*a*)	2

Chemistry.

Prerequisites:—Chemistry 1; Physics 1 or 2, and Mathematics 2.

Course:—Candidates are required to take the following classes: Chemistry 2, 3, 4, 5, 7 and 9, and are advised to take Physics 2, and Mathematics 3 (Calculus).

Geology.

Students intending to take Honour Geology are recommended to take Chemistry and Physics in the First Year, as some knowledge of these subjects is essential. Geology 1, should be taken in the Second Year, as it is a prerequisite for all Honour Geology;

and Geology 2, if possible, as it supplements Geology, 1, and is a prerequisite for Geology 7, 8 and 9.

Geology 3, 4, 5, 7, 8, 9, 10 and 12, may be taken as Honour subjects.

Biology and Bacteriology.

Prerequisites:—Students are advised to take Chemistry 1; Biology 1; Botany 10 (*a*); Zoology 21 (*a*), with distinction.

Course:—To be chosen in accordance with the general regulations and on the approval of the departments.

Biology and Geology.

Prerequisites:—Students are advised to take Chemistry, 1; Biology 1, and Geology 1, with distinction.

Course:—To be chosen in accordance with general regulations and on approval of departments.

Chemistry and Biology.

Prerequisites:—Chemistry 1; Physics 1 or 2, and Biology 1.

Course:—Candidates must complete the following courses: Chemistry 2, 3, 4, 7 and 9; Biology 3 and 4, and Zoology 23 and 24.

Chemistry and Physics.

Prerequisites:—Chemistry 1; Physics 1 or 2, and Mathematics 2.

Course:—Candidates must complete Chemistry 2, 3, 4, 5 and 7, and Physics 3, 4, 7, or 9 and 8 or 10. They are advised to take Mathematics 3.

Chemistry and Geology.

Prerequisites:—Chemistry 1; Physics 1 or 2, and Geology 1.

Course:—Candidates must take Chemistry 2, 4, 5 and 7, and at least 12 units in Geology.

Mathematics.

Prerequisites:—Mathematics 1 and 2; Physics 1 and 2.

Course:—Third Year Mathematics 3, 4, 5, 6 and 7; Physics 3. Fourth Year Mathematics (Course to be chosen from the remaining subjects offered), Physics 4.

Physics.

Prerequisites:—Mathematics 1 and 2; Physics 1 or 2.

Required in Third and Fourth Years:—(*a*) Mathematics 3, 5 and 9; (*b*) Physics 3, 4, 7, 8, 9 and 10.

Mathematics and Physics.

Prerequisites:—Mathematics 1 and 2; Physics 1 or 2.

Mathematics, Third Year:—3, 5, together with 7 or 4 and 6; *Fourth Year*:—8 and 9, and another course to be chosen.

Physics, Third Year:—3 and 4; *Fourth Year*, 5 or 6 and 8 or 10.

English Language and Literature.

Candidates for honors in English Language and Literature are subject to the following special regulations:

1. They shall take Courses 20, 21a, 21b, 22, 24. Attendance upon the Seminar is required during both of the final years, but credit will be given only for the work of the Fourth Year.

2. They shall pass examinations on the life, times, and complete works of some major English author (*see* English 19).

3. They shall take other courses covering at least 15 units of credit. One part of this work shall be a course in English History; or, lacking this, candidates must submit to an examination in that subject, to be set by the Department of History.

4. They shall submit to a final Honours Examination, written or oral or both, on the History of English Literature.

In the award of Honours special importance will be attached to the Graduating Essay and to the Final Honours Examination.

English and History.

Candidates for honours must comply with the following regulations:

English:—1. They shall take Courses 20 and 24, and any three of the English Courses of the first division. Attendance upon the Seminar is required during both the final years, but credit will be given only for the work of the Fourth Year.

2. They shall submit to a final Honours Examination, written or oral or both, on the History of English Literature since 1400.

History:—Candidates must take at least 12 units in History during their Third and Fourth Years.

The graduating essay will count 3 units.

English and French.

English:—As in English and History.

French:—See details (pages 110, 111).

English and Latin.

English:—As in English and History.

Latin:—Candidates must in their Third and Fourth Years take at least 12 units in Latin. They will be expected to show special knowledge of some one major Latin author, and to pass an examination upon their general knowledge of Latin Literature, History, Antiquities, etc.

English and Philosophy.

English:—As in English and History.

Philosophy, Prerequisite:—Philosophy, 1.

Course:—Totalling 12 units, 6 of which must be taken in the Third Year.

Economics, Political Science and Sociology.

Candidates for Honours in the Department of Economics, Political Science, and Sociology are subject to the following special regulations of the Department:

(*a.*) The prerequisite for an Honours Degree shall be Courses 1 and 2.

(*b.*) An Honours Degree may be taken in this Department in May, 1921, by students who satisfactorily pass five courses in the Department other than Courses 1 and 2.

(*c.*) A final General Honours Examination, written or oral, shall be taken by each candidate at the close of the Fourth Year.

(*d.*) A graduating essay which shall embody the results of independent work on the part of the student will count for 3 to 6 units.

(*e.*) Each candidate may be required to deliver an address on some subject related to his course of study, before a general audience to be designated by the Head of the Department.

(*f.*) Those who propose to do Honours work in this Department are advised to take if possible a course in Ethics and the foundational courses in History.

History and Economics.

History:—As in English and History.

Economics:—Three courses in this Department other than Courses 1 and 2. For further regulations see Economics, Political Science and Sociology, clauses a, c, d, e, f.

History and Philosophy.

History:—As in English and History.
Philosophy:—As in English and Philosophy.

History and French.

History:—As in English and History.
French:—See details (pages 110, 111).

History and German.

Not given in 1920-21.

History and Latin.

History:—As in English and History.
Latin:—As in English and Latin.

French and Latin.

French:—See details (pages 110, 111).
Latin:—As in English and Latin.

French and German.

Not given in 1920-21.

French and Spanish.

Not given in 1920-21.

French and Philosophy.

French:—See details (pages 110, 111).
Philosophy:—As in English and Philosophy.

COURSES IN ARTS.

Department of Agriculture.

Professor: F. M. Clement.

The Scientific Basis of Agriculture.

This course has been designed to familiarize the student with the basic principles underlying scientific agriculture.

Two lectures per week throughout the year. 2 units.

Department of Bacteriology.

Professor: R. H. Mullin.
Assistant Professor: ———
Assistant: Olive C. E. McLean,

Bacteriology, 1.

A course of General Bacteriology, consisting of lectures, demonstrations, and laboratory work.

The history of bacteriology, the place of bacteria in nature, the classification of bacterial forms, methods of culture and isolation, and various bactericidal substances and conditions will be studied. The relationship of bacteria to agriculture, household science, and public health will be carefully considered.

Chemistry 1, and Biology 1, are prerequisites.

Seven hours a week during the First Term. 2 units.

Bacteriology 2.

A course of Special Bacteriology, consisting of lectures, demonstrations, and laboratory work.

The more common pathogenic bacteria will be studied together with the reaction of the animal body against invasion by these bacteria. The course will include studies in immunity and the various diagnostic methods in use in public health laboratories.

Seven hours a week during the Second Term. 2 units.

Bacteriology 6.

A course of lectures on Public Health, designed to supply information concerning the general principles of the science and the relationship it bears to the general public. Third and Fourth Years.

One lecture a week during the First Term. ½ unit.

Department of Biology.

Associate Professor of Botany: A. H. Hutchinson.
Associate Professor of Zoology: ————
Lecturer in Zoology: C. McLean Fraser.
Assistant Professor of Plant Pathology: ————
Botanist in charge of Herbarium and Botanical Gardens: John Davidson.
Assistant in Zoology: John Allardyce.
Assistant in Botany: Irene Mounce.

Biology.

1. *Introductory Biology.*—The course is introductory to more advanced work in Botany or Zoology; also to courses closely related to Biological Science, such as Agriculture, Forestry, Medicine.

The fundamental principles of Biology; the interrelationships of plants and animals; life processes; the cell and division of labour; life-histories; relation to environment.

The course is prerequisite to all other courses in Biology, except Biology 2.

Pass Course: Two hours lecture and two hours laboratory work per week.

Distinction Course: An additional two hours per week laboratory work. First Term.

Reference book: Smallwood, Text-book of Biology.

Second Term: Biology 1, shall be supplemented by Botany 10 (*a*), or Zoology 21 (*a*), which may be chosen in accord with course to be pursued.

2. *General Biology.*—The outline of the course is similar to that of Biology 1. The work required is more advanced and

the course is open to students of the Third and Fourth Years who have not taken Biology 1.

Two hours lecture and four hours laboratory work. First Term.

Reference books: Assigned reading from a number of books on General Biology.

Second Term: It is recommended that this course be supplemented by a more advanced course in a related subject (Zoology, Botany, Bacteriology). 2 units.

3. *General Physiology* of animal and plant life processes. Open to students of Third and Fourth Years having prerequisite Chemistry and Physics.

Two hours lecture and four hours laboratory work per week. Second Term.

Reference text: Bayliss, General Physiology. 2 units.

4. *Principles of Heredity.*—The fundamentals of Genetics illustrated by the race histories of certain plants and animals; the physical basis of heredity; variations; mutations; acquired characters; Mendel's law with suggested applications.

Two hours lecture per week. First Term. 1 unit.

Reference books: Assigned reading from a number of books.

Botany.

10. *Economic Botany.*

(*a.*) *General Economic Botany.*—An introductory course to General Botany and more specialized courses in Economic Botany. Plant requirements; plant products; plant-diseases; plant-breeding; forest ecology; life-histories of economic plants.

Pass Course: Two hours lecture and two hours laboratory work per week.

Distinction Course: An additional two hours per week laboratory work. Second Term. 2 units.

Reference book: Coulter, Barnes & Cowles, Text-book of Botany.

(*b.*) *Economic Flora.*—The classification and identification of economic plants found in the province. Collections are re-

quired. The course, while designed particularly to meet the needs of students of Agriculture or Forestry, is open to students of the Third and Fourth Years.

Two hours lecture and four hours laboratory work per week. Second Term. 2 units.

Prerequisite: Botany 10a.

Reference text: Henry, Flora of Southern British Columbia; Gray, Field, Forest, and Garden Botany.

(*c.*) *Plant Pathology.*—Identification and life-histories of parasites causing plant-diseases; means of combating them.

One hour lecture and two hours laboratory work per week. Second Term. 1 unit.

Prerequisite: Botany 10a.

Reference books: Massee's Diseases of Cultivated Plants and Trees; Stevens & Hall, Diseases of Economic Plants.

11. *Morphology.*

(*a.*) *General Morphology* of plants. A comparative study of plant structures. The relationships of plant groups. Comparative life-histories. Emphasis is placed upon the increasing complexity of plant structures, from the lower to the higher forms, involving a progressive differentiation accompanied by an interdependence of parts.

Two hours lecture and four hours laboratory work per week. First Term. 2 units.

Reference book: Coulter, Barnes & Cowles, Text-book of Botany Vol. I.

(*b.*) A shorter course of the same general scope and aims as 11 (*a*).

One hour lecture and two hours laboratory work per week. First Term. 1 unit.

12. *Physiology.*

(*a.*) *General Physiology* of plant life processes.

Two hours lecture and four hours laboratory work per week. First Term. 2 units.

(*b.*) A course similar in outline to 12 (*a*).

One hour lecture and two hours laboratory work per week. First Term. 1 unit.

Reference book: Coulter, Barnes & Cowles, Text-book of Botany Vol. I., Part II.

13. *Histology.*—(*a.*) A study of the structure and development of plants; methods of killing, fixing, embedding, sectioning, staining, mounting, drawing, reconstructing. Use of microscope, camera lucida; microphotography.

Seven hours per week. Second Term. 2 units.

Prerequisite: Botany 10a.

Zoology.

20. *Economic Zoology.*

(*a.*) *Economic Entomology.*—A study of the insect pests of animals and plants; means of combating them.

1½ units.

Lecture and laboratory, five hours per week. One Term

21. *Morphology.*

(*a.*) *General Morphology* of animals. Comparative anatomy. The relationships of animal groups. Comparative life-histories.

Course is prerequisite to other courses in Zoology.

Pass Course: Two hours lecture and two hours laboratory work per week. Second Term. 2 units.

Distinction Course: An additional two hours laboratory work per week.

Reference book: Thompson, Outlines of Zoology.

(*b.*) *Morphology of Insects.*—General Entomology: a collection is required.

One hour lecture and two hours laboratory work per week. One Term. 1 unit.

23. *Histology.*—(*a.*) Study of the structure and development of animal tissues. Methods in histology.

Seven hours per week. Second Term. 2 units.

24. *Embryology.*—(*a.*) A general survey of the principles of vertebrate embryology. Preparation and examination of embryological sections.

Seven hours per week. First Term. 2 units.

Reference books: Kellicott, Chordate Development.

Department of Chemistry.

Professor: D. McIntosh.
Professor: E H. Archibald.
Associate Professor: R. H. Clark.
Associate Professor: ————
Assistant: John Allardyce.
Assistant: Ruth Fulton.
Assistant: ————

1. *General Chemistry.*—This course is arranged to give a full exposition of the general principles involved in modern Chemistry, and comprises a systematic study of the properties of the more important metallic and non-metallic elements and their compounds, and the application of Chemistry in technology.

Books recommended: Inorganic Chemistry (Alexander Smith; Century Co.), or Inorganic Chemistry (H. G. Byers; Chas. Scribner's Sons).

Two lectures and one laboratory period of three hours a week. For Distinction an additional hour is required.

2. *Qualitative and Quantitative Analysis.*

Prerequisite: Chemistry 1.

(*a.*) *Qualitative Analysis.*—A course consisting of one hour of lecture or recitation and six hours of laboratory work each week throughout the First Term. During the first six weeks of the term an additional lecture or recitation hour may be substituted for a part of the laboratory work.

(*b.*) *Quantitative Analysis.*—A course consisting of one hour of lecture or recitation and six hours of laboratory work each week throughout the Second Term. The course embraces the more important methods of gravimetric and volumetric analysis.

Course (*b*) must be preceded by Course (*a*).

Books recommended: Noyes, Qualitative Analysis; Cumming & Kay, Quantitative Analysis.

For Distinction an additional laboratory period is required.

3 units.

3. *Organic Chemistry.*—This introduction to the study of the compounds of carbon will include the methods of preparation and a description of the properties of the more important groups and compounds in both the fatty and the aromatic series. Two lectures and one laboratory period of three hours weekly.

Chemistry 3 will only be given to those students taking Chemistry 2, or those who have had the equivalent of 2.

Books recommended: Holleman-Walker, Text-book of Organic Chemistry; Gatterman, The Practical Methods of Organic Chemistry. 3 units.

4. *Theoretical Chemistry.*—An introductory course on the development of modern Chemistry, including osmotic phenomena, the ionization theory, the law of mass action, and the phase rule.

Prerequisite: Chemistry 2.

Two lectures a week during the Second Term.

Text-book: James Walker, Introduction to Physical Chemistry. 1 unit.

5. *Advanced Qualitative and Quantitative Analysis.*

(*a.*) *Qualitative Analysis.*—One lecture and six hours in the laboratory throughout the First Term. The work of this course will include the detection and separation of the less common metals, particularly those that are important industrially, together with the analysis of somewhat complex substances occurring naturally.

(*b.*) *Quantitative Analysis.*—One lecture and six hours laboratory work per week during the Second Term. The determinations made will include the more difficult estimations in the analysis of rocks, as well as certain constituents of steel and alloys. The principles on which analytical chemistry is based will receive a more minute consideration than was possible in the elementary course.

Prerequisite: Chemistry 2. 3 units.

6. *Industrial Chemistry.*—Two hours of lectures per week throughout the year. These industries, which are dependent on the facts and principles of Chemistry, will be considered in as much detail as time will permit. The lectures will be supplemented by visits to manufacturing establishments in the neighbourhood, and it is hoped that some lectures will be given by specialists in their respective fields.

Prerequisites: Chemistry 2 and 3. 2 units.

7. *Physical Chemistry.*—The lectures, which are a continuation of those given in 4, include the kinetic theory of gases, thermo-chemistry, the application of the principles of thermodynamics to chemistry, osmotic phenomena, applications of the dissociation theory, colloidal solutions, and a study of the physical properties of gases, liquids, and solids and of their chemical constitutions.

Two lectures and one laboratory period of three hours weekly throughout the year.

Prerequisites: Chemistry 2, 3, and 4. 3 units.

Text-books: Bigelow, Physical Chemistry; Findlay, Physico-Chemical Measurements.

For reference: Ramsay's Series of Books on Physical Chemistry.

8. *Applied Electro-Chemistry.*—Solutions are studied from the standpoint of the osmotic and the dissociation theories. The laws of electrolysis, electroplating, primary and secondary batteries, and the preparation of the elements and compounds by electrolytic methods and in the electric furnace are studied.

Three lectures weekly during the First Term.

For reference: Le Blanc, Elements of Electro-Chemistry; Thompson, Applied Electro-Chemistry; and Stanfield, the Electric Furnace. 1½ units.

9. *Advanced Organic Chemistry.*—Stereochemical theories will be discussed, and chemical and physico-chemical methods employed in determining the constitution of organic compounds will be studied.

The laboratory work will be arranged as far as possible to suit the requirements of the individual student. It will consist

in the preparations of more complex substances than those made in 3 and special work in drug and food analysis.

Two lectures and one laboratory period per week throughout the year. 3 units.

Department of Classics.

Professor: Lemuel F. Robertson.
Associate Professor: O. J. Todd.
Assistant Professor: H. T. Logan.
Assistant: A. N. St. John Mildmay.

Greek.

Beginner's Course.—White's First Greek Book. Chap. I.-XLVIII. (Copp, Clark Co.).

Four hours a week. Mr. Logan.

1. *Lectures.*—Xenophon, Anabasis (Marchant, Bell's Illustrated Classics), Euripides, Alcestis (Blakeney, Bell's Illustrated Classics).

Composition and Grammar: White's First Greek Book (Copp, Clark Co.).

History: Athenian Empire (Cox, Epoch Series, Longmans).

Four hours a week. Mr. Todd.

2. *Lectures.*—Plato, Apology (Adam, Elementary Classics, Cambridge); Aeschylus, Prometheus Vinctus (Rackham, Cambridge University Press).

Composition (North and Hillard): Selected passages will occasionally be set for Unseen Translation.

History: Spartan and Theban Supremacies (Sankey, Epoch Series, Longmans).

Four hours a week. Mr. Logan.

3. *Lectures.*—Thucydides, Book VII. (Marchant, Macmillan); Sophocles, Antigone (Jebb & Shuckburgh, Cambridge Univ. Press); Iliad XXII. (Edwards, Pitt Press).

History: Bury's Greek History (Second Edition, 1913), Chapters XII.-XVII.

Three hours a week. Mr. Todd. 3 units.

4. *Greek Literature in English Translation.*—A survey of Greek literary history from Homer to Lucian, with reading and interpretation of selected works from the most important authors.

Knowledge of Greek is not prerequisite.

Two hours a week. Mr. Todd. 2 units.

Latin.

1. *Lectures.*—Cicero, De Amicitia (Shuckburgh, Macmillan's Elementary Classics); Stories from Ovid's Metamorphoses (Slater, Clarendon Press).

Composition: Latin Composition (Ramsay, Vol. I., Part II., Clarendon Press).

History: Outlines of Roman History (Pelham, Rivington) to 133 B.C.

Three hours a week. Mr. Robertson, Mr. Todd, Mr. Logan.

Distinction Course: Lectures, Roman History (to 31 B.C.) and Roman Literature.

One hour a week. Mr. Logan.

2. *Lectures.*—Cicero, Pro Archia (Reid, Pitt Press); Pliny, Selected Letters (Prichard and Bernard, Clarendon Press); Virgil, Aeneid Bk. VI. (Page, Macmillan).

Composition: Bradley's Arnold's Latin Prose Composition (Longmans, Green & Co.), 32 exercises.

History: Outlines of Roman History (Pelham, Rivington) from 133 B.C. to 69 A.D.

Three hours a week. Mr. Robertson.

Distinction Course: Horace, Selected Odes (Wickham, Clarendon Press).

One hour a week. Mr. Robertson.

3. *Lectures.*—Virgil.

Three hours a week. (Given in 1920-21 and alternate years). Mr. Robertson. 3 units.

4. *Lectures.*—Horace.

Three hours a week. (Given in 1921-22 and alternate years).

5. *Lectures.*—Seneca, Select Letters (Summers, Macmillan); Quintilian. Bk. X. (Peterson, Clarendon Press); Juvenal (Duff, Pitt Press). (Open only to those who have taken or are taking Latin, 3, or 4.)

Three hours a week. (Given in 1920-21 and alternate years).

Mr. Todd, Mr. Logan. 3 units.

6. *Lectures.*—General view of Latin Poetry. (Open only to those who have taken or are taking Latin 3 or 4. Three hours a week. (Given in 1921-1922 and alternate years.)

7. *Lectures.*—Roman History from 133 B.C. to 41 A.D. (advanced course).

Three hours a week. (Given in 1921-22 and alternate years).

8. *Advanced Latin Composition.*

Obligatory for Honour students.

One hour a week. Mr. Todd. 1 unit.

Department of Economics, Sociology and Political Science.

Professor: Theodore H. Boggs.
Associate Professor: ————
Assistant Professor: H. F. Angus.

Economics.

1. *Principles of Economics.*—An introductory study of general economic theory, including a survey of the principles of value, prices, money and banking, international trade, tariffs, monopoly, taxation, labour and wages, the control of railways and trusts, etc.

Ely & Wicker, Elementary Principles of Economics; and Taussig, Principles of Economics.

Economics 1 is the prerequisite for all other courses in the department, but may be taken concurrently with Economics 2, or Government 1.

Pass Course: Three hours a week. Distinction work: One additional hour. 3 units.

2. *Selected Topics in the History of Economic Life and Economic Thought.*—A survey of the more important phases of the

European economic organization from the time of the Middle Ages; and a study of the development of modern economic thought.

Toynbee, The Industrial Revolution; Clay, Economics for the General Reader; and assigned readings in other texts.

Three hours a week. 3 units.

3. *Labour Problems and Social Reform.*—A study of the rise of the factory system and capitalistic production, and of the more important phases of trade unionism in England, Canada, and the United States. A critical analysis of various solutions of the labour problem attempted and proposed; profit-sharing, co-operation, arbitration and conciliation, scientific management, labour legislation and socialism.

Carlton, The History and Problems of Organized Labour; Cole, Self Government in Industry; Skelton, Socialism: A Critical Analysis; and Spargo & Arner, Elements of Socialism.

Three hours a week. 3 units.

4. *Money and Banking.*—The origin and development of money. Banking principles and operations, laws of coinage, credit, price movements, foreign exchange. Banking policy in the leading countries, with particular reference to Canada.

Phillips, Readings in Money and Banking; White, Money and Banking; and Johnson, Report on the Canadian Banking System.

Three hours a week. 3 units.

Not given in 1920-21.

5. *Public Finance.*—This course deals with public revenues and expenditures and the administration of public funds. Some of the topics discussed are: Theories of just taxation, progressive taxation, the shifting and incidence of taxation, the internal revenue system, tariffs on imports, the general property tax, income and inheritance taxes, the single tax. Particular attention is devoted to the taxation systems (federal, provincial and local) of Canada.

Seligman, Essays in Taxation; Plehn, Introduction to Public Finance; and Vineberg, Provincial and Local Taxation in Canada.

Three hours a week. 3 units.

6. *International Trade and Tariff Policy.*—A survey of the theory of international trade and the foreign exchanges; and a study of the commercial policy of the leading countries, with considerable attention being devoted to the British Dominions.

Bastable, The Theory of International Trade; Taussig, Free Trade, the Tariff and Reciprocity; Armitage-Smith, The Free Trade Movement and its Results.

Three hours a week. 3 units.

7. *Corporation Economics.*—Historical development of the different forms of industrial organization, including the partnership, joint-stock company, and the corporation, and the later developments, such as the pool, trust, combination, and holding company. Methods of promotion and financing, over-capitalization, stock market activities, the public policy toward corporations, etc.

Haney, Business Organization and Combination; and assigned readings in other texts.

Three hours a week. 3 units.

Not given in 1920-21.

Government.

1. *Constitutional Government.*—This course deals with the nature and origin of the state; with its development and with the machinery and methods of government in the British Empire, the United States, France and Germany.

Leacock, Elements of Political Science; and Vinogradoff, Common Sense in Law.

Three hours a week. 3 units.

2. *Jurisprudence and Constitutional Law.*—These are two half courses. The first deals with the nature and origin of Law and the development of legal systems. The second with the constitutional law of Great Britain and of Canada, special attention being given to the relation of the citizen to the government and to the extent to which individual liberty is recognized and protected.

Houston, Constitutional Documents of Canada; and Salmond, Jurisprudence, or Theory of the Law.

Three hours a week. 3 units.

Sociology.

1. *Principles of Sociology.*—An introductory study of early man and his relation to his environment; of races of men and their distribution; of the early forms and development of the industrial organization, marriage and the family, the arts and sciences, religious systems, government, classes, rights, etc. A review also of certain of the social problems of modern society growing out of destitution, crime, overcrowding, etc. A critical survey of schemes for betterment.

Blackmar & Gillin, Outlines of Sociology; and Fairchild, Applied Sociology.

Three hours a week. 3 units.

Not given in 1920-21.

Department of English.

Professor: G. G. Sedgewick.
Assistant Professor: W. L. Macdonald.
Assistant Professor: J. K. Henry.
Assistant Professor: F. G. C. Wood.
Assistant Professor: Thorleif Larsen.
Assistant Professor: ———

FIRST YEAR.

1. *Literature.*—Elementary study of a number of literary forms to be chosen from the short story, the play, the novel, the essay, the simpler sorts of poetry.

Texts for 1920-21: Canby's A Study of the Short Story (Holt); Euripides' Bacchae in Gilbert Murray's paraphrase; Shakespeare's Julius Caesar; Sheridan's The School for Scandal (Everyman); Ibsen's The Doll's House (Everyman); Poems of To-day (McClelland, Goodchild & Stewart).

Two hours a week: one credit.

2. *Composition.*—Elementary forms and principles of composition, expository themes; study of models.

Two hours a week.

SECOND YEAR.

3. *Literature.*—Studies in the history of English Literature.

(*a.*) Pass Course: Lectures and texts illustrative of the chief authors and movements from Tottell's Miscellany to Shelley; Halleck's History of English Literature, new edition (American Book Company).

Two hours a week.

(*b.*) Distinction Course: Readings from Nineteenth Century poetry since 1830; Ward's English Poets, Vol. IV.

One hour a week.

4. *Composition.*—Narrative and Descriptive Themes; the writing of reports.

One hour a week.

THIRD AND FOURTH YEARS.

The curriculum in English for students of the Third and Fourth Years is arranged in three divisions. The first includes a central body of general courses which will be offered, as far as possible, every year, and to each of which are assigned 3 units of credit. In the second division are listed courses carrying 2 units of credit and usually given in alternate years. And the third consists of courses designed especially for honour and graduate students, and open to others only by special permission.

DIVISION I.

9. *Shakespeare.*—(*a.*) A detailed study of the text of Henry IV., Part I., Midsummer Night's Dream, Hamlet, The Tempest.

(*b.*) Lectures on Shakespeare's development, on his use of sources, and on his relation to the stage and the dramatic practice of his time.

Students will provide themselves with annotated editions of the four plays named above, and with the Cambridge Shakespeare (ed. Neilson) or the Oxford Shakespeare (ed. Craig).

Three hours a week. Mr. Sedgewick. 3 units.

10. *The Drama to* 1642.—The rise, the development, and the decline of the Elizabethan drama. The course begins with a short study of one or two of the plays of Sophocles and an outline of Aristotle's dramatic criticism, but treats mainly the rise of the English drama in the Miracle and Morality Plays; the Interludes; the influence of the Roman stage; Shakespeare's predecessors—Lyly, Kyd, Green, Peele, and Marlowe; its full development in Shakespeare, and, briefly, its decline.

Texts (in Everyman's Library): The plays of Sophocles, Minor Elizabethan Dramatists (2 vols.), and Marlowe; the Oxford Shakespeare (ed. Craig); Jonson's Alchemist; Beaumont & Fletcher's Philaster (Six Elizabethan Plays—World's Classics).

Three hours a week. Mr. Larsen. 3 units.

13. *The English Novel from Richardson to the Present Time.*—The development of English fiction will be traced from Richardson, Fielding, Smollett, and Sterne through Goldsmith, Mrs. Radcliffe, Jane Austen, Scott, C. Brontë, Dickens, Thackeray, George Eliot to Trollope, Meredith, Stevenson, and a few representative novelists now living.

A fair knowledge of the works of Jane Austen, Scott, Dickens, Thackeray, and George Eliot is a prerequisite for those taking this course.

Three hours a week. Mr. Wood. 3 units.

14. *From Milton to Burns.*—After a preliminary survey of the work of Milton and of Dryden, this course will follow the development of English literature during the eighteenth century. Emphasis will be laid on Defoe, Swift, Addison, Pope, Thomson, Gray, Collins, Johnson, Cowper, and Burns.

Three hours a week. Mr. Macdonald. 3 units.

16. *Romantic Poetry,* 1780 *to* 1830.—Studies in the beginnings and progress of Romanticism, based chiefly on the work of Wordsworth, Coleridge, Byron, Keats, Shelley, Scott.

Texts: The Oxford editions of the first five poets named.

For reference: Elton's A Survey of English Literature, 1780-1830.

Three hours a week. 3 units.

17. *Tennyson, Browning, and Arnold.*—Tennyson's In Memoriam and The Idylls of the King; Browning's poems, 1833-1870; Selections from Arnold.

Texts: Browning's Complete Poetical Works (Cambridge Edition); Arnold's Poems (Oxford Edition); Tennyson's Poems (Globe Edition).

Three hours a week. Mr. Henry. 3 units.

19. *Private Reading.*—Students of the Senior Year may pursue, with the consent and under the direction of the Department of English, a course of private reading to which, if succesfully completed, will be assigned 3 units of credit. In such courses examinations will be set, but no class instruction will be given. 3 units.

DIVISION II.

5. *The Elements of Poetics.*—Studies in the criticism and appreciation of poetry; metre, the varieties of poetry, poetic content, the poetic frame of mind; exercises in criticism and metrical composition; contemporary developments in poetry.

Two hours a week. Mr. Larsen.

Not given in 1920-21.

6. *Narrative Writing.*—A study of narrative composition: (*a*) critical reading of a considerable number of modern short stories and of two or three modern novels; (*b*) frequent critical and narrative themes.

Only a limited number of students will be admitted to this course.

Two hours a week. Mr. Sedgewick. 2 units.

7. *Technique of the Drama.*—A practical study of dramatic form and structure based on the analysis of modern plays, with special reference to the one-act play as an art form. "Playmaking," by Wm. Archer, and "Twenty-four Representative One-act Plays of America" (Little, Brown & Co.) are the texts used in this course.

Two hours a week. Mr. Wood.

Not given 1920-21.

8. *The Elizabethan Age, exclusive of the Drama.*—(1) The social backgrounds of Elizabethan England; (2) the lyric from Tottell's Miscellany to Donne; (3) the Sonneteers; (4) Spenser and the Spenserians; (5) prose from Elyot to Bacon; (6) Elizabethan literary criticism.

Two hours a week. Mr. Larsen. 2 units.

11. *English Drama since* 1600.—A survey of English drama from the time of Ben Jonson to the present. Later Elizabethan drama, representative plays of the Restoration, the works of Goldsmith, Sheridan, and of early Nineteenth Century writers will be considered. This will be followed by a study of some dramatists of recent years, including Wilde, Shaw, Galsworthy, Pinero, Jones, Stephen Phillips, Barrie, and the Irish School.

Two hours a week. Mr. Wood. 2 units

12. *The Romance and the Ballad.*—Origins of the Romance; the Arthurian Cycle; Metrical Romances, 1200-1500. Ballad origins and literature; English and Scottish Popular Ballads.

Two hours a week. Mr. Macdonald. 2 units.

15. *Prose of the Sixteenth and Seventeenth Centuries.*—The development of English prose from 1500 to 1700, with emphasis upon the work of such men as Tindale, Coverdale, Sidney, Lyly, Greene, Bacon, Milton, Bunyan, Browne, and Dryden.

Two hours a week. Mr. Macdonald.

Not given in 1920-21.

18. *Nineteenth Century Prose,* studied in two divisions in alternate years:—

A. Critical and Literary Prose of the early part of the century: Coleridge, Wordsworth, Lamb, Hazlitt, DeQuincey, Jeffrey, Landor.

Not given in 1920-21.

B. Social, literary, and religious movements of the Victorian period: Carlyle, Ruskin, Macaulay, Newman, Mill, Arnold, Stevenson.

Two hours a week. Mr. Henry. 2 units.

DIVISION III.

20. *Chaucer and Middle English.*—(*a.*) Middle English grammar with the reading of representative texts. (*b.*) The Canterbury Tales.

Texts: A Middle English reader and the Oxford Chaucer (ed. Skeat).

Three hours a week. Mr. Sedgewick. 3 units.

21a. *Anglo-Saxon.*—Bright's Anglo-Saxon Reader.

Two hours a week. 2 units.

21b. *Anglo-Saxon.*—Beowulf.

One hour a week. 1 unit.

22. *Studies in Linguistic History.*—Origins, growth, and development of the English language. A brief introduction to Germanic philology; the Indo-European language group; Grimm's Law; the Anglo-Saxon period; Norman, French, and Latin influences; study of the gradual evolution of forms, sounds, and meanings.

One hour a week. Miss MacInnes. 1 unit.

24. *Seminar.*—In this class advanced students will get practice in some of the simpler methods of criticism and investigation. The subject for 1920-21 will probably be the principles of literary criticism.

Two hours a week. 2 units.

Department of Geology and Mineralogy.

Professor of Geology: Reginald W. Brock.
Professor of Physical and Structural Geology: ————
Assistant Professor of Geology: Edwin T. Hodge.
Associate Professor of Paleontology: ————
Assistant Professor of Geology: W. L. Uglow.

1. *General Geology.*—The lectures deal with the most common minerals and rocks and the structure of the earth; work of the air, water, living creatures, and internal forces in modifying the earth; vulcanism; history of the earth and its plants and animals; geology and physiography of North America.

Distinction: Two hours a week additional study will be given, consisting of laboratory practice in methods for the recognition of the most important minerals and rocks; study of maps, models, and specimens illustrating geological facts and their interpretation.

Text: Geology, Physical and Historical, by H. F. Cleland.

Three hours of lectures per week throughout the session.

2. *General Mineralogy.*—Theory of the physical and chemical properties of minerals and crystals, description of minerals and a discussion of their occurrence, association, genesis, and uses in the industrial arts; accompanied by practice in the determination of the physical and chemical properties of minerals; study of crystals and crystal models; and identification of the common and important minerals.

Text: Dana's Manual of Mineralogy. New Ed., revised by Ford.

Two lectures and a laboratory period of two hours a week throughout the session.

Distinction: Two additional hours, time to be individually arranged with each student. 3 units.

3. *Historical Geology.*—Continental evolution and development of life with special reference to North America.

Two hours per week First Term.

Text book: Schuchert Historical Geology.

Prerequisite: Geology 1. 1 unit.

4. *Structural and Physiographic Geology.*—A special study of the earth's features, their origin, characteristic changes and the agencies by which produced.

Two hours per week. Second Term.

Prerequisite: Geology 1. 1 unit.

5. *Regional Geology and Geological Influences.*—After brief review of the history of geology, the salient features of the geology of Canada and North America are taken up, followed by a consideration of the other continental and the oceanic seg-

ments of the earth's crust. Attention is then drawn to the influence of geological and consequent topographical features upon life and particularly upon man.

Three hours per week.

Distinction one additional hour per week. 3 units.

Prerequisite: Geology 1.

6. *Palaeontology.*—A study of invertebrate and vertibrate fossils, their classification, identification and distribution both geological and geographical.

Two lectures and two laboratory periods per week. 4 units.

7. *Petrology.*—Lectures: The lectures deal with the physical, chemical, and optical properties of the rock-forming minerals; and with the genesis, occurrence, determination, and uses of the igneous, sedimentary, and metamorphic rocks.

Laboratory: Instruction in the practical application of the polarizing microscope to the study of rock-forming minerals; and the microscopic study of rock in connection with megascopic determination of the corresponding specimens. The course aims to train the student in the rapid and accurate determination of rocks met with in geological field-work or in every-day commercial life.

Text: Petrology for Students, by Alfred Harker.

Prerequisite: General Mineralogy 2, must precede or accompany this course.

Two lectures and two laboratory periods of two hours each a week throughout the session. 4 units.

8. *Economic Geology.*—A study of the occurrence, genesis, and structure of the principal metallic and non-metallic ore-deposits with type illustrations; and a description of the ore-deposits of the British Empire, special stress being placed on those in Canada.

Text: Mineral Deposits, by Lindgren.

Prerequisite: Petrology 7, must precede or accompany this course; Geology 1, must have been taken.

Three hours of lectures and one of laboratory work a week throughout the session. 4 units.

9. *Economic Mineralogy.*—A course designed to treat some 70 or 80 minerals of economic importance from the point of view of their geological occurrence and association, paragenesis, distribution, value and uses.

Lectures to be supplemented by laboratory work which will take up the detailed study of specimens showing these minerals in their natural associations, the examination of polished and etched surfaces, and methods of determination.

Two hours per week. 2 units.

Prerequisites: General Geology, and General Mineralogy.

10. *Field Geology.*—This course is designed to acquaint the student with the ordinary methods of Field Geology. Small areas will be assigned to each student, and the results of his investigations will be embodied in a report and geological map. Conferences during the progress of each student's work will be held.

Fifteen hours' field-work during the session, with the necessary laboratory work on report and map. 1 unit.

Prerequisite: Geology 1 and 4.

11. *Agricultural Geology.*—A course in General Geology in which those topics of special importance to Agriculturists are stressed, such as weather, climate, rock decay; origin, transportation, and distribution of soils; origin of land form suitable for agriculture; flood control, drainage, wells, rock fertilizers, road and building materials, and the agricultural provinces of the world.

Two lectures and a laboratory period of two hours per week during the First Term.

12. *Meteorology and Climatology.*—Two lectures and a laboratory period of two hours per week during the Second Term. 1½ units.

Department of History.

Associate Professor: Mack Eastman.
Assistant Professor: W. N. Sage.

Students who intend to specialize in History are advised to associate with it Economics or some other allied subject. A read-

ing knowledge of French or German will be found extremely valuable in Senior courses.

1. *History.*—A general view of the development of the great European nations since the beginning of the French Revolution, with some attention to contemporary problems. Mainly a reading course.

Text-book: Hazen, Modern European History (Henry Holt), or Robinson & Beard, Outlines of European History, Part II. (Ginn, last edition).

First Year, one hour a week. Dr. Eastman.

2. *English History.*—The history of England from the Norman Conquest to the Revolution of 1688. This course aims at interpreting the constitutional, political, economic, and religious development of England and Wales during the period prescribed. Attention will also be paid to the history of Scotland and Ireland and the origin of Overseas Britain.

Text-book: Green, A Short History of the English People (last edition).

Second Year, three hours a week, with an additional hour for distinction. Mr. Sage.

3. *Canadian History.*—A comparison of Spanish, English and French colonial effort in the New World serves as an introduction to this course in Canadian history. Church and State during the French régime, the relations between French and English since the British Conquest, Canadian constitutional development, and present day problems will receive special attention.

Text-book: C. G. D. Roberts, A History of Canada (Macmillan). Books recommended for summer reading: Parkman, Pioneers of France in the New World, The Jesuits in North America, Count Frontenac and New France, The Old Régime, La Salle and the Discovery of the Great West (Little, Brown & Co., Boston); G. M. Wrong, Conquest of New France (in Chronicles of America, Glasgow, Brook & Co., Toronto), or Parkman, Montcalm and Wolfe. These books may be purchased from the University Bookstore or borrowed during the summer from the University Library.

An examination counting 10 per cent. of the year's work and based upon this summer reading will be held at the beginning of the autumn term.

Second Year, two hours a week. Dr. Eastman. 2 units.

4. *Mediaeval History.*—A sketch of Mediæval History from the Council of Nicaea to the Fall of Constantinople, 325-1453 A. D. The following subjects will be treated: The Triumph of Christianity; the break-down of the Roman Empire; the Barbarian Invasions; the Franks; Charlemagne; the rise of the Papacy; the struggle between the Empire and the Papacy; the Crusades; Frederick II.; the later Middle Ages.

Text-books: Oman, The Dark Ages (Rivingtons); Tout, The Empire and the Papacy; Lodge, The Close of the Middle Ages; Bryce, The Holy Roman Empire (Macmillan & Co.).

For entrance to this course an essay must be prepared before the opening of the autumn term, on some topic in the history of the later Roman Empire.

Third year, three hours a week. Mr. Sage. 3 units.

5. *Renaissance* and *Reformation.*—A brief outline of the rise of the Christian Church; a closer study of the Renaissance, the Reformation and the Counter-Reformation, and, in conclusion, a short account of the subsequent history of religious thought down to our own times, with especial reference to the English Deists, the French Philosophes, Wesleyanism, Pietism, Catholic Modernism and the Higher Criticism.

Preliminary reading: Bryce, The Holy Roman Empire (Macmillan).

Text-book: Symonds, Short History of the Renaissance in Italy (Henry Holt); Sichel, The Renaissance (Home University Library); Lindsay, A History of the Reformation, 2 vols. (Scribners), or Fisher, The Reformation (Scribners).

Third Year, three hours a week. Dr. Eastman. 3 units.

6. *American History.*—A sketch of the political, constitutional and economic development of the United States of America from the beginning of the War of Independence to the close of the World War.

Text-book: Muzzey, American History (Ginn).

Summer reading: The colonial period of American history up to the passage of the Stamp Act. A preliminary essay will be required. Books recommended for reading and reference: Muzzey; Curry, A Short History of British Colonial Policy (Oxford University Press); Channing, The Student's History of the United States (Macmillan); Chronicles of America; Cambridge Modern History, vol. VII.

Fourth Year, three hours a week. Mr. Sage. 3 units.

7. *Modern European History.*—The political, diplomatic and economic history of the leading countries of Europe from the beginning of the French Revolution to the present day, with especial attention to the origins of the World War and the problems of the peace settlement.

Preliminary reading: Arthur Young, Travels in France (Bohn's Popular Library); Lowell, The Eve of the French Revolution (Houghton Mifflin); De Toqueville, The State of Society in France before the Revolution; Taine, The Ancient Régime; Rocquain, The Revolutionary Spirit preceding the Revolution; Morley, Voltaire, Rousseau; Tallentyne, The Friends of Voltaire (Tupman's Sons). A preliminary essay will be required, subject: The Influence of the Great Writers upon the Coming of the Revolution. This will count 10 per cent. of the year's work.

Text-books: Matthews, The French Revolution (Longmans); Johnston, Napoleon (Henry Holt), or Herbert Fisher, Napoleon (Home University Library); Hazen, Europe since 1815 (Henry Holt).

Fourth year, three hours a week. Dr. Eastman. 3 units.

Department of Mathematics.

Professor: ————
Associate Professor: G. E. Robinson.
Assistant Professor: E. H. Russell.
Assistant Professor: E. E. Jordan.
Assistant Professor: L. Richardson.
Instructor: John Henry.

1. (*a*) *Plane Geometry and the Geometry of Planes.*—As in Hall & Stevens' School Geometry.

   (*b*) *Algebra.*—Hall & Knight's Elementary Algebra completed.

   (*c*) *Trigonometry.*—To the solution of right-angled Triangles.

   Three hours a week, with an additional tutorial hour for Pass Students.

   For Distinction.

   (*d*) *Trigonometry.*—Playne & Fawdry, Practical Trigonometry.

   One hour a week.

2. (*a*) *Geometry of Solids.*

   (*b*) *Analytic Geometry.*—Baker's Analytic Geometry for Beginners.

   Three hours a week during the First Term.

   (*c*) *Algebra.*—Selected Chapters from Hall & Knight's Advanced Algebra.

   Three hours a week during the Second Term.
   For Distinction.

   (*d*) *Elementary Calculus.*

   One hour a week throughout the session.

3. *Analytic Geometry.*—Plane and Solid, Loney's Co-ordinate Geometry.

   Two hours a week. **2 units.**

   Prerequisites: 1, 2.

4. *Spherical Trigonometry with Applications.* Dupuis & Matheson's Spherical Trigonometry and Astronomy.
   Two hours a week, First Term. 1 unit.
   Prerequisite: 1.

5. *Differential and Integral Calculus.* Granville.
   Three hours a week. 3 units.
   Prerequisites: 1, 2.

6. *Higher Algebra,* a continuation of course 2 (c).
   Two hours a week, Second Term. 1 unit.

7. *Theory of Equations and Determinants.* Dickson's Elementary Theory of Equations.
   Two hours a week. 2 units.
   Prerequisite: 2.

8. *Topics in Advanced Calculus.*
   Two hours a week. 2 units.
   Prerequisite: 5.

9. *Differential Equations.*—Murray.
   Two hours a week. 2 units.
   Prerequisite: 5.

*10. *History of Mathematics.*
   One hour a week. 1 unit.

11. *Higher Plane Trigonometry.*
   Two hours a week, First Term. 1 unit.
   Prerequisites: 1, 2.

12. *Projective Geometry.*
   Two hours a week, Second Term. 1 unit.
   Prerequisites: 1, 3.

*13. *General Astronomy.* Moulton's Introduction to Astronomy.
   Two hours a week. 2 units.

*14. *Definite Integrals.*
   Two hours a week. 2 units.
   Prerequisites: 5, 9.

*15. *Elliptic Integrals.*
Two hours a week. 2 units.
Prerequisites: 5, 9.

*16. *Theory of Functions.*
Two hours a week. 2 units.
Prerequisites: 8, 9.

*17. *Finite Differences.*
One hour a week. 1 unit.
Prerequisites: 5, 6.

*For students in Honours.

Department of Modern Languages.

Professor: H. Ashton.
Associate Professor: A. F. B. Clark.
Assistant Professor: Isabel MacInnes.
Assistant Professor: G. Grojean.
Instructor: Mrs. A. F. B. Clark.
Instructor: Mlle. Hélène Karr-Simpson.
Instructor in French: ———
Instructor in French and Spanish: ———

French.

COURSE I.

Pass:

(*a.*) *Literature*:—Le voyage de Monsieur Perrichon (Francois), Allyn & Bacon, Chicago; Bazin's Les Oberlé.

(*b.*) *Language*:—Revision of the grammar covered by Siepmann, Part II. and all the exercises in the above texts.

An accurate knowledge of the above is necessary for a pass.

Three hours a week.

Distinction:

(*a.*) *Literature*:—Lectures on the French authors included in Siepmann III.

One hour a week.

(*b.*) *Language*:—The whole of Siepmann, Part III. Primary French Course; Siepmann's Short French Grammar.

Three hours a week.

COURSE II.

Pass:

(*a.*) *Literature*:—Molière, Les précieuses ridicules; Corneille, Le Cid (Marks) Manchester Univ. Press; Racine, Britannicus (Didier, Paris).

(*b.*) *Composition*:—Jules Lazare, Elementary French Composition (Hachette, London). All the practical rules and twelve of the passages.

Three hours a week.

Distinction:

The above and, in addition, 1 hour a week: Causeries sur là France (in French); Barrett Wendell; La France d-Aujourd'hui (Nelson).

COURSE III.

Pass:

(*a.*) *Literature* of the 18th century:—1. Beaumarchais, Le Barbier de Séville (Freund) Macmillan. 2. Voltaire, Contes (Preston) Oxford Univ. Press. 3. Montesquieu, Lettres Persanes (Pellissier) Macmillan.

(*b.*) *Composition*:—Weekley's French Prose Composition. Free composition based on texts 1 and 3 above.

Three hours a week. 3 units.

Honours:

The pass course above and in addition the following: 1. J. J. Rousseau, Morceaux choisis (Mornet) Henri Didier, Paris. 2. Lecture expliquée (in French) Kastner's Select Passages from Modern and Contemporary French Authors, Intermediate course, Hachette, London.

Three hours a week 3 units.

COURSE IV.

Pass:

(*a.*) *Literature*:—Auzas, Nineteenth Century Poets (Oxford Press).

(*b.*) *Composition*:—Ritchie and Moore; Advanced French Composition, Free Composition.

Three hours a week. 3 units.

Honours:

The pass course above and in addition the following:—1. Rostand, Les Romanesques; La princesse lointaine. 2. Guy de Maupassant, Six Contes, Cambridge Press; Huit Contes (White) Heath; Balzac, Contes Choisis (Bourget) Dent, London; Bazin, Contes de Bonne Perrette (Calmann Lévy, Paris). 3. Lecture expliquée (in French). Kastner's Select Passages from Modern and Contemporary French Authors, Senior Course, Hachette, London.

Three hours a week. 3 units.

All Honours students should procure G. L. Strachey's Landmarks in French Literature. New York (H. Holt).

FOR STUDENTS IN AGRICULTURE.

(Special course in French).

1st Year:—As course I. above.

2nd Year:—Prescribed text: Cunisset-Carnot, Le livre d'Agriculture, Paris (Larousse).

German.

BEGINNER'S COURSE.

Composition, Grammar, Conversation:—Text, Siepmann's Primary German Course (Macmillan). Reading, Andersen's Märchen (Heat).

COURSE I.

Pass:

(*a.*) *Composition, Conversation, etc.*:—Pope: Writing and Speaking German (Holt).

(*b.*) *Reading*:—Moser, Der Bibliothekar (Ginn); Storm, In St. Jürgen (Ginn); Leidel, Leberecht Hühnchen (Heath).

(*a*) and (*b*), three hours a week.

Distinction:

In addition to (*a*) and (*b*) above:—(*c*) Freytag, Die Journalisten (Ginn).

One hour a week.

COURSE II.

Pass:

(*a.*) *Composition, Conversation, etc.*:—Pope, Writing and Speaking German (Holt).

(*b*) *Reading*:—Lessing, Minna von Barnhelm (Macmillan); Schiller, Die Jungfrau von Orleans (Heath); Goethe, Egmont (Ginn).

(*a*) and (*b*), three hours a week.

Distinction:

In addition to (*a*) and (*b*) above:

(*c.*) A general survey of German Literature. Stroebe and Whitney, Geschichte der deutschen Literatur (Holt).

One hour a week.

3 units.

COURSE III.

(*a.*) *Composition.*

(*b.*) A course in nineteenth century literature, including the reading of a number of standard works.

Three hours a week. 3 units.

Spanish.

COURSE I.

(*a.*) *Literature*:—Galdos, Electra (Macmillan); B. Ibanez, La Baracca (Macmillan); C. Darado Espana pintoresca.

(*b.*) *Language*:—Hills and Ford, First Spanish Course (Copp, Clark); Ramsay's Spanish Grammar (Holt).

Four hours a week. 3 units.

COURSE II.

(*a.*) *Literature*:—Galdos, Dona Perfecta and other authors to be announced later.

(*b.*) *Language*:—As for Course I. above.

Four hours a week. 4 units.

Department of Philosophy.

Professor: ———
Associate Professor: James Henderson.

1. *A Course in Elementary Psychology.*—Text-book: Pillsbury's Essentials of Psychology (latest edition). Students will also be referred to Stout's Manual of Psychology, Titchener's text-book, James's Psychology, etc.

Preparatory reading recommended: McDougall's Psychology (Home University Library).

A Course in Elementary Logic, Deductive and Inductive.—Text-book: Mellone's Introductory Text-book of Logic (latest edition).

Three hours a week.

A fourth hour per week for students desiring distinction will be devoted to lectures introductory to the main problems of Philosophy, and a special study of Descartes' Discourse on Method and Berkeley's Treatise concerning the Principles of Human Knowledge.

2. *A Course in Moral Philosophy.*—(*a.*) Theoretical Ethics; the development of morality in the race and in the individual; the psychological and metaphysical implications of morality; the chief ethical theories of ancient and modern times, with special reference to the Ethics of Idealism and the Ethics of Evolution. (*b.*) Applied Ethics; Moral Institutions; the duties and the virtues; the social organism; Ethics in relation to Politics and Economics; the sociological movement; moral progress.

MacKenzie's Manual of Ethics is prescribed for collateral reading. A special study will be made of portions of Aristotle's Ethics; Butler's Sermons on Human Nature, i, ii, iii; Mill's Utilitarianism; Kant's Metaphysic of Morals.

Preparatory reading recommended: Ethics, by Canon Rashdall (The People's Classics); Ethics, by G. E. Moore (Home University Library).

Four hours a week. 4 units.

3. *The History of Philosophy from the Renaissance to the Present Time.*—Text-book: Calkin's Persistent Problems of Philosophy. Works of reference: Rand's Modern Classical Philosophers, and the Various Histories of Philosophy—Hoffding, Windelbrand, Erdmann, etc.

Four hours a week. 4 units.

Courses 2 and 3 will be given in alternate years. In 1920-21 Course 2 will be given.

4. *History of Early Greek Philosophy.*—The philosophers up to and including Socrates will be studied, and in the latter part of the session a detailed study will be made of Plato's Republic.

Text-books: Greek Philosophy, Part. I. Thales to Plato, by John Barnet; The Republic of Plato, translated by A. D. Lindsay (J. M. Dent & Co.).

Books of Reference: Bakewell's Source-Book in Ancient Philosophy; Taylor's Aristotle on his Predecessors; Gomperz, Greek Thinkers; Zellers' History of Greek Philosophy.

Two hours a week. 2 units.

Other courses may be announced later.

Department of Physics.

Professor: ———
Associate Professor: T. C. Hebb.
Associate Professor: A. E. Hennings.
Associate Professor: J. G. Davidson.
Instructor: P. H. Elliott.

1. *A General Study* of the principles of mechanics, properties of matter, heat, light, sound, and electricity, both in the lecture-room and in the laboratory. The course has two objects: (1) To

give the minimum acquaintance with physical science requisite for a liberal education to those whose studies will be mainly literary; (2) to be introductory to the courses in Agriculture, Chemistry, Engineering, and Advanced Physics. Students must reach the required standard in both theoretical and practical work.

Two hours of lectures and one period of two hours of laboratory work per week for the pass course and one extra lecture hour for distinction students.

2. *General Physics.*—Lectures and demonstrations. Especial attention is given to modern points of view.

Three lectures per week for the pass course and one extra lecture hour for distinction students.

Prerequisite: Course 1, or its equivalent.

Text-book: Kimball's College Physics. 3 units

3. *Mechanics, Molecular Physics and Heat.*—A study of the statics and dynamics of both a particle and a rigid body, the laws of gases and vapors, temperature, hygrometry, capillarity, expansion, and calorimetry.

Two hours of lectures and three hours of laboratory per week.

Prerequisite: Course 1 or its equivalent.

Text-book: Millikan's Mechanics, Molecular Physics and Heat. 3½ units.

4. *Electricity, Sound, and Light.*—A study of the fundamentals of magnetism, electricity, sound, and light.

Two hours of lectures and three hours of laboratory per week.

Prerequisite: Course 1, or its equivalent.

Text-book: Millikan and Mills' Electricity, Sound, and Light. 3½ units.

5. *Dynamics of a Particle and of a Rigid Body.*—A rigorous mathematical study of this subject.

Two hours of lectures per week.

Prerequisites: Course 3, and Differential and Integral Calculus. 2 units.

6. *Advanced Electricity and Magnetism.*—In this course, especial attention is given to the theoretical phases of Electricity and Magnetism.

Two hours of lectures per week

Prerequisites: Courses 3 and 4, and Differential and Integral Calculus.

Text-book: Starling's Electricity and Magnetism. 2 units.

7. *Kinetic Theory of Gases and Introduction to Thermodynamics.*—A course of lectures elucidating the fundamentals of these subjects.

Two hours of lectures per week.

Prerequisites: Course 3, and Differential and Integral Calculus.

Books for reference: Poynting and Thomson's Heat, Boynton's Kinetic Theory of Gases, Preston's Heat, and Meyer's Kinetic Theory of Gases. 2 units.

8. *Theoretical and Experimental Optics.*—A course of lectures accompanied by laboratory work consisting of accurate measurements in diffraction, dispersion, interference, and polarization.

Two hours of lectures and three hours of laboratory per week.

Prerequisites: Courses 3, and 4, and Differential and Integral Calculus.

Books for reference: Houstoun's Treatise on Light, Mann's Advanced Optics, Wood's Physical Optics, Preston's Theory of Light, Drude's Theory of Optics, and Edser's Light for Students.

Not offered for 1920-21.

9. *Recent Advances in Physics.*—A course of lectures dealing with the electrical properties of gases, the electron theory, and radioactivity.

Two hours of lectures per week.

Prerequisites: Courses 3, and 4, and Differential and Integral Calculus.

Books for reference: Thomson's Conduction of Electricity through Gases, Rutherford's Radio-active Substances and Their

Radiations, Millikan's Electron, Thomson's Positive Rays, Hughes' Photo-electricity and Kaye's X-Rays. 2 units.

10. *Advanced Experimental Physics.*—In this course the candidate for honours is expected to perform one or more classical experiments and to do some special work.

Carefully prepared reports, abstracts, and bibliographies will constitute an essential part of the course.

Six hours of laboratory work per week. 3 to 6 units.

CURRICULUM, 1921-22

FIRST AND SECOND YEARS.

The work of the first two years in Arts shall be treated as a unit according to the following scheme involving ten courses:

1 and 2.—English 1, 2, 3, 4. (6 units).

3 and 4.—The first two courses in a language offered for matriculation. (6 units).

5.—The first course (3 units) in Mathematics. (To be taken in First Year).

6.—A first course (3 units) in Economics *or* History *or* Philosophy.

7-10.—Four courses (12 units) to be chosen from the following groups of studies, one of which courses must be a Science *or* a Language:—

1. Mathematics, Biology, Chemistry, Geology, Physics.
2. Latin, Greek, French, German, Spanish.
3. Economics, History, Philosophy.

1. No student shall take less than 15 units of work in his First Year.

2. *Distinction Courses*:

(*a*) Distinction Courses and attendance at Distinction Lectures shall be optional.

(*b*) Examination results in each course shall be published in two lists, one for Pass Students, one for those in Distinction.

(*c*) Distinction classes shall carry value to the extent of an additional one-fourth in the award:—

1. Of general standing for the year;
2. Of scholarships and prizes.

(*d*) Students looking forward to an Honour course are required, during the Second Year, to take Distinction in their proposed specialty or specialties.

3. No student in his First Year shall elect more than one beginners' course in language, and no beginners' course in language shall count towards a degree unless followed by a Second Year's work in that language.

4. It is recommended that students elect at least one course in Natural Science during the First and Second Years of their course. If such a course has not been taken then, it must be taken in the third or fourth year.

THIRD AND FOURTH YEARS: PASS CURRICULUM.

1. The Curriculum of the Third and Fourth Years in Arts shall include at least 30 units of work, of which students shall take, in their Third Year, not less than 15 units or more than 18.

2. "Courses" for Pass Students shall consist of not more than three hours of lectures a week. In courses that involve laboratory work, one hour of lecture shall be regarded as the equivalent of two or three hours of attendance in the laboratory.

3. All students who are candidates for a Pass Degree shall complete, during their Third and Fourth Years, at least 15 units of work in two related Major subjects, in each of which, except in the case of Bacteriology, they shall have done work in the first two years. A minimum of 6 units is required in each of the Major subjects. They shall be chosen from the following groups:—

(*a*) Chemistry *and* Physics *or* Biology *or* Geology *or* Bacteriology.
(*b*) Biology *and* Geology *or* Bacteriology *or* Physics.
(*c*) Physics *and* Mathematics *or* Geology.
(*d*) Latin *and* Greek *or* French *or* German *or* Spanish.
(*e*) French *and* German *or* Spanish.
(*f*) Philosophy *and* Latin *or* Greek *or* Mathematics.
(*g*) English *and* Latin *or* Greek *or* French *or* German *or* History *or* Economics *or* Philosophy.
(*h*) History *and* Economics *or* Philosophy *or* French *or* German.
(*i*) Economics *and* Philosophy *or* Mathematics.

4. All students who are candidates for a Pass Degree shall take at least 6 units of work in a subject or subjects other than their two major subjects.

5. During the Senior Year, students may elect, with the consent of the department concerned, one course of private reading, to count not more than 3 units. In such courses examinations will be set but no class instruction will be given.

6. On or before March 31st of each year, all students in their Second Year shall submit to the Dean of the College a scheme of the courses which they propose to take during their last two years.

THIRD AND FOURTH YEARS: HONOURS CURRICULUM.

For Third and Fourth Years Honours Curriculum *see* page 75 and following.

FACULTY OF APPLIED SCIENCE

INFORMATION FOR STUDENTS IN APPLIED SCIENCE.

Admission.

The general regulations as to admission to the University are to be found on page 39 and following.

The requirements for Matriculation in Applied Science are the same as for Senior Matriculation, except in the Department of Nursing, in which Junior Matriculation is accepted. Students who have passed the First Year in Arts are admitted to the First Year in Applied Science without further examination. Mathematics and Physics must both have been taken in Senior Matriculation, or in First Year Arts.

Candidates for a Senior Matriculation certificate will not be considered as having passed unless they obtain at least 50 per cent. on the aggregate and at least 40 per cent. in every paper.

For Matriculation requirements *see* page 42 and following.

For returned soldiers the requirements for entrance to the Faculty of Applied Science are those of the Applied Science Matriculation of 1915. (*See* page 42.)

COURSES LEADING TO THE DEGREE OF B.Sc.

The degree of B.Sc. is granted only after four sessions of class-room work from Senior Matriculation or its equivalent as above.

A double course leading to the degree of B.A. and B.Sc. is also offered.

The curriculum as laid down in the following pages may be changed from time to time as deemed advisable by the Faculty.

Except in the Department of Nursing, which is treated separately (page 130), the work of the first two years is largely in Mathematics and pure science, giving a foundation for specialization in the various branches of Engineering in the Third and Fourth Years of a B.Sc. Course.

In the Third Year four courses are offered:—

I. Chemistry.
II. Chemical Engineering.
IV. Mining Engineering.
V. Metallurgy Engineering.

In the Fourth Year four courses are offered:—

I. Chemistry.
II. Chemical Engineering.
IV. Mining Engineering.
V. Metallurgy Engineering.

The regular work of each session in Applied Science will end about the first of May, at the close of the sessional examinations.

The Summer Work in:—

1. First Year Drawing and Shop-work;
2. Second Year Surveying and Geodesy;
3. Third Year Surveying,

will begin on Friday, August 27th, 1920.

GENERAL OUTLINE OF COURSES.

The work of the First Year is the same in all the courses in Applied Science, except Nursing.

Summer Work.—All undergraduates entering the First Year of Applied Science are required to be in attendance at the University on Friday, August 27th, 1920, when the classes in Drawing and Shop-work will commence.

The work of the Second Year is the same in four of these courses, and includes the work being covered in the second year at other universities, reserving specialization for the Third and Fourth Years.

The curriculum, as outlined below, is subject to alteration at any time.

FIRST YEAR.

Subject.	First Term.		Second Term.	
	Lectures per Week.	Laboratory Hours per Week.	Lectures per Week.	Laboratory Hours per Week.
Mathematics 1	8	..	8	..
Descriptive Geometry 1	2	4	2	4
Mechanical Drawing 1	..	6	..	6
Mechanics 1	4	3	..	..
Advanced Heat	..	..	4	3
Chemistry 1*	3	3	3	3
Shop-work 1*, (a) and (d)	1	3	1	3
Shop-work (b) and (c) 2 weeks				
Drawing (a) and (b) 2 weeks				

*Students who have taken these classes may claim exemption.

Summer Work.—All undergraduates entering the Second Year—except those taking the Chemistry Course (Course 1)—are required to be in attendance at the Surveying School on August 27th, when the field-work in Surveying and Geodesy will commence.

SECOND YEAR.

Subject.	First Term.		Second Term.	
	Lectures per Week.	Laboratory Hours per Week.	Lectures per Week	Laboratory Hours per Week.
Mathematics 2	6	..	3	..
Chemistry 2	1	6	1	6
General Engineering 1	1	..	1	..
Structural Engineering 1	..	..	..	3
Mechanical Engineering 1	3	..	3	..
Mechanics 2	2	..	2	..
Physics 2 (Electricity and Magnetism)	2	3	2	3
Shop-work 2	1	3	1	3
Mapping, 2	..	3	..	3
Surveying 1	2	..	2	..
Field-work 1 (four weeks*)	..	..	..	..

*Field-work begins August 27th, 1920.

Summer Work.—Undergraduates entering the Third Year in Civil and Mining Engineering (Courses 3 and 4) are required to attend the Surveying School on August 27th, when the field-work in Surveying will commence.

Essay.—Students entering the Third and Fourth Years must prepare an essay which should consist of about 2,000 words, and which must in all respects follow the specifications herewith given:—

All essays must be handed in to the Registrar not later than November 15th. A maximum of 100 marks, or nearly 10 per cent. of the total marks for the year, is given for these essays.

The subject for the essay must be a critical description of the work on which the student is engaged during the summer, or a description of any engineering, scientific, or industrial work with which he is familiar.

It should be illustrated by drawings, sketches, and (when desirable) by photographs, specimens, etc.

The essay must be written in precise, well-chosen English. In preparing it advantage may be taken of any source of information, but due acknowledgment must always be made of all authorities and books consulted. In judging of the value of the essays, account will be taken not only of the subject-matter, but also of style and literary construction.

All essays when handed in will become the property of the Department concerned and will be filed for reference. Students may submit duplicate copies of their essays in competition for the students' prizes of the Canadian Society of Civil Engineers, or of the Canadian Mining Institute.

Essays must be written on paper of substantial quality, and of a size approximately 8½ x 11 inches.

I. Chemistry.

The aim of this course is to train the students for positions as analytical chemists, and to give them such knowledge of the principles of chemistry that they may be prepared to assist in the solution of problems of value to the industrial and agricultural

life of the Province. The course is arranged to give in the first two years a knowledge of the fundamental principles of chemistry and physics, with sufficient mathematics to enable the theoretical parts of the subject to be understood.

In the Third Year, analytical, organic, and physical chemistry are studied from the scientific side and in relation to technology; while in the Fourth Year a considerable amount of time is devoted to a short piece of original work.

FIRST YEAR.

As in other engineering courses. (For details *see* page 123.)

SECOND YEAR.

Subject.	First Term.		Second Term.	
	Lectures per Week.	Laboratory Hours per Week.	Lectures per Week.	Laboratory Hours per Week.
Mathematics 2	6	..	3	..
Chemistry 2	1	9	1	9
Chemistry 3	2	3	2	3
Chemistry 4	2	..	2	..
Mechanics 2	2	..	2	..
Physics 2 (Electricity and Magnetism)	2	3	2	3
German (Arts) 1	3	..	3	..

THIRD YEAR.

Subject.	First Term.		Second Term.	
	Lectures per Week.	Laboratory Hours per Week.	Lectures per Week.	Laboratory Hours per Week.
Engineering Economics	2	..	..	..
Geology 1	3	1	3	1
Chemistry 5	1	9	1	9
Metallurgy 1	1	..	3	..
Geology 2	2	2	2	2
Chemistry 7	2	3	2	3
Bacteriology 1 (Arts)	..	..	..	7
Assaying	1	7	..	..

FOURTH YEAR.

Subject.	First Term.		Second Term.	
	Lectures per Week.	Laboratory Hours per Week.	Lectures per Week.	Laboratory Hours per Week.
Chemistry 6	2	..	2	..
Chemistry 8	3	..	..	..
Chemistry 9	2	3	2	3
Ore-dressing	2	..	2	..
Thesis	..	20	..	20

II. Chemical Engineering.

This course is arranged to prepare the student for the duties of managing engineer in a chemical manufactory. As such he must not only be conversant with the chemical processes involved, but he must be prepared to design and to oversee the construction of new buildings and to direct the installation and use of machinery. Accordingly, the course of study combines a considerable amount of engineering with the maximum of chemical training allowed by the time at his disposal.

FIRST AND SECOND YEARS.

As in other engineering courses. (For details *see* page 123.)

THIRD YEAR.

Subject.	First Term.		Second Term.	
	Lectures per Week.	Laboratory Hours per Week.	Lectures per Week.	Laboratory Hours per Week.
Engineering Economics	2	..	..	..
Metallurgy, 1	1	..	3	..
Mechanical Engineering 2 and 3	2	3	2	3
Geology 2	2	2	2	..
Chemistry 3	2	3	2	3
Chemistry 4	..	..	2	..
Chemistry 5	1	9	1	6
General Engineering 2	2	..	2	..
Structural Engineering 3	..	..	1	3

FOURTH YEAR.

Subject.	First Term.		Second Term.	
	Lectures per Week.	Laboratory Hours per Week.	Lectures per Week.	Laboratory Hours per Week.
Electrical Engineering	1	2	1	2
Engineering Law	2	..	..	..
Hydraulics	1	..	..	3
Chemistry 6	2	..	2	..
Chemistry 8	3	..	..	..
Chemistry 5	1	9	1	9
Chemistry 7	2	3	2	3
Fire Assaying	1	7	..	..
Thesis	..	6	..	10

IV. Mining Engineering.

This course is intended to give a broad foundation in Mining Engineering that will form a suitable introduction to any branch of the work that aptitude or circumstances may lead the student to enter after graduation.

Special attention is therefore given to the fundamental sciences upon which the practice of the profession is based. As the usual avenues toward professional work are through draughting, surveying, and assaying, special attention will be given to training in these branches of the work.

Specialization does not begin until the Third year, when courses in Mining, Metallurgy, Ore-dressing, Assaying, and Mine Surveying are commenced, but the chief work of the Third Year is still in such fundamental subjects as Applied Mechanics, Mechanical Engineering, Chemistry, Geology, and Mineralogy.

Instruction is given by means of lectures and practical work in the field, draughting-room, and laboratory, and by visits to mines and works. Students are recommended to spend their vacations at practical works in connection with Mining, Metallurgy, or Surveying, and are required to do so between the Third and Fourth Year.

Special attention is paid to British Columbia conditions, fitting students to practice their profession to special advantage in this Province after graduation either in Mining or Metallurgy.

Students are advised to become members of the Canadian Institute of Mining Engineers.

FIRST AND SECOND YEARS.

As in other engineering courses. (For details *see* page 123.)

THIRD YEAR.

Subject.	First Term.		Second Term.	
	Lectures per Week.	Laboratory Hours per Week.	Lectures per Week.	Laboratory Hours per Week.
Engineering Economics	2	..	..	..
General Engineering 2	2	..	2	..
Mapping 2	..	3	..	..
Structural Engineering 3	..	..	1	3
Mechanical Engineering 2 and 3	2	3	2	3
Geology 1	3	1	3	1
Geology 2	2	2	2	2
Chemistry 5	1	6	1	6
Mining 1	..	..	3	..
Mine Surveying	..	..	1	..
Fire Assaying	1	7	..	..
Metallurgy 1	1	..	3	..
Ore-dressing	2	..	2	..
Field-work 2 (four weeks*)	..	..	..	..

*Field-work begins August 27th, 1920.

FOURTH YEAR.

Subject.	First Term.		Second Term.	
	Lectures per Week.	Laboratory Hours per Week.	Lectures per Week.	Laboratory Hours per Week.
Geology 7	2	4	2	4
Geology 8	3	1	3	1
Electrical Engineering	1	2	1	2
Mechanical Engineering 4	1	..	1	..
Designing and Draughting	..	3	..	3
Ore-dressing Laboratory	..	9	..	9
Hydraulics	1	..	..	3
Mining 2	2	..	2	..
Mining 3	2	..	2	..
Mining 4	1	..	1	..
Metallurgy 2	2	..	2	..

V. Metallurgical Engineering.

FIRST AND SECOND YEAR.

As in other engineering courses. (For details *see* page 123.)

THIRD YEAR.

As in Mining Engineering. (*See* Above.)

FOURTH YEAR.

Subject.	First Term.		Second Term.	
	Lectures per Week.	Laboratory Hours per Week.	Lectures per Week.	Laboratory Hours per Week.
Geology 8	3	1	3	1
Electrical Engineering	1	2	1	2
Mechanical Engineering 4	1	..	1	..
Ore-dressing Laboratory	..	9	..	9
Hydraulics	1	..	..	3
Mining 2	2	..	2	..
Metallurgy 2	2	..	2	..
Metallurgy 3	2	..	2	..
Metallurgy 4	..	9	..	9
Chemistry 8	3	..	..	..

SHORT COURSE IN MINING.

The regular Short Courses in Mining for the Session of 1920-21 will commence on January 10th, 1921, and will continue for eight weeks. These courses include Mining, Smelting, Ore Concentration, Geology and Ore-deposits, Mineralogy and Rock Study, Fire Assaying, Chemistry, Surveying, and Blacksmithing.

The courses are thoroughly practical in nature. They are not intended for those who have had a technical training, but rather for those who have had practical experience in Mining and Prospecting, or are connected with the business of mining in any way. The courses are designed to give practical technical knowledge, helpful in practical mining work and business.

While they are short they are complete in themselves, and require no other preparation than a common-school education or ability to read and write.

Experience has shown that they fill a practical demand and they have proved very successful in the past.

As they do not form part of the regular University course, a special bulletin is issued, in which details of the courses and requirements for admission are given. Copies of this may be obtained on application to the Registrar of the University.

DEPARTMENT OF NURSING.

The requirements for admission for this course are those set forth for Junior Matriculation. (*See* page 41.)

A degree will be granted upon the successful completion of a five years' course consisting of University work and Hospital training.

The latter may be taken in any institution that is of the standard set by the University, and that has made application and submitted evidence of fitness to the University, and been approved of by the University.

Until 1925, nurses, who have graduated from a Hospital that is in affiliation with this University or otherwise approved of by the Senate, may be awarded the degree on complying with the following conditions:

1. They shall have matriculated.
2. They shall take, or shall have taken, the full academic training laid down for this course. At least one year of such training shall be, or shall have been, taken in the University of British Columbia.
3. Except under special circumstances the course shall be entered upon within two years of the time of graduating as a nurse.

The curriculum for the first four years of the course, as outlined below, is subject to alteration at any time.

FIRST YEAR.

1. English 1 and 2, History 1.
2. Mathematics 1 or Latin 1 or French 1.
3. Physics 1.
4. Chemistry 1.
5. Biology 1.

If she has not already done so, the student must enter an approved Training School for Nurses in May at the close of the First Year and take the ordinary four months' Preparatory Course for Probationers. During this period the student will undergo (*a*) rigid physical examination, (*b*) examination as to fitness in temperament and character for nursing.

SECOND YEAR.

1. English 3 and 4.
2. Chemistry 2.
3. Philosophy 1.
4. Economics 1.
5. Bacteriology 1 and 2.

THIRD AND FOURTH YEARS.

The Third and Fourth Years will be spent in practical training in an approved Hospital.

FIFTH YEAR.

In her Fifth Year the student will attend the session of the University. Two major subjects are offered, of which the student, with the consent of her advisors, may elect, either (1) *Teaching and Administration of Schools for Nurses,* or (2) *Public Health Nursing.* Students selecting Pedagogy will take Courses A and B. Those selecting Public Health will take Courses A and C.

A—GENERAL.

Psychology,
Sanitary Science,
Practical Application of Sociology,
Statistics,
Nutrition,
Physical Education.

B—PEDAGOGY.

Students selecting the Pedagogy option will, in addition, take the following subjects:

Principles of Teaching,
History of Education,
Teaching of Nursing Principles and
Contemporary Problems,
Teaching Practice,
Supervision in Hospital Training Schools.

C—PUBLIC HEALTH.

Students selecting Public Health option will, in addition, take the following subjects:

Principles of Public Health Nursing and
Contemporary Problems,
Principles of Public Health Teaching,
Medical Inspection and School Nursing,
Control of Communicable Diseases,
Principles of Modern Social Work,
Administration of Institutes.

Special Courses for Returned Soldiers

In co-operation with the Department of Soldiers' Civil Re-establishment, the Department of Mining gives a Vocational Course in Assaying, which is practically continuous throughout the year. The length of course for any student is at least six months.

Admission to these courses is allowed only to those returned soldiers who are approved by the Department of Soldiers' Civil Re-establishment.

The courses include Chemistry, Short Mining Courses, and practical work in Assaying, for forty-three hours per week throughout the period of instruction. Instruction in general is along the lines required in the Provincial Department of Mines examination for certificate to practice assaying in British Columbia.

In co-operation with the Department of Soldiers' Civil Re-establishment, the Department of Mechanical Engineering offers courses for the revocational training of returned soldiers.

Admission to these courses is allowed only to those who are approved by that Department as needing and fitted for the work.

In general the length of a course is six months and entrance may follow soon after approval.

Special equipment and tools suitable to the very practical nature of each course are provided to supplement the equipment of the University laboratories.

Anyone who satisfactorily completes one of these courses should have no difficulty in retaining employment along the line of his training.

At present the following are offered:

(1.) *Garage Mechanics.*—A six months' course, giving training in the operation and care of automobiles and in overhauling and repair work on these. The course starts with a month of lecture-room work and practical demonstration and work on parts of cars, including carburetors and complete electrical outfits. In the succeeding months the work is graded, through increasingly difficult overhaul work on cars, to a finishing course on general garage repairs.

(2.) *Chauffeur Work.*—A ten weeks' course, including a month of lecture work and demonstration, a short course on garage repairs, some vulcanizing and tire repair work, and practice in driving a large variety of cars in the open country and also through city traffic.

(3.) *Gas Engine Care and Operation.*—A six months' course in the operation and care of various types of stationary and marine internal combustion engines and gasoline farm tractors. The work is similar to that given in connection with the course in Garage Mechanics, with the overhauling and operation being carried on with internal combustion engines and with much more time spent in actual operating than would be spent on such work in the garage course. The engines operated are fired by gasoline, kerosene, distillate and heavy oil fuels, and the course includes the operation of a power boat, either by engine room signals or by one-man handling of both engines and steering apparatus.

(4.) *Machine Shop Work.*—An eight months' course in general machine tool and hand work of general machinists. The first part of the course is limited to the making of a definite set of model pieces, which give the student practice in common types of machine and bench work with which he is likely to come in contact. The latter part of the course takes up actual jobbing work. The machinery operated includes lathes of various types, large and small drill presses, milling machines, shapers, a universal grinder and a planer.

(5.) *Steam Engineering.*—A six months' course preparing men to pass the Provincial Third or Fourth Class Engineers' examinations for the operation of steam plants in British Columbia. Most of the students have had previous firing experience and others graduating from this work will have to fill the provincial requirements with regard to time spent in employment in connection with a high pressure plant, before sitting for their examinations. About half of the time of this course is spent in the lecture room and about half in the operation of a steam plant or in the installation or repair of general machinery.

(6.) *Practical Electricity.*—A six to eight months' course preparing the student for the capable handling or installing of the electrical equipment of any industrial plant, office building or the like. The work is graduated through various steps which take up the different branches of electrical work, and is done

for the first four months of the course. At the end of the course the student has the option of taking any one of wiring for power and light, switchboard operation, armature winding and automobile electrical repairing.

DOUBLE COURSE FOR THE DEGREES OF B.A. AND B.Sc. (APPLIED SCIENCE).

The requirements are as follows:—

FIRST YEAR.

As set forth in the Calendar for the First Year of Arts. The Distinction Class in Physics must be taken.

SECOND YEAR.

Subjects of the Second Year of Arts are as follows (two of the five courses must be Distinction Courses):—

1. English 3, 4.
2. The language taken in the First Year.
3. Mathematics 2 (Distinction).
4 and 5. Two of the following, including Chemistry 1, if not already taken:
   Another language.
   Philosophy 1.
   Economics 1.
   History 2.
   Chemistry 1 Distinction (if not already taken).
   Biology.
   Geology.
6. Descriptive Geometry.

The Shop-work and Drawing of the First Year of Applied Science will be taken before entering on the Third Year of the Double Course.

THIRD YEAR.

1 and 2. (Not less than eight units to be taken.) Two of:—
A foreign language.
English History.
Economics.
Philosophy.
Biology.

3. Geology 1.
4. Physics 1, and Mechanics 1 (Applied Science).
5. Mechanical Drawing 1 and 2 (Applied Science).
6. Descriptive Geometry.

FOURTH YEAR.

As for Second Year Applied Science, including Summer Surveying School.

FIFTH YEAR.

As for Third Year Applied Science. The degree of B.A. to be conferred on completing the Fifth Year of this course.

SIXTH YEAR.

As for Fourth Year Applied Science.

REGULATIONS REGARDING PREREQUISITE SUBJECTS.

(1.) No student proceeding to a degree will be allowed to take any subject, unless he has previously passed, or secured exemption, in all prerequisite subjects.* If any subject has another which is concurrent with it, both must be taken in the same session.

*It is to be noted that prerequisite subjects are those which, in the opinion of the Faculty, must have been mastered before the subjects to which they are prerequisite can be intelligently studied.

Concurrent subjects are those which so supplement one another that no one of them can be advantageously studied alone.

(2.) All students proceeding to a degree as above shall be classed as undergraduates and conditioned undergraduates, the latter being students with defective entrance qualifications or those who have failed in one or more of the subjects of their course in the year previous to that in which they are entered.

(3.) All students who have conditions that have not been removed at the opening of any session are conditioned undergraduates, and come under the regulations governing prerequisite subjects.

(4.) Except in special cases as provided below, no undergraduate or conditioned undergraduate shall be permitted to take any second-year subjects until he has passed or secured exemption in all matriculation requirements; and, similarly, no third-year work may be undertaken until all first-year subjects shall have been passed or exemption granted. No fourth-year work may be undertaken until all subjects of the previous years shall have been passed or exemption granted.

(5.) Partial students (not proceeding to a degree) may be admitted to classes without regard to the prerequisite rule, provided that they have obtained the permission of the Head of each Department concerned, and have also had their courses approved by the Faculty.

(6.) In the event of a partial student desiring to obtain undergraduate standing in order to proceed to a degree, he shall not be given credit for work already done without the usual prerequisites until he has passed examination or secured exemptions in such prerequisites as may be demanded and has had his case approved by a unanimous vote of the Faculty.

(7.) All undergraduates who, at the close of any session, have passed the examinations in all the subjects of their year, or who, at the opening of the following session, have removed all conditions by passing supplemental examinations in the subjects in which they have failed, may pass into the next higher year as undergraduates.

EXAMINATIONS IN APPLIED SCIENCE.

There are two examinations in each year—one at Christmas and the other at the end of the session. Successful students are arranged in three classes, as follows: First class, those who obtain 80 per cent. or more; Second class, from 65 per cent. to 80 per cent.; Passed, from 50 to 65 per cent.

Christmas examinations will be held in all subjects and are obligatory for all students. Any partial student of the first year who fails in the Christmas examinations in any subject will not be allowed to continue his course in that subject, except under special circumstances and with the consent of the Faculty.

Any student whose record is found to be unsatisfactory may at any time be required to withdraw from the University.

SUPPLEMENTAL EXAMINATIONS.

Applications for these examinations, accompanied by the necessary fees, should be in the hands of the Registrar at least two weeks before the date of the examinations.

COURSES IN APPLIED SCIENCE.

N.B.—The following courses are subject to such modifications during the year as the Faculty may deem advisable.

Department of Chemistry.

Professor: D. McIntosh.
Professor: E. H. Archibald.
Associate Professor: R. H. Clark.
Associate Professor: ———
Assistant: John Allardyce.
Assistant: Ruth Fulton.
Assistant: ———

1. *General Chemistry.*—As in Arts
2. *Qualitative and Quantitative Analysis.*—As in Arts
3. *Organic Chemistry.*—As in Arts
4. *Theoretical Chemistry.*—As in Arts
5. *Advanced Qualitative and Quantitative Analysis.*—As in Arts
6. *Industrial Chemistry.*—As in Arts
7. *Physical Chemistry.*—As in Arts
8. *Applied Electro-Chemistry.*—As in Arts
9. *Advanced Organic Chemistry.*—As in Arts

Descriptive Geometry.

Associate Professor: E. G. Matheson.
Assistant: G. M. Irwin.
Assistant: H. F. G. Letson.

1. *Descriptive Geometry.* — Geometrical drawing; orthographic, isometric, and axometric projections; shades and shadows.

Text-book: Descriptive Geometry, H. F. Armstrong.

2. *Descriptive Geometry.*—Mathematical perspective; perspective of shadows; spherical projections and construction of maps.

Text-book: Elementary Perspective, by L. R. Crosskey (pub. by Blackie & Son, London).

Reference books: The Principles and Practice of Surveying, by C. B. Breed and G. L. Hosmer (pub., J. Wiley & Son, N.Y.); Plane Surveying, by P. C. Nugent (pub., Wiley); Topographic, Trigonometric, and Geodetic Surveying, by H. W. Wilson (pub., Wiley).

Department of Civil Engineering and Surveying.

Professor: ———
Associate Professor: E. G. Matheson.
Assistant: W. H. Powell.
Assistant: G. M. Irwin.
Assistant: H. F. G. Letson.
Assistant: ———
Assistant: ———

ENGINEERING ECONOMICS.

General finance; stocks and bonds; partnership and corporations; estimating; cost analysis; valuations; operating and fixed charges; specifications and contracts; general management.

Text Books: Engineering Economics, by J. C. L. Fish (McGraw Hill). Specifications and Contracts, by Waddell & Wait. Students must also read the Chapters on "Banking Contracts," "Partnerships," and "Joint Stock Companies," in Digest of Canadian Mercantile Law of Canada, by W. H. Anger, *two hours a week* First Term.

ENGINEERING LAW.

The Engineer's Status; Fees; Salary; as a Witness; Responsibility for Negligence; Engineering Contracts generally; Tenders; Quantities; Specifications; Plans; Drawings; Designs; Extras and Alterations; Time; Payments and Certificates; Penalty Bonus or liquidated damages clauses; Maintenance and Defect Clauses; Sub-contractors; Engineer's Assistant or Agent; Arbitration and Awards, etc.

Students must read: "Digest of Canadian Mercantile Law of Canada by Anger; Chapters on Bank and Banking; Chattel Mortgages; Mortgages; Contracts; Joint Stock Companies;

Landlord and Tenant; Master and Servant; Mechanics' Lien Act; Negotiable Paper; Partnership; Principal and Agent; Statute of Limitations; also notes on Law of Contracts in "Specifications and Contracts," by Waddell & Wait; also the "Law Affecting Engineers," by Ball. All are in Library. Two hours a week First Term.

GENERAL ENGINEERING, 1.

Materials of Construction.—Manufacture and properties of iron and steel; principal alloys; considerations governing selection of materials; manufacture and properties of cements; study of concrete; stone and brick masonry; principal kinds of commercial timber; preservation of timber; discussion of standard specifications for engineering work.

Second Year Students. One hour a week during the year.

Text Book: Materials of Engineering, by H. F. Moore.

Reference Books: Mills, Materials of Engineering.

Johnson, Materials of Construction.

Upton, Materials of Engineering.

GENERAL ENGINEERING, 2.

Strength of Materials.—Lectures dealing with the fundamental principles of the strength of materials. The subject includes stress, strain, resilience; bending moment and shearing force diagrams; simple, continuous, and cantilever beams; strength of shafting; spiral springs; elementary consideration of compound stresses and shearing in different sections.

Strength of Materials in Laboratory.—Testing of concrete, timber, steel, and other materials to illustrate the theories and factors considered in the lectures.

Text-book: Boyd, Strength of Materials.

Third Year students. Two hours a week, with one laboratory period per week during the Second Term.

Prerequisite: Mathematics and Mechanics of the First and Second Years.

HYDRAULIC ENGINEERING.

Hydrostatics.—Design of Standpipes, Reservoirs and Dams.

Hydrodynamics.—Fundamental principles and application of same to problems on the discharge of orifices, notches and weirs; flow in pipes and in open channels, such as ditches and flumes; practical field measurements of above. Examination of Hydraulic developments.

Third Year students in Civil Engineering.

Fourth Year students in Mining and Chemical Engineering.

One hour per week First Term; three hours per week Second Term.

Text-book on Hydraulics by George E. Russell.

RAILWAY ENGINEERING.

Location and grade problems; economics of location; reconnaissance, preliminary and location surveys; yards and terminals; details and materials of construction; estimates of probable receipts and expenditures.

Two lectures a week throughout the year.

Text-book: Railroads, Curves and Earthwork, Allen; Economics of Railroad Construction, Webb.

STRUCTURAL ENGINEERING, I.

Graphical Statics.—Composition of forces; general methods involving the use of funicular and force polygons; determination of reactions, centres of gravity, bending moments and moments of resistance; stresses in cranes, braced towers, roof-trusses, and bridge-trusses.

Laboratory period of three hours during the Second Term.

Required of all engineering students.

Text-book: Modern Framed Structures, Vol. 1. to end of Section III., page 156, by Johnson, Bryan & Turneaure. Pub., Wiley.

Prerequisites: Mathematics 1; Mechanics 1 and 2. First Term.

STRUCTURAL ENGINEERING 2.

Foundations and Masonry.—Borings; bearing power of soils; pile and other foundations; coffer-dams; caissons; open dredging; pneumatic and freezing processes; estimates of quantities and costs.

One hour lecture and three hours laboratory during First Term.

Text-book: Foundations, by M. A. Howe.

Reference books: Treatise on Masonry Construction, by I. O. Baker (Wiley); Foundations of Bridges and Buildings, by H. C. Jacoby and R. P. Davis. Pub., McGraw Hill, N.Y.

STRUCTURAL ENGINEERING 3.

Problems in draughting, illustrating designs in structural engineering and reinforced concrete; estimates of quantities and costs.

One hour lecture and three hours laboratory during Second Term.

Text-book: Structural Draughting and Elementary Design, Conklin.

Prerequisites: Structural Engineering 1; General Engineering 2. First Term.

SURVEYING 1.

Lectures. Chain and angular surveying. The construction, adjustment and use of the transit, level, compass, stadia, and minor field instruments; topography; levelling; contour surveying; stadia surveying; railway circular curves; vertical curves; the survey systems of Provincial and Dominion lands.

Second Year students two hours a week throughout the year.

Text-book: Elementary Surveying, Vol. I., by Breed & Hosmer.

Reference Books: Manual of Surveys of Dominion Lands; Instruction for B. C. Land Surveyors; Gillespie's Surveying, Vol. I.; Nugent, Plane Surveying; Baker, Engineers' Surveying Instruments.

FIELD WORK 1.

Details for field work, 1920. Minimum time, 22 days.

(1) *Telemeter and Compass Traverse.* — A closed circuit about four miles in length following Marine Drive and the road boundary of the Point Grey University site.

Closing error, 1 in 100. Time, 2 days.

(2) *Farm Survey.*—Chain and Compass. Within the cleared area of Point Grey site; sufficient detail to show buildings, roads, total areas and areas of particular crops.

Established stations to be occupied by each party; Latitudes and Departures to be calculated when work is being done.

Closing error, 1 in 500. Time, 2 days.

(3) *Chain and Transit.*—Following approximately same course as chain and compass survey. Angles to be measured using both Debection and Plate Azimuth methods. Tie lines to be calculated and run directly across the clearing from West to East. Obstacles to be passed by right angled offsets.

Closing error, 1 in 5000. Time, 8 days.

(4.) *Establishment of Bench Mark at Beach* by comparison with tide tables; connection of same with Bench Marks established by the Geodetic Survey (one on the Dairy Barn, one on monument "P"); establish contour using Main Axis as a base and going to bush line at right angles (each party will do a section of the whole area).

Time, 5 days.

(5.) *Detail survey, using chain and pickets.* Stanley Park, Coal Harbour to the Forest; five-foot contours by hand level referred to high-water mark.

Time, 3 days.

Extra days may be utilized for special problems.

All calculations to be made as the field work progresses. Sufficient notes to be copied that there shall be no confusion in the draughting room.

All undergraduates entering the Second Year—except those taking the Chemistry Course.

MAPPING, 1.

Draughting from notes obtained in Field work, 1.

(1.) *Telemeter Survey*—Angles to be plotted by protractor method. Scale, 1 inch=200 feet.

(2.) *Compass Survey*—To be plotted by Latitudes and Departure method. Scale, 1 inch=3 chains.

(3.) *Transit Survey*—Angles to be plotted by Tangents and Chords. Scale, 1 inch=200 feet.

(4.) *Contours*—Tracing of No. 3 with contours plotted on it.

(5.) *Detail of Stanley Park*—Scale, 1 inch=1 chain. This map to be tinted in water colors.

(6.) Mine plan from notes furnished.

(7.) Land plan from notes furnished.

All undergraduates in second year except those taking Chemistry Courses.

SURVEYING, 2.

Continued from Surveying, 1.

Theory and use of instruments, Planimeter, pantograph, aneroid, Plane Table Surveying, Mine Surveying, Hydrographic Surveying, City Surveying.

Theory of transition curves, elements of Geodetic Surveying, elements of practical astronomy.

Third Year students in Civil Engineering.

Two hours a week throughout the year.

Text-book: Surveying, Vol. II., Breed & Hosmer.

Reference Books: Theory and Practice of Surveying, Johnson & Smith; Topographic, Trigonometric and Geodetic Surveying, H. W. Wilson; Green's Practical and Spherical Astronomy.

FIELD-WORK, 2.

(*a.*) Railway surveys, including reconnaissance, preliminary and location surveys, illustrating the methods of taking topography; of cross-sectioning; of estimating quantities of earth and of running in easement and vertical curves, etc. The notes secured will be used in class work during term for mapping and for estimating quantities and costs.

(*b.*) *Hydrographic Surveys.*—This will include the topography of the bed of a section of a river by sounding and fixing positions by transists and by sextants, illustrating the three-point problem; the gauging the stream-flow by surface and deep floats and by the Current Meter.

(*c.*) *Mine Surveys.*—Carrying lines down shafts and producing the same.

(*d.*) Astronomical observations with sextant and transit to determine Latitude and Azimuths.

(*e.*) The use of the transit, plane table, sextant, barometer, current meter, etc.

MAPPING 2.

Draughting from notes obtained on Field Work of railway location and hydrographic survey.

Location and design of pipe line for hydraulic development from notes of survey furnished; estimate of cost, etc.

Third Year students Mining Engineering. Three hours a week. First Term.

Third Year students, Civil Engineering. Three hours a week throughout the year.

Department of Mechanical Engineering.

Professor: ———
Associate Professor: L. Killam.
Assistant in Mechanical Engineering: Cedric C. Ryan.
Assistants:
J. Hogarth.
J. Crowley.
J. W. Faulkiner.
F. McCrady.
S. Northrop.
H. Taylor.

MECHANICAL ENGINEERING 1.

Mechanics of Machines.—Prerequisite: Mechanics 1.—(*a.*) *Kinematics of Machines.*—Displacement, velocity, and acceleration, and their mutual relations; constrained motion; the relative motions of links in various closed chains; alterations and closure; the design of gear teeth, wheel trains and cams.

(*b.*) *Dynamics of Machines.*—The dynamics of revolving and reciprocating parts of machines; work represented in the indicator diagram; the design of fly-wheels.

Text-book: Durley, Kinematics of Machines.

Reference Book: Ewing, The Steam Engine and Other Heat Engines.

Three hours a week throughout the year.

MECHANICAL ENGINEERING 2.

Heat Engines and Auxiliaries.—The mechanical engineering of large and small steam and internal-combustion power plants, with consideration of the economical selection and arrangement of equipment; the air-compressor and the transmission and use of compressed air; refrigeration; heating and ventilation.

Text-book: Fernald & Orrok, Engineering of Power Plants.

Reference books: Gebhardt, Steam Power Plant Engineering; Marks and Davis, Steam Tables and Diagrams; Kent, Mechanical Engineers' Pocket Book.

Two hours a week throughout the year.

MECHANICAL ENGINEERING 3.

Laboratory.—The testing of boilers, steam-engines, and internal-combustion engines; fuel calorimetry; flue-gas analysis; the distribution of losses in a steam-power electric generating plant; the efficiency of belt transmission of power; the power and its transmission in an automobile; air-compression; lubrication.

Reference Book: Carpenter & Diedrichs, Experimental Engineering.

Three hours a week throughout the year.

MECHANICAL ENGINEERING 4.

Thermodynamics.—The fundamental principles of thermodynamics; the theory of air-compression and the transmission and use of compressed air; the internal combustion engine and its applications.

Text-books: Simons, Compressed Air.

Reference book: Lucke, Thermodynamics.

One hour a week throughout the year.

ELECTRICAL ENGINEERING.

Prerequisite: Physics 2.

An essentially practical course designed to give the student acquaintance with and experience in the handling of electrical machinery. Access is had to hydro-electric generating plants and sub-stations and to isolated steam-power generating plants. Experimental studies are made of different types of generators and motors, storage-batteries and other electrical apparatus, with a view to guiding the student in the selection of proper apparatus for any particular service. A lecture course on commercial practice will be given.

Text-book: Gray, Principles and Practice of Electrical Engineering.

Three hours a week throughout the year.

DRAWING.

(a.) *Freehand Drawing.*—The sketching of machine parts, buildings and other structures, to train the student in the making of perspective drawings, or dimensioned drawings which may be copied to scale.

(b.) Lettering.—Practice in freehand lettering of the types in common use in draughting-rooms; the making of capitals, with drawing instruments; tinting and blue-printing.

Three hours a day during four weeks of summer work.

MECHANICAL DRAWING 1

The making of drawings and tracings of simple machine parts. The making of detailed drawings from assembly drawings, and assembly from detail drawings, and assembly and detail drawings from measurements of more complicated machine parts.

All work is finished in accordance with the best commercial practice; and instruction is given in the reason for such practice and the choice of materials specified for use.

Six hours a week throughout the year.

SHOP-WORK.

These courses are planned to give the student some knowledge of common methods of manufacture as employed commercially, and also to supplement the manual-training work of the High Schools in imparting a degree of manual skill and instruction in the use and care of various hand and machine tools. The courses help to form a basis for future intelligent design of parts for machines or structures.

The student is strongly advised to increase his practical experience by work in some branch of engineering during the summer vacations.

In conjunction with the Shop-work courses, the student is required to read portions of certain text-books on shop practice, tool design, and machine performance.

Notes on work done in the shops are handed in to the Instructors in charge.

SHOP-WORK 1.

(a.) *Wood-working.*—The use and care of wood-working tools in bench-work and turning; the making of various joints and small structures with finished surfaces; turning and boring. All work is done according to blue-print specifications.

Three hours a week throughout the year.

(*b.*)*Smith-work.*—The use and repairing of smiths' tools; the making of small iron and steel forgings, including welding; the tempering of carbon-steel tools.

Three hours a day during two weeks of summer work.

(*c.*) *Foundry-work.*—Bench and floor moulding; core-making; cupola operation.

Three hours a day during two weeks of summer work.

(*d.*) *Shop Lectures.*—A course of lectures in line with the work done in Courses (*a*), (*b*), and (*c*), with a discussion of materials used and explanation of more advanced practice. Instruction is also given in the use of the slide-rule, and regular reading of library periodicals is encouraged.

One hour a week throughout the year.

SHOP-WORK 2.

(*a.*) *Machine-shop Work.*—Bench-work, including marking off, chipping, filing, scraping, tapping, and fitting; lathe-work, including turning and boring of cylindrical work to gauge, screw-cutting and finishing; lathe adjustments; shaping; drilling; milling; gear-cutting; tool-dressing.

Three hours a week throughout the year.

(*b.*) *Shop Lectures.*—A course of lectures to supplement the knowledge gained in Course (*a*). The subjects considered are: Tools and tool-steels annealing, hardening, and tempering; grinding; soldering and welding; pipe-fitting; machine-fitting; the manufacture of interchangeable parts; lathe adjustments.

Text-book: Starrett, Vols. I. and II.

One hour a week throughout the year.

Department of Mining and Metallurgy

Professor of Mining: J. M. Turnbull.
Professor of Metallurgy: H. N. Thomson.
Assistant Professor of Mining: Geo. A. Gillies.
Assistant Professor of Metallurgy: ———
Assistant: ———

Mine Surveying.—This course covers the application, to mining problems, of the general principles of surveying, under the following heads:—

Instruments and accessory appliances used, their selection, care, and methods of use underground. Practical details of underground survey-work and special difficulties. Surveying in shafts. Setting and lining in of timbers. Stope surveys. General underground surveys. Co-operation with sampling and geological work. Different systems of taking notes and sketches. Mapping methods. Scale of maps. Uses of maps for various purposes. Records, and methods of keeping them. Estimating tonnages and volumes. Functions of the Mine Survey Department.

Lectures one hour per week in the Second Term of the Third Year.

No text-book is required.

Prerequisite: Surveying, 1.

Ore-dressing.—Owing to rapid and radical changes in the practice of ore-dressing in recent years, and the immense number and variety of machines in use, no attempt is made to describe all the machines. Most of the time is spent in considering fundamental principles, typical machines, and their general operations and relations in standard modern milling practice.

Students are taught the commercial and technical characteristics of true concentrating ores, the general principles on which the size, character, site, and other features of a mill are designed. The general lay-out of crushing, handling, and separating machinery. The laws of crushing and of various classifying and

separating actions, and the design, operation, and comparative efficiency of typical machines, such as crushers, rolls, stamps, ball and tube mills, jigs, tables, screens, classifiers, and slime-handling devices.

Attention is paid to pneumatic, magnetic, electrostatic, flotation, and other special processes, including coal-washing.

Two lectures per week throughout the Third Year.

Reference books: Theory and Practice of Ore-dressing, E. S. Wiard; Concentrating Ores by Flotation, T. J. Hoover; etc.; Current Mining Journals; Trade Catalogues.

Text-book: Text-book of Ore Dressing, R. H. Richards.

Metallurgy I.—This course covers the fundamental principles underlying metallurgical operations in general, and is introductory to subsequent more specialized study.

The lectures follow in general the subject as taken up in Principles of Metallurgy, by Chas. H. Fulton, including the following main subjects:—

Physical mixtures and thermal analysis. Physical properties of metals. Alloys. Measurement of high temperatures. Typical metallurgical operations. Roasting and fusing. Electro-metallurgy. Slags. Matte, bullion, and specie. Refractory materials. Fuels. Combustion. Furnaces.

Lectures one hour per week during the First Term and three hours per week in the Second Term. Third Year.

Text-book: Principles of Metallurgy, C. H. Fulton.

Reference books: General Metallurgy, H. O. Hofman; Current Mining and Metallurgical Journals; Trade Catalogues.

Prerequisites: Chemistry 1, and Physics 1 and 2.

Fire Assaying.—Quantitative determination of Gold, Silver, Lead, and Platinum by fire-assay methods, with underlying principles.

Lectures and laboratory work, eight hours per week during the First Term of the Third Year.

Text-book: Manual of Fire Assaying, C. H. Fulton.

MINING 1.

A general course in prospecting and metal mining for all mining and metallurgy students in their third year, covering the following subjects:

Ores and Economic Minerals; Ordinary Prospecting; Economic Considerations; Finding Mineral Deposits; Float; Deductions from outcrops and other indications; Core and Churn Drilling; Mineral Belts; mineral Fashions; Conditions in British Columbia; Legal Considerations; Preliminary Developments; Timbering and Framing; Tunnelling; Shaft Sinking; Ordinary Mining Methods; Transportation and Haulage; Drainage; Ventilation.

Three hours per week in the Second Term of the Third Year.

No text-book is required, references being made to a number of books and publications.

Mining 2.—A general course in Coal, Petroleum and Placer Mining and Mine Valuation. This course is a continuation of Mining 1 and covers the following subjects:

Coal Mining.—Classification of Coals; Mining Methods; Ventilation; Transportation and Haulage; Tipples; Western Canadian Coal Fields.

Petroleum.—Oil Finding; Origin; Migration; Surface Indications; Geological Structure; Locating Wells.

Placer and Hydraulic Mining.—Prospecting; Testing of Deposits; Hydraulics; Flumes; Ditches; Mining Methods.

Valuation of Mines and Prospects.

Two hours per week throughout the Fourth Year for all mining and metallurgy students.

No text-book is required, reference being made to a number of books and publications.

Prerequisite: Mining, 1.

Mining 3.—An advanced course in Mining Engineering covering the following subjects:

Scientific Prospecting; Mine Development; Special Mining Methods; Blasting and Explosives; Sampling and Estimation of Ore; Examination of Mines and Prospects; Accounting and Costs; Mining Laws; Administration; Welfare and Safety Work; Economics; Ethics.

Two hours per week throughout the Fourth Year for students in Mining Engineering.

No text-book is required, but reference is made to a number of books and periodicals.

Prerequisite: Mining 1.

Mining 4.—A special course covering the structural and mechanical features of Mining Engineering, as follows:—

Mine Structures; Mining Plant and Machinery; Core and Churn Drills; Tramways, etc.

One hour per week throughout the Fourth Year for Mining Engineering students.

No text-book is required.

Prerequisites: Mining 1; Mechanical Engineering 1, 2, 3; General Engineering 1 and 2.

ORE-DRESSING LABORATORY.

A variety of crushing, sizing, classifying and separating operations are carried out by the students and studied quantitatively on appropriate machines, singly and in combination. Special attention is paid to Flotation processes, several types of machines being used.

Ores from British Columbia working mines are usually chosen so that the work of the students is along practical lines in comparison with actual work in operating plants.

Nine hours per week throughout the Fourth Year for all students in Mining and Metallurgical Engineering.

Prerequisite: Ore-dressing.

DESIGNING AND DRAUGHTING.

A course covering the special requirements of mining students in regard to the layout and details of Mining Plant, Structures, and Mine Survey Plans.

Three hours per week throughout the Fourth Year for students in Mining Engineering only.

METALLURGY 2.

A general course covering principles and practice of Pyro-Metallurgy and Hydrometallurgy as applied to Gold, Silver, Copper, Iron, Lead, and Zinc.

Two hours per week throughout the Fourth Year for all students in Mining and Metallurgical Engineering.

No text-book is required.

Prerequisite: Metallurgy 1.

METALLURGY 3.

A special course covering Thermochemistry; Metallurgical Calculations; Furnace Design and Efficiency; Special Processes.

A large portion of the time will be given to the study of heat balances of typical smelting operations.

Text-book: Metallurgical Calculations, by J. W. Richards.

Two hours per week throughout the Fourth Year for students in Metallurgical Engineering.

Prerequisites: Metallurgy 1; Chemistry 1.

METALLURGY 4.

Laboratory Course in Metallurgical Analysis of Ores and Furnace Products, Pyrometry and Refractories.

Special attention will be given to analytical methods used by smelting plants in purchase of ores and control of furnace operations.

Nine hours per week throughout the Fourth Year for students in Metallurgical Engineering.

Prerequisites: Metallurgy 1; Chemistry 5.

Department of Geology.

Professor: R. W. Brock.
Professor of Physical and Structural Geology: ———
Assistant Professor of Geology: Edwin T. Hodge.
Associate Professor of Paleontology: ———
Assistant Professor of Geology: W. L. Uglow.

1. *General Geology.*—As in Arts
2. *General Mineralogy.*—As in Arts
7. *Petrology.*—As in Arts
8. *Economic Geology.*—As in Arts

Department of Mathematics.

Professor: ———
Associate Professor: G. E. Robinson.
Assistant Professor: E. H. Russell.
Assistant Professor: E. E. Jordan.
Assistant Professor: L. Richardson.
Instructor: John Henry.

Mathematics 1.

1. (*a*) *Geometry of Solids.*—Hall and Stevens School Geometry. (*b*) *Analytic Geometry.*—Straight Line and Circle. Tanner and Allen's Brief Course in Analytic Geometry.

Three hours a week. First Term.

2. *Trigonometry.*—Plane and Spherical. Playne and Fawdry's Practical Trigonometry. Dupuis & Matheson's Spherical Trigonometry and Astronomy. Castle's Five-figure Logarithmic and other Tables.

Three hours a week. Second Term.

3. (*a*) *Algebra.*—Miscellaneous theorems and exercises, exponential and other series, properties and solutions of higher equations, complex numbers and vector algebra, graphical algebra, indeterminate forms, limits, derivatives, slopes of curves. Rietz & Crathorne's College Algebra. (*b*) *Calculus.*—Elementary Course from Granville's Differential and Integral Calculus.

Four hours a week throughout the session.

Mathematics 2.

1. *Analytical Geometry.*—Plane and Solid. Tanner & Allen's Brief Course in Analytical Geometry.

Three hours a week. First Term.

2. *Calculus.*—Differentiation of functions of one or more variables, successive differentiation, tangents, etc., curvature, maxima and minima, integration, with applications to areas, volumes, moments of inertia, etc. Granville's Differential and Integral Calculus.

Three hours a week throughout the session.

Department of Physics and Mechanics.

Professor: ———
Associate Professor: T. C. Hebb.
Associate Professor: A. E. Hennings.
Associate Professor: J. G. Davidson.
Instructor: P. H. Elliott.

The instruction includes a fully illustrated course of experimental lectures on the general principles of Physics, accompanied by courses of practical work in the laboratory, in which students will perform for themselves experiments, chiefly quantitative, illustrating the subjects treated in the lectures. Opportunity will be given to acquire experience with all the principle instruments used in exact physical and practical measurements.

1. *Mechanics* I.—An elementary treatment of the subject of statics, dynamics, and hydrostatics, with particular emphasis on the working of problems. In the laboratory the fundamental principles of statics and dynamics are established. The course is given in the first half of the First Year of Applied Science. The seven hours per week devoted to the course are divided into four hours of lectures and one laboratory period of three hours.

Text-books: Mechanics and Hydrostatics, Loney; Mechanics, Molecular Physics and Heat, Millikan.

2. *Advanced Heat.*—This course is begun when Mechanics, 1, is finished, and the seven hours devoted to it are divided in the same manner. The course is based on the supposition that the student is already familiar with the elementary principles of heat.

Text-books: Heat for Advanced Students, Edser; Mechanics, Molecular Physics and Heat, Millikan.

3. *Electricity and Magnetism.*—A quantitative study of the fundamental principles of electricity and magnetism, with a special reference to the fact that the student is to be an engineer.

The course includes a short treatment of the Elements of Alternating Currents.

Two hours of lectures and three hours of laboratory per week.

Text-books: Electricity, Sound and Light (first part), Millikan and Mills; Electrical Measurements, Smith.

4. *Mechanics* 2.—The subject-matter consists of an extension of the statics and dynamics of Mechanics 1, but with the use of the Differential and Integral Calculus.

Two hours of lectures per week in the Second Year of Applied Science.

Prerequisite: Mechanics 1.

Text-book: Applied Mechanics, Poorman.

FACULTY OF AGRICULTURE

INFORMATION FOR STUDENTS IN AGRICULTURE.

Courses of Study.

Two distinct lines of study are offered, as follows:—

(1.) A Four-year Course leading to the Degree of Bachelor of Science in Agriculture (B.S.A.).

(2.) A series of Short Courses: (*a*) At the University; (*b*) Extension Courses at different points in the Province.

Course Leading to the Degree of B.S.A.

Students in Agriculture are required to have Junior Matriculation or its equivalent before entering upon this course (for requirements see page 41). The degree of B.S.A. is granted only after the successful completion of four years of lecture and laboratory work. The course is planned for students who wish to obtain a practical and scientific knowledge of Agriculture, either as a basis for demonstration and teaching, or as an aid to success in farm management.

Short Courses.

(*a.*) *At the University.*—These Short Courses are planned for those men and women who are unable to take advantage of the longer course, but who desire to extend their knowledge of agriculture in one or more of those branches in which they are particularly interested. The work throughout is intensely practical. Illustrative material and periods devoted to demonstration and judging work are strong features of the courses. No entrance examination is required, nor are students asked to write an examination at the conclusion of the course.

(*b.*) *Extension Courses at Different Points in the Province*—In order to reach those engaged in Agriculture who are not able to avail themselves of the Short Courses given at the University, the Faculty of Agriculture offers extension short courses in various centres throughout the Province. These courses are of at least four days' duration, are proceeded with according to a definite time-table, and include lectures and demonstrations in connection with the work of each department of the Faculty. Detailed programmes are prepared to suit the specific centres, and requests for such courses may be addressed to the Registrar of the University.

EXAMINATIONS IN AGRICULTURE.

There are two examinations in each year—one at Christmas and the other at the end of the session. Successful students are arranged in three classes, as follows: First-class, those who obtain 80 per cent. or more; Second-class, from 65 per cent. to 80 per cent.; Passed, from 50 to 65 per cent.

Christmas examinations will be held in all subjects and are obligatory for all students. Any partial student of the First Year who fails in the Christmas examinations in any subject will not be allowed to continue his course in that subject, except under special circumstances and with the consent of the Faculty.

Any student whose record is found to be unsatisfactory, may at any time be required to withdraw from the University.

SUPPLEMENTAL EXAMINATIONS.

Applications for these examinations, accompanied by the necessary fees, should be in the hands of the Registrar at least two weeks before the date of the examinations. (*See* page 59.)

CURRICULUM.

The first two years of work leading to the degree in Agriculture are devoted to acquiring a knowledge of the basic sciences upon which Agriculture rests, in adding to the student's knowledge of mathematics and language, and in laying a foundation for more advanced studies in practical and scientific Agriculture.

The Third Year is devoted largely, and the Fourth Year almost wholly, to courses in Applied Agriculture.

Except under special circumstances, students will not be eligible for registration who have not attained the age of seventeen. Specialization will begin at the commencement of the Third Year. Students who have not had at least one full season's practical farm experience will be required to obtain this preliminary training before registering for the Third Year.

FIRST YEAR COURSE OF STUDY.

Agriculture—	Units
Agronomy 1	1
Animal Husbandry 1	1½
Horticulture 1	1
Biology, 1 and Botany 10 (*a*)	3
Chemistry 1	3
English 2	2
French or German (Special)	2
Mathematics 1 — Geometry Trigonometry and Algebra	2
Physics 1	3
Total required	18½

SECOND YEAR COURSE OF STUDY.

Agriculture—	Units.
Agronomy 2	2
Animal Husbandry 2	1½
Dairying 1	1
Horticulture 2	1
Poultry Husbandry 1	1½
Zoology 21 (*a*)	1½
Chemistry 2	3
English 3 and 4	3
French or German (Special)	2
Bacteriology, 1	1½
Total required	18

THIRD AND FOURTH YEAR COURSES OF STUDY.

On account of the specialized types of farming which must necessarily be followed in many parts of British Columbia, the work in the Third and Fourth Years leading to the degree of B.S.A. has been arranged in major courses so as to admit of a measure of specialization in one of the several recognized branches of Agriculture. At the same time all courses have been so arranged that every student will get the basic work in all lines no matter what option is chosen.

Prior to the beginning of the Third Year every student must indicate in which one of the major options he wishes to continue his study, and shall arrange his elective courses in consultation with the Head of the Department under which that major option comes.

The following courses are required of all students in agriculture in the Third and Fourth Years:—

THIRD YEAR.

	Units.
Economics 1	3
Chemistry 3 (Lectures only)	2
Principles of Heredity—Biology 4 ..	1
Total required	6

FOURTH YEAR.

Evolution of Agriculture	1½
Total required	1½

Agronomy Major.

Students majoring in Agronomy are required to take the following subjects in addition to those subjects which are required of all students taking Third and Fourth Year Agriculture:—

THIRD YEAR.

	Units.
Agronomy 3	1½
Agronomy 4	1½
Animal Husbandry 4	1½
Plant Morphology—Botany 11 (*b*)	1
Plant Physiology—Botany 12 (*b*)	1
Agricultural Geology	1½
Total required	8

FOURTH YEAR.

	Units.
Agronomy 5	1
" 6	1½
" 7	1½
" 8	1
" 9	1½
Systematic and Economic Botany—Botany 10 (*b*)	2
Economic Entomology — Zoology 20 (*a*)	1½
Soil Chemistry—Chemistry 9	1
Soil Bacteriology—Bacteriology 5	1
Total required	12

Thesis.

Each student is required to elect up to a total of 18 units in the Third and Fourth Years respectively.

Animal Husbandry Major.

In addition to the subjects required of all students taking Third and Fourth Year work in Agriculture, the following subjects are required in the Animal Husbandry Major:—

THIRD YEAR.

		Units.
Animal Husbandry	3	1½
"	4	2
"	5	1
"	7	1½
Agronomy	3	1½
Total required		7½

FOURTH YEAR.

		Units.
Animal Husbandry	8	1
"	9	1½
"	10	1
"	11	1½
"	12	1
"	13	1
"	14	1½
Agronomy	4	1½
Total required		10

In both Third and Fourth Years students are required to elect up to a total of 18 units.

Dairying Major.

In addition to the courses required of all students in Third and Fourth Year Agriculture, the following are obligatory for students who propose to major in Dairying:—

THIRD YEAR.

		Units.
Dairying 3—Dairy Bacteriology		2
Dairying 4, 1½ units *Or* Dairying 5, 1½ units		1½

Organic Chemistry (Laboratory) ...	1
Agricultural Geology	1½
Animal Husbandry 4	1½
Total required	7½

FOURTH YEAR.

	Units.
Dairying 6	4
" 7—Dairy Bacteriology	1½
" 8	½
" 9	1
Municipal Engineering 1	1½
Plant Physiology—Botany 12 (*b*) ..	1
Dairy Chemistry—Chemistry 9	2
Total required	11½

Thesis.

With the approval of the Head of the Department in which he is majoring, and in consultation with the heads of other departments directly concerned, the students in the Third and Fourth Years will elect further courses up to a total of 18 units.

Horticulture Major.

In addition to the subjects required of all students taking Third and Fourth Year work, students majoring in Horticulture are required to take the following subjects:—

THIRD YEAR.

	Units.
Horticulture 3	2
" 4	1
Plant Morphology—Botany 11 (*b*) ..	1
Plant Physiology—Botany 12 (*b*) ..	1
Zoology (Systematic Entomology)—	
Zoology 21 (*b*)	1
Agricultural Geology	1½
Total required	7½

FOURTH YEAR.

	Units.
Horticulture 5	1½
" 6	1½
" 7	1
" 8	1½
" 9	1
" 10	1½
Plant Pathology—Botany 10 (*c*)	1
Economic Entomology—Zoology 20 (a)	1½
Systematic and Economic Botany — Botany 10 (*b*)	2
Chemistry of Insecticides and Fungicides—Chemistry 9	½
Bacteriology of Canning, Fermentations, etc.—Bacteriology 5	½
Total required	13½
Thesis.	

Students in both Third and Fourth Years are required to elect up to a total of 18 units.

Poultry Husbandry Major.

In addition to the subjects required of all students taking Third and Fourth Year work in Agriculture, the following subjects are required in Poultry Husbandry Major:—

THIRD YEAR.

	Units.
Poultry Husbandry 2	1½
" 3	1½
" 4	1½
Zoology 24a	2
Total required	6½

FOURTH YEAR.

		Units.
Poultry Husbandry	5	½
"	6	½
"	7	2
"	8	4
"	9	1½
Total required	.....	8½

Each student is required to elect up to a total of 18 units in the Third and Fourth Years respectively.

COURSES IN AGRICULTURE.

Department of Agronomy.

Professor: P. A. Boving.
Assistant Professor: G. G. Moe.
Assistant Professor: ———
Extension Assistant: ———

Agronomy—Soil and Soil Fertility.

An examination will be made of the more important soil types in the vicinity of the University; cultivation, manuring, and rotation of crops will be studied in their relation to soil productivity; methods of treatment will be observed, and the principles underlying proper soil management and improvement will constitute the basis for subsequent courses in Agronomy.

One lecture and one laboratory. First Term, First Year. 1 unit.

Agronomy 2—Field Crops.

This course embraces a study of the most important grain, corn, forage, and root crops. A detailed study of the crops, in the field and in the laboratory, will supplement the lecture work in order to give the student a comprehensive idea, not only of the different phases of crop production, but also of the relative value of separate specimens and samples.

Two lectures and two laboratories. First Term, Second Year. 2 units.

Agronomy 3—Field Crops (Advanced).

This course deals with the production and marketing of vegetable, root, clover, and grass seeds.

Two lectures and one laboratory. First Term, Third Year. 1½ units.

Agronomy 4—Seed-Growing.

Course 4 constitutes a more detailed study of field crops than was possible in Course 2. It also embraces special lecture and laboratory work on the harvesting, threshing, cleaning, storing, and marketing of our ordinary field crops. The two courses combined will give the student a more complete understanding of the various factors bearing upon the production of a first-class article, whether intended for sale or for feeding.

One lecture and two laboratories. Second Term, Third Year. 1½ units.

Agronomy 5—Farm Management.

This course embraces a study of the selecting, planning, and operating of a farm. Various systems and practices prevailing on the American Continent and in Europe will be discussed and compared.

Two lectures. First Term, Fourth Year. 1 unit.

Agronomy 6—Field-crop Judging.

The judging and handling of grains, grasses, forage and root crops will be taken up in the field as well as in the laboratory.

One lecture and two laboratories. First Term, Fourth Year. 1½ units.

Agronomy 7—Soil Management.

Different systems of cultivation, rotation, and manuring, as practised in Canada and elsewhere, will be discussed, and the influence of these factors on the maintenance or exhaustion of soil fertility will be studied.

Two lectures and six half-days. Second Term, Fourth Year. 1½ units.

Agronomy 8—Plant-breeding.

As related to the breeding of field crops.

One lecture and one laboratory. Second Term, Fourth Year. 1 unit.

Agronomy 9—Field Experiments.

The scope, the methods, and the interpretation of field experiments will be discussed and a study will be made of the more important results obtained in different parts of the world.

One lecture and two laboratories. Second Term, Fourth Year. 1½ units.

Agronomy 10—Thesis.

Subject to be selected with the approval of the Head of the Department before the end of the Third Year.

Students majoring in Agronomy will be required to work one summer with the Department.

Department of Animal Husbandry.

Professor: J. A. McLean.
Assistant Professor: H. M. King.
Assistant Professor: ————
Extension Assistant: H. R. Hare.
Lecturer in Veterinary Medicine: ————

Animal Husbandry 1—Market Classes and Grades of Live Stock.

A study of the characteristics and requirements of the various market classes and grades of beef cattle, dairy cattle, horses sheep, and swine.

Three two-hour laboratory periods per week. Second Term, First Year.

Text: Plumbs' Judging Farm Animals. 1½ units.

Animal Husbandry 2—Breeds of Cattle and Swine.

A study of the origin, history of development, characteristics, and adaptations of the breeds of beef cattle, dairy cattle, and swine.

One lecture and two three-hour laboratory periods per week. First Term, Second Year.

Prerequisite: Animal Husbandry 1, or its equivalent.

Text: Plumbs' Types and Breeds of Farm Animals.

1½ units.

Animal Husbandry 3—Breeds of Horses and Sheep

A study of the origin, history of development, characteristics, and adaptations of the breeds of horses and sheep.

One lecture and two three-hour laboratory periods per week. First Term, Third Year.

Prerequisite: Animal Husbandry 1, or its equivalent.

Text: Plumbs' Types and Breeds of Farm Animals.

1½ units.

Animal Husbandry 4—Live-stock Feeding and Management.

The feeding, care, and management from birth to maturity of the various types of live stock.

Three lectures per week. First Term, Third Year.

Lectures: Assigned reading.

Prerequisites: Animal Husbandry 1 and 2. 1½ units.

One three-hour laboratory period per week in the fitting and handling of live stock is required of Animal Husbandry Major students. ½ additional unit.

Animal Husbandry 5—Advanced Judging.

A continuation of the type of work represented in the laboratory of Animal Husbandry, 2. Designed to strengthen Animal Husbandry students in the selection of herd sires, foundation

breeding herds, and in the building-up of superior flocks and herds. Students will be required to make several trips to leading herds in the Province.

Two two-hour laboratory periods per week. Second Term, Third Year.

Prerequisites: Animal Husbandry 2 and 3. 1 unit.

Animal Husbandry 6—Live-stock Breeding.

A study of the principles of breeding in their application to live-stock development and improvement.

Two lecture periods per week. Spring Term, Third Year.

Prerequisites: Animal Husbandry 3; Principles of Heredity —Biology, 4. 1 unit.

Animal Husbandry 7—Herd Flock and Stud-book Study.

An advanced course in the study of the principal breeds of live stock, familiarizing the student with the leading sires, dams, families, and herds of the various breeds, and the blood lines entering into their formation. Emphasis will be placed upon a study of pedigrees.

Two lecture periods and one three-hour laboratory period per week. Second Term, Third Year.

Prerequisites: Animal Husbandry 2, 3, and 6. 1½ units.

Animal Husbandry 8—Nutrition.

A study of the elements and compounds important to animal nutrition and their relation to the animal organism; the digestive system; the digestion, absorption, assimilation, and disposition of food materials. A study of the various feedstuffs.

Texts: Henry's Feeds and Feeding (Fifteenth Edition); Armsby's Animal Nutrition: Assigned reading.

Two lectures per week. First Term, Fourth Year.

Prerequisite: Chemistry 3—Organic Chemistry. 1 unit.

Animal Husbandry 9—Animal Feeding.

The feeding of all classes of live stock, having distinct regard to the economic problems confronting the breeder and the producer.

Text: Henry's Feeds and Feeding: Assigned reading.

Three hours per week. Second Term, Fourth Year.

Prerequisite: Animal Husbandry 8. 1½ units.

Animal Husbandry 10—Markets and Marketing.

A careful study of the markets with their requirements for live stock and live-stock products, and the relation which these things bear to production. Marketing of breeding stock.

Two lectures per week (assigned reading). First Term, Fourth Year.

Prerequisite: Animal Husbandry 7. 1 unit.

Animal Husbandry 11—Thesis and Seminar.

Each student majoring in Animal Husbandry shall be required to write a thesis on some live-stock subject, the selection being made by the student under the approval of the Head of the Department. The subject of this thesis shall be chosen not later than the beginning of the First Term of the Senior Year.

A seminar of one hour per week for the special study of current agricultural problems and literature shall be held.

1½ units.

Animal Husbandry 12—Live-stock Practice.

Every Animal Husbandry student is required to spend the summer months between the Third and Fourth Years on an approved live-stock farm and to present a written report upon his summer's work before entering upon the Second Term of the Fourth Year.

Open only to students majoring in Animal Husbandry.

1 unit.

Animal Husbandry 13—Farm and Ranch Management.

The management of the range, ranch, and farm for the production of live stock.

Two lectures and one three-hour laboratory period per week. Second Term, Fourth Year.

Prerequisite: Animal Husbandry, 12. 1½ units.

Animal Husbandry 14—Veterinary Science.

A study of the common diseases of horses, cattle, sheep, and swine; their causes, prevention, and treatment

Three hours per week. Second Term, Fourth Year.
Prerequisites: Animal Husbandry 2 and 3. 1½ units.

Department of Dairying.

Associate Professor: Wilfrid Sadler.
Assistant Professor: ————
Assistant: R. L. Vollum.

Dairying 1—Elementary Dairying.

An elementary course of lectures on milk, cream, and the principles and practices of butter-making. Laboratory work in cream-raising, separators, preparation of cream for butter-making, butter-making on the farm, preparation of clotted cream.

One lecture and three hours laboratory per week. Second Term, Second Year.

Prerequisite: Bacteriology 1. 1 unit.

Dairying 2—Farm Cheese-making.

Principles and practices of cheese-making, hard-pressed, blue-veined, and soft; the making of cheese on the farm; a general knowledge required of the principal varieties of each class of cheese, and laboratory practice in the making of standard varieties.

This course is offered in the Third Year or Fourth Year to students other than Dairy Specialists.

One lecture and six hours laboratory per week for one term.

Prerequisites: Bacteriology 1; Dairying 1. 1½ units.

Dairying 3—Dairy Bacteriology. (*See also* Bacteriology 3.)

The bacteriology of milk, butter, and cheese; sources of bacteria in milk, number and varieties; influence of time, temperature, etc., on these; methods of culture and isolation; fermentation of milk, lactic, butyric, peptonizing, gaseous, ropy, etc.; relation of milk to spread of tuberculosis, typhoid fever, and other diseases; pasteurization and sterilization of milk; certified milk and bacterial standards applied to milk; bacteriology of cream, butter-making, and butter; bacteria concerned in the making of cheese; control of bacteria in relation to milk and dairy products.

Two lectures and six hours laboratory work per week. First Term, Third Year.

Prerequisite: Bacteriology 1. 2 units.

Dairying 4—Creamery Butter-making.

Creamery butter-making; grading of cream; treatment and preparation of cream for butter-making; pasteurization; manufacture of creamery butter; judging, grading, and marketing of butter.

One lecture and six hours laboratory work per week. Second Term, Third Year.

Prerequisites: Bacteriology 1; Dairying 1; Dairying 3. 1½ units.

Dairying 5—Market Milk.

The hygienic aspect of milk production; the bacterial quality of machine-drawn *versus* hand-drawn milk; certified milk; handling and management of milk for city consumption; grading of milk on bacterial standards; pasteurization; transportation and distribution of milk; ordinances and regulations concerning the

sale of milk. This course will include laboratory work in dairy bacteriology, practice in the dairy, and visits to selected farms and milk distributing depots.

One lecture and six hours laboratory work per week. Second Term, Third Year.

Prerequisites: Bacteriology 1; Dairying 1. 1½ units.

NOTE.—If for Dairying Specialists, further prerequisite: Dairying 3.

Dairying 6—Cheese and Cheese-making.

This course deals with the principles and practices of cheese-making—hard-pressed, blue-veined, and soft. Also the course given in Dairying 1, will be resumed, the work being of a more advanced and comprehensive character.

Two lectures and six hours laboratory work per week throughout the session. Fourth Year.

Prerequisites: Bacteriology 1; Dairying 1; Dairying 3.

Dairy Specialists only. 4 units.

Dairying 7—Dairy Bacteriology 2.

(*See also* Bacteriology, 4)

The course given in Dairying 3, is resumed, the work being of a more advanced nature; the unorganized ferments or enzymes of milk and their influence on milk and dairy products; qualitative and quantitative analysis of market milk, condensed milk, milk powder, cream, butter, and cheese; bacterial changes in storage butter; ripening of cheese. Opportunities are presented for exercising bacterial control of the various processes carried out in the dairy.

One lecture and six hours laboratory work per week. First Term, Fourth Year.

Dairy Specialists only. 1½ units.

Dairying 8—Resting of Milk and Dairy Products.

Mechanical methods of testing milk, cream, butter, and cheese; the selling of milk and cream on the butter-fat basis; causes of variation in butter-fat content.

One lecture-laboratory period per week. First Term, Fourth Year. ½ unit.

Dairying 9—Dairy Buildings and Equipment.

Buildings suitable for handling of milk and manufacturing of dairy products; their situation, construction, arrangement; equipment of farm dairies, creameries, and cheese-factories. This course includes detailed studies of selected buildings.

One lecture and one laboratory period per week. Second Term, Fourth Year. 1 unit.

Department of Horticulture.

Professor: F. M. Clement.
Associate Professor: A. F. Barss.
Assistant Professor: ————
Extension Assistant: W. A. Middleton.

A general study of the production and sale of the more important vegetable crops, as applied to garden and farm conditions in British Columbia.

One lecture and one laboratory per week. First Term, First Year. 1 unit.

Horticulture 2—Small Fruits.

A general study of the production and sale of strawberries, raspberries, loganberries, currants, gooseberries, and other small-fruit crops, as applied to garden and farm conditions in British Columbia.

Two lectures per week. Second Term, Second Year. 1 unit.

Horticulture 3—Practical Pomology.

A detailed study of the planting, pruning, cultivation, and care of tree-fruits. The course is planned for students who desire to extend their knowledge of practical orcharding.

Two lectures and two laboratories per week. First Term, Third Year. 2 units.

Horticulture 4—Plant Propagation and Nursery Practice.

The course is a fairly complete study of general and specific methods of plant propagation and general nursery practice.

One lecture and one laboratory per week. Second Term, Third Year. 1 unit.

Horticulture 5—Commercial Pomology.

This course deals with special problems in orchard management; costs of production, grading, packing, distribution, and sale. It also deals with laws and regulations governing production and sale and the status of the British Columbia fruit industry.

Two lectures and one laboratory per week. First Term, Fourth Year.

Prerequisites: Courses 1, 2, 3, and 4. 1½ units.

Horticulture 6—Systematic Pomology.

Description, identification, and classification of fruits. (This course also includes a certain amount of work in Systematic Olericulture.)

One lecture and two laboratories per week. First Term, Fourth Year.

Prerequisite: Course 5. 1½ units.

Horticulture 7—Greenhouse Construction and Management.

A study of the various greenhouses in and around Vancouver, and of such crops as are grown under glass in British Columbia.

Two lectures per week. Second Term, Fourth Year.

(Seven half-days will be required in addition.) 1 unit.

Horticulture 8—By-products.

A study of the methods of preparation of canned goods, dried products, juices, and vinegars. The place of the by-products plant in British Columbia.

Two lectures per week. Second Term, Fourth Year.

(Seven half-days in addition.) 1½ units.

Horticulture 9—Plant-breeding.

As applied to the improvement of horticultural crops.

Two lectures per week. Second Term, Fourth Year.

1 unit.

Horticulture 10—Landscape Gardening and Floriculture.

As applied to farm and home decoration; general principles governing the planting and care of ornamental trees, shrubs, and flowers; the plant materials.

Two lectures and one laboratory per week. First Term, Fourth Year. 1½ units.

Department of Poultry Husbandry.

Associate Professor: ———
Assistant Professor: ———

Poultry Husbandry 1—General.

Includes a study of the fundamentals of poultry-keeping, such as: Breeds, breeding, and judging; feeds and feeding; locating and constructing poultry-houses and equipment; incu-

bation and brooding; markets and marketing. The class-room lectures and recitations are supplemented with practice work in the laboratory.

Required of Sophomores in Agriculture. Second Term,

Two lectures or recitations per week and two hours laboratory. 1½ units.

Poultry Husbandry 2—Markets and Marketing.

An advanced course in the preparation and marketing of poultry products. Students taking this course are required to prepare products for market, and, when practical, to do the actual marketing.

Elective: Required of Juniors majoring in Poultry Husbandry. First Term.

One lecture or recitation, two two-hour laboratory periods, and two hours' practice per week. 1½ units.

Poultry Husbandry 3—Incubation and Brooding.

A study of the problems concerned in hatching and rearing poultry. Practice is given in the operation of different types of incubators and brooders.

Elective: Required of Juniors majoring in Poultry Husbandry. Second Term.

One lecture or recitation, two two-hour laboratory periods, and two hours' practice per week.

Prerequisite: Zoology 24a. 1½ units

Poultry Husbandry 4—Poultry-breeding.

Arranged to give the student a general understanding of the principles of breeding as applied to Poultry Husbandry. Emphasis is laid upon breeding for egg and meat production.

Elective: Required of Juniors majoring in Poultry Husbandry. Second Term.

One lecture or recitation, two two-hour laboratory periods, and two practice hours per week.

Prerequisite: Principles of Heredity—Biology 4. ½ units.

Poultry Husbandry 5—Seminar.

Arranged to give students a general knowledge of advanced problems in poultry-keeping. Government and Station publications are reviewed, and reports made on original work.

Required of all Seniors in Poultry Husbandry. First Term.

One lecture period per week.

Prerequisites: Poultry Husbandry 1, 2, 3, and 4. ½ unit.

Poultry Husbandry 6—Seminar.

A continuation of Poultry Husbandry, 5.

Required of Seniors in Poultry Husbandry. Second Term.

One lecture per week.

Prerequisites: Poultry Husbandry 1, 2, 3, 4, and 5. ½ unit.

Poultry Husbandry 7—Poultry Management.

A study of systems of extensive and intensive poultry-farming. Capital, labour, and economic methods of flock management are studied.

Required of Seniors in Poultry Husbandry. First Term.

Two lectures or recitations and four hours laboratory per week. 2 units.

Poultry Husbandry 8—Advanced Poultry Husbandry.

Arranged to give the student an opportunity for special and original problems.

Required of Seniors in Poultry Husbandry. Second Term.

Hours by arrangement. 4 units.

Poultry Husbandry 9—Feeds and Feeding.

Consists of a study of the various feedstuffs used for poultry, and their value; the balancing of rations; a study of experimental data and practice in feeding.

Required of Seniors in Poultry Husbandry. First Term.

One lecture and six hours laboratory and practice per week.

Prerequisites: Poultry Husbandry 1; Animal Husbandry 8. 1½ units.

The Evolution of Agriculture.

Professor F. M. Clement.

In this course a study will be made of the gradual evolution of those ideas and forces which have resulted in the approved agricultural practices of the present day. A knowledge of the development of these ideas is essential to an understanding of the present status of the farmer and of the farming industry, and will enable the student to forecast with greater accuracy the lines along which further progress may be expected.

Fourth Year. First Term. Three lectures per week.
1½ units.

Department of Bacteriology.

Professor of Bacteriology: R. H. Mullin.
Associate Professor of Dairying: Wilfrid Sadler.

Bacteriology 1.

A course of General Bacteriology, consisting of lectures, demonstrations and laboratory work.

The history of Bacteriology, the place of bacteria in nature, the classification of bacterial forms, methods of culture and isolation, and various bactericidal substances and conditions will be studied. The relationship of bacteria to agriculture, household science, and public health will be carefully considered.

Prerequisites: Chemistry 1, and Biology 1.

Seven hours a week during the First Term. 2 units.

Bacteriology, 2.

A course of Special Bacteriology, consisting of lectures, demonstrations, and laboratory work.

The more common pathogenic bacteria will be studied, together with the reaction of the animal body against invasion by

these bacteria. The course will include studies in immunity and the various diagnostic methods in use in public health laboratories.

Seven hours a week during the Second Term. 2 units.

Bacteriology 3—Dairy Bacteriology.

(*See also* Dairying 3.)

The bacteriology of milk, butter, and cheese; sources of bacteria in milk, number and varieties; influence of time, temperature, etc., on these; methods of culture and isolation; fermentation of milk. lactic, butyric, peptonizing, gaseous, ropy, etc.; relation of milk to spread of tuberculosis, typhoid fever, and other diseases; pasteurization and sterilization of milk; certified milk and bacterial standards applied to milk; bacteriology of cream, butter-making, and butter; bacteria concerned in the making of cheese; control of bacteria in relation to milk and dairy products.

Two lectures and six hours laboratory work per week. First Term, Third Year.

Prerequisite: Bacteriology 1.

Bacteriology 4—Dairy Bacteriology.

(*See also* Dairying 7.)

The course given in Bacteriology 3, is resumed, the work being of a more advanced nature; the unorganized ferments or enzymes of milk and their influence on milk and dairy products; qualitative and quantitative analysis of market milk, condensed milk, milk powder, cream, butter, and cheese; bacterial changes in storage butter; ripening of cheese. Opportunities are presented for exercising bacterial control of the various processes carried out in the dairy.

One lecture and six hours laboratory work per week. First Term, Fourth Year.

Prerequisites: Bacteriology 1, and Bacteriology 3.

Dairy Specialists only.

Bacteriology 5.

Special courses in Applied Bacteriology.

Department of Biology

Associate Professor of Botany: A. H. Hutchinson.
Associate Lecturer in Zoology: C. McLean Fraser.
Lecturer in Zoology: C. McLean Fraser.
Assistant Professor of Plant Pathology: ———
Botanist in Charge of Herbarium and Botanical Gardens: John Davidson.
Assistant in Zoology: John Allardyce.
Assistant in Botany: Irene Mounce.

Biology 1.—As in Arts
Biology 4.—As in Arts
Botany 10 (*a*).—As in Arts
Botany 10 (*b*).—As in Arts
Botany 10 (*c*).—As in Arts
Botany 11 (*b*).—As in Arts
Botany 12 (*b*).—As in Arts
Zoology 20 (*a*).—As in Arts
Zoology 24 (*b*).—As in Arts

Department of Civil Engineering.

Professor: —
Associate Professor: E. G. Matheson.
Assistant: W. H. Powell.
Assistant: G. M. Irwin.
Assistant: H. F. G. Letson.
Assistant: ———
Assistant: ———

Municipal Engineering 1.

Water supply, power requirements, piping and general installation, sewage systems, disposal of sewage, concrete construction.

One hour per week, First Term; two hours per week, Second Term.

LIST OF STUDENTS IN ATTENDANCE SESSION 1919-20

FACULTY OF ARTS AND SCIENCE.

FIRST YEAR.

Full Undergraduates.

Name.	*Home Address.*
Abel, Ilva Isabella J.	Vancouver.
Ahone, Esther	Vancouver.
Albo, Frank John P.	Rossland.
Albo, Joseph	Rossland.
Anderson, Annie M.	Rock Creek.
Archibald, Ruby Clare	New Westminster.
Arkley, Heileman Osborne	Vancouver.
Armour, John Arnold K.	New Westminster.
Arnott, Clarence	Vancouver.
Astell, Clara Annie	Vancouver.
Aster, Etienne	Vancouver.
Baillie, Eunice Elizabeth	Port Hammond.
Bain, William Alexander	Vancouver.
Baird, John Douglas	Vancouver.
Baker, Lorimer Gilleson	Vancouver.
Barlow, Margaret Young	North Vancouver.
Barnes, George Hector	Rossland.
Barnes, Margaret Hilda	Rossland.
Barr, Ruth Rose	Vancouver.
Baynes, Lloyd Lester	Vancouver.
Beaton, Sylvia	Vancouver.
Bell, Marjory Emma	Hollyburn.
Benedict, Frances Ellen	Arrowhead.
Bennett, Marjorie Jean	North Vancouver.
Berkeley, Alfreda Alice	Nanaimo.
Binnie, Mary Christiana	Rossland.
Blackmore, Pauline Florence	Vancouver.
Boyes, John Calvin Patterson	Vancouver.
Boyes, William Earl	Vancouver.
Brain, John Gordon	West Vancouver.
Brennan, Alyce Hart	Vancouver.
Broome, Enoch Bunting	South Vancouver.
Brown, Ethel Mary	New Westminster.
Brown, Joseph Frederick	Port Hammond.
Buchanan, Allen	Vancouver.
Buck, Dorothea Mae	Kelowna.
Buckley, John Mervin	Vancouver.

Name.	*Home Address.*
Bulman, Thomas Ralph	Kelowna.
Burke, Beatrice Mary	Vancouver.
Burnet, Lilly Ruth	Vancouver.
Bushell, Herbert Edward	Vancouver.
Cameron, William Craig	Chilliwack.
Campbell, Claude Lane	Victoria.
Cant, George Beattie	North Vancouver.
Carlisle, Kenneth Wilfred	Vancouver.
Carlyle, Vernon Sim	New Westminster.
Caspell, Jessie Marguerite	Vancouver.
Cassidy, Harry Morris	Murrayville.
Chapman, Mary Isbell	New Westminster.
Chester, Herbert	Cranbrook.
Clandinin, Thomas	Vancouver.
Clark, Mary Aseneath	Vancouver.
Clyne, John Valentine	Vancouver.
Condon, John Ernest	Vancouver.
Cook, Cora Louise	Chemainus.
Coombs, George Alexander	Nanaimo.
Cope, Mary Catherine L.	Vancouver.
Corbett, Dorothy Blanche	Vancouver.
Cordingly, Norma Millicent	Vancouver.
Cornyn, Lillian Mary	Vancouver.
Crandlemire, Vera Kate	Central Park.
Creelman, Helen	Point Grey.
Creelman, Pauline	Point Grey.
Crombie, Muriel Ardis	Vancouver.
Crowe, Harry Alfred	South Vancouver.
Crowley, Terence	Kelowna.
Curtis, Grace Hamilton	Vancouver.
Davy, Constance Geraldine	New Westminster.
Dawe, Arthur Parsons	Vancouver.
Dawson, David Collins	Vancouver.
Dench, Phyllis Victoria R.	North Vancouver.
Desrosiers, Marie Cecilia	Vancouver.
Disney, Charles Norman	Edmonds.
Disney, Gladys Mabel	Langley Prairie.
Drennan, Albert Alexander	Vancouver.
Eddy, Grace Rhoda P.	New Westminster.
Ellis, Edgar Harrison	Vancouver.
Elliott, Annie Isabel	Vancouver.
Elliott, Kathleen Effie	Vancouver.
Elliott, Muriel Edna	Kamloops.
Emery, Donald Joseph	Edmonds.

Name.	*Home Address.*
Evans, Lacey Heintzman	Vancouver.
Eveleigh, Evelyn Mary S.	Vancouver.
Fahay, Lida Mary	Vancouver.
Fahay, Thomas James	Vancouver.
Fay, Madeline Winnifred	Vancouver.
Ferguson, Royden Hamilton	Vancouver.
Findlay, Marjorie L.	Vancouver.
Fitch, Beatrice Constance	Vancouver.
Fleming, Everitt S. J.	Kelowna.
Fleming, George Herbert	Vancouver.
Foley, Lucien Wilbur	Vancouver.
Foran, Margaret	Vancouver.
Forster, Clara Catherine	Vancouver.
Found, Louis Ross	Vancouver.
Freeman, Norman Lloyd	Vancouver.
French, Richard Dawson	North Vancouver.
Fyfe, Kenneth Robert	North Vancouver.
Gale, Stanley Cuthbert	Vancouver.
Garlick, Beatrice	South Vancouver.
Gartshore, Dorothy Isobel S.	Vancouver.
Geen, Alva Howard	Kelowna.
Gilbert, Evelyn Maude	Vancouver.
Goodman, Edwin Ellis	Vancouver.
Gordon, Marguerite Helen	Vancouver.
Graham, Ida Christine	New Westminster.
Grant, Earle Shaw	Vancouver.
Green, Ethel Lucy	Chilliwack.
Gross, Rowena Pauline	Vancouver.
Groves, Godfrey Francis C.	Kelowna.
Hagelstein, George Frederick	Murrayville.
Hallett, Lawrence	Steveston.
Harvey, Alexander Rout	Vancouver.
Hatch, David Alfred	Vancouver.
Heaps, Elsie Frankland	Vancouver.
Henderson, Jean	Point Grey.
Herd, Elizabeth Brown G.	Vancouver.
Higginbotham, Margaret W.	Vancouver.
Hillman, Victor George	Vancouver.
Holtz, Lucile	Vancouver.
Hood, William	Vancouver.
How, Anna Beryl	Vancouver.
Hudson, George Eddy	Masset.
Huggard, Lewis H. A. Roy	Vancouver.
Huggett, Jack Leslie	Vancouver.

Name.	*Home Address.*
Hull, Ralph	South Vancouver.
Hunter, Allan D.	Point Grey.
Hunter, Robert	Point Grey.
Innes, Mary Winona E.	Vancouver.
Jack, Gladys Gordon	Marpole.
Jackson, Eric Whitcliffe	Hammond.
Jackson, Robert M.	Vancouver.
James, Elizabeth	Vancouver.
Jardine, Agnes Alexandra	Vancouver.
Johnson, Elvira Signe	Revelstoke.
Johnson, Harry S. A.	Vancouver.
Johnson, Henry Wm.	Hope.
Johnston, Eleanor I.	Vancouver.
Jones, Percy Barwell	Vancouver.
Kagnoff, Morris	Vancouver.
Kellington, Gwendolyn M.	New Westminster.
Kerr, Gerald C. G.	Vancouver.
Kidd, Dorothy Elizabeth	Vancouver.
Kinney, Constance M.	Penticton.
Knight, Ethel H.	Vancouver.
Knowlton, Kathleen B.	Vancouver.
Lade, Mary Eliza	Vancouver.
Ladner, Pearl Alice	Vancouver.
Laidlaw, Gordon L.	Vancouver.
Lanoville, Leontine	Vancouver.
Larson, Winnie Evelyn	Fanny Bay, Van. I.
Lawson, Kenneth J.	Vancouver.
Layton, Ruth Logan	Vancouver.
LeNeveu, Allen H.	Vancouver.
Leveson, Mary K.	Vancouver.
Lindmark, Ruth Amanda	Vancouver.
Lindsay, Margaret P.	Vancouver.
Lipsey, George Cherry	South Vancouver.
Lochead, John Richard	Vancouver.
Locklin, Lillian Rolston	Vancouver.
Marett, Leila Margaret	Vancouver.
Mathers, William Graham	Vancouver.
Matheson, John Edward	Vancouver.
Matheson, Minerva Jane	Vancouver.
Mathews, Helen Mary	Vancouver.
Mercer, Clara Margaret	New Westminster.
Miller, Elmer Susie	Vancouver.
Miller, Selwyn A.	Vancouver.
Miller, Georgina Eveline	Vancouver.

Name.	*Home Address.*
Mitchell, Arthur Hilton	Vancouver.
Mitchell, John Hardie	Vancouver.
Moore, Ellen Vera	Vancouver.
Moore, Marion Elizabeth	Point Grey.
Morden, Gladys Ethel M.	North Vancouver.
Morden, Wilma Margaret	North Vancouver.
Mowat, Carl Madill	Vancouver.
Musson, Alice Maud	Collingwood East.
McAlonen, Bessie Marie	Vancouver.
MacDonald, Josephine	New Westminster.
McIntosh, Donald	Vancouver.
McIntosh, Donald James	Vancouver.
MacKay, Phyllis Isabel	Vancouver.
McKee, John Rogers	Vancouver.
Mackenzie, Donald Hector	Rossland.
MacKenzie, Mary Isobel	New Westminster.
McLane, Paul Vernon	Jubilee P.O.
McLean, Robert Leslie	Vancouver.
McLennan, Beth Dawson	Vancouver.
McLeod, Margaret	Morden, Man.
MacLeod, Robert L.	North Vancouver.
McMurray, Helen Marie	Vancouver.
MacNeill, Allan Roy	Vancouver.
McPhee, Angus	Vancouver.
McPhee, Christine Mae	Abbotsford.
McPhee, Margaret Graves	South Vancouver.
McPherson, John Wallace	Vancouver.
McRae, Farquhar John	Agassiz.
McRae, Rena Viola	Vancouver.
Napier, Alan Jack	South Vancouver.
Nash, Esther Gertrude	Vancouver.
Nelson, Gordon R.	Vancouver.
Nicol, Dorothy Mary	Vancouver.
Niederman, Otto Emil	Trail.
Noble, John Stephen	Cranbrook.
Ogilvie, Alvin Easton	Agassiz.
O'Neill, Henry Wingrove	Vancouver.
O'Reilly, Patrick F.	Vancouver.
Osborne, Freleigh F.	Vancouver.
Osterhout, Minnie M.	Jubilee P. O.
Parker, David Benjamin	Vancouver.
Parmiter, Lois Gertrude	New Westminster.
Pattullo, Ruth J.	Vancouver.
Pearce, Beatrice A.	Victoria.

Name.	*Home Address.*
Pearcey, John Guy	Vancouver.
Pearson, Catherine S.	Kerrisdale P. O.
Pedlow, Gladys L.	Vancouver.
Peele, Percy Frederick	New Westminster.
Peter, Constance E.	Vancouver.
Peterson, Frank	Vancouver.
Pittendrigh, Mary A.	Vancouver.
Portsmouth, Kathleen M.	Mission City.
Potter, Herbert	Rossland.
Procter, Arthur	Vancouver.
Purdy, Harry Leslie	Vancouver.
Ray, Arthur Hugo Le P.	Vancouver.
Rear, James Carlton	Vancouver.
Rees, Catharine B.	New Westminster.
Reid, Helen E.	Vancouver.
Reycraft, Helen K.	Vancouver.
Riddehough, Geoffrey B.	Penticton.
Ritchie, Dwight C.	Vancouver.
Robb, Irvine McNab	North Vancouver.
Roberts, Aubrey F.	Vancouver.
Roberts, Marion O.	Kerrisdale P.O.
Robertson, Mabel V. E.	Courtenay.
Robertson, Norman A.	Kerrisdale.
Robertson, Sheila Dunsmore	Penticton.
Robinson, Abner	Vancouver.
Robinson, George Spencer	South Vancouver.
Robinson, Kathleen G.	Vancouver.
Robson, Charles Young	Kerrisdale.
Ross, Beulah	Vancouver.
Rouse, Rhoda M. A.	Vancouver.
Rowley, Gordon W.	New Westminster.
Russell, George	Union Bay.
Sanford, Osbert McL.	Vancouver.
Sangster, Norman	Vancouver.
Saunders, Emma	Vancouver.
Saunders, John M.	Vancouver.
Scott, Gordon Hilbert	Vancouver.
Seldon, Marion L.	Clayburn P.O.
Sellers, Fred. W.	Vaucouver.
Shakespear, Raymond N.	North Vancouver.
Shaw, Sybil J.	New Westminster.
Shipp, George W.	Vancouver.
Shoemaker, C. H.	Vancouver.
Sing, Herbert Carman	Vancouver.

Singh, I. ..... Vancouver.
Skelding, Cecil H. ..... Vancouver.
Smith, Agnes C. ..... Kamloops.
Smith, Gertrude M. ..... New Denver.
Smith, Zella B. ..... Vancouver.
Snider, Issidor ..... Vancouver.
South, Icel I. ..... Vancouver.
Southon, Henry S. ..... Vancouver.
Stephens, Emma A. R. ..... North Vancouver.
Stevens, Ernest G. B. ..... South Vancouver.
Stewart, Isabel P. ..... Vancouver.
Stirk, Kathleen ..... Vancouver.
Stitt, Thelma E. ..... Vancouver.
Stoodley, George E. ..... Armstrong.
Straus, Jean ..... Vancouver.
Stuart, Dorothy L. ..... Vancouver.
Sutherland, George F. ..... Vancouver.
Swanson, Myrtle I. ..... Anyox.
Swartz, Ira W. ..... Vancouver.
Switzer, Gerald B. ..... New Westminster.
Taylor, Clifford N. ..... Vancouver.
Thompson, Jessie M. ..... Eburne.
Thompson, Willard A. ..... Vancouver.
Thorsteinson, Thora S. ..... South Vancouver.
Tofte, Norman ..... Vancouver.
Tribe, Jonathan ..... Rosedale P.O.
Tupper, Mary E. ..... South Vancouver.
Turnbull, Frank A. ..... Vancouver.
Uchida, Matusaburo ..... Vancouver.
Upshall, William C. C. ..... Vancouver.
Waite, Campbell C. ..... Kerrisdale.
Walker, Robert E. ..... Vancouver.
Walsh, Dorothy H. ..... Oak Bay.
Wallace, Fraser M. ..... Vancouver.
Webb, Doris Vivian ..... New Westminster.
Weld, Gladys Noyes ..... Vancouver.
Wells, Clarence C. ..... Sardis.
West, Herbert E. ..... Vancouver.
White, Frank L. ..... Vancouver.
White, Vera V. ..... Vancouver.
Wilby, Elsie L. ..... Victoria.
Wilcox, John Carmen ..... Salmon Arm.
Williamson, Marion ..... Vancouver.
Wilson, David W. ..... Whitehorse, Y.T.
Wilson, James H. ..... South Vancouver.

Name.	*Home Address.*
Wilson, John Harvey	Kerrisdale.
Wilson, John Owen	Prince George.
Wilson, Judith L.	Prince George.
Woodworth, George E.	Chilliwack.
Wright, Margaret A.	Vancouver.
Yonemoto, Harno	Steveston.

Conditioned.

Allardyce, Catherine MacB.	Vancouver.
Andrews, Grace Mary	Vancouver.
Aylard, Clara M.	Victoria.
Barlow, John	North Vancouver.
Bloomfield, Edgar J.	Vancouver.
Bloomfield, Joan D'A.	Vancouver.
Buckle, Frank	Saanichton.
Buckerfield, Jessie McC.	Vancouver.
Chu, Thomas	Vancouver.
Clark, Helen Ida	Vancouver.
Clever, Emily Edith	New Denver.
Coburn, Wallace Andrew	Vancouver.
Cowan, Edna Norma	Vancouver.
Dyce, Merton Alexander	Matsqui.
Gillen, James Lamon	Abbotsford.
Heaslip, Wilbur Jefferies	Vancouver.
Hewett, Glenna M. M.	North Vancouver.
Hurliman, Ryffell M.	Vancouver.
Ingram, Margaret A.	Vancouver.
Jackson, Mary I.	Vancouver.
Lapsley, Marie L.	Vancouver.
Marrion, Robert F. C.	Vancouver.
McClay, Adeline L.	Vancouver.
McCutcheon, James C.	Greenwood.
MacKechnie, Hugh Alexander	Vancouver.
McKee, William Harold	Vancouver.
McQueen, Stanley McKay	Vancouver.
McTaggart, Edna Mary	Vancouver.
North, William Roy	Vancouver.
Patterson, Aileen Jane	Penticton.
Schmidt, Walter Ernest	Vancouver.
Skinner, Helen Gertrude	Vancouver.
Stewart, William	Victoria.
Stuart, Katherine	Vancouver.
Taylor, Kenneth Bruce	Vancouver.
Wallace, Robert Bruce	Vancouver.

Name.	*Home Address.*
Weir, Carlton Morley	Vancouver.
White, Helen Grace	Vancouver.
Williams, Winfield O. W.	Vancouver.
Wood, William G. O.	Vancouver.
Woodside, Everett Haywood	Vancouver.
Yip, Kew Park	Vancouver.

Partial.

Broadfoot, William Craig	Vancouver.
Brown, Ronald Earl	Stoughton, Sask.
Brown, William R.	Vancouver.
Buck, Frederick Stacey	Vancouver.
Bulmer, Mary Lucinda	North Vancouver.
Crompton, Edith S. S.	Vancouver.
Darling, Phyllis	Vancouver.
Fisher, Marion	Vancouver.
Goodfellow, John Christie	Vancouver.
Home, Maurice	Victoria.
Kinnear, William Norman	South Vancouver.
Law, Constance Mary	Vancouver.
Mark, William John	Vancouver.
Murphy, Perley A.	Vancouver.
McAlpine, Dugald John	Vancouver.
MacKenzie, Margaret Agnes	Vancouver.
Philips, Norman Albert	White Rock.
Rolston, Kathleen Latimer	Vancouver.
Rowan, Muriel Margaret	Vancouver.
Smith, Albert Crowther	Vancouver.
Thomson, Albert O.	Mt. Lehman.
Trorey, Lyle Graeme S.	Vancouver.
Ullock, Alice Katherine	Vancouver.
Underhill, John Edward	North Burnaby.
Walker, William Greenleaf	Vancouver.
Warke, John	Vancouver.
Whitehead, Frederick George	Kelowna.
Williams, John Warren	Vancouver.
Wilson, Margaret I.	Vancouver.
Wolverton, Jasper Mathews	Nelson.

SECOND YEAR.

Full Undergraduates.

Aconley, Izeyle Vera	Vancouver.
Adams, Dorothy Isobel	Marpole.
Argue, Ralph Starret	Vancouver.

Name.	*Home Address.*
Atherton, Marion Clara	Vancouver.
Ballard, Edna Florence	Vancouver.
Birnie, Anne Robina	Vancouver.
Black, William Griffiths	Trail.
Bolton, Lloyd Lawrence	Vancouver.
Bramley, Arthur	Vancouver.
Buell, Arthur Lightfoot	North Vancouver.
Bullock, Winifred	Vancouver.
Bulman, Marjory Maude	Kelowna.
Buxton, Mary Isabel	McKay.
Cameron, William Murray	New Westminster.
Campbell, Annie Louise	Vancouver.
Campbell, Ernest Albert	Vancouver.
Casselman, Jessie Elizabeth	Vancouver.
Clark, Charles Augustus F.	Vancouver.
Clark, George Savage	Vancouver.
Clarke, Margaret Isabella	Vancouver.
Collard, Carlton	Vancouver.
Coope, Geoffrey	Vancouver.
Cowdell, Lillian Francis	Vancouver.
Cox, Stafford Albert	Vancouver.
Crawford, Alphonse Middleton	Vancouver.
Crickmay, Colin Hayter	North Vancouver.
Cummings, Robert Edgar	Vancouver.
Cutler, Norman Leon	Vancouver.
Dauphinee, James Arnold	New Westminster.
Dodson, Edna	Kerrisdale.
Dougan, Clarence Alvin	Vancouver.
Dowling, Doris Ada	Vancouver.
Drury, Nora Charlotte	Victoria.
Eagles, Blythe Alfred E.	New Westminster.
Elsey, C. R.	West Summerland.
Fingland, Dorothy Ellen	Trail.
Frith, Joscelyne S.	Vancouver.
Fraser, George Wallace B.	Kerrisdale.
Fulton, Doris Jessie	Vancouver.
Gibbon, Marion Evelyn	Vancouver.
Gignac, Etoile Patricia	Vancouver.
Gill, Dorothy Alexandra	North Vancouver.
Gillis, Gwendolyn Christina	Victoria.
Gordon, John Anderson H.	New Westminster.
Grant, Frances Rena	Victoria.
Grimmett, Norman Thatcher	Merritt.
Harris, Joseph Allen	West Summerland.

Name.	*Home Address.*
Heaslip, Leonard William	Vancouver.
Hughes, Ernest Leigh	Vancouver.
Hunter, Harold Leland	Vancouver.
Hurst, Allan McLean	Vancouver.
Imlah, Albert Henry	New Westminster.
Johnson, Edward Alfred	Dunbar Heights P.O.
Johnson, Lyle Clinton	South Vancouver.
Keir, Helen	North Vancouver.
Keir, Jeannie McRae	North Vancouver.
Kerr, Margaret Isobel	Vancouver.
Kion, Gertrude A.	Vancouver.
Lamb, Richard William	New Westminster.
Letson, Gordon MacIntosh	Vancouver.
Lipson, Barnett Abraham	Vancouver.
Metz, Cora Irma	Vancouver.
Miles, Mona Collister	Victoria.
Miller, Isobel Selina	Vancouver.
Moe, Audrey Muriel	Vancouver.
Monkman, Ada Evelyae	Ladner.
Munro, Alexander	Vancouver.
Munro, Mary	Vancouver.
Munro, Robert James	Vancouver.
McAfee, Weldon Robert	Vancouver.
McIntyre, Donald Manning	West Summerland.
MacKinnon, Georgina Emily	Vernon.
McLennan, Lester Winson	Vancouver.
MacLeod, John Phee Gordon	North Vancouver.
McLoughry, Muriel Alice	Vancouver.
Naden, Esther Stuart	Victoria.
Pye, Dora Ellen Gertrude	Vancouver.
Rae, Violet Jean	South Vancouver.
Rankin, Agnes Helen	Vancouver.
Ray, Godfrey Henry	Vancouver.
Reid, William Tennant	South Vancouver.
Robson, Gwendolyn	Vancouver.
Rogers, Edna Jessie	Vancouver.
Shaw, Keith Duncan	Vancouver.
Shaw, Mary Jeannie	Vancouver.
Stevenson, Arthur Henry L.	Vancouver.
Steves, Jessie Lena	Steveston.
Switzer, Lila Marjorie	New Westminster.
Verchere, Ruth Emilie	Ladysmith.
Vogee, Arthur Edward	Vancouver.
Watson, Annie Pirie	Vancouver.

Weinberg, Dena .....Vancouver.
Wells, Lewis Edelbert.....Carnduff, Sask.
Whitley, Paul Nelson.....Yale.
Wilcox, Marion .....Vancouver.
Willis, Norah Evangeline .....Vancouver.
Woodworth, Clifford Allen.....Chilliwack.

Conditioned.

Agnew, Agnes Marjorie.....Vancouver.
Broad, Charles Norman.....Summerland.
Clandinin, Gladys Margaret.....Vancouver.
English, Mary Helen.....Kaslo.
Grant, Kathleen Langille.....Prince Rupert.
Herd, James Fenton.....Vancouver.
Hopper, Dorothy Aileen.....Vancouver.
King, George G.....Vancouver.
Limpus, George H.....Vancouver.
Lipson, Bertha .....Vancouver.
MacKenzie, Flora Roda.....Point Grey.
Reid, Mary Lillian.....Vancouver.
Ross, Hugh Milligan.....Marpole.
Rowan, Maude Elizabeth.....Vancouver.
Simpson, Margaret Salmond.....Vancouver.
Tennant, Irene .....Victoria.
Wootten, Philip Alfred.....Vancouver.

Partial.

De Lauter, Margaret.....Vancouver.
Duffy, James .....Vancouver.
Kemp, Gwendolyn Muriel.....Vancouver.
McTavish, Janet Lee E.....Vancouver.
Lewis, Edward Dewart.....Ladner.
Shier, John William .....Vancouver.
Smillie, Leonard Albert.....Seaforth, Ont.
Taylor, Cecil Davis.....New Westminster.
Urquhart, Christine M.....Eburne.

THIRD YEAR.

Full Undergraduates.

Anders, Victor Llewellyn.....Vancouver.
Barlow, Edith Charlotte I.....North Vancouver.
Barnwell, George Francis.....Vancouver.
Blakey, Dorothy .....Vancouver.
Boss, Arthur Evan.....Vancouver.

Name.	*Home Address.*
Brenchley, Dorothy Ann Bennett	Vancouver.
Carson, Miriam Barbara	Vancouver.
Clarke, Margaret	Kelowna.
Coatés, Lila Frances	Japan.
Cowling, Florence	Vancouver.
Craig, Ruth Dyke	Vancouver.
Cribb, Reginald Edward	Wellington, V.I.
Cross, George Carmichael	New Westminster.
Crozier, Isabella Elliott	Vancouver.
Crute, Ebenezer	Vancouver.
de Pencier, Joseph Christian	Vancouver.
Dunbar, Violet Evelyn	Vancouver.
Edwards, Sadie	Vancouver.
Fink, Henry Jacob Vincent	Cranbrook.
Foerster, Russell Earle	Vancouver.
Fournier, Leslie Thomas	Vancouver.
Galbraith, Samuel Tait	Vancouver.
Gill, Bonnie Helen	North Vancouver.
Goldstein, Cyril Moss	Vancouver.
Goldstein, Sylvia	Vancouver.
Handford, Freda Mary	Vancouver.
Harrison, Ruth	Vancouver.
Healy, Agnes Coupland	Vancouver.
Herman, Victoria	Vancouver.
Hobson, Lillian	Vancouver.
Ingledew, Harold Garfield	Kerrisdale.
Jones, Norah Vivian	Kelowna.
Kilpatrick, Myrtle Esther	Victoria.
Kirby, Judson Orville Coates	Rocky Mt. House, Alta.
Laird, Frederick William	Vancouver.
Lawrence, James Lyle	Victoria.
Lawrence, Marion Evangeline	Vancouver.
Lazenby, Frederick Arthur	Port Hammond.
Lett, Jessie Katrina	Marpole.
Lewis, Kathleen Gwynneth	Victoria.
Lord, Arthur Edward	Vancouver.
Lynch, James Carrell	Vancouver.
Lyne, Dorothy Elizabeth	Vancouver.
Lyness, Ruth Emily	Marpole.
Matheson, Marjorie Crawford	Vancouver.
Milley, Chesley Ernest	Vancouver.
Mitchell, James Reid	Prince Rupert.
Mortimer, Helen	Vancouver.
Munn, Nina Vivian	New Westminster.

Name.	*Home Address.*
Munro, Muriel Rose	Vancouver.
McAfee, Irene Davin	Vancouver.
MacArthur, Donald Moulton	Vancouver.
McArthur, Hattie May	Prince George.
MacBeth, Jessie Alexandra	Vancouver.
McConnell, Hazel Erma	Victoria.
McDougall, Wilfrid Robinson	Vancouver.
McGregor, Norma Isabel	Kaslo.
McKee, Enid Muriel	Vancouver.
McKee, Greta H.	Vancouver.
McLean, Eleanor May	Vancouver.
McLean, Harold William	Vancouver.
Peardon, Thomas Preston	Vancouver.
Pratt, Bernard Dodge	Vancouver.
Pumphrey, Lionel Frank	Vancouver.
Reed, Muriel Ruth	Vancouver.
Reid, Georgina Agnes	Vancouver.
Rive, Alfred	Vancouver.
Robson, Margaret Watt	Kerrisdale.
Rogers, Wilbur Stuart	Vancouver.
Russell, Alan Macpherson	Marpole.
Sauder, Marion Eleanor Martha	Vancouver.
Schell, Joseph McLure	Vancouver.
Scott, Sedman Morley	Vancouver.
Shannon, Myrtle Evelyn	Vancouver.
Smith, Annie Marie	Vancouver.
Smith, Charles Duncan	Vancouver.
Smith, Winston R.	Vancouver.
Solloway, Edgar	Vancouver.
Studer, Frank John	Vancouver.
Suttie, Ethel Gwendolyn	Vancouver.
Ure, Agnes Margaret	Vancouver.
Usher, Alexander Murray	Marpole.
Weld, Charles Beecher	Vancouver.
Wilby, George Van	Vancouver.
Wilks, Arthur Frederick	Vancouver.

Conditioned.

Arkley, Jack MacDougall	Vancouver.
Bowes, Dorothy Margaret	Victoria.
Faulkner, Everett William	Kelowna.
Fisher, Lacey Julian	New Westminster.
Greenwood, Julia Elizabeth	Toronto

Name.	*Home Address.*
Mathers, Nina Adell	Vancouver.
McCabe, Margaret Aileen	Vancouver.
Osborne, Dwight Hillis	Victoria.
Webster, Arnold Alexander	Agassiz.
Wilson, Freda Lenore	Vancouver.
Wilson, Grace Agnes	Vancouver.

Partial.

Ballantyne, William Herbert	Vancouver.
Beltz, Edward W.	Vancouver.
Cowan, Patricia Louise	Vancouver.
Denham, Joseph	Vancouver.
James, Gordon	Vancouver.
Lanning, Roland John	Ladner.
Law, Frederick Charles	Vancouver.
Suzuki, Y.	Japan.

FOURTH YEAR.

Full Undergraduates.

Abernethy, Elizabeth Barclay	Vancouver.
Adams, Robert Frederick	Ireland.
Agabob, Walter John	Vancouver.
Alexander, Merle H.	Eburne.
Berto, John Clifford	Vancouver.
Bottger, Hermine Dorothea	Vancouver.
Buck, Frank Hepworth	Vancouver.
Coates, Kathleen McKie	Victoria.
Coates, Willson Havelock	Vancouver.
Colgan, Harry Wilfred	Vancouver.
Copping, Marjorie	Vancouver.
Couper, Walter James	Vancouver.
Damer, Margaret Agnes	Vancouver.
Davidson, Jean Munro	Vancouver.
Day, Marjorie	Vancouver.
Draper, Hester E.	Central Park.
Fournier, Eugenie Idá	Vancouver.
Gilley, Janet Kathleen	New Westminster.
Gladwin, Aleen Harrison	Vancouver.
Grant, Rena Victoria Alice	Vancouver.
Hill, Annie Graham	Vancouver.
Hokkyo, Jun-ichi	Japan.
Inrig, Mary Catherine	Vancouver.
Irvine, Florence Annabel	Vancouver.
James, Edwin Telford	Vancouver.

Name.	*Home Address.*
Keenleyside, Hugh L.	Vancouver.
Kellie, Robert Irwin	New Westminster.
Lucas, Evylin Carolina	Victoria.
Magee, Frances Ethel	Vancouver.
Martin, George Rutherford	Vancouver.
Matheson, Agnes Helen	Vancouver.
Miller, Clive	Vancouver.
Morris, Verna Edna	Steveston.
Morrison, Loyle Alexander	Vancouver.
Morrison, Margaret Ralston	Vancouver.
McClay, James Gerald	Vancouver.
MacKinnon, George Ernest	Revelstoke.
Nelson, John C.	Vancouver.
Peebles, Allon	New Westminster.
Pillsbury, Katherine Hall	Prince Rupert.
Porter, Gertrude Gladys	Victoria.
Scharschmidt, Daphne Maud	Vancouver.
Siddons, John Donald	White Rock.
Smith, Adela Elizabeth	Jubilee.
Smith, Elizabeth Patricia H.	Victoria.
Stirk, Louie	Vancouver.
Swencisky, Alfred Harold J.	New Westminster.
Swencisky, Laura Mary	New Westminster.
Wallace, Bryce Howie	Vancouver.
Walsh, Violet Charlotte	North Vancouver.
Weld, John Noel	Vancouver.

Partial.

Sneath Isabel	Toronto, Ont.
Wright, Thomas Hall	Vancouver.

POST-GRADUATE STUDENTS.

Allardyce, William John	Vancouver.
Baker, Lincoln Thompson	North Vancouver.
Barclay, May Lilian	New Westminster.
Best, Edgar Leslie	Dundarave, B.C.
Coy, Norah Elizabeth	Vancouver.
Emmons, Richard Conrad	Vancouver.
Gintzburger, Pauline Emma	Vancouver.
Mennie, John Hamilton	Vancouver.
Marwick, Edna Mary E.	Victoria.
Mounce, Irene	Vancouver.
McGuire, Stella Victoria	Vancouver.

Name.	*Home Address.*
Maclean, Olive Edmondson	Victoria.
Ryder, Walter Scott	Vancouver.
Vollum, Roy Lars	Vancouver.
Wilband, Hazel Grace	Vancouver.
Mahrer, Leopold S.	Nanaimo.
Clement, Elsie Bonallyn	Vancouver.
Gill, Margaret S.	North Vancouver.
Harvey, Isobel	Vancouver.
Hurst, Macleod Ewart	Kerrisdale.

FACULTY OF APPLIED SCIENCE.

FIRST YEAR.

Full Undergraduates.

Aconley, William Thorne	Vancouver.
Anderson, Allan Jardine	Vancouver.
Atkinson, James Ray	Chilliwack.
Austin, Alfred Philip	Vancouver.
Bell, John Gordon	Vancouver.
Berry, Theodore Victor	Vancouver.
Burton, William Donald	Vancouver.
Cameron, Ralph King	Vancouver.
Campbell, Douglas Stuart	Vancouver.
Coffin, Frederick Winfield	Vancouver.
Corfield, Guy	Esquimalt.
Cutler, Roderick Orrison	Vancouver.
Curtis, Milford Dean	Victoria.
Edwards, Isaac John	Vancouver.
Evans, Charles Sparling	Vancouver.
Forrester, William Wallace	New Westminster.
Geigerich, Joseph Rhinehardt	Kaslo.
Graham, Roland Creelman	Vancouver.
Graham, William Ernest	Vancouver.
Green, Cecil Howard	Vancouver.
Gregg, Elwyn Emerson	Vancouver.
Gross, George Clarence	Vancouver.
Gunning, Henry Cecil	Vancouver.
Gwyther, Valentine Mackenzie W.	Vancouver.
Harkness, John Alexander C.	South Vancouver.
Hodson, Reginald	Victoria.
Houghton, Gordon Kingsley	New Westminster.
Jenkins, John Henry	North Vancouver.
Johnston, Harry Lloyd	Vancouver.

Name.	*Home Address.*
Jones, Russell Heber B.	Victoria.
Lidgey, Ralph Christian G.	Vancouver.
Loveridge, Gilbert Thomas	Vernon.
Lusby, Eric Blair	New Westminster.
Mathers, Cliffe St. John	Vancouver.
McCallum, Neil Mitchell	Vancouver.
McKee, Robert Gerald	Langley Prairie.
MacPherson, Archibald B.	Vancouver.
McVittie, Charles Archibald	Victoria.
Offord, Reginald Harold	Vancouver.
Rae, Douglas Henderson	North Vancouver.
Riddell, John Gerald	Vancouver.
Say, Stanley R.	Hants, Eng.
Sears, Clement J.	Victoria.
Sivertz, Christian	Victoria.
Smith, Winston Robinson	Vancouver.
Spargo, Thomas	Vancouver.
Stroyan, Philip Bateman	Vancouver.
Thompson, William McNabb	West Vancouver.
Tuckey, Francis Edward	Victoria.
Wilkinson, Elmo Clifford	White Rock.
Wilson, Clarence Harrison	New Westminster.

Conditioned.

Baker, William Risser	Vancouver.
Clegg, C. Harold	Rossland.
Davidson, Douglas Alexander	Vancouver.
Day, George	Vancouver.
Fanning, William Harold	Vancouver.
Fraser, Duncan	Vancouver.
Jure, Albert Edward	Vancouver.
Kidd, George Stuart	Vancouver.
Molynaux, Edmund Mitchell	Vancouver.
Parker, Raymond Whitfield	Vancouver.
Rice, Harrington Molesworth B.	Duncan.
Rushbury, Henry George	Vancouver.
Ternan, Clifford Chalmer	Vancouver.
Ure, William	West Vancouver.

Partial.

Brown, James Philip	Vancouver.
Byrn, Thomas Stavert	Victoria.
Cock, Cecil James	Vancouver.

Name.	*Home Address.*
Grey, Donald	Victoria.
Guernsey, Tarrant Dickie	Thompson, Nev., U.S.A.
Hanna, William S.	Vancouver.
Heyland, Domenic	Victoria.
Hooper, Cleeve Woodward	Vancouver.
Hynd, David Brown B.	Vancouver.
Keith, Leslie Stephens	Vancouver.
Langille, Ewart Gladstone	Kelowna.
McEwen, Horace Austin	Yellow Grass.
McLachlan, Charles Gordon	Vancouver.
Marlatt, Charles Ewart	Trail.

SECOND YEAR.

Full Undergraduates.

Anderson, David Gash	Vancouver.
Anderson, Sydney	Vancouver.
Banfield, William Orson	Vancouver.
Baxter, Fred. Rolland	Vancouver.
Baxter, Wilfred Ernest	Vancouver.
Bickell, William Albert B.	Vancouver.
Cameron, George Stuart	Vancouver.
Caspell, Edmund Vanderburg	Vancouver.
Coates, Wells Wintemute	Vancouver.
Coles, Eric Morrell	Vancouver.
Dixon, George C.	Vancouver.
Emmons, Edward Frets	Vancouver.
Fountain, George Frederick	Vancouver.
Fournier, John Raymond	Vancouver.
Gale, William Alexander	Royal Oak.
Goranson, Roy Walter	New Westminster.
Gray, William Henry	South Vancouver.
Hatt, Rena Alexandra	Vancouver.
Hoult, John Henry	New Westminster.
Jackson, Oscar Edmund A.	Aldergrove.
Jane, Robert Stephen	Vancouver.
Meekison, Andrew Gordon	Vancouver.
Mitchell, Robert John	Vancouver.
Moody, Charles Edwin	Vancouver.
McColl, Eli Stuart	Vancouver.
McDiarmid, Harry Deleu	Vancouver.
McDougall, Stewart Robertson	New Westminster.
McLellan, Norman Wellington	Vancouver.
McLellan, Logan Seaforth	Vancouver.

Name.	*Home Address.*
McPhalen, Hugh Cornelius	Vancouver.
Pearse, Hubert Arnold	Atlin.
Peck, Wallace Suanzey	Vancouver.
Scott, William Orville C.	Vancouver.
Shaw, Donald Lee	Vancouver.
Shockley, Henry Maurice	Prince Rupert.
Walker, John Fortune	Vancouver.

Conditioned.

Gillespie, Roy Meredith	Aldergrove.
Handy, Lee	Vancouver.
McLuckie, Robert Macfarland	Vancouver.
Somerville, Lawrence Harold	Vancouver.
Watson, James	Vancouver.
Weinrobe, Morris	Vancouver.

Partial.

Cook, Archibald James	Marpole.
Davidson, John Randolph	Vancouver.
Todd, Arthur Allison	Vancouver.
Weart, James Farr	Vancouver.

THIRD YEAR.

Full Undergraduates.

Anderson, Robert Griffith	Vancouver.
Bell, Harold Glover	Vancouver.
Carter, Bayard Marshal	Steveston.
Doyle, Harold	Vancouver.
Dreury, John Haworth	Victoria.
Gill, James Edward	Vancouver.
Gillie, Kenneth Beresford	Victoria.
Hatch, William George	Vancouver.
Honeyman, Pharie Donald I.	Kerrisdale.
James, Turnbull Howard	Vancouver.
Kingham, Joshua Rowland	Victoria.
Melville, John	Vancouver.
Morrison, Donald McKay	Vancouver.
McPhee, Ronald	Vancouver.
McQueen, Donald William	Vancouver.
Payne, Wilfrid Reid	Kerrisdale.
Plummell, Stephen Bechel	Vancouver.
Rose, Hedley Alexander	Point Grey.
Stone, Clifford Ervin	Vancouver.
Swanson, Clarence Otto	Vancouver.

Name.	*Home Address.*
Thompson, Douglas Lionel	Vancouver.
Wallace, Douglas Archibald	Vancouver.
White, Edward Murdie	Port Haney.

Partial.

Jackson, Hector John R.	Aldergrove.
Waun, Arthur	Vancouver.
Wilson, Frank Robinson	Whitehorse, Y.T.

FOURTH YEAR.

Full Undergraduates.

Andrews, Henry Ivan	Vancouver.
Aylard, Clayton Leslie	Victoria.
Boomer, Edward Herbert	Vancouver.
Dixon, Gilbert Bruce	Vancouver.
Gilchrist, George Gladstone	Dunbar Heights P.O.
Lambert, Noel Dudley	Princeton.
McKechnie, Donald Cowan	Marpole.
Rebbeck, James Walter	Vancouver.
Seiji, Tamenaga	Japan.
Watts, Harold Newton	Vancouver.

NURSING

SECOND YEAR.

Healy, Margaret Louise	Vancouver.
Johnson, Beatrice	Vancouver.

FACULTY OF AGRICULTURE.

FIRST YEAR.

Full Undergraduates.

Barry, Sidney Clifford	Vancouver.
Bennett, Leslie	North Vancouver.
Cavers, Raymond Vere	Cloverdale.
Davis, Lewis Travers	Parksville.
Fulton, Harry Graham	Chilliwack.
Harris, George Howell	West Summerland.
Landon, Gordon Lorne	Armstrong.
Leckie, Robert Gordon	Vancouver.
MacLeod, Clarence Herbert	North Vancouver.
Pye, William John S.	Vancouver.

Richards, Albert Edward.....New Westminster.
Riddell, William Hugh.....Vancouver.
Rolston, Francis Fairchild.....Vancouver.
Stacey, Leonard Brown.....Chilliwack.
Woods, John Jox.....North Vancouver.

Conditioned.

Eby, Victor James.....Abbotsford.
MacCallum, Hugh Crawford.....Agassiz.

Partial.

Bates, Frederick Harold.....Courtenay.
Beard, John Allan.....Vernon.
Blair, Archibald .....Steveston.
Burke, William Marshall .....Central Park.
Callaghan, James Gordon.....Vancouver.
Fraser, Robert Leslie.....Vancouver.
Kinnear, Alexander Roy.....South Vancouver.
Neill, William .....Vancouver.
Palmer, Richard Claxton.....Cowichan Bay.
Phillips, Sperry Shea.....Cranbrook.
Van de Hoop, Johan Pieter..... Celista.
Rive, Charles .....Vancouver.
Riley, William John.....Vancouver.

SECOND YEAR.

Full Undergraduates.

Clarke, George Ernest W.....Vancouver.
Fisher, Raymond A.....Prince Rupert.
Leavens, John B.....Point Grey.
McKechnie, Martha S.....Marpole.
Traves, Charles W.....New Westminster.

Conditioned.

Kelly, Clifford D.....Vancouver.
Sweeting, Bertram S.....Vancouver.

Partial.

Manuel, Archibald L.....North Vancouver.

THIRD YEAR.

Full Undergraduates.

Lamb, Cecil Alexander.....Cloverdale.
Leckie, Claude P.....Vancouver.
Mounce, Marion J.....Vancouver.

Conditioned.

Greenwood, Harold D.....Vancouver.
Harris, Henry .....Ellison P.O.

Partial.

Coward, George Stanley.....Kingston, Ont.
McKenzie, Frederick F.....Marpole.

REGISTRATION FOR 1919-20.

Faculty of Arts and Science.

	Women	Men	Total	
First Year	181	201	382	
Second Year	62	60	122	
Third Year	53	52	105	
Fourth Year	29	23	52	
Post Graduate	11	9	20	
	336	345		681

Faculty of Applied Science.

	Women	Men	Total	
First Year	..	80	80	
Second Year	1	45	46	
Third Year	..	26	26	
Fourth Year	..	10	10	
Nursing (Second Year)	2	..	..	
	3	161		164

Faculty of Agriculture.

	Women	Men	Total	
First Year	..	30	30	
Second Year	1	7	8	
Third Year	1	6	7	
	2	43		45
				890

Short Courses.

Botany	71	
Mining	28	
Forestry	15	
Gas Engine	52	
Motor Mechanics	80	
Chauffeur	43	
Steam Engineering	53	
Electrical Engineering	62	
Machinist	21	
Agriculture	215	
		640

Total Registration 1530

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