

CALENDAR

OF THE

University
of
British Columbia

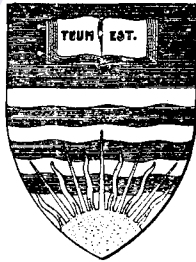
FIFTH SESSION
1919-20



VANCOUVER, BRITISH COLUMBIA
1919

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THE UNIVERSITY OF BRITISH COLUMBIA.

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British Columbia.

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 The Principal of Victoria Normal School, D. L. MACLAURIN,
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- (e.) Representative of High School Principals, T. A. BROUGH, Esq., B.A.
- (f.) Representative of Provincial Teachers' Institute.
- (g.) Representative of Affiliated Colleges.
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 Miss S. P. CLEMENT, B.A., Vancouver, B.C.
 Hon. GORDON HUNTER, B.A., Victoria, B.C.
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——— Instructor in Chemistry.

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O. J. TODD, Ph.D. (Harv.), Assistant Professor of Classics.

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A. N. ST JOHN MILDMAY, M.A. (Oxon.), Tutor in Classics.

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——— Assistant Professor of Economics.

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———— Assistant Professor of Mathematics.

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

Department of Mechanical Engineering.

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

CEDRIC C. RYAN, M.Sc., Instructor in Mechanical Engineering.

Demonstrators	{	H. Taylor.	L. E. Dunham.
		J. W. Faulkner.	F. Zuehlke.
		S. Northrop.	R. P. Duncan.
		F. McCrady.	W. E. Anderson.
		J. E. Dubberley.	J. Hogarth.
		J. Crowley.	T. B. Dick.
		E. G. Parsons.	E. Martin.
		E. J. Pitts.	

Department of Mining and Metallurgy.

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

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

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

Department of Modern Languages.

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

A. F. B. CLARK, B.A. (Tor.), Ph.D. (Harvard), Assistant Professor.

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

——— Assistant Professor.

——— Instructor.

——— Instructor.

Department of Philosophy.

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

Department of Physics.

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

——— Assistant Professor of Physics.

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

Department of Poultry Husbandry.

ALFRED G. LUNN, B.S.A. (Oregon Agricultural College), Associate Professor of Poultry Husbandry.

1919 CALENDAR 1919

JULY							AUGUST							SEPTEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
..	..	1	2	3	4	5	..	..	..	..	..	1	2	..	1	2	3	4	5	6
6	7	8	9	10	11	12	3	4	5	6	7	8	9	7	8	9	10	11	12	13
13	14	15	16	17	18	19	10	11	12	13	14	15	16	14	15	16	17	18	19	20
20	21	22	23	24	25	26	17	18	19	20	21	22	23	21	22	23	24	25	26	27
27	28	29	30	31	..	..	† 25	26	27	28	29	30	28	29	30	..	..	..	..
OCTOBER							NOVEMBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
..	..	..	1	2	3	4	..	..	..	..	..	..	1	..	1	2	3	4	5	6
5	6	7	8	9	10	11	2	3	4	5	6	7	8	7	8	9	10	11	12	13
12	13	14	15	16	17	18	9	10	11	12	13	14	15	14	15	16	17	18	19	20
19	20	21	22	23	24	25	16	17	18	19	20	21	22	21	22	23	24	25	26	27
26	27	28	29	30	31	..	‡ 24	25	26	27	27	29	28	29	30	31	..	..	..

1920

JANUARY							FEBRUARY							MARCH						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
..	..	..	..	1	2	3	1	2	3	4	5	6	7	..	1	2	3	4	5	6
4	5	6	7	8	9	10	8	9	10	11	12	13	14	7	8	9	10	11	12	13
11	12	13	14	15	16	17	15	16	17	18	19	20	21	14	15	16	17	18	19	20
18	19	20	21	22	23	24	22	23	24	25	26	27	28	21	22	23	24	25	26	27
25	26	27	28	29	30	31	29	..	..	..	..	..	..	28	29	30	31	..	..	..
APRIL							MAY							JUNE						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
..	..	..	..	1	2	3	..	..	..	..	..	..	1	..	..	1	2	3	4	5
4	5	6	7	8	9	10	2	3	4	5	6	7	8	6	7	8	9	10	11	12
11	12	13	14	15	16	17	9	10	11	12	13	14	15	13	14	15	16	17	18	19
18	19	20	21	22	23	24	16	17	18	19	20	21	22	20	21	22	23	24	25	26
25	26	27	28	29	30	..	‡ † 25	26	27	28	29	27	28	29	30	..	..	..
JULY							AUGUST							SEPTEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
..	..	..	..	1	2	3	1	2	3	4	5	6	7	..	..	..	1	2	3	4
4	5	6	7	8	9	10	8	9	10	11	12	13	14	5	6	7	8	9	10	11
11	12	13	14	15	16	17	15	16	17	18	19	20	21	12	13	14	15	16	17	18
18	19	20	21	22	23	24	22	23	24	25	26	27	28	19	20	21	22	23	24	25
25	26	27	28	29	30	31	29	30	31	..	..	..	..	26	27	28	29	30	..	..
OCTOBER							NOVEMBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
..	..	..	..	..	1	2	..	1	2	3	4	5	6	..	..	..	1	2	3	4
3	4	5	6	7	8	9	7	8	9	10	11	12	13	5	6	7	8	9	10	11
10	11	12	13	14	15	16	14	15	16	17	18	19	20	12	13	14	15	16	17	18
17	18	19	20	21	22	23	21	22	23	24	25	26	27	19	20	21	22	23	24	25
† 25	26	27	28	29	30	28	29	30	..	..	..	..	26	27	28	29	30	31	..	

ACADEMIC YEAR, 1919-20.

1919.	}	Supplemental Examinations in Applied Science begin.
Monday, August 25th.		
Tuesday, August 26th.	}	Registration Day for First, Second, and Third Year Applied Science.
Wednesday, August 27th.		
Wednesday, September 10th.	}	Matriculation Supplemental Examinations begin. Supplemental Examinations in Arts begin.
Monday, September 15th.		
Friday, September 19th.	}	Last day for Registration.
Monday, September 22nd.		
Tuesday, September 23rd.	}	Meeting of the Faculty at 10 a.m. Lectures begin.
Wednesday, October 8th.		
Wednesday, December 10th.	}	Meeting of the Senate.
Thursday, December 11th.		
Saturday, December 13th.	}	Last day of Lectures for Term. Examinations begin.
Friday, December 19th.		
Friday, December 26th.	}	Examinations end. Meeting of the Faculty at 10 a.m.
1920.		
Monday, January 5th.	}	Second Term begins.
Wednesday, February 11th.		
	}	Meeting of the Senate.

Friday, April 9th.	}	Last day of Lectures.
Tuesday, April 13th.		
Friday, April 30th.	}	Meeting of the Faculty at 10 a.m.
Monday, May 3rd.		
Thursday, May 6th.	}	Congregation.
Monday, June 21st.		
	}	Matriculation Examinations begin.

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SUPPLEMENTAL EXAMINATIONS.

Junior Matriculation Supplemental Examination Time-table, September, 1919.

Date.	A.M.	Subject.	P.M.	Subject.
Wednesday, September 10th	9 to 11	History	1 to 3 3 to 5	English Literature. German Literature.
Thursday, September 11th	9 to 11	Latin Authors	1 to 3 3 to 5	Latin Grammar and Composition. Agriculture.
Friday, September 12th	9 to 11	French Literature.....	1 to 3	French Language.
Saturday, September 13th	9 to 11	Physics	1 to 3 3 to 5	Chemistry. German Language.
Monday, September 15th	9 to 11	Geometry	1 to 3 3 to 5	English Composition. Botany. Greek.
Tuesday, September 16th	9 to 11	Algebra		

EXAMINATION TIME-TABLES.

Faculty of Arts, Supplemental Examinations, September, 1919.

Date.	Hour.	Supp. to First Year Sessional.	Supp. to Second Year Sessional.	Supp. to Third Year Sessional.
Wednesday, Sept. 10th.	9 a.m. 2 p.m.	Trigonometry Algebra	English Literature..... English Composition	English 6. English 7.
Thursday, Sept. 11th.....	9 a.m. 2 p.m.	Latin Authors..... Latin Composition, Sight Trans- lation and History	Latin Authors..... Latin Composition, Sight Trans- lation, History and Literature	Latin Authors. Latin Composition, Sight Translation and History.
Friday, Sept. 12th.....	9 a.m. 2 p.m.	French..... French.....	French..... French.....	French. French.
Saturday, Sept. 13th.....	9 a.m.	Chemistry 1.....	Chemistry 2.....	Chemistry.
Monday, Sept. 15th.....	9 a.m. 2 p.m.	English Literature..... English Composition.....	Economics 1 Logic.....	
Tuesday, Sept. 16th.....	9 a.m. 2 p.m.	Geometry..... Physics	Psychology Physics	English 8.
Wednesday, Sept. 17th..	9 a.m. 2 p.m.	History Geology I.....	Geometry Algebra.....	English 10.

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 Commissioners 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 Commissioners 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 Carøe.

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, Biological 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 (1915-16).

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, lecture-ships, 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.

Catalogue, Order, and Loan Departments	{ Dorothy M. Jefferd. Lionel Haweis. Winifred Attwaters.
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The University Library consists of 31,000 volumes and about 9,500 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 number of complete sets of periodical publications devoted to literature and science, and of the transactions of learned societies.

Small working reference libraries are maintained in the Chemistry and Geology Departments. The number of works added to the Library during the past University year was 3,354 volumes. Two hundred and seventy-five 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 and PP), the schedules for which have not been completed by the Library of Congress. 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 to readers the resources of the Library, total over 160,000 cards. Of these, 82,000 are in the Main Catalogue in the Reading Room, and make all the classified portions of the Library referable by author, title, and subject, with necessary analyticals. The Reading Room has accommodation for over 100 readers.

During the session the library is open from 8.45 a.m. to 9 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 12 noon.

Books to which the Teaching Staff have specially referred their classes for consultation are placed in a "Reserved" class. These may be loaned only for periods during which the Library is closed. Other works, to the number of two, may be bor-

rowed by students for a period of seven days, or for a shorter period should the volume be in general demand.

Works that are rare, costly, or otherwise unsuited for general circulation are loaned only under special conditions.

During the past academic year a number of valuable contributions to the Library have been made by governments, institutions, corporations, and private benefactors. Many of these gifts are of great value. The following is a list of donations since the issue of the Calendar for 1918-19:—

- 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.
 Departmental Reports and other Official Publications.
- 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.
- THE GOVERNMENT OF BRITISH COLUMBIA.
 Statutes, Departmental Reports, and Official Publications.
- THE GOVERNMENT OF THE PROVINCE OF ONTARIO.
 Official Publications.
- THE STATE OF MINNESOTA—BOARD OF CONTROL.
 Reports.
- THE STATE OF NEW YORK—EDUCATION DEPARTMENT.
 Reports.
- INTERNATIONAL JOINT COMMISSION, OTTAWA.
 Reports.

- DOMINIONS ROYAL COMMISSION, LONDON.
Reports.
- LIBRARY OF CONGRESS, WASHINGTON, D.C.
Reports and Publications.
- 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.
Current Publications.
- CARNEGIE INSTITUTE, WASHINGTON, D.C.
Current Publications.
- FRANKLIN INSTITUTE, PHILADELPHIA, PENN.
Publications.
- LEAGUE TO ENFORCE PEACE, N.Y.C.
Publications.
- SMITHSONIAN INSTITUTION, WASHINGTON, D.C.
Publications.
- AMERICAN JERSEY CATTLE CLUB.
Herd Book.
- CANADIAN NATIONAL LIVE STOCK RECORDS.
Publications.
- HOLSTEIN FRIESIAN ASSOCIATION OF AMERICA.
Advanced Register.
Herd Book.
- HOLSTEIN FRIESIAN ASSOCIATION OF CANADA.
Herd Book.
- MRS. A. L. HILL, NEW WESTMINSTER.
Canada Geological Survey: Reports of Progress.
" " Annual Reports.
" " Catalogue of Canadian
Plants.
- T. K. Rose. Gold.

- T. B. MACAULEY, ESQ., MONTREAL.
 Clydesdale Horse Society of the United Kingdom.
 Clydesdale Stud Books, Vols. 1-40.
- JAMES PORTER, ESQ., VANCOUVER.
 Renan. History of Science.
- LADY TAYLOR, WINNIPEG.
 Bartholinus. Anatomie. Leyden, 1686.
 Trials in connection with the North West Rebellion,
 1885.
 Howe, Joseph. The speeches and public letters of the
 Hon. Joseph Howe.
 International Council of Women. Women's position in
 the laws of the nations.
 Priddis, Harriet. The naming of London streets.
 Statutes, documents, and papers bearing on the discus-
 sion respecting the northern and western boundaries
 of the Province of Ontario.
 Edwards, John. The Gilbertines in Scotland.
 Makower, S. V. Some notes upon the history of the
 Times.
 Correspondence, papers, and documents, of dates from
 1856 to 1882, inclusive, relating to the northerly and
 westerly boundaries of the Province of Ontario.
 Cote, N. Omer, *ed.* Political appointments, parliaments,
 and the judicial bench in the Dominion of Canada,
 1867-1895.
 Pope, Joseph, *ed.* Confederation.
 Declaration concerning matter of bounty. King James
 I., 1610.
 Houston, William, *ed.* Documents illustrative of the
 Canadian constitution.
 Report of the proceedings connected with the disputes
 between the Earl of Selkirk and the North-West
 Company.
 Walsh, Wm., *ed.* Select speeches of the Rt. Hon.
 George Canning.
 Royal Society of Canada. Proceedings and transac-
 tions.

HERBERT KEDDELL, ESQ., PENTICTON.

Illustrat Norges Historie, O. A. Overland, six
volumes.

VANCOUVER DAILY PROVINCE.

Two copies daily.

VANCOUVER DAILY SUN.

Two copies daily.

VANCOUVER DAILY WORLD.

Two copies daily.

1919-1920

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.

HONOUR COURSES.

A scheme of Honour Courses is being drafted and will come into operation in the Session of 1920-21.

The following are the regulations governing Honour Courses:—

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 condition, they should not be granted consent 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. Only those students who have taken a Distinction Course in a subject will be allowed to take Honours in that subject.

3. Honour students shall be required, during their Third and Fourth Years, to acquire at least six units of credit in a subject or subjects quite outside of the department or departments under whose direction they are specializing. Such students may, not unfairly, be asked to exceed the thirty units of credit ordinarily required for the B.A. degree.

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

5. All candidates for Honours shall be 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 shall be designed to test a student's knowledge of his chosen subject or subjects as a whole and shall be in addition to the ordinary class examinations of the Third and Fourth Years.

6. Honours shall be 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.

DEPARTMENT OF NURSING.

It has been determined to establish a Department of Nursing in connection with the Faculty of Applied Science. This course will lead to a degree in Nursing. The requirements for admission to this course are those set forth for Junior Matriculation (*see* page 40). The course for the first two years will be the same as for the first two years of Arts (*see* page 62). The practical work of the course can be taken up in any institution that is approved by the University authorities.

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.
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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 1919-20 the University offers instruction in the first, second, third, and final 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 first, second, third, and fourth years of Courses in Applied Science, leading to the degree of Bachelor of Applied Science; and in the first three years of a Course in Agriculture.

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 1919-20 will begin on Tuesday, September 23rd.

Two Matriculation Examinations will be held, one commencing on Wednesday, September 10th, 1919, and the other on June 21st, 1920.

Buildings.

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 \$5 to \$10 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 swansdown.

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 21st, 1920, at all the centres in British Columbia at which high-school examinations are now held, that is to say: Agassiz, Armstrong, Bridgeport, Chilliwack, Cranbrook, Cumberland, Duncan, Enderby, Fernie, Golden, Grand Forks, Kamloops, Kaslo, Kelowna, Ladner, Ladysmith, Matsqui, Mission, Nanaimo, Nelson, New Westminster, Peachland, Penticton, Point Grey, Alberni, Prince Rupert, Revelstoke, Rossland, Salmon Arm, Summerland, Trail, Vancouver (Britannia, King Edward, and King George), North Vancouver, South Vancouver, Vernon, and Victoria, as well as Abbotsford, Belmont, Cloverdale, Creston, Hedley, Maple Ridge, Merritt, and Sidney, 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 with the necessary fee (for

which *see* page 38) 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 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 a diploma or certificate does not show the marks obtained in the several subjects of the examination, it must be accompanied by an official statement containing this information.

II. MATRICULATION EXAMINATION FEES.

Junior Matriculation.

For the first examination*	\$ 5 00
For a subsequent examination, per paper	2 00
For examination of certificates, in respect of which candidates are exempted from the whole of the Matriculation Examination	2 00

Senior Matriculation.

For the first examination*	\$10 00
For a subsequent examination, per paper	2 00

Matriculation Examination fees must be sent to the University Registrar at the time of application for the 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 a fee of \$1 will be charged.

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.

* In the case of candidates who qualify on certificates, or by examinations (conducted by other authorities) in all but three subjects or less, the fee will be \$3.

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 46, 47, and 48. 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 40).
2. History and Historical Geography (as on page 40).
3. One of the following:—
French, German, Latin (as on pages 41, 42, and 43).
4. Algebra and Arithmetic:
Hall & Knight's Elementary Algebra (omitting Chapters 40, 41, 42), or the same subject-matter in similar text-books.
5. Geometry:
As in Hall & Stevens' School Geometry.
6. Trigonometry:
Hall & Knight's Elementary Trigonometry to page 210, and Chapter 19; nature and use of logarithms (Bottomley's four-figure tables).

7. One of the following:—

Botany, Chemistry, Physics, a language not already chosen (as on pages 42 and 43).

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 Chap. 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.

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 (Marchant & Chant), and will consist of fifteen questions distributed as follows: Mechanics and Wave-motion, 4; Heat, 3; Sound, 2; Light, 2; Electricity and Magnetism, 4. Ten questions will constitute a full paper.

One paper of two hours.

Latin.

Texts.—Caesar, De Bello Gallico, Books 2 and 3 (Rutherford, Macmillan & Co.); and Ovid, Gleason's A Term of Ovid, lines 234-670 (American Book Co.).

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

Translation at sight from Latin into English.

Composition.—Translation into Latin of detached English sentences and easy narrative based on the prescribed texts.

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.

The examination in grammar will be especially concerned with the regular forms of the noun and verb.

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, Rübzahl (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 Waddell's A School Chemistry (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 Processes.

1. Root.

- (a.) Anchorage; forms of roots in relation to anchorage.
- (b.) Food storage; examples of food storage in roots.
- (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.
 - (b.) Food storage; examples.
 - (c.) Transpiration of water; experiments to illustrate.
 - 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.*
- 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, Liliaceæ. (*Dicotyledons*) Salicaceæ, Rosaceæ, Leguminosæ, Umbelliferæ, Ericaceæ, Labiateæ, Compositæ.

A collection is recommended.

D. Economic Plants.—Native of British Columbia.

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

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' Cyclopaedia 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 as 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-book: Ontario High School Physics and Laboratory Manual.

Chemistry.

I. *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 1919 and alternate years*—

Cicero, *De Senectute* (Warman, Bell & Sons).

Virgil, *Georgic IV.* (Page, Macmillan).

Ovid, *Elegiac Selections* (Smith, Bell & Sons).

For 1920 and alternate years—

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

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

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. The Faculty will determine the standing of such a student in this University.

AGE OF ADMISSION.

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

REGISTRATION AND ATTENDANCE.

I. Registration.

APPLICATION FOR ADMISSION.

Those who intend to register as students of the University for the Session 1919-20 are required to make application to the Registrar before the beginning of lectures, on forms to be obtained from the Registrar's office.

Between September 15th and September 19th, both dates inclusive, students may register for the Session 1919-20 at the office of the Registrar. Friday, September 19th, will be the last day of registration for all students. Lectures will commence on Tuesday, September 23rd. 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 to attend *in person* at the office of the Registrar, some time during the week preceding the opening day of the session, in order 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 within the time 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. 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 subsequently, as new names are received, and *only those for whom cards have been received by an Instructor will be admitted to his class*; except in the case of students whose standing cannot be determined at the time of registration. To these, 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. 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 Instructor 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.

II. 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.

4. 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	\$10 00
Alma Mater	5 00
Caution-money	5 00

The fee for registration may be paid in two instalments, the first not later than October 4th and the second not later than January 13th. After these dates an additional fee of \$2 will be exacted of all students in default.

All students are required to pay a registration fee annually of \$10.

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 may be required.

2. Immediately after October 15th 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 5th 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

1919-1920

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 1920 the following scholarships, prizes, and medals will be offered:—

**ROYAL INSTITUTION FOR THE ADVANCEMENT OF
LEARNING OF BRITISH COLUMBIA SCHOLARSHIPS
AND LOANS.**

(a.) Matriculation Scholarships.

1. Seven General Proficiency Scholarships will be awarded on the result of the Junior Matriculation Examinations, 1920.

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.

(d.)

The endowment of the following three scholarships was originally made to the Royal Institution for the Advancement of Learning of British Columbia, and has, with the consent of the donors and subscribers, been transferred by the Board of Governors of that Institution to the University of British Columbia:—

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.

(e.)

The following additional scholarships have been donated by friends of the University:—

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 Women's Canadian Club Scholarship.

The amount and the object of this scholarship are not yet determined, but an announcement in regard to it will be made in the course of the session.

UNIVERSITY SCHOLARSHIPS, ETC.

1. A Fellowship 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.

THE GOVERNOR-GENERAL'S MEDAL.

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

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, kindness, 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 school-mates." 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, Dean Robinson, Dr. Alexander Robinson (Superintendent of Education), 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.

THE WOMEN'S CANADIAN CLUB PRIZE.

A prize of \$25 was given in the Session 1918-19 by the Women's Canadian Club, and was awarded to the returned soldier standing highest in the graduating class.

THE WESBROOK PRIZES.

Two prizes of the value of \$50 each were given by Mrs. Wesbrook in the Session 1918-19. One was awarded to the student winning second place in the graduating class of 1919, and the other to the student obtaining the highest standing in the Department of English in the same class.

THE J. N. HARVEY PRIZE.

This prize of the value of \$50 was donated by J. N. Harvey, Esq., to be awarded in the Sessions 1918-19 and 1919-20 for the best essay by a member of the class of Arts '20 on some specified subject in the field of Economics or Political Science, as a memorial to his son Gerald Myles Harvey, who died on active service, and who had been a member of the class of Arts '20.

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 141.)

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, or one laboratory period of not less than two or more than three hours, such period to be continuous.

Students seeking First Class standing in any subject are required to take the distinction course in that subject.

All students of the First and Second Years are required to take five courses, two of which must be Distinction Courses, and no student may elect more than three Distinction Courses without special permission. The minimum for each of the first two years is seventeen units.

FIRST YEAR.

- I. English, 1 and 2; History, 1.
- II. Mathematics, 1.
- III. Physics, 1.
- IV., V. Two of the following, of which one at least must be a language: Chemistry, 1; French, 1; German, 1; Greek, 1; Latin, 1; Biology, 1; Geology, 1.

NOTE.—*Students may elect three foreign languages, substituting one of these for either Mathematics or Physics.*

SECOND YEAR.

- I. English, 3, 4.
- II. French, 2; or German, 2; or Greek, 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; Economics, 1.
 - (e.) Mathematics, 2; Biology, 1, and Botany or Zoology.

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.

In each of the Third and Fourth Years students are required to take at least fifteen units.

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, four at least must be chosen from each of the other two groups.

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

	Units.
Agriculture	2
Bacteriology, 1	2
" 2	2
" 6	1/2

	Units.
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	1
" 9	3
Economics, 1	3
" 2	3
" 3	3
" 4	3
" 5	3
" 6	3
Government, 1	3
Social, 1	3
English, 5	2
" 6	2
" 9	2
" 10	2
" 11	2
" 13	2
" 14	2
" 16	3
" 17	2
" 20	3
" 21	2

	Units.
English, 22	1
„ 24	2
French, 2	3
„ 3	4
„ 4	4
Geology, 2	4
„ 3	3
„ 4	3
„ 5	1
„ 6	1
„ 7	4
„ 8	4
German, 2	3
„ 3	4
Greek, 2	3
„ 3	4
„ 4	2
History, 3	2
„ 4	2
„ 5	2
„ 6	4
„ 7	4
Latin, 2	3
„ 3	4
„ 4	3
Mathematics, 2	3
„ 3	4
„ 4	4
Philosophy, 3	4
„ 4	2
Physics, 2	3
„ 3	3
„ 4	3
„ 5	3
Spanish	3
Zoology, 20 (a)	1½
„ 21 (a)	2
„ 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 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 may, on application in writing,—

- (a.) Be exempted from attending lectures and passing examinations in the subjects in which he has already passed:

- (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, should be in the hands of the Registrar at least two weeks before the date set for the examinations.

COURSES IN ARTS.

Department of Agriculture.

Professor: Leonard S. Klinck, M.S.A.

The Scientific Basis of Agriculture.

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

Four lectures per week during the First Term.

Department of Bacteriology.

Professor: R. H. Mullin, B.A., M.B.

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. $\frac{1}{2}$ unit.

Department of Botany and Zoology.

Associate Professor: A. H. Hutchinson, M.A., Ph.D.

Assistant Professor of Zoology: ———

Instructor in charge of Herbarium and Botanical Garden:
John Davidson, F.L.S., F.B.S.E.

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).

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*.

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

Two hours lecture per week. One Term.

Text-book (reference books to be assigned): *Agricultural students will procure Genetics in Relation to Agriculture*, Babcock & Clausen.

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.

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

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

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.
One Term.

Reference books: Masee'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.

Reference book: Coulter, Barnes & Cowles, Text-book of Botany, Vol. 1.

(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.

12. *Physiology*.

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

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

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

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

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

Zoology.

20. *Economic Zoology*.

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

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.

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

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.

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

Seven hours per week. First Term.

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

Seven hours per week. Second Term.

Reference books: McBride, Text-book of Embryology, and Kellicott, Chordate Development.

Department of Chemistry.

Professor: D. McIntosh, M.A., D.Sc., F.R.S.C.

Associate Professor: E. H. Archibald, M.A., Ph.D.,
F.R.S.E., F.R.S.C.

Associate Professor: R. H. Clark, M.A., Ph.D.

Instructor: _____

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 Co.).

Two lectures and one laboratory periods of three hours each 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. *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*.

4. *Theoretical Chemistry*.—An introductory course on the development of modern Chemistry, including osmotic phe-

nomena, 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.

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.

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.

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.

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.

Two lectures weekly during the First Term.

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

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.

Department of Classics.

Associate Professor: Lemuel F. Robertson, M.A.

Assistant Professor: O. J. Todd, Ph.D.

Assistant Professor: H. T. Logan, M.A.

Tutor: A. N. St. John Mildmay, M.A.

Greek.

1. *Lectures*.—Thucydides, Rise of the Athenian Empire (Colson, 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).

Four hours a week.

2. *Lectures*.—Plato, Apology (Adam, Elementary Classics, Cambridge); Aeschylus, Prometheus Vincetus (Rackham, Cambridge Univ. 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.

3. *Lectures*.—Thucydides, Book VII. (E. C. Marchant, Macmillan); Sophocles, Philoctetes (Jebb & Shuckburgh, Cambridge Univ. Press); Odyssey, I.-XII. (Merry, Clarendon Press). Selections to be read in class.

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

Composition: Passages to be selected.

Four hours a week.

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.

Latin.

1. *Lectures*.—Cicero, De Senectute (Warman, Bell & Sons); Virgil, Georgic IV. (Page, Macmillan & Co.).

Composition: Latin Composition (Mitchell, Macmillan's Canadian School Series), from page 50 to the end.

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

Three hours a week.

Distinction Course: Ovid, Elegiac Selections (Smith, Bell & Sons); Cicero, Ninth Philippic, Select Orations (King, Clarendon Press).

One hour a week.

2. *Lectures*.—Cicero, Pro Archia (Reid, Pitt Press); Livy, Hannibal's First Campaign in Italy (Bell & Sons); 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.

Distinction Course: Horace, Wickham's Selected Odes (Clarendon Press); Catullus (Simpson, Macmillan).

One hour a week.

3. *Lectures*.—Cicero, Select Letters (Prichard & Bernard, Oxford Press); Cicero, Pro Sestio (H. A. Holden, Macmillan's Classical Series); Cicero, Tusculan Disputations (1) and Somnium Scipionis (F. E. Rockwood, Ginn & Co.); Tacitus, Histories I. and II. (A. D. Godley, Macmillan).

History: Pelham, Outlines of Roman History, B.C. 133 to A.D. 476 (Rivington).

Four hours a week.

4. *Lectures*.—General view of Latin Poetry: Anthology of Latin Poetry (Tyrrell, Macmillan & Co.); Student's Companion to Latin Authors (Middleton & Mills, Macmillan & Co.).

Three hours a week.

This course is open only to students who are taking Course 3 or have taken it in previous years.

Department of Economics, Sociology, and Political Science.

Professor: Theodore H. Boggs, M.A., Ph.D.

Assistant Professor: _____

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; or Sociology, 1.

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

2. *Political and Economic Conditions within the Empire*.—A review of the governments of the British dominions and of suggested plans for the political reorganization of the empire, during the First Term; to be followed, in the Second Term, by

a survey of the resources, industries, commerce, and tariffs of Britain and the dominions.

Curtis, *The Problem of the Commonwealth*; Jebb, *The Britannic Question*; and Drage, *The Imperial Organization of Trade*.

Three hours a week.

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*; Skelton, *Socialism: a Critical Analysis*; and Spargo & Arner, *Elements of Socialism*.

Three hours a week.

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*; Howard & Swanson, *Money and Banking*; and Johnson, *Report on the Canadian Banking System*.

Three hours a week.

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.

Not given in 1919-20.

6. *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 Walker, *Corporation Finance*.

Three hours a week.

Government.

1. *Constitutional Government*.—Following a preliminary survey of the origin of political institutions a detailed study is made of the structure, functions, and actual working of the governments of Canada, Great Britain, the United States, and other countries. A comparative study as well of the parties of these countries.

Leacock, *Elements of Political Science*, and assigned readings in other texts.

Three hours a week.

Not given in 1919-20.

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.

Not given in 1919-20.

Department of English.

Associate Professor: G. G. Sedgewick, Ph.D.

Assistant Professor: J. K. Henry, B.A.

Assistant Professor: F. G. C. Wood, M.A.

Assistant Professor: W. L. MacDonald, M.A., Ph.D.

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 1919-20: 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. Lectures with recitations and reports on assigned reading.

Texts for 1919-20:—

(1.) Pass Course: Halleck's *History of English Literature*, New Edition (American Book Company); Chaucer, *Selections*; Bacon, *Selected Essays*; Spenser's *Faerie Queene*, Book I.; Shakespeare, two or three plays; Milton, *Selected Poems*; selections from the prose and poetry of the 17th and 18th centuries to be chosen from a book of essays and from Ward's *English Poets*, Vol. III.

Two hours a week.

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

One hour a week.

4. *Composition*.—Narrative and descriptive themes; the writing of reports.

One hour a week.

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.

Two hours a week. Mr. Sedgewick.

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.

Two hours a week. Mr. Sedgewick.

Not given in 1919-20.

9. *Shakespeare*.—(a.) A detailed study of the text of Henry V., Twelfth Night, Othello, and The Winter's Tale.

(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).

Two hours a week. Mr. Sedgewick.

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).

Two hours a week. Mr. Henry.

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.

Not given in 1919-20.

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.

Two hours a week. Mr. Wood.

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.

Two hours a week. Mr. MacDonald.

16. *Romantic Poetry, 1780 to 1830.*—More advanced 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. Mr. Sedgewick.

Not given in 1919-20.

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).

Two hours a week. Mr. Henry.

Not given in 1920-21.

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.

Not given in 1919-20.

21. *Anglo-Saxon*.—Bright's Anglo-Saxon Reader and Beowulf. Two hours a week. Mr. Sedgewick.

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; special study of the gradual evolution of forms, sounds, and meanings.

One hour a week.

24. *Seminar*.—In this class advanced students will get practice in some of the simpler methods of criticism and investigation. The subject for 1919-20 will probably be the work of Keats.

Two hours.

N.B.—Students who desire to take any of the Courses 20, 21, 22, 24, must first obtain the permission of the Instructor.

Department of Geology.

Professor: Reginald W. Brock, M.A., F.R.S.C.

Assistant Professor: Edwin T. Hodge, M.A., Ph.D.

1. *Elements of 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 geologic facts and their interpretation.

Text: *Geology, Physical and Historical*, by H. F. Cleland. Three hours of lectures per week throughout the session.

2. *General Geology*.—This course takes up in a more intensive manner the same subject-matter as (1) *Elements of Geology*.

Text: *Text-book of Geology*, by Pirsson & Schuchert.

Not open to students who have taken (1).

Three hours of lectures and two hours laboratory work a week throughout the session.

3. *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.

Prerequisite: (1) with distinction or (2).

Two lecture and laboratory periods of two hours each a week throughout the session.

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

4. *Geology of the World and Geological Influences*.—This course covers: (a) Salient geological features of the various continental and oceanic segments; (b) form and distribution of surface features produced by geological formations; (c) influence of geological formations and topographic forms on nations and on the distribution and development of plants, animals, and man; (d) discussion of the inorganic natural resources of the world.

Three hours of lectures per week throughout the session.

Distinction: One additional hour, time to be individually arranged with each student.

Prerequisite: (1) with distinction or (2).

5. *Origin and Development of Life*.—A course in elementary paleontology which treats briefly the theories pertaining to the origin of life upon the earth and traces in detail the various forms of life from the earliest records up to the present time.

Two hours of lectures per week during Second Term.

Prerequisite: (1) with distinction or (2).

6. *Origin and Development of Man*.—This course in paleoanthropology deals with the development of man from lower but kindred forms of animal life and discusses the method of his distribution over the earth to form the present races of men.

Two hours of lectures per week during Second Term.

Prerequisite: (1) with distinction or (2).

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 everyday commercial life.

Text: *Petrology for Students*, by Alfred Harker.

Prerequisite: General Mineralogy (3) must precede or accompany this course.

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

8. *Ore-deposits*.—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: *Principles of Economic Geology*, by Emmons.

Prerequisite: *Petrology* (8) must precede or accompany this course.

Three hours of lectures and one of laboratory work a week throughout the session.

Department of History.

Assistant Professor: Mack Eastman, Ph.D.

Assistant Professor: W. N. Sage, M.A.

History.

1. A general view of the development of the great European Nations since the beginning of the French Revolution.

Text: Hazen, *Modern European History* (Henry Holt & Co.).

First Year, one hour a week. Dr. Eastman.

2. 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: Green, *A Short History of the English People*.

Second Year elective, three hours a week, with an additional hour for distinction. Mr. Sage.

3. Beginning with a comparison of Spanish, English, and French methods of colonization in America, this course will be devoted to Canadian History. Church and State under the French Régime, the relations between French and English under British rule, Canadian constitutional development, and present-day problems will receive special attention. Students should read in advance Parkman's *Jesuits in North America*, *Count Frontenac*, *The Discovery of the Great West*, *The Old Régime*, and *Wolfe and Montcalm*.

Third Year elective, two hours a week. Dr. Eastman.

4. An outline of the rise of the Christian Church, a closer study of the Reformation and the Counter-Reformation, and a brief account of the subsequent history of religious thought down to our own times, with especial reference to the English Deists, the French "Philosophes," the German Pietists, the Wesleyans, the "Modernists," and the Higher Critics.

Third Year elective, two hours a week. Dr. Eastman.

Text: G. P. Fisher, *The Reformation* (Chas. Scribner's Sons).

5. 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: Channing, *Students' History of the United States* (The Macmillan Co.).

Fourth Year elective, two hours a week. Mr. Sage.

6. A sketch of Mediæval History from the Council of Nicæa to the Fall of Constantinople, 325-1453 A.D. The following subjects will be treated: The Triumph of Christianity; the breakdown 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* (Rivington's); Tout, *The Empire and the Papacy*; Lodge, *The Close of the Middle Ages*; Bryce, *The Holy Roman Empire* (Macmillan & Co.).

Fourth Year elective, two hours a week. Mr. Sage.

7. The practical, economic, and diplomatic history of the leading countries of Western Europe from the French Revolution to the present day, with especial attention to the origin of the Great War and the problems of the peace settlement.

Text-books: Shailer Matthews, *The French Revolution* (Longmans); Herbert Fisher, *Napoleon* (Home University Library); Hazen, *Europe since 1815* (Henry Holt).

Supplementary reading to be announced later.

Fourth Year elective, four hours a week. Dr. Eastman.

Department of Mathematics.

Associate Professor: G. E. Robinson, B.A.

Assistant Professors { E. H. Russell, B.A.
E. E. Jordan, M.A.

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

Plane Geometry and the Geometry of Planes.—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).

For the ordinary class a course of three hours per week; for the distinction class the course will be four hours per week.

2. *Geometry*.—(a) *Solid Geometry*, continuation of the *Geometry of the First Year*; (b) *Geometrical Conic Sections*. *Spherical Trigonometry*, an elementary course.

Text-book: Wilson's *Solid Geometry and Conic Sections*.

Algebra.—Permutations and combinations; binomial theorem; exponential and logarithmic series; interest, annuities, and bonds; undetermined coefficients; partial fractions; summation of typical series; probabilities; determinants.

Text-book: Hall & Knight's *Advanced Algebra*.

Analytic Geometry.—A short introductory course.

For the ordinary class a course of three hours per week; for the distinction class the course will be four hours per week.

3. *Analytic Geometry*.—Text-book: Tanner & Allen.

Two hours a week throughout the session.

Calculus.—Text-book: Granville's Differential and Integral Calculus (Ginn & Co.).

Two hours a week throughout the session.

4. (1.) *Topics from Advanced Calculus; Differential equations.*
 - (2.) *Analytic Geometry* of two and three dimensions.
 - (3.) *Algebra.*—Topics in determinants, theory of equations, series and functions of a real variable.
 - (4.) *Mathematical Drawing and Projective Geometry.*
- Four hours a week.

Department of Modern Languages.

Associate Professor of French: H. Ashton, M.A., D.Lett.,
D.Litt., O.I.P.

Assistant Professor: A. F. B. Clark, Ph.D.

Assistant Professor: Isabel MacInnes, M.A.

Assistant Professor: _____

French.

In order to obtain admission to the First Year class in French, intending students must have passed the University Matriculation Examination, or an equivalent examination, in that subject.

COURSE I.

I. (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 (i) those marked V. Free Composition, pages 143 to 219, (ii) the test papers in composition, pages 259 to 265, and (iii) the passages for translation into French, pages 266 to 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).

Three hours language course for pass students. One hour literature for students taking the distinction course.

Agricultural French.

Prescribed text: Cunisset-Carnot, *Le livre d'Agriculture*, Paris (Larousse).

Reading and translating with easy composition.

Two hours a week.

COURSE II.

Summer Reading.—Students who intend to take Course II. are required to read during the vacation.

Introduction to No. 4 below.

(a.) (1) Racine, *Andromaque*; (2) Molière, *Les Precieuses Ridicules*; (3) Molière, *Le Misanthrope*; (4) Mme. de Sévigné, *Choix de lettres* (Manchester University Press).

Two hours a week.

(b.) *Composition*.—Weekley, *Groundwork in French Composition* (W. B. Clive). One hour a week.

(c.) One hour's literature lesson based on (a) above. Distinction.

COURSE III.

Summer Reading.—Sainte Beuve, *Trois portraits* (Oxford Press), pages 57 to 112.

(a.) *Literature*.—Corneille, *Polyeucte* (Didier, Paris), 1 fr.; Racine, *Andromaque* (Didier, Paris), 1 fr.; Molière, *Les Precieuses Ridicules* (Didier, Paris), 1 fr.; *Les Femmes Savantes* (Didier, Paris), 1 fr.

Three hours a week.

(b.) *Composition*.—Weekley, *French Prose Composition* (W. B. Clive); Philibert & Pratt, *Free Composition* (Dent).

One hour a week.

(c.) *Phonetics*.—In conjunction with (b). Dumville, *Elements of French Pronunciation* (Dent, Toronto).

Third Year students wishing to graduate with Honours in French should take Courses III. and IV. during their Third Year.

COURSE IV.

Summer Reading—Hugo, Notre Dame de Paris.

(a.) *Literature*.—The Romantic movement in France. (1) Victor Hugo, *Hernani*; (2) Victor Hugo, *La légende des siècles* (Oxford Press), 3s. net; (3) De Musset, *Poésies choisies* (Oxford Press), 2s. net; (4) Rostand, *Cyrano de Bergerac* (Fasquelle, Paris).

Three hours a week.

(b.) *Composition*.—Free composition and letter-writing. Ritchie & Moore, *French Composition*; Philibert & Pratt, *Free Composition*.

One hour a week.

(c.) A course of lectures on Modern French Institutions and French Life in conjunction with IV. (a).

Honour Courses in French, Third and Fourth Years, will be offered in 1920-21.

German.

Beginners' Course.—Siepmann, *Primary German Course* (Macmillan); Allen, *German Life* (Holt); Nichols, *Easy German Reader* (Holt).

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

(b.) *Reading*.—Storm, *Immensee* (Holt); Keller, *Legenden* (Holt); Meyer, *Der Schuss von der Kanzel* (Ginn); Freytag, *Die Journalisten* (Ginn).

Four hours a week.

2. *Summer Reading*.—Keller, *Dietegen* (Ginn).

The examination in Summer Readings will be held in the first week of the session.

(a.) *Composition*.—Pope, *Writing and Speaking German* (Holt).

(b.) *Literature*.—A general survey of German literature. Stroebe and Whitney, *Geschichte der Deut. Literatur* (Holt).

(c.) *Reading*.—Lessing, *Minna von Barnhelm* (Macmillan); Schiller, *Wilhelm Tell* (Holt); Goethe, *Egmont* (Ginn).

Four hours a week.

3. *Summer Reading*.—Students are expected to read as many as possible of the works mentioned in (c).

(a.) Whitney & Stroebe, *Exercises in German Syntax and Composition* (Holt).

(b.) *The German Lyric*.—A Book of German Verse, H. G. Fiedler (Clarendon Press).

(c.) *Nineteenth Century Fiction*.—Kleist, Michael Kohlhaas (Holt); Fouqué, *Undine* (Holt); Keller, *Zwei Novellen* (Oxford); Meyer, *Das Amulet* (A. B. Co.); Storm, *Pole Poppenspäler* (Heath).

Supplementary reading: Tieck, *Der blonde Eckbert*; Hoffmann, *Der goldene Topf*; Grillparzer, *Der arme Spielmann*; Mörike, *Mozart auf der Reise nach Prag*.

Four hours a week.

Spanish.

1. (a.) *Grammar and Conversation*.—Hills & Ford, *First Spanish Course* (Heath).

(b.) *Reading*.—Harrison, *Elementary Spanish Reader* (Ginn); Dorado, *Espana Pintoresca* (Ginn).

Fours hours a week.

Department of Philosophy.

Associate Professor: James Henderson, M.A.

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, and James's *Psychology*.

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.

Not given in 1919-20.

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*—Höfding, Windelbrand, Erdmann, etc.

Four hours a week.

Courses 2 and 3 will be given in alternate years. Session of 1919-20, Course 3 will be given.

4. *History of Early Greek Philosophy*.—In connection with the course, a special study will be made of Plato's *Republic* (*Golden Treasury* edition, translated by Davies & Vaughan).

Books of Reference.—Bakewell's *Source-book in Ancient Philosophy*; Taylor's *Aristotle on his Predecessors*; Burnet's *History of Greek Philosophy*; Gomperz, *Greek Thinkers*; Zeller's *History of Greek Philosophy*, etc.

Two hours a week.

Department of Physics.

Associate Professor: T. C. Hebb, M.A., B.Sc., Ph.D.

Assistant Professor: _____

Instructor: P. H. Elliott, M.Sc.

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. *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 for the pass course and one extra lecture hour for the distinction students.

Text-book: Millikan, *Mechanics, Molecular Physics, and Heat.*

3. *Electricity, Sound, and Light.*—A study of the fundamentals of electricity, sound, and light as found in Millikan & Mills' book on these subjects.

Two hours of lectures and three hours of laboratory per week.

NOTE.—The mathematics used in Courses 2 and 3 is not advanced, but the student must be prepared to use geometry, algebra, and trigonometry freely.

4. *Dynamics of a Particle and of a Rigid Body.*—Prerequisites: Physics, 2, and Differential and Integral Calculus.

Three hours a week.

5. *Advanced Electricity and Magnetism.*—Prerequisites: Physics, 2 and 3, and Differential and Integral Calculus.

Three hours a week.

INFORMATION FOR STUDENTS IN APPLIED SCIENCE.

The general regulations as to admission to the University are to be found on pages 36 and following.

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 Matriculation requirements *see* pages 39 and following.

Students intending to enter Applied Science are strongly advised to take Chemistry, I, during First Year Arts.

For returned soldiers the requirements for entrance to the Faculty of Applied Science are those of the Applied Science Matriculation of 1915. (*See* page 39.)

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. Metallurgy.
- V. Mining.

In the Fourth Year four courses are offered:—

- I. Chemistry.
- II. Chemical Engineering.
- IV. Metallurgy (1920-21).
- V. Mining 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 Wednesday, August 27th, 1919.

GENERAL OUTLINE OF COURSES.

The work of the First Year is the same in all the courses in Applied Science.

Summer Work.—All undergraduates entering the First Year of Applied Science are required to be in attendance at the University on Wednesday, August 27th, 1919, 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.		See Page.
	Lectures per Week.	Laboratory Hours per Week.	Lectures per Week.	Laboratory Hours per Week.	
Mathematics, I.....	8	....	8	...	114
Descriptive Geometry, I.....	2	4	2	4	103
Mechanical Drawing, I.....	...	6	...	6	109
Mechanics, I.....	4	3	...	...	115
Advanced Heat.....	...	...	4	3	115
Chemistry, I*.....	3	3	3	3	102
Shop-work, I*.....	1	3	1	3	110

* Students who have taken these classes may claim exemption.

Summer Work.—All undergraduates entering the Second Year—except those taking the Chemistry Course (Course I)—are required to be in attendance at the Surveying School on August 27th, when the field-work in Surveying and Geodesy will commence. (*See page 106.*)

SECOND YEAR.

Subject.	FIRST TERM.		SECOND TERM.		See Page.
	Lectures per Week.	Laboratory Hours per Week.	Lectures per Week.	Laboratory Hours per Week.	
Mathematics, 2	6	...	3	....	115
Chemistry, 2.....	1	6	1	6	102
General Engineering, 1.....	1	...	1	....	103
Structural Engineering, 1.....	...	...	...	3	104
Mechanical Engineering, 1.....	2	....	2	....	108
Mechanics (Advanced).....	3	....	3	....	116
Physics, 2 (Electricity and Magnetism)	2	3	2	3	116
Shop-work, 2.....	1	3	1	3	110
Mapping, 2.....	...	3	....	3	107
Surveying, 1.....	2	....	2	....	105
Field-work, 1 (four weeks *) .....	...	....	....	....	106

* Field-work begins August 27th, 1919.

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. (See page 107.)

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, 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 $8\frac{1}{2} \times 11$ 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 94.)

SECOND YEAR.

Subject.	FIRST TERM.		SECOND TERM.		See Page.
	Lectures per Week.	Laboratory Hours per Week.	Lectures per Week.	Laboratory Hours per Week.	
Mathematics, 2	6	....	3	...	115
Chemistry, 2	1	9	1	9	102
Chemistry, 3	2	3	2	3	103
Chemistry, 4	2	....	2	...	103
Mechanics (Advanced)	2	....	2	...	116
Physics, 2 (Electricity and Magnetism)	3	3	3	3	116
German (Arts), 1	2	...	3	...	89

THIRD YEAR.

Subject.	FIRST TERM.		SECOND TERM.		See Page.
	Lectures per Week.	Laboratory Hours per Week.	Lectures per Week.	Laboratory Hours per Week.	
Engineering Economics.....	...	...	2	...	103
Geology, 2.....	3	1	3	1	114
Chemistry, 5.....	1	9	1	9	103
Metallurgy, 1.....	1	..	3	...	113
Mineralogy, 1.....	2	2	2	2	114
Chemistry, 7.....	2	3	2	3	103
Chemistry, 8.....	...	..	...	...	103
Bacteriology, 1 (Arts).....	...	..	...	7	67
Assaying.....	1	7	...	...	113

FOURTH YEAR.

Subject.	FIRST TERM.		SECOND TERM.		See Page.
	Lectures per Week.	Laboratory Hours per Week.	Lectures per Week.	Laboratory Hours per Week.	
Chemistry, 6.....	2	...	2	...	103
Chemistry, 8.....	2	...	...	...	103
Chemistry, 9.....	1	3	2	3	103
Ore-dressing.....	2	...	2	3	112
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* pages 94 and 95.)

THIRD YEAR.

Subject.	FIRST TERM.		SECOND TERM.		See Page.
	Lectures per Week.	Laboratory Hours per Week.	Lectures per Week.	Laboratory Hours per Week.	
Engineering Economics.....	...	...	2	...	103
Metallurgy, 1.....	1	...	3	...	113
Mechanical Engineering, 2 and 3.....	2	3	2	3	108
Mineralogy, 1.....	2	2	2	...	114
Chemistry, 3.....	2	3	2	3	103
Chemistry, 4.....	...	...	2	...	103
Chemistry, 5.....	1	9	1	6	103
General Engineering, 2.....	2	...	2	...	104
Structural Engineering, 3.....	...	...	1	3	105

FOURTH YEAR.

Subject.	FIRST TERM.		SECOND TERM.		See Page.
	Lectures per Week.	Laboratory Hours per Week.	Lectures per Week.	Laboratory Hours per Week.	
Elec. Engineering and Elec. Eng. Lab.	1	2	1	2	109
Engineering Law.....	2	...	...	...	.....
Hydraulics.....	1	...	...	3	104
Chemistry, 6.....	2	...	2	...	103
Chemistry, 8.....	2	...	...	...	103
Chemistry, 5.....	1	9	1	9	103
Chemistry, 7.....	2	3	2	3	103
Fire Assaying.....	1	7	...	...	113
Thesis.....	...	6	...	10	.....

IV. Metallurgy.

The course for the Third Year is the same as in Mining Engineering.

V. 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 will be required to do so between the Third and Fourth Year.

FIRST AND SECOND YEARS.

As in other engineering courses. (For details see pages 94 and 95.)

THIRD YEAR.

Subject.	FIRST TERM.		SECOND TERM.		See Page.
	Lectures per Week.	Laboratory Hours per Week.	Lectures per Week.	Laboratory Hours per Week.	
Engineering Economics	2	...	...	...	103
Fire Assaying.....	1	7	...	...	113
Geology, 2.....	3	1	3	1	114
Chemistry, 2 or 5.....	1	6	1	6	103
Mechanical Engineering, 2 and 3.....	2	3	2	3	108
Metallurgy, 1.....	1	...	3	...	113
Mineralogy	2	2	2	2	114
Mining, 1.....	...	...	3	...	111
Ore-dressing.....	2	...	2	3	112
Structural Engineering, 3.....	2	...	2	...	105
General Engineering, 2.....	...	...	1	3	104
Mine Surveying .....	...	...	1	...	111
Mapping, 2.....	...	3	...	...	107
Field-work, 2 (four weeks*)	4*	...	...	...	107

* Field-work begins August 27th, 1919.

FOURTH YEAR.

Subject.	FIRST TERM.		SECOND TERM.		See Page.
	Lectures per Week.	Laboratory Hours per Week.	Lectures per Week.	Laboratory Hours per Week.	
Geology, 7 (as in Arts).....	2	4	2	4	84
Geology, 8 (as in Arts).....	3	1	3	1	84
Mining, 2.....	5	...	5	...	113
Metallurgy, 2.....	4	...	2	...	114
Electrical and Mechanical Engineering	2	2	2	2	108
Designing and Draughting.....	...	3	...	3	114
Ore-dressing Laboratory.....	...	9	...	9	112
Hydraulics.....	1	...	...	3	104

SHORT COURSES IN MINING.

The regular Short Courses in Mining for the Session of 1919-20 will commence on January 12th, 1920, and will continue for eight weeks. These courses include Mining, Smelting, 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.

**REGULATIONS CONCERNING 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.*

(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.) 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 exempted. No fourth-year work may be undertaken until all subjects of the previous years shall have been passed or exempted.

(4.) 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.

(5.) 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.

(6.) 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

* 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. If any subject has another which is concurrent with it, both must be taken in the same session.

all conditions by passing supplemental examinations in the subjects in which they have failed, may pass into the next higher year as undergraduates.

(7.) 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.

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.

Associate Professor: E. H. Archibald.

Associate Professor: R. H. Clark.

Instructor in Chemistry: ———

1. *General Chemistry*.—As in Arts (*see page 72*).
2. *Qualitative and Quantitative Analysis*.—As in Arts (*see page 72*).

3. *Organic Chemistry*.—As in Arts (*see page 72*).
4. *Theoretical Chemistry*.—As in Arts (*see page 72*).
5. *Advanced Qualitative and Quantitative Analysis*.—As in Arts (*see page 73*).
6. *Industrial Chemistry*.—As in Arts (*see page 73*).
7. *Physical Chemistry*.—As in Arts (*see page 73*).
8. *Applied Electro-Chemistry*.—As in Arts (*see page 74*).
9. *Advanced Organic Chemistry*.—As in Arts (*see page 74*).

Descriptive Geometry.

Assistant Professor: E. G. Matheson.

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.

Assistant Professor: E. G. Matheson.

Instructor: W. H. Powell.

ENGINEERING ECONOMICS.

General finance; stocks and bonds; partnership and corporations; estimating; cost analysis; valuations; operating and fixed charges; specifications and contracts; general management.

Two hours a week. Second Term.

GENERAL ENGINEERING, I.

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 com-

mercial timber; preservation of timber; discussion of standard specifications for engineering work.

Second Year students. One hour a week during the year.

Reference book: Mills, 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.

HYDRAULIC ENGINEERING, 1.

General Hydrology.—Application of hydraulic pressure in the case of dams, gates, and pipes; flow of water and measurement of volume by various orifices and weirs; flow in open channels, ditches, flumes, etc.

Third Year students. One hour a week.

Text-book: Hydraulics, by 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, 1.

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. I. to end of Section III., page 156, by Johnson, Bryan & Turneaure. Pub., Wiley.

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 illustrating designs in structural engineering and reinforced concrete; drawing estimates of quantities and costs.

One hour lecture and three hours laboratory during Second Term.

Text-book: *Structural Draughting and Elementary Design*, Conklin.

SURVEYING, 1.

Lectures; chain and angular surveying, surveying instruments and equipment, their construction, use, and adjustment; topography, levelling, contouring, stadia surveying, railway curves, etc.; Provincial and Dominion surveys.

Two hours a week.

Text-book: *Surveying*, Breed & Hosmer, Vol. I.

SURVEYING, 2.

(Continued from Surveying, 1.)

Theory and use of instruments, plane table surveying, mine surveying, hydrographic surveying, theory and setting out of

railway curves; elements of geodetic surveying; elements of practical astronomy; Provincial and Dominion land surveying.

FIELD-WORK, I.

(1) Farm survey, with chain and compass; (2) compass and micrometer survey; (3) detail survey of chain and pickets; (4) practice with level and transit, including adjustments. Practical instruction is given, with special reference to the general requirements of all courses.

Detail of Field-work, I, for 1919. Second Year Class.

(Total time, 22 days.)

1. *Farm Survey*.—Chain and compass survey within the cleared area of Point Grey site. Sufficient detail to show buildings, roads, total areas, and areas of particular crops. Latitudes and Departures to be calculated when work is being done. Closing error, 1 in 500. Map to be plotted 2 chains = 1 inch. Latitudes and Departures method. Time, 3 days.

2. *Telemeter and Compass*.—A closed circuit following Marine Drive and the road boundary of the Point Grey site, about 6 miles in length. Closing error, 1 in 100. Map to be plotted 200 feet = 1 inch by protractor method. Time, 2 days.

3. *Transit and Chain Traverse*.—Following same course as compass survey. Angles to be measured, using both deflection 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, 1-5,000. Plotted 200 feet = 1 inch. Angles plotted by tangents and by chords. Time, 7 days.

4. Establishment of Beach Mark at Beach by comparison with tide tables. Determination of elevation of main floor, Science Building, referred to tide-table datum and thence by equation to city datum. Establish contours, using main axes as a base and going to bush line at right angles. Plotted 200 feet = 1 inch. 2-foot contours. 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. Plotted 1 chain = 1 inch. Time, 3 days.

Two spare days may be utilized for special problem.

All calculations to be made as the field-work progresses. Sufficient notes to be copied that there shall be no confusion at the draughting-room.

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 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 transits and by sextants, illustrating the three-points 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.) Determining the latitude by the use of a mercury horizon.

(e.) The use of the transit, plane table, sextant, barometer, current meter, etc.

MAPPING, 1.

Draughting from notes obtained in field-work and other surveys; plans of University ground; also a plan of a mine from notes given.

MAPPING, 2.

Draughting from notes obtained in field-work and from other notes. Special practice in location from railway surveys, river soundings, and other advanced work.

Department of Mechanical Engineering.

Associate Professor: L. Killam.

Instructor: Cedric C. Ryan, M.Sc.

Demonstrators	{	H. Taylor.	L. E. Dunham.
		J. W. Faulkner.	F. Zuehlke.
		S. Northrop.	R. P. Duncan.
		F. McCrady.	W. E. Anderson.
		J. E. Dubberley.	J. Hogarth.
		J. Crowley.	T. B. Dick.
		E. G. Parsons.	E. Martin.
		E. J. Pitts.	

MECHANICAL ENGINEERING, 1.

Mechanics of Machines.—(a.) *Kinematics of Machines.*—Displacement, velocity, and acceleration, and their mutual relations; constrained motion; and the relative motions of links in various closed chains; alteration 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; (1) the efficiencies of ideal heat-engines; the properties of steam and the elementary theories of different heat-engines; or (2) carburetion.

Text-books: Simons, *Compressed Air*; Ewing, *The Steam Engine and Other Heat Engines*.

Reference book: Lucke, *Thermodynamics*.

Two hours a week throughout the year.

Electrical Engineering.

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, I.

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.) *Woodworking*.—The use and care of woodworking 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 smith's 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 Engineering.

Professor of Mining: J. M. Turnbull.

Professor of Metallurgy: _____

Assistant Professor of Mining: _____

Demonstrator: G. H. Comrie.

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 and mapping one hour per week in the First Term of the Third Year.

Mining, 1.—This course covers broadly the general principles underlying the operations of finding and working mines. It forms the foundation for more specialized and detailed subsequent studies in mining. In outline the course is as follows:—

Ores.—Nature and types of ores and economic minerals.

Prospecting.—Methods used in searching for mineral deposits. Outcrops and other indications of occurrence. Geological aids. Mineral fashions. British Columbia Mineral Acts and Laws, applying to prospecting and location of mineral claims.

Preliminary Development.—Usual methods, their choice, nature, and applicability. Relation to future operations. Technical and commercial results to be attained.

Boring.—Types of long-distance boring drills used, their uses for particular purposes. Value of results in prospecting for and development of mineral occurrences.

Mechanical Appliances.—General nature, types, and uses of mining machinery. Hoisting and winding engines, compressors, rock-drills, coal-cutters, dredges and hydraulic plants, transportation appliances and systems.

Structures.—General nature, types, and uses of structures and buildings in connection with mines. Ore-bins, head-frames, etc.

Excavation.—Breaking and moving gravel, rock, ore, and coal. Common explosives, their use and effects.

Mining Methods.—Systematic development work. General methods used in mining different types of mineral occurrences. Placer mining. Value and use of maps, surveys, geological and sampling work.

Lectures, three hours per week in the Second Term of the Third Year.

Books of reference: Principles of Mining, H. C. Hoover; Mining without Timber, R. B. Brinsmade; etc.; and Current Mining Journals and Transactions.

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, with one laboratory period of three hours per week in the Second Term.

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, 1.—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.

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, 2.—An advanced course in the principles and practice of Mining Engineering under the following general heads:—

Mining machinery, plant, and structures. Mining methods. Mine development. Mine timbering, tunnelling, shaft-sinking, blasting, and explosives. Mine examination, ore sampling, mine valuation, mine accounts and costs, administration, economics, ethics.

No special text-book is specified, but reference is made to numerous books, technical journals, trade catalogues, etc. Adaptation to British Columbia conditions is kept in view.

Lectures, five hours per week during the Fourth Year.

Metallurgy, 2.—An advanced course covering the principles and practice of copper, lead, iron, and zinc smelting. Refining and marketing of metals. Hydrometallurgy of gold, silver, zinc, and copper. Other metallurgical processes are treated briefly.

Text-books, references, etc., will be specified as required during the course. Adaptation to British Columbia conditions is a prime consideration.

Lectures, four hours per week during the First Term and two hours per week during the Second Term. Fourth Year.

Designing and Draughting.—A course covering the special requirements of mining students in regard to the layout and details of mining plant, structures, mine surveys, etc.

Three hours per week during the Fourth Year.

Department of Geology.

Professor: R. W. Brock (on overseas service).

Assistant Professor: Edwin T. Hodge.

2. *General Geology.*—As in Arts (*see* page 82).
3. *General Mineralogy.*—As in Arts (*see* page 83).
7. *Petrology.*—As in Arts (*see* page 84).
8. *Ore-deposits.*—As in Arts (*see* page 84).

Department of Mathematics.

Associate Professor: G. E. Robinson.

Assistant Professors { E. H. Russell.
E. E. Jordan.

MATHEMATICS, I.

1. *Geometry.*—(a.) Solid geometry. (b.) Analytic geometry.

Text-books: Hall & Stevens' School Geometry (Macmillan); Tanner & Allen's Analytic Geometry (American Book Co.).

2. *Algebra.*—Miscellaneous theorems and exercises, exponential and other series, properties and solutions of higher equations, complex numbers and vector algebra, graphical algebra, with an introduction to analytic geometry, indeterminate forms, limits, derivatives, slopes of curves. First Year (First and Second Terms).

Text-books: Rietz & Crathorne's College Algebra (Holt & Co.).

3. *Trigonometry*.—Plane and Spherical. Second Term.
Text-book: Murray's Plane and Spherical Trigonometry, with tables (Longmans).

MATHEMATICS, 2.

1. *Analytic Geometry*.—The point, straight line, circle, parabola, ellipse and hyperbola, elements of geometry of three dimensions. First Year (latter part of Second Term) and Second Year (First Term). The Second Year work begins with the circle.

Text-book: Tanner & Allen's Analytic Geometry (American Book Co.).

2. *Calculus*.—Differentiation of functions of one or more variables, successive differentiation, tangents, etc., curvature, maxima, and minima, integration, with appliances to areas, volumes, moments of inertia, etc. First and Second Terms.

Text-book: Granville's Differential and Integral Calculus (Ginn & Co.).

Department of Physics and Mechanics.

Associate Professor: T. C. Hebb.

Assistant Professor: _____

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, 1*.—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.

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.

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.

Two hours of lectures and three hours of laboratory per week.

4. *Advanced Mechanics*.—The subject-matter consists of an extension of the statics and dynamics of Mechanics, I, but with the use of the Differential and Integral Calculus.

Two hours of lectures per week in the Second Year of Applied Science.

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 practise 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 the Commission as needing and fitted for the work.

In general the length of a course is six months, and entrance may follow immediately upon approval.

Special equipment and tools, suitable to the very practical nature of each course, are provided to supplement the equipment of the University laboratories.

Any one who satisfactorily completes one of these courses should have no difficulty in obtaining employment along the line of his training.

At present the following are offered:—

1. *Garage Mechanics*.—Giving training in the operation and care of internal-combustion engines and automobiles, and in repair-work on these.

2. *Automobile Driving*.—A six weeks' course, including four weeks of garage-work.

3. *Gas-engine Operation*.—A four months' course in the operation and repairing of various types of stationary and marine internal-combustion engines and of gasoline farm-tractors, including work in general machine-fitting.

4. *Machine-shop Work*.—Including machine-tool and hand work for general machinists.

5. *Steam Engineering*.—Instructing those with firing experience so that they may secure Third or Fourth Class Engineers' Papers for the operation of steam plants in British Columbia.

6. *Practical Electricity*.—Preparing for the capable handling or installing of the electrical equipment of any industrial plant, office building, or the like.

7. *Moving-picture Machine Operation*.—Giving the electrical training necessary for this work, and supplementing the work of the Physics Department in Optics, as preparation for later instruction on machines by members of the Operators' Union.

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.

(1.) 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 38). 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.

(2.) 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 67.*)

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. A detailed outline of the Fourth Year courses is included in the present calendar, but these courses will not be offered before the fall of 1920.

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	3
Chemistry, 1	3
English, 2	2
French or German (Special)	2
Mathematics, 1—Geometry and Trigonometry	2
Physics, 1	3
	<hr/>
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	2
Botany, 10 (a), or Zoology, 21 (b)....	1½
Chemistry, 2	3
English, 3 and 4	3
French or German (Special)	2
Bacteriology, 1	1½
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Total required	18½

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.

	Units.
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
Animal Husbandry, 6	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
<hr/>	
Total required	13½

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
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Total required	7½

FOURTH YEAR.

	Units.
Animal Husbandry, 8	1
„ 9	1½
„ 10	1
„ 11	1½

	Units.
Animal Husbandry, 12	1
" 13	1
" 14	1½
Agronomy, 4	1½
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Total required	10

In both Third and Fourth Years students will be 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	1½
Dairying, 5, 1½ units }	
Organic Chemistry (Laboratory)	1
Agricultural Geology	1½
Animal Husbandry, 4	1½
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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
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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 (<i>b</i>).....	1
Plant Physiology—Botany, 12 (<i>b</i>).....	1
Zoology (Systematic Entomology)— Zoology, 21 (<i>b</i>)	1
Agricultural Geology	1½
	<hr/>
Total required	7½

FOURTH YEAR.

	Units.
Horticulture, 5	1½
" 6	1½
" 7	1
" 8	1½
" 9	1
" 10	1½
Plant Pathology—Botany, 10 (<i>c</i>)	1
Economic Entomology—Zoology, 20 (<i>a</i>)	1½
Systematic and Economic Botany— Botany, 10 (<i>b</i>)	2
Chemistry of Insecticides and Fungi- cides—Chemistry, 9	½
Bacteriology of Canning, Fermenta- tions, etc.—Bacteriology, 5	½
Thesis	½
	<hr/>
Total required	14

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, 3	2
	6½
Total required	6½

FOURTH YEAR.

	Units.
Poultry Husbandry, 5	½
" 6	½
" 7	2
" 8	4
" 9	1½
	8½
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: L. S. Klinck, M.S.A.
 Associate Professor: P. A. Boving, Cand.Phil.,
 Cand.Agr.
 Assistant Professor: G. G. Moe, B.S.A.

Agronomy, 1—Soils 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 improve-

ment will constitute the basis for subsequent courses in Agronomy.

One lecture and one laboratory. Fall 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. Fall Term, Second Year.
2 units.

Agronomy, 3—Field Crops (Advanced).

Course 3 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, and storing 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. Fall Term, Third Year.
1½ units.

Agronomy, 4—Seed-growing.

This course deals with the production and marketing of vegetable, root, clover, and grass seeds.

Two lectures and one laboratory. Spring 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. Fall 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. Fall 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.

Prerequisite: Agronomy, 5.

Two lectures and six half-days. Spring Term, Fourth Year.
1½ units.

Agronomy, 8—Plant-breeding.

As related to the breeding of field crops.

One lecture and one laboratory. Spring 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. Spring 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, B.A., B.S.A.

Assistant Professor: H. M. King, B.S.A.

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. $1\frac{1}{2}$ 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. $1\frac{1}{2}$ 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. $1\frac{1}{2}$ 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. $1\frac{1}{2}$ units.

One three-hour laboratory period per week in the fitting and handling of live stock is required of Animal Husbandry Major students. $\frac{1}{2}$ 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.

Prerequisites: Chemistry, 3—Organic Chemistry; and Animal Husbandry, 3. 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, N.D.D., B.S.A., M.Sc.

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 analyses 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—Testing 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, B.S.A.

Associate Professor: A. F. Barss, A.B., B.S. in Agr., M.S.

Horticulture, 1—Vegetable Gardening.

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: A. G. Lunn, B.S.A.

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; incubation 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. 2 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, 3. 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. 1½ 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, 7.
1½ units.

The Evolution of Agriculture.

Professor: Leonard S. Klinck, M.S.A.

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.

R. H. Mullin, B.A., M.B., Professor of Bacteriology.

Wilfrid Sadler, B.S.A., M.Sc., Associate Professor of Dairying.

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 and Zoology.

Associate Professor: A. H. Hutchinson, M.A.,
Ph.D.

Instructor in charge of Herbarium and Botanical
Gardens: John Davidson, F.L.S., F.B.S.E.

Biology, 1.—As in Arts (*see* page 68).

Biology, 4.—As in Arts (*see* page 69).

Botany, 10 (a).—As in Arts (*see* page 69).

Botany, 10 (b).—As in Arts (*see* page 70).

Botany, 10 (c).—As in Arts (*see* page 70).

Botany, 11 (b).—As in Arts (*see* page 70).

Botany, 12 (b).—As in Arts (*see* page 70).

Zoology, 20 (a).—As in Arts (*see* page 71).

Zoology, 21 (b).—As in Arts (*see* page 71).

Department of Engineering.

Associate Professor: L. Killam.

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.

Not offered before 1920-21.

Department of Geology.

Professor: Reginald W. Brock, M.A., F.R.S.C.

Assistant Professor: Edwin T. Hodge, M.A., Ph.D.

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 lecture and laboratory periods of two hours each during the First Term.

Meteorology and Climatology.

Two lecture and laboratory periods of two hours each during the Second Term.

Offered for the first time in 1919-20.

1919-1920

**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, and it is recommended that Chemistry, 1 (Distinction), be taken during this First Year of the course.

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:—
 - Another language.
 - Philosophy, 1.
 - Economics, 1.
 - History, 2.
 - Chemistry, 1 (if not already taken).
 - Biology.
 - Geology.

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.
 - Geology.
3. Physics, 1, and Mechanics (Applied Science).
4. Mechanical Drawing, 1 and 2 (Applied Science).

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.

**FOREST PRODUCTS LABORATORIES OF CANADA,
VANCOUVER LABORATORY.**

Loren L. Brown, B.Sc. (C.E.), Superintendent.

The above Laboratory has recently been established by the Forestry Branch of the Department of the Interior.

The main purpose of this Laboratory is the testing of woods to establish correct mechanical properties and structural characteristics of Canadian woods.

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 Hatt-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.

HERBARIUM AND BOTANICAL GARDENS.

The University possesses a Herbarium of over 10,000 sheets illustrating the Provincial flora, including algæ, fungi, mosses, ferns, and 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 the donation of several private herbaria; the "Eli Wilson collection," donated in 1913, comprised between 1,000 and 2,000 specimens, most of which were collected in the interior of British Columbia, represented over thirteen years' work on the part of the donor, E. Wilson, Esq., Armstrong, B.C.

Numerous smaller collections have been donated since then, but during the early part of 1919 a collection of approximately 2,500 specimens, known as the "A. J. Hill collection," was presented by Mrs. A. J. Hill, of New Westminster, through E. B. Hill, Esq., son of the donor.

This collection represents work extending over a period of thirty-five years in British Columbia, and contains specimens collected during the preliminary survey of the Canadian Pacific Railway route to the Coast. A valuable series of about 100 excellent water-colour illustrations of mushrooms and allied fungi is included in this donation.

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 herbaraceous collection, where plants are systematically arranged 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.

HONOUR ROLL.

**HONOUR ROLL OF THE MEMBERS OF THE STAFF AND
OF THE STUDENT BODY WHO ENLISTED
FOR OVERSEAS SERVICE.**

So far 268 replies to the questionnaire sent out to the relatives of the 504 men whose names appear on the University Roll of Honour have been received, and the following information has been compiled:—

Killed, 73; wounded, 94.

M.C.	29	1914-15 Star	2
M.M.	17	Mons Medal.....	1
D.S.O.	3	D.F.C.	2
D.C.M.	2	Croix de Guerre	1
1915 Star.....	3	Croce di Guerra	1

MEMBERS OF THE STAFF.

Brock, Major Reginald W. Logan, Major Harry T., M.C.
Jordan, Capt. Edward E. Schofield, Lieut. Stuart J.
Eastman, Lieut. Mack.

STUDENTS OF THE UNIVERSITY OF BRITISH COLUMBIA.

Abercrombie, William Thomas.
Allardyce, William John.
Allen, Gordon C.
Anderson, Lance-Sergeant Allan Jardine.
*Anderson, Claude William, M.M.
Anderson, David Gash.
Anderson, John Alexander.
Anderson, Captain Sydney, D.F.C.
Archibald, Aubrey Parker.
Austin, Corporal Clarence Ward.
Baker, Lincoln Thompson.
Ballantyne, William Herbert.
Banfield, William Orson.
Barclay, William Saunderson.
Barnwell, George Francis.
Baxter, Fred Rowland.
Baxter, William E.
Berto, John C.
Best, Edgar Leslie.
Bickell, William Albert Bird.

* Killed in action.

- Blair, Lieutenant Alexander Gilbert.
 Bottger, Gevert Carl.
 *Bunn, Raymond Spence.
 Buscombe, Harold Frederick Edwin.
 Bush, Waldo Murray.
 Cairnes, Clive Elmore.
 Callaghan, Gordon.
 Carter, Bayard M.
 Caspell, Edmond Vanderburgh.
 Castleman, Gordon Cameron.
 Christie, Alexander Sellar.
 Clark, George Savage.
 Clarke, Lieutenant George Ernest Wesley.
 *Clement, Captain Carleton Main, Croix de Guerre, M.C.
 Cline, Harold MacKechnie.
 Coates, Wells Wintemute.
 Coles, Eric Morrell.
 Colgan, Lieutenant Harry Wilfrid.
 Collister, Douglas Harold.
 Cook, Archibald James.
 Craig, Gordon.
 *Creery, Lieutenant Cuthbert John.
 Creery, Leslie Charles.
 *Creery, Second Lieutenant Ronald Hulbert, M.C.
 Crickmay, Colin Hayter.
 Cross, George Carmichael.
 Crute, Ebenezer.
 Davidson, Douglas Alexander.
 Dawe, Captain William Albert, M.C., M.M.
 Day, Frederick James.
 Day, Edwin Ethelbert.
 de Pencier, Joseph Christian.
 Desbrisay, Merrill.
 Dixon, Lieutenant George Clapham.
 Doell, Raymond A.
 Drewry, John Haworth.
 *Duncan, Lieutenant Charles Andrew.
 Emmons, Edward.
 Emmons, William Frank.
 Evans, Charles Sparling.
 Fitzgerald, Herbert George.
 Fooks, Maynard Allan.
 Fountain, Lieutenant George Frederick.
 Fowler, Grant.
 Frampton, Lieutenant Geoffrey.
 Galbraith, Samuel Tait.
 Gale, William Alexander.

* Killed in action.

- *Gibson, Lieutenant Harold Alexander Frater.
 Gibson, Lieutenant Thomas Ian.
 Gillespie, Roy Meredith.
 Gillie, Kenneth Beresford.
 Glen, Herbert Douglas Stewart.
 Goodman, Edwin Monro.
 Gordon, Lieutenant Alva McIntyre.
 Gregg, Elwyn Emerson.
 Greenwood, Harold Day.
 Hamilton, Lieutenant Robert Stanford.
 Hamilton, Stewart Perry, M.M.
- *Hardie, Charles Mawer.
 Harkness, John Alexander Charles.
 Harris, Henry.
- †Harvey, Gerald Myles.
 Hatch, Marion Charles.
 Hatch, William George.
 Heynen, Robert Harry.
- *Hillis, Bruce.
 Holmes, Sergeant Albert Thomas Franklin.
 Hughes, Ernest Leigh.
- *Hughes, Norman Vincent.
 Hunter, Robert Russell.
 Hurst, Allan McLean.
 Jackson, Lieutenant Lorne Hugh.
 Jackson, Captain John Arnold, M.C., 1915 Star.
 James, Gordon.
 James, Howard Turnbull.
 Jane, Robert Stephen.
- *Jeffs, William Armour Cowan.
 Johansson, Joseph Soemunder.
 Johnston, Sergeant Harry Lloyd.
 Kearne, Lance-Corporal Geoffrey Norman.
 Keenleyside, Hugh Llewellyn.
 Kellie, Robert Irvine.
 Kerr, Lieutenant John Harold.
 Kirby, Judson Orville Coates.
 Lambert, Lieutenant Noel Dudley.
 Law, Frederick Charles.
 Lawrence, Corporal James Lyle, D.C.M.
- *Lawson, Lance-Corporal Duncan MacDonald.
 Leckie, Claude Perrin.
 Le Messurier, Lieutenant Ernest L.
 *Le Messurier, Lieutenant Thomas.
 Letson, Lieutenant Harry Farnham Germaine, M.C.

* Killed in action.

† Died while in training.

Lett, Major Sherwood, M.C.
Livingstone, Lieutenant Warren.
Lord, Arthur Edward.
Lord, Lieutenant Ernest Ellis.
Lumsden, Gerald Roberts.
MacArthur, Donald Moulton.
Macfarlane, Lieutenant Comrie Vernon Hastings.
MacLeod, William Ray.
Marshall, Abraham Lincoln.
Mathers, Cliffe St. John.
* Mathers, Wilford Wiltsie.
Maxwell, William Forrest.
May, John Gordon.
*Mayers, James Christian Francis.
McAfee, Weldon Robert.
McClay, James Gerald.
McColl, Eli Stuart.
McCuaig, Lieutenant Donald Alexander.
McDiarmid, Lieutenant Harry de Cew, Croce di Guerra.
McDougall, Wilfrid Robinson.
McIlvrde, Robert, M.M., 1915 Star.
McInnes, Harold Walker.
McKenzie, Frederick Francis.
McLellan, Norman Wellington.
McLellan, Willard Gilmore.
McNamara, Joseph Albert.
McPhalen, Hugh Cornelius, M.M.
McQueen, Lieutenant Donald William.
McTavish, Lieutenant Alexander Morrison.
Meadows, George Douglas.
Meekison, Lieutenant Donald Murray.
Melville, Andrew Harry.
Mellish, John Frederick.
Mennie, John Hamilton.
Meredith, Howard Jackson.
Merrill, Gerald Harriman.
Miller, Sergeant Arthur Harold.
Miller, Lieutenant Clive.
Milton, Ernest Lytle.
*Moore, Captain Guy Borthwick.
Morrison, Loyle Alexander.
Munro, Alexander.
Munro, Donald Hugh.
*Murray, Kenneth William.
*Newton, Edgar Harold.
Palmer, Richard Claxton.

* Killed in action.

- Palmer, William Mills.
Pearse, Hubert Arnold.
Pim, Edgar Henry.
Pratt, Bernard Dodge.
Rae, Douglas Henderson, M.M.
Ray, Godfrey H.
Rebbeck, James Waller.
Richards, Edgar Charles.
Rickaby, William.
Rive, Alfred.
Roberts, Aubrey Frederick.
Robertson, Hugh Milne.
Rose, Hedley Alexander.
Scott, Gordon Wood, M.M.
Scott, Lieutenant Seaman Morley.
*Seidelman, Edward Joseph.
Sexsmith, Lieutenant Franklin Frederick Burrows.
*Shearman, Thomas Stinson Becket.
*Simmonds, Lieutenant Robert Hazlette.
Smeeton, Lieutenant Joseph Thomas.
Southcott, Lance-Corporal James Percy Caldwell.
Southam, Harold Davey.
Stephen, John Forrest.
*Stewart, Lieutenant Earl Richard, D.F.C.
†Stewart, John Malcolm.
Story, John Boyd.
Thompson, Lance-Corporal Douglas Lionel.
Thompson, Stephen Cecil Clute.
Thomson, William Gregg.
Timberlake, Morley, M.M.
Traves, Lieutenant Charles Wesley, M.M.
*Traves, Edmond Cornelius.
Usher, Alexander Murray.
Usher, Charles.
Waddington, Corporal George Wilfrid, M.M.
Walkinshaw, Wingate Robertson.
Wallace, Bryce Y. Howie.
Wallis, Captain Preston Richard Montagu, M.C., 1914-15 Star.
Walsh, Harold Edgar.
Watts, Harold Newton.
Weart, Sergeant James Foss.
Weld, Charles Beecher.
Wilkinson, Elmo Clifford.
Williams, Joseph Augustin.
*Wilson, Lieutenant Conrad Blackadder.

* Killed in action.

† Died while in training.

Wilson, Frank Robinson.
 Wilson, William Cochrane.
 Woodward, Lieutenant Eric Raymond, M.C., 1915 Star.
 *Wright, Lieutenant Douglas Archibald.
 Wright, Charles Alfred Holstead.
 Wright, Leroy Charles.

STUDENTS OF THE MCGILL UNIVERSITY COLLEGE OF
 BRITISH COLUMBIA.

Adams, Robert Frederick.
 Allen, Lieutenant J. S.
 *Anderson, Captain Goldie Fraser, M.C.
 Appleton, Lieutenant Harold.
 *Atkins, Lieutenant Basil Elmo.
 Baker, Fred Lefevre.
 Baldwin, Captain Sidney George.
 Barker, Culver Maynard.
 Bell-Irving, Major Malcolm McBain, D.S.O., M.C.
 Bell-Irving, Captain Robert.
 Bennett, James Lingard.
 Beveridge, Lieutenant William Wentworth, M.C.
 Black, Alexander Pineo.
 Boak, Captain Eric Wellesley.
 Bodie, Robert Charles.
 *Bowser, William James.
 Boyd, James Bruce.
 *Boyes, Lieutenant David Alexander.
 Boyle, Ernest Allen.
 Bray, Lieutenant Harry Randle.
 Brydone-Jack, Lieutenant Herbert Disbrow.
 Buck, Captain Frank Hepworth, M.C.
 Bunt, Major William Percy.
 Busby, Lance-Corporal Edward Maurice.
 Cameron, Sapper Hamish Johnston, M.M.
 *Campbell, Fred Edward.
 *Cameron, Lieutenant Ian McKenzie.
 Campbell, J. M.
 Carne, Harold Gowan.
 Carnsew, Lieutenant Charles Noel Thomas, M.C.
 Celle, Peter Thomas Dominic.
 *Chaffey, Lieutenant Charles R.
 Chave, Elmer Hargreaves.
 Chown, Eric Vickers.
 Clark, Harry McKenzie.
 Clearihue, Lieutenant Joseph D.

* Killed in action.

- Coughlan, Joseph Clare.
Crane, Lieutenant Harry Joseph.
Creery, Lieutenant Kenneth Andrew.
Creighton, Second Lieutenant Charles P.
Davies-Moore, Fritz.
*Desbrisay, Lieutenant Eric Merrill, D.S.O.
Desbrisay, Harold Archibald.
de Pencier, Lieutenant Theodore Frederick Wells.
De Wolf, Lieutenant Tempest Carroll St. Etienne, M.C.
Donaldson, Major Arthur William.
*Dowler, Lieutenant John Welton Douglas.
Draper, Richard.
Drost, Lieutenant Herbert Mason, M.C.
Duchesnay, Lieutenant de St. Denis, M.C.
*Duncan, Robert George, M.M.
Dunn, Lieutenant Frank.
Dustan, Alexander Boyle.
Earle, George Alfred.
Earle, Major Harry A.
Eberts, Captain Harold F. H., 1915 Ribbon.
Eckardt, Harold Alexander.
Elliott, H. Maclean.
Elliott, Lachlan McLean.
Ellis, William Nichol.
Ellison, Price.
Ferguson, Clifford Joseph.
Finch, Captain Orie.
Fisher, Aubrey Silver.
Fitz-Henry, Edward Graham.
Flitton, Ralph Cyril.
Floyd, Claude Herbert.
Foreman, Earl Kenneth.
Forrester, Alexander.
*Frame, Lieutenant William Layton.
Frampton, C. S.
Frampton, Keith Bertie.
Fraser, Lieutenant George Lyall, M.M.
Fullerton, Lieutenant James Thornton.
*Gibbins, Lieutenant Gwynn Gilbert.
*Gilbert, Lieutenant Reginald Herbert.
Godfrey, Edward Adolphus Chapnell.
Gordon, Lieutenant David John
Gordon, Eric Valentine.
Grant, Harold David.
Graves, Sergeant Herbert Sandham.

* Killed in action.

Handy, Levi.
Hannington, Captain Francis Carleton, M.C. and Bar.
*Harvey, Lieutenant Oliver Colin.
Helme, Harold Heaton.
Hickey, Edward John.
Hodsdon, Donald Wilbur.
Holland, Frederick William.
Holland, Richard Rowe.
Holmes, Captain Henry Cuthbert, Mons Medal.
Honeyman, Lieutenant Pharic Donald Innes, M.C. with Bar.
Hoult, Sergeant John Henry.
Hunt, Lieutenant William Lucas.
Irwin, Giffard M.
*James, Percy R.
Jones, Thomas Meredith.
Kerr, Forrest Alexander.
*Knowling, Lieutenant Albert James.
Lane, James Eldon.
Leckie, Lieutenant John Alan.
Lindsay, Gordon.
Macaulay, Alexander Howard.
*MacLennan, Neil Kenneth Finlayson.
Macnaghten, Captain Ronald Frederick, D.S.O.
MacPherson, Lieutenant Gordon Angus.
MacPherson, Lieutenant Ralph Stewart, M.C.
Marling, Samuel Earle.
Mathers, Lieutenant Fred DesBrisay.
McDiarmid, Neil H.
McDonald, Lieutenant John Alexander, M.C.
McGowan, Thomas Hoey.
McGregor, Donald Manson.
McKay, Angus Howard.
McKenzie, C. I.
McLelan, Lieutenant Allan Gordon Wilson.
McLennan, Robert Purvis.
McLennan, Stanley Archibald.
*McNaught, Robert Donald.
McNaughton, Ira James.
McNeill, Chester Wilson.
McNeill, Lieutenant Donald Lerverne.
McTavish, Lieutenant Charles Hugh.
Moodie, Captain Stanley Fyfe Middleton.
Moore, Joseph D.
*Morrison, Albert Henry.
Muir, William James Cecil.

* Killed in action.

-
- Murray, David Fraser.
Murray, Captain William Ewart Gladstone.
*Mutch, Lieutenant John Thomas, M.C.
Ney, John Stewart.
Nicholson, Cuthbert Neilson.
Norris, George Edward.
Norris, Lieutenant Thomas Grantham, M.C. and Bar.
Northrop, Lieutenant Harold.
*Owen, Harold Heber.
Payne, Wilfrid Reid.
Plummer, Lieutenant Stephen Becher.
*Pottinger, James McNaughton.
Poupore, Major William Edmond.
Powell, Harold Milton.
Powell, Captain Fitzhenry Townshend Scudamore.
*Price, Captain Harold, M.C.
Priest, Roy Montagu.
*Putnam, Laurie Chalmers, M.M.
*Rand, Lieutenant Edwin Arthur.
*Raynes, Walter L.
Reid, Lieutenant John Herbert.
Ritchie, Rae George.
Robinson, Captain Henry Lunam.
Rogers, William Byron.
Rosebrugh, Lieutenant Charles Kenneth.
*Ross, Lieutenant Douglas William.
Ross, Lieutenant Herbert McKenzie, M.C.
Ross, Captain William Cameron, M.C. with 2 Bars.
Sawers, Major Basil Lindsay, M.C. with Bar.
*Sclater, Major James Loutit.
Scott, Lieutenant Cecil Oscar.
Scott, Lieutenant James Hastie, M.C.
Scott, Sydney Dunn.
Selman, Gordon Samuel.
Service, Robert W.
Simpson, Donald David.
*Sivertz, Henry G., M.M. with 2 Bars.
Smith, Laurence Bradbury.
Smith, Philip Paul.
Smith, Robert Reid.
Smithson, Hillerie William.
Sproule, Walter Kirby.
*Stevens, D. O. Vernon.
Stewart, Lieutenant Carroll Alexander.
Stewart, Frederic Choate.

* Killed in action.

Stewart, Charles Clark.
 Stewart, George William.
 Stone, Clifford Ervin.
 *Stone, Lieutenant Horace Gordon.
 Stuart, Lieutenant William James.
 Sutton, William Alan.
 Swenson, Paul Sidney.
 *Taylor, Lieutenant Arthur.
 Taylor, Ivan Marcus, 1914-15 Star.
 *Taylor, Major Kenneth Churchill Craigie, D.S.O.
 Thomas, Lieutenant Owen James.
 *Thomson, Andrew B.
 *Trapp, Donovan Joseph.
 Turnbull, Robert Franklin.
 *Underhill, Charles Bertram.
 Underhill, Lieutenant Frederic Clare.
 Underhill, Lieutenant James Theodore.
 Wade, Lieutenant Henry Read.
 Walker, John Fortune.
 Wall, Major James Thomas.
 Whyte, Captain Harold Eustace.
 Wilmot, Major Lemuel Allan.
 Wilson, Arthur Louis.
 Wilson, Lieutenant Ray Holland, M.C.
 Wilson, Robert Morris.
 Yates, Arthur.

MATRICULANTS.

Akehurst, Lieutenant Charles H. I.
 Atkins, Cadet Richard Roy, M.M.
 Atkinson, James H. R.
 Baker, Albert M. O.
 Bennett, Lieutenant Leslie.
 Berto, Joseph B.
 Birbeck, Albert Franklin.
 Burns, Torquil H.
 Campbell, Harold Lane.
 Caple, Harold Henry.
 Carlisle, Kenneth W. W.
 Chew, Vernor J.
 Clandinin, Thomas.
 Clare, Richard Roy.
 *Corsan, Stuart Glassford.
 Crowe, Henry Alfred.
 Cuthbert, William Arthur.
 Davenport, Harold.

* Killed in action.

Deans, William.
Dirom, Albert Munro.
*Domoney, Leslie Ira.
Douglas, Llewellyn.
Elliott, George Albert.
Ewen, Hamish.
Ford, Reginald Bryden.
Forrester, Norman B.
Foulkes, Godfrey Strother.
Fraser, William Alan.
*Freeman, Frank Eric.
*Freeman, Harold Augustus.
Fuller, John Reginald.
Gallagher, Victor Rex.
Gee, Arthur Milsap.
Gray, David Peter.
Gray, Robin.
Grimmett, John Alexander.
Harris, George Howell.
Henry, Arthur Taylor.
Hine, Robert Fraser, M.M.
Houghton, Gordon Kingsley.
Jack, Thomas Douglas.
Jackson, Hugh Arthur Bruce.
James, Percy F.
Jensen, Ernest A.
Jones, Russell Heber Blayde.
King, Paul A.
Kirkup, Gilbert Walker.
Knight, Albert Leslie.
*Knowling, George Henry.
*Lalonde, Maurice Chevrier.
Laughton, John A. C.
Lewis, Fred Robert.
Lundie, James Athol.
Manson, Arthur Bennett.
Mawhinney, Lieutenant W. Russell.
McAllister, Thomas H.
McInnes, Hubert Campbell.
McLeod, Lieutenant Robert Leighton.
McMichael, William.
McNab, Allan Graham.
Middleton, William.
Mickleborough, George Joseph.
Miles, Stanley Frederick.

* Killed in action.

Morden, Herbert Holmes.
Nelson, Lieutenant Gordon Rishton.
Osterhout, Lieutenant Arthur Berson.
Ozburn, Reginald H.
Parfitt, Victor Raymond.
Paterson, Gilzean Walker.
*Pearce, Harold Marshall.
Peterson, Frank.
*Phillips, Eugene.
*Reid, Robert Morgan.
Ritchie, Ralph Gardiner.
Robson, Wilmot Douglas.
Rogers, Judson Havelock.
*Ross, John H.
Rourke, Rupert Karl.
Rowan, Eric Reginald.
Selman, Roy G.
Small, Frederick Arthur.
Stacey, Leonard.
Stewart, James Lionel.
Swenson, Arthur.
Taylor, Thomas Talbot.
Thompson, William McNab.
Todd, Robert Lawrie.
Toft, Norman.
Tuckey, Francis Edward.
Waterhouse, Albert Victor.
Wellband, Wilbur Arthur, D.C.M.
Youngs, Frank.

* Killed in action.

ALPHABETICAL LIST OF STUDENTS AND ADDRESSES.

FACULTY OF ARTS.

FIRST YEAR.

<i>Name.</i>	<i>FIRST YEAR.</i>	<i>Home Address.</i>
Allan, Doris Olga		Vancouver.
Allen, Gordon Craig		Vancouver.
Allen, Muriel Eva		Vancouver.
Astell, Mary Catherine Laura		Vancouver.
Atherton, Marion Clara		Vancouver.
Baker, Wallace Risser		Vancouver.
Ballard, Edna Florence		Vancouver.
Barlow, Margaret Young		North Vancouver.
Bell, John Gordon		Vancouver.
Bird, Henry James		Vancouver.
Birnie, Anna Robina		Vancouver.
Bramley, Arthur		Vancouver.
Brown, Ethel M.		Vancouver.
Bulman, Marjory Maude		Kelowna.
Burton, William Donald		Vancouver.
Bushell, Herbert Edward		Vancouver.
Buxton, Mary Isabel		McKay P.O.
Cameron, Ralph King		South Vancouver.
Cameron, William Murray		New Westminster.
Campbell, Annie Louise		Vancouver.
Campbell, Ernest Albert		Vancouver.
Casselmann, Jessie Elizabeth		Vancouver.
Charnley, Mary Alexandra		Vancouver.
Clandinin, Gladys Margaret		Vancouver.
Clarke, Margaret Isabella		Vancouver.
Clarke, Mary Asenath		Vancouver.
Clegg, Charles Harold		Rossland.
Coffin, Frederick Winfield		Vancouver.
Collard, Carlton		Vancouver.
Collier, Elmer Baldwin Ferris		Vancouver.
Cornyn, Lillian Mary		Vancouver.
Cowdell, Lillian Francis		Vancouver.
Crawford, Alphonse		Vancouver.
Crowley, Terence		Kelowna.
Cummings, Robert Edgar		Vancouver.
Curtis, Annette Hamilton		Vancouver.
Curwen, Greta Elizabeth		Vancouver.
Cutler, Norman Lion		Vancouver.
Darts, George Crompton		Vancouver.
Dauphinee, James Arnold		New Westminster.

<i>Name.</i>	<i>Home Address.</i>
Davidson, Douglas Alexander	Vancouver.
Dew, Annie Nina	Vancouver.
Dodson, Edna	Kerrisdale.
Dougan, Clarence Alvin	Vancouver.
Eagles, Blythe Alfred Edmund	New Westminster.
Else, Charles Roy	West Summerland.
Embree, Alma Gertrude	New Westminster.
Emery, Gertrude Bouchier	New Westminster.
English, Mary Helen	Kaslo.
Eveleigh, Evelyn Mary Southcott	Vancouver.
Fanning, William Harold	Vancouver.
Ferguson, William Chester Milton	Vancouver.
FitzGerald, Lillian Helen	Vancouver.
Fletcher, Lillian Maud	Vancouver.
Ford, Reginald Bryden	Vancouver.
Forrester, William Wallace	New Westminster.
Frith, Joscelyne Sylvia	Vancouver.
Fulton, Doris Jessie	Vancouver.
Gale, Stanley Cuthbert	Vancouver.
Gammie, Janie Polson	Vancouver.
Garlick, Beatrice	South Vancouver.
Geekie, Jean Mollison	South Vancouver.
Gerhart, Annie Eileen	Vancouver.
Gibbon, Marion Evelyn	Vancouver.
Gignac, Etoile Patricia	Vancouver.
Gill, Dorothy Alexandra	North Vancouver.
Graham, Ida Christine	New Westminster.
Grant, Frances Rena	Victoria.
Green, Cecil Howard	Vancouver.
Greenwood, Charlotte	Vancouver.
Greer, Harold John	Port Coquitlam.
Gregg, Ethel Marguerite	New Westminster.
Gross, George Clarence	Vancouver.
Gunning, Henry Cecil	Vancouver.
Gwyther, Harold William	Vancouver.
Gwyther, Valentine M. W.	Vancouver.
Hall, Vernon Knight	Vancouver.
Hamilton, Margaret Agnes	E. Norwood, Ohio.
Hankinson, Thomas Edwin	Dunbar Heights.
Harris, Joseph Allen	West Summerland.
Harvey, Marguerite	Vancouver.
Hayton, Alma Beryle	Vancouver.
Hazlitt, Norah	Vancouver.
Holtz, Lucile	North Vancouver.
Horsman, Mary Dorothea Helen	Vancouver.
Hunter, Alan Duffie	Vancouver.

<i>Name.</i>	<i>Home Address.</i>
Hunter, Robert	Vancouver.
Imlah, James Albert Henry	New Westminster.
Johnson, Edward Alfred	Marine Heights P.O.
Johnson, Lily Mabel	Vancouver.
Johnston, Edna Mary	Coalmont.
Johnston, Henrietta Elizabeth	Vancouver.
Jure, Albert Edward	Vancouver.
Keir, Helen	North Vancouver.
Kerr, Margaret Isobel	Vancouver.
King, Margaret Elizabeth	Vancouver.
King, George Graeme	Vancouver.
Kirk, Katherine	Vancouver.
Kirk, Margaret Lina	Yakima, Wash.
Laking, Vera Evelyn	Murrayville.
Lamb, Richard William	Edmonds.
Lavery, Wilfrid Gerard	New Westminster.
Lawson, Kenneth James	Vancouver.
Leitch, Marion Moore	Vancouver.
Le Messurier, Clara	Vancouver.
Lidgely, Ralph Christian Graham	Vancouver.
Limpus, George Henry	Vancouver.
Linn, William Lindsay	New Westminster.
Lipson, Barnett Abraham	Vancouver.
Lipson, Bertha	Vancouver.
Livingstone, Ethel Belle	Vancouver.
Lusby, Eric Blair	New Westminster.
McCandless, Phyllis May	Vancouver.
McIntyre, Donald Manning	West Summerland.
McKee, Robert Gerald	Langley Prairie.
McLeod, Georgia Victoria	New Westminster.
McLoughry, Muriel Alice	Vancouver.
McLoughry, Vivian Helen	Vancouver.
McMynn, Mae Edith Annie	Midway.
Mercer, Marion Isabelle	New Westminster.
Meredith, Rice Howard	Vancouver.
Metz, Cora Irma	Vancouver.
Miller, Isobel Selina	Vancouver.
Moe, Audrey Muriel	Vancouver.
Monkman, Evelyn Ada	Ladner.
Moodie, Annie Slight	East Burnaby.
Murray, David Wesley	Vancouver.
Neill, Helen Douglas	Alberni.
Offord, Harold Reginald	Vancouver.
Pearson, Catherine Seymour	Vancouver.
Pearson, Geoffrey Carman	New Westminster.
Pedlow, Gladys Lillian	Vancouver.

<i>Name.</i>	<i>Home Address.</i>
Pound, Albert Earl	Vancouver.
Price, Edith Ethel	Burnaby.
Pye, Dora Ellen Gertrude	Vancouver.
Rae, Violet Jean	Vancouver.
Rankin, Agnes Helen	Vancouver.
Reid, James	Vancouver.
Roberts, Aubrey Frederick	Vancouver.
Robinson, Abner	Vancouver.
Robinson, George Spencer	South Vancouver.
Rogers, Edna Jessie	Vancouver.
Ross, Hugh Milligan	Marpole.
Rushbury, Henry George Boswell	Vancouver.
Saunders, Emma	Vancouver.
Scott, Florence Edna	Cloverdale.
Shaw, Mary Jeannie	Vancouver.
Simpson, Margaret Salmond	Vancouver.
Sisley, Alice Olivia	Vancouver.
Smith, Charles Duncan	Vancouver.
Smitheringale, William Vicars	Vancouver.
Spargo, Thomas	Vancouver.
Stevens, Wilford Leonard	Port Hammond.
Stevenson, Arthur Henry Lionel	Vancouver.
Steves, Jessie Lena	Steveston.
Stillman, Willard Elliott	Ladner.
Stroyan, Philip Bateman	Vancouver.
Swanson, Mary Katherine	Kamloops.
Switzer, Lila Marjorie	Vancouver.
Taylor, Ivan Marcus	Vancouver.
Taylor, Lottie Lillian	Vancouver.
Thompson, Jessie Mildred	Eburne.
Trembath, Marjorie Edna	Port Hammond.
Wade, Eva	Salmon Arm.
Walker, John Eden	New Westminster.
Walker, Robert Edward	Vancouver.
Wallock, Susie	Vernon.
Webb, Doris Vivian	New Westminster.
Webster, John Osborne	Kerrisdale.
Webster, Sylvia Mary	Vancouver.
Wellband, Wilbur Arthur	Vancouver.
Wenborn, Marguerite Winifred	Steveston.
Wilcox, Marion	Vancouver.
Willis, Norah Evangeline	Vancouver.
Wootten, Philip Alfred	Vancouver.
Wrinch, Leonard Breckon	Hazelton.

Conditioned.

<i>Name.</i>	<i>Home Address.</i>
Aconley, Vera Izeyle	Vancouver.
Agar, Helen Louise	New Westminster.
Bruneau, Edna Mary	Vancouver.
Carruthers, Walter Eric	Vancouver.
Coburn, Wallace Andrew	Nanaimo.
Coope, Geoffrey	Vancouver.
Day, George	Kelowna.
Dowling, Doris Ada	Prince Rupert.
Edwards, Isaac John	Vancouver.
Elliott, Muriel Edna	Kamloops.
Fay, Madeline Winnifred	Vancouver.
Fraser, Duncan	Vancouver.
Grant, Kathleen Langille	Prince Rupert.
Grimmett, Helen Elizabeth	Merritt.
Hale, Amy Eleanor	Revelstoke.
Hooper, Helen Virginia Francis	Vancouver.
Letson, Gordon McIntosh	Vancouver.
McKee, John Rogers	Vancouver.
Mackenrot, Dorothy Lince	Revelstoke.
Mackenzie, Flora Rhoda	Langara P.O.
Mackenzie, Lillian Jean	Langara P.O.
MacKenzie, Mary Isobel	New Westminster.
MacNeill, Allan Roy	Vancouver.
Matheson, Mabel Alena	New Westminster.
McKee, William Harold	Vancouver.
Molyneux, Edmund Mitchell	Cloverdale.
O'Hagan, Howard	Vancouver.
Partington, Margery Elizabeth	Vancouver.
Paterson, Thomas	Port Haney.
Shier, John William	Vancouver.
Vogee, Arthur Edward	Vancouver.
Weinberg, Dena	Vancouver.

Partial.

Bertrand, Clémence Augusta Jane	Vancouver.
Broadfoot, William Craig	Vancouver.
DesBrisay, Bernice	Vancouver.
Doherty, Winnifred Harriet Elizabeth	Vancouver.
Edwards, Cedric Gerald	Ponoka, Alta.
Ellis, Mary C.	St. John, N.B.
Jones, Harold Kingsworth	Vancouver.
Kemp, Gwendolyn Muriel	Vancouver.
Simpson, Nathanael Vernon	Kaleden.
Spangelo, Ella Marie	Schuler, Alta.

<i>Name.</i>	<i>Home Address.</i>
Stuart, Katherine	Vancouver.
Thomson, Helen Isabelle	Vancouver.
Urquhart, Christine Margaret	Eburne.
Walker, William Greenleaf	Vancouver.
Woodside, Everett Haywood	Vancouver.

S.O.S.

Campbell, Douglas Stuart	Vancouver.
Fraser, George Wallace Bruce	Vancouver.
Hallett, Lawrence Trenergy	Steveston.
Hunter, Harrold Leland	Vancouver.
Knowlton, Kathleen Blanche	Vancouver.
Ogilvie, Alvin Easton	Agassiz.
Parker, Raymond Whitfield	Vancouver.
Pittendrigh, Mary Aleda	Vancouver.
Purkiss, Thomas Edison	New Westminster.
Reid, Helen Evelyn	Vancouver.
Russell, George	Union Bay.
Shaw, Keith Duncan	Vancouver.
Standen, Alice Edith	Penticton.
Stevens, Ernest George Barlow	Vancouver.
Ternan, Clifford Chalmer	Vancouver.
Waite, Campbell Castlemore	Kerrisdale.
Williamson, James	Vancouver.
Woodworth, George Elden	Chilliwack.
Worsley, Lewis Frederick Victor	Vancouver.

SECOND YEAR.

Adams, Dorothea Isobel	Marpole.
Anders, Victor	Vancouver.
Argue, Ralph Starrat	Vancouver.
Arkley, Jack MacDougall	Vancouver.
Barlow, Edith Charlotte Irene	Ladysmith.
Blakey, Dorothy	Vancouver.
Boss, Arthur Evan	Vancouver.
Bowes, Dorothy Margaret	Victoria.
Buell, Arthur Lightfoot	North Vancouver.
Calbick, Chester Joseph	Nelson.
Carson, Miriam Barbara	Vancouver.
Clarke, Margaret	Kelowna.
Coates, Lila Frances	Hamamatsu, Japan.
Cowling, Florence	Vancouver.
Cribb, Reginald Edward	Wellington.
Crozier, Isabella Elliott	Vancouver.
Dunbar, Violet Evelyn	Vancouver.
Dunlop, Mary	Vancouver.

<i>Name.</i>	<i>Home Address.</i>
Edwards, Sadie	Vancouver.
Fink, Henry Jacob Vincent	Cranbrook.
Fisher, Lacey Julian	New Westminster.
Foerster, Russell Earle	Vancouver.
Fournier, Leslie Thomas	Vancouver.
Fraser, Ferguson Ross	North Vancouver.
Gill, Bonnie Helen	North Vancouver.
Gilley, Marjorie	New Westminster.
Goldstein, Cyril Moss	Vancouver.
Goldstein, Sylvia	Vancouver.
Greenwood, Julia Elizabeth	Vancouver.
Grimmett, Norman Thatcher	Merritt.
Handford, Freda Mary	Victoria.
Harper, Kathleen Esme	Vancouver.
Healy, Agnes Coupland	Vancouver.
Herman, Victoria	Vancouver.
Hobson, Lillian Belle	Vancouver.
Ingledeew, Harold Garfield	Kerrisdale.
James, Vera Alexandra	Vancouver.
Jones, Nora Vivian	Kelowna.
Keatley, Nora Kathleen	Nelson.
Kilpatrick, Myrtle Esther	Victoria.
Kion, Gertrude Anna	Vancouver.
Laird, Frederick William	Vancouver.
Lawrence, Marion Evangeline	Vancouver.
Lazenby, Frederic 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.
MacBeth, Jessie Alexandra	Vancouver.
MacLeod, William Ray	Atchelitz.
Martin, George Rutherford	Vancouver.
Mathers, Nina Adell	Vancouver.
Matheson, Marjorie Crawford	Vancouver.
McAfee, Irene Davin	Vancouver.
McArthur, Hattie May	Vancouver.
McCabe, Margaret Aileen	Vancouver.
McConnell, Hazel Erma	Victoria.
McKee, Enid Muriel	Vancouver.
McKee, Greta Hope	Vancouver.
McLean, Eleanor May	Vancouver.
McLean, Harold William	Vancouver.
Mitchell, James Reid	Prince Rupert.

<i>Name.</i>	<i>Home Address.</i>
Munn, Nina Vivian	New Westminster.
Munro, Mary	Vancouver.
Munro, Muriel Rose	Vancouver.
Munro, Robert James	Vancouver.
Osborne, Dwight Hillis	Victoria.
Parker, Rhoda Kathleen St. George	Vancouver.
Partridge, Phyllis Marion Ulmer	Union Bay.
Peardon, Thomas Preston	Vancouver.
Pratt, Bernard Dodge	Vancouver.
Pumphrey, Lionel Frank	Vancouver.
Reed, Muriel Ruth	Vancouver.
Reid, Nita	Grand Forks.
Rive, Alfred	Vancouver.
Robson, Helen McGregor	Vancouver.
Rogers, Wilbur Stuart	Vancouver.
Russell, Alan Macpherson	Marpole.
Sauder, Marion Eleanor Martha	Vancouver.
Shannon, Myrtle Evelyn	Vancouver.
Smith, Winston Robinson	Vancouver.
Solloway, Edgar	Vancouver.
Studer, Frank John	Vancouver.
Suttie, Ethel Gwendolyn	Vancouver.
Thomson, Hazel Marie	Vancouver.
Vermilyea, Beula Beatrice	Vancouver.
Wilby, George Van	Vancouver.
Wilks, Arthur Frederick	Burnaby.
Wilson, Freda Lenore	Vancouver.
Wright, Evelyn Isabel	Vancouver.

Conditioned.

Brenchley, Dorothy Ann Bennett	Vancouver.
Chatters, Othello Pritchard	Vancouver.
Cowan, Patricia Louise	Vancouver.
dePencier, Joseph Christian	Vancouver.
English, John Frederick Kerr	Chilliwack.
Faulkner, Everett William	Kelowna.
Gilroy, Laura May	Vancouver.
Harrison, Ruth	Vancouver.
Hopper, Dorothy Aileen	Vancouver.
Keir, Jeannie McRae	North Vancouver.
Lehman, Beatrice Lucy	Mt. Lehman.
Mortimer, Helen	Vancouver.
Roberts, Lorna Alexandria Lyllian	Vancouver.
Robson, Margaret Watt	Kerrisdale.
Rowan, Maude Elizabeth	Vancouver.
Schell, Joseph McLure	Vancouver.

<i>Name.</i>	<i>Home Address.</i>
Smith, Annie Marie	Vancouver.
Sutherland, Evelina Jessie	Vancouver.
Taylor, Cecil Davis	New Westminster.
Webster, Arnold Alexander	Agassiz.
Wilson, Grace Agnes	Vancouver.

Partial.

Ballantyne, William Herbert	Vancouver.
Curtis, Edwin Johnston	Vancouver.
Denham, Joseph	Vancouver.
Nicholson, Angus Alexander	Port Haney.
Lanning, Roland John	Ladner.
Robinson, Dorothy	Naramata.
Ure, Agnes Margaret	Vancouver.

THIRD YEAR.

Abernethy, Elizabeth Barclay	Vancouver.
Adams, Robert Frederick	Londonderry, Ireland.
Alexander, Merle Helena	Eburne.
Berto, John Clifford	Vancouver.
Coates, Willson Havelock	Vancouver.
Colgan, Harry Wilfrid	Vancouver.
Copping, Marjorie	Vancouver.
Couper, Walter James	Kerrisdale.
Damer, Margaret Agnes	Vancouver.
Davidson, Jean Munro	Vancouver.
Day, Marjorie	Vancouver.
Draper, Hester Elizabeth	Vancouver.
Fournier, Eugenie Ida	Vancouver.
Gladwin, Aleen Harrison	Kerrisdale.
Grant, Rena Victoria Alice	Vancouver.
Harris, Ethel	Vancouver.
Hill, Annie Graham	Vancouver.
Inrig, Mary Catherine	Vancouver.
Irvine, Florence Annabel	Vancouver.
Keenleyside, Hugh Llewellyn	Vancouver.
Lucas, Evylin Caroline	Victoria.
MacKinnon, George Ernest	Revelstoke.
Magee, Frances Ethel	Vancouver.
Matheson, Agnes Helen	Vancouver.
McClay, James Gerald	Vancouver.
Morris, Verna Edna	Steveston.
Nelson, John Cecil	Vancouver.
Nowlan, Norah Kathleen	Vancouver.
Peebles, Allan	New Westminster.
Pillsbury, Katherine Hall	Prince Rupert.

<i>Name.</i>	<i>Home Address.</i>
Porter, Gertrude Gladys	Victoria.
Roy, Henrietta	Fraser Arm.
Roy, Jessie	Fraser Arm.
Scharschmidt, Daphne Maud	Vancouver.
Siddons, John Donald	Vancouver.
Smith, Elizabeth Patricia Hamilton	Victoria.
Stirk, Louie	Vancouver.
Swencisky, Laura Mary	New Westminster.

Conditioned.

Coates, Kathleen McKie	Victoria.
Day, Edwin Ethelbert	Vancouver.
Gilley, Janet Kathleen	New Westminster.
Hokkyo, Junichi	Vancouver.
James, Edwin Telford	Vancouver.
Smith, Adela Elizabeth	Burnaby.
Swencisky, Alfred Harold Joseph	New Westminster.
Weld, John Noel	Vancouver.

Partial.

Ballentine, Ellen May	Vancouver.
Böttger, Hermine Dorothea	Vancouver.
McKechnie, Eberts Mills	Vancouver.
Morgan, Osborne	Vancouver.
Morrison, Margaret Ralston	Vancouver.
Scott, David William	Vancouver.

FOURTH YEAR.

Archibald, Annie Marguerite	New Westminster.
Allardyce, William John	Vancouver.
Ashwell, Iris	Chilliwack.
Bain, Janet Burnett	Vancouver.
Barclay, May Lilian	New Westminster.
Baxter, Catherine Florence	Lougheed, Alta.
Bell, William Sidney	Vancouver.
Boyd, Lillian Martha	Vancouver.
Cameron, Margaret Marion Burleigh	Vancouver.
Costley, Muriel Helen	Kamloops.
Dalton, Clara Belle	Vancouver.
Dunlop, Henry Adam	Vancouver.
Dawe, William Albert	Vancouver.
Emmons, Richard Conrad	Vancouver.
Fletcher, Hugh Mackay	Toronto, Ont.
Fraser, Joseph Gordon	Vancouver.
Gibson, Thomas Ian	Vancouver.
Gill, Margaret Susannah	North Vancouver.

<i>Name.</i>	<i>Home Address.</i>
Gintzburger, Pauline Emma	Vancouver.
Grant, Muriel	Victoria.
Gross, Alice Stockton	Vancouver.
Highmoor, Constance Elizabeth	Kerrisdale.
Hosang, Inglis	Vancouver.
Hunter, Ellen Craig	Vancouver.
Kerr, Donna Enid	Duncan.
Ketcheson, Laura Marguerite	Hatzic.
Mahrer, Leopold Joseph	Vancouver.
Marwick, Edna Mary Ellen	Victoria.
Maynard, Catherine Easterby	Vancouver.
McKay, Evelyn Christiana	Everett, Wash.
McLean, Olive Edmondson	Victoria.
Murphy, Eldred Almack	Vancouver.
Peck, Marjory Gowan	Vancouver.
Reid, Gertrude Kathleen	Vancouver.
Rollston, Eva Jean	Vancouver.
Scott, Gordon Wood	Vancouver.
Shaw, Ian A.	Vancouver.
Shimizu, Kosaburo	Vancouver.
Smeeton, Joseph Thomas	Vancouver.
Stewart, Ruth	Vancouver.
Sutcliffe, William George	Vancouver.
Swencisky, Dylora Mary	New Westminster.
Thomas, Isabel	Vancouver.
Vollum, Roy Lars	Vancouver.
Wallace, Norah Elizabeth	Vancouver.
Wesbrook, Helen Fairchild	Vancouver.
Wolfe, Miriam Bedingfield	Vancouver.

Partial.

Browne, Margaret	Vancouver.
Grant, Dorothy M.	Vancouver.
Houston, Dorothy Margaret	Vancouver.
Walsh, Violet Charlotte	Vancouver.
Wright, Thomas Hall	Vancouver.

Graduates.

Best, Edgar Leslie	West Vancouver.
Clement, Elsie Bonallyn	Vancouver.
Clement, Shirley Pope	Vancouver.
Walsh, Harold Edgar	Vancouver.
Fulton, Ruth Vivian	Vancouver.
Harvey, Isobel	Vancouver.
Mounce, Irene	Vancouver.
Robertson, Hugh Milne	South Vancouver.

FACULTY OF APPLIED SCIENCE.

FIRST YEAR.

<i>Name.</i>	<i>Home Address.</i>
Anderson, Sydney	Vancouver.
Banfield, William Orson	Vancouver.
Evans, Gerald Taylor	Vancouver.
Goranson, Roy Walter	New Westminster.
Gray, William Henry	Revelstoke.
Handy, Levi	Vancouver.
Hatt, Rona Alexander	Vancouver.
Houghton, Gordon Kingsley	New Westminster.
Lee, Douglas Clarence	Vancouver.
McColl, Eli S.	Vancouver.
McDougall, Stewart Robertson	New Westminster.
McLennan, Logan Seaforth	Vancouver.
Moody, Charles Edwin	Vancouver.
Peck, Wallace Swanzey	Vancouver.
Shaw, Lee Donald	Vancouver.
Thurston, Frederick	Port Moody.
Tuckey, Francis Edward	Victoria.
Usher, Alexander Murray	Marpole.
Weinrobe, Morris	Vancouver.

Conditioned.

Kidd, George Stuart	Vancouver.
Shockley, Henry Maurice	Prince Rupert.
Somerville, Archibald Laurence Harold	Vancouver.

Partial.

Crickmay, Colin Hayter	North Vancouver.
Hynd, David Brown Balfour	Vancouver.

SECOND YEAR.

Full Undergraduates.

Anderson, Robert Griffith	Vancouver.
Doyle, Harold	England.
Gill, James Edward	Vancouver.
Jane, Robert Stephen	Vancouver.
Kingham, Joshua Rowland	Victoria.
Meekison, Andrew Gordon	Vancouver.
Melville, John	Vancouver.
Parks, William Henry	Vancouver.
Stedman, Donald Frank	Vancouver.
Swanson, Clarence Otto	Vancouver.
Thompson, Gordon Maurice	Vancouver.

<i>Name.</i>	<i>Home Address.</i>
Wilson, Frank R.	Whitehorse.
Walker, John Fortune	Vancouver.

Conditioned Undergraduates.

MacDonald, Jack Lorraine	Vancouver.
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Partial.

Eckhardt, Harold Alexander	Vancouver.
Waun, Arthur	Vancouver.

THIRD YEAR.

Full Undergraduates.

Andrews, Henry Ivan	Vancouver.
Aylard, Clayton Leslie	Victoria.
Boomer, Edward Herbert	Vancouver.
McKechnie, Donald Cowan	Marpole.
Morrison, Donald McKay	Vancouver.
Rebbeck, James Waller	Vancouver.
Wallace, Douglas Archibald	Vancouver.

Conditioned Undergraduates.

Ashwell, Ewart L.	Chilliwack.
Gilchrist, George Gladstone	Point Grey.
Tamenaga, Seiji	Vancouver.

Partial.

Beltz, Edward William	Vancouver.
Miller, Lawrence Victor	Vancouver.
Orr, Oscar	Vancouver.

FOURTH YEAR.

Full Undergraduates.

Letson, Harry Farnham Germaine	Vancouver.
Stedman, Horace George	Vancouver.

FACULTY OF AGRICULTURE.

FIRST YEAR.

Clarke, George Ernest Wesley	Vancouver.
Fisher, Raymond Anderson	Prince Rupert.
Leavens, John Bruce	Point Grey.

<i>Name.</i>	<i>Home Address.</i>
McKechnie, Martha Stirling	Marpole.
Traves, Charles Wesley	New Westminster.

Partial.

Chu, John Shih	Vancouver.
Yip, Kew Park	Vancouver.

S.O.S.

Moore, Francis Wilfred	Vancouver.
Sweeting, Bertram Stanley	Vancouver.

SECOND YEAR.

Greenwood, Harold Day	Vancouver.
Harris, Henry	Larkin.
Lamb, Cecil Alexander	Cloverdale.
McKenzie, Frederick Francis	Marpole.

Conditioned.

Woodward, Robert Cecil	Victoria.
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Partial.

Leckie, Claude Perrin	Vancouver.
Mounce, Marion Jean	Vancouver.
Wright, Walter M.	West Summerland.

The following attended the Short Course in Fruit-growing from February 3rd to 14th, inclusive:—

Adams, Charles Edmund G.	Kelowna.
Andrews, William James	Courtenay.
Barber, W. J.	South Vancouver.
Binns, Frederick	Vancouver.
Bool, Fred	Salmon Arm.
Brooke, Harold Arthur	Salmon Arm.
Brookes, Reuben William	Trinity Valley.
Christian, Edwin	Cowichan Station.
Cox, William Alexander	Chilliwack
Deacon, Benjamin	Victoria.
Eckford, Arthur E. T.	North Vancouver.
Edwards, Walter Kendrick	Point Grey.
Eggleston, Herbert James Llewellyn	West Summerland.
Ekman, Oscar	Telkwa.
Eyes,	Kerrisdale.
Fitz-John, Annie (Mrs.)	Central Park.
Gilpin, Albert H.	Cranbrook.

<i>Name.</i>	<i>Home Address.</i>
Goodrich, Arthur	Vancouver.
Gray, Robert	Okanagan Mission.
Hayward, R. B.	Vancouver.
Hill, Walter	Fernie.
Holder, James Burroughs	Vancouver.
House, William Thomas	New Westminster.
Hughes, Frederick	Vancouver.
Judge, Kathleen	Vancouver.
Lamb, Harry Arthur	South Vancouver.
Lister, John	Eburne.
MacLucas, Jenny Craig (Mrs.)	Vancouver.
Macnaughton, William	Vancouver.
Main, Robert Niven	South Vancouver.
Markham, Alfred	Vancouver.
Martin, Thomas	South Vancouver.
Meaden, David Mitchell	Vancouver.
Miatt, C.	Burnaby.
Mouncey, William	Vancouver.
Mowat, John F.	Vancouver.
Naylor, Sidney	Armstrong.
Osborne, Charles H.	Kamloops.
Palmer, William John	Duncan.
Pfister, Clarence	Eburne.
Pool, Frank	Vancouver.
Priest, John Stanley	Salmon Arm.
Quiney, James Luke	Vancouver.
Raines, Arthur	North Battleford, Sask.
Reekie, James	Vancouver.
Shuttlewood, Sarah Wilkinson (Mrs.)	Vancouver.
Smith, Agnes	Jubilee P.O.
Smith, James Reid	South Vancouver.
Steine, Margaret	North Vancouver.
Turner, John	West Vancouver.
Tyson, John	Vancouver.
Vander, Veen, Hugh Woodruff	Vancouver.
Walker, William Thomas	Vancouver.
Walls, O. Charles	Victoria.
Weir, Isabel Rose Jane	Victoria.
Westmacott, Catherine	Vancouver.
Wilkinson, Samuel	Victoria.
Wilson, Herbert	Vancouver.
Woods, John	Half Moon Bay.
Zellweger, Ernest	Eburne.

List of students registered in the Short Course in Mining from January 13th to March 8th, 1919:—

<i>Name.</i>	<i>Home Address.</i>
Carew-Gibson, E. A.	Victoria.
Jerrison, Richard Henry	South Vancouver.
Kearns, Edward P.	Vancouver.
Langham, Harold Francis	Vancouver.
MacNab, Neil C.	Vancouver.
Mitchell, Frank	Vancouver.
Munro, Colin Hector	Hazelton.
Orton, Barry	Vancouver.
Phillips, George Henry	Vancouver.
Priest, Elijah	Vancouver.

List of Short Course students, Agronomy and Animal Husbandry, January 6th to 17th, inclusive:—

Barber, W. J.	South Vancouver.
Beale, Earl Russell	New Westminster.
Bevan, William	New Westminster.
Binns, Frederick	Vancouver.
Bool, Fred	Salmon Arm.
Brockbank, James	Vancouver.
Brooke, Harold	Salmon Arm.
Brookes, Reuben William	Trinity Valley.
Bulman, Thomas Ralph	Kelowna.
Burrows, A. J.	Cloverdale.
Deacon, Benjamin	Victoria.
Edwards, Walter Kendrick	Point Grey.
Eggleston, Herbert James Llewellyn	West Summerland.
George, James	Coghan.
Gilpin, Albert H.	Cranbrook.
Hayward, R. Brian	Vancouver.
Heywood, Oliver	Vancouver.
Hill, Walter	Fernie.
Jeffrey, G. J.	Scott, Sask.
Judge, Kathleen	Vancouver.
Macnaughton, William	Vancouver.
Main, Robert N.	South Vancouver.
Markham, Alfred	Vancouver.
Marshall, Clifford	Eburne.
Martin, Thomas	South Vancouver.
McClelland, Robert Henry	Eburne.
McLean, Dunbar Hudson	Murrayville P.O.
Mercer, A. (Mrs.)	Chilliwack.

<i>Name.</i>	<i>Home Address.</i>
Nelens, Harry Edwin	Vancouver.
Nicol, Frank Bingham	Kerrisdale.
Pfister, Ernest	Eburne.
Raines, Arthur	North Battleford, Sask.
Robinson, Gilbert	Duncan.
Rose, William Wilfred	Steveston.
Sellings, William Robert	Vancouver.
Shelly, F.	Parksville.
Smith, Agnes	Jubilee P.O.
Smith, James R.	South Vancouver.
Smith, Wilfred Richard	Lazo P.O.
Stroyan, Nora Florence	Vancouver.
Sutton, William	Salmon Arm.
Thompson, John James	Eburne.
Thornbery, Gregory Hartley	Courtenay.
Traves, Charles Wesley	New Westminster.
Turner, John	West Vancouver.
Valens, Edgar Adam	Vancouver.
Walker, William Thomas	Vancouver.
Waugh, Ernest	Vancouver.
Williams, J. C.	Vancouver.
Williamson, Alfred	Cumberland.
Williamson, Edward	Cumberland.
Wilson, Herbert	Vancouver.

The following students attended the Short Course in Poultry Husbandry from January 20th to 31st, inclusive:—

Adams, Charles Edmund G.	Kelowna.
Allan, Lettie Gray (Mrs.)	Vancouver.
Andrews, William James	Courtenay.
Bagg, Arthur Legg	North Vancouver.
Balcombe, George	Vancouver.
Barber, W. J.	South Vancouver.
Binns, Frederick	Vancouver.
Bool, Fred	Salmon Arm.
Brooke, Harold Arthur	Salmon Arm.
Brookes, Reuben William	Trinity Valley.
Burke, J. C.	Vancouver.
Butler, John	Vancouver.
Christian, Edwin	Cowichan Station.
Deacon, Benjamin	Vancouver.
Eckford, Arthur E. T.	Eckville, Alta.
Edwards, Walter Kendrick	Point Grey.
Ellison, William John	New Westminster.

<i>Name.</i>	<i>Home Address.</i>
Fitz-John, Annie (Mrs.)	Central Park.
Fitz-John, Frederick Samuel	Central Park.
Fowler, John	South Vancouver.
Gilpin, Albert H.	Cranbrook.
Gray, John Russell	Vancouver.
Grist, Arthur William	Comox.
Hand, Herbert Sidney	Vancouver.
Hartin, Joseph	Vancouver.
Hayward, R. B.	Vancouver.
Heywood, Oliver H.	Vancouver.
Hill, Walter	Vancouver.
House, William Thomas	New Westminster.
Jackson, William John	Vancouver.
Jeffrey, Janie Porteous	Scott, Sask.
Jolly, Alfred Charles	Vancouver.
Judge, Kathleen	Vancouver.
Logan, Margaret Sterritt (Mrs.)	Point Grey.
MacKenzie, Robert Dougal	Cloverdale.
Maye, Tadajiro	Vancouver.
McNeil, John	Vancouver.
Moore, Annie Lucia (Mrs.)	Point Grey.
Mouncey, William	Vancouver.
Nicol, Frank Bingham	Kerrisdale.
Northwood, James Henry	South Vancouver.
Osborne, Charles Herman	Black Pines P.O.
Palmer, William John	Vancouver.
Pfister, Clarence	Eburne.
Phinney, Roy	Vancouver.
Purdon, Richard Henry Fetherstonhaugh	Burnaby.
Pybus, Henry	Vancouver.
Quiney, James Luke	Vancouver.
Reekie, James	Vancouver.
Rogers, William	Vancouver.
Service, Andrew Gray	Eburne.
Shelly, F.	Parksville.
Shuking, Mildred Ward	Vancouver.
Smith, William Richard Lyne	Vancouver.
Stebbins, Peter George	Vancouver.
Steine, Margaret	North Vancouver.
Struthers, Amy (Mrs.)'	Vancouver.
Summer, William	Vancouver.
Sutton, William	Salmon Arm.
Sweeting, Annie Blanche	Vancouver.
Traves, Charles Wesley	New Westminster.
Turner, John	West Vancouver.
Tyson, John	Vancouver.

<i>Name.</i>	<i>Home Address.</i>
Valens, Edgar Adams	Vancouver.
Walker, Adam McMurray	Vancouver.
Webster, John Thomas	Vancouver.
Westmacott, Catherine	Vancouver.
Whittaker, Alice (Mrs.)	New Westminster.
Whittaker, John Simon	New Westminster.
Wilson, Herbert	Vancouver.
Wood, Arthur	Vancouver.
Zellweger, Ernest	Eburne.

Lists of students in attendance at the Short Courses in Vocational Training for Returned Soldiers:—

Chauffeur—

Bell, Greig Antonio	Vancouver.
England, Harry	New Westminster.
English, Richard Edward	Vancouver.
Erard, Oscar Emile	Vancouver.
Laurance, Edward M.	Vancouver.
Matthews, Henry Gwynne VEVERS	Kelowna.
McCarthy, Joseph	Vancouver.
McClellan, Shorts Douglas	Vernon.
Mitchell, W. W.	Vancouver.

Electrical—

Astley, Frank Robert	Vancouver.
Bowkett, Harry Stephen	Vancouver.
Brooks, Edward Samuel	New Westminster.
Campbell, William	Vancouver.
Catherwood, Sherwood George	Vancouver.
Chaplin, Arthur Percival	New Westminster.
Clemans, Charles Edward	Vancouver.
Ealding, Christopher	Vancouver.
Ferguson, Walter	South Vancouver.
Fordham, Richard	South Vancouver.
Grant, William Alexander	West Point Grey.
Head, John William	Vancouver.
Hope, Charles Edward	Calgary, Alta.
Johnstone, Stanley	Vancouver.
Kelly, Arthur Ernest	Vancouver.
Kidner, Ernest Alfred	Victoria.
Little, John Carson	Vancouver.
Lowry, W. R.	Vancouver.
Luffis, Charles Frederick	Vancouver.
Manson, Thomas St. Clair	Kamloops.
Marden, Harold	New Westminster.

<i>Name.</i>	<i>Home Address.</i>
McPhee, Murdoch Stewart	Vancouver.
Meshner, Ernest Clarence	Nanaimo.
Mourant, Arthur Ernest	McKay P.O.
Myers, William Henry	Burnaby.
Olson, Alford	Vancouver.
Paige, Gilbert Harlestone	Vancouver.
Peel, Ernest John	Kerrisdale.
Reesor, Hedley Halcro Buchan	Vancouver.
Simmons, Thomas Charles	Vancouver.
Stafford, Raymond Frank	Vancouver.
Stubbs, Frederick James	Vancouver.
Thorne, William Richard	Vancouver.
Tucker, George	Vancouver.
Waltho, William	Nanaimo.

Gas-engines—

Armishaw, Herbert	Nanaimo.
Atchison, Lloyd Harrington	Cloverdale.
Bryant, Edward Mars	Vancouver.
Bunce, William	North Battleford, Sask.
Clark, James Arthur	Vancouver.
Corner, Hunter	Vancouver.
Farrell, Russell Edward	Vancouver.
Ferguson, Thomas Henry	Vancouver.
Fisher, John Lindsay	New Westminster.
Fraser, Alexander	Vancouver.
Fuller, Harold Wallace	Vancouver.
Gillan, Frank	Qualicum Beach, V.I.
Granito, John	Wilmer.
Harrison, Arthur	Vancouver.
Henderson, John	Vancouver.
Hines, James Higham	South Vancouver.
MacKenzie, John Wallace	Vancouver.
Maars, John	Vancouver.
Moffatt, William Alexander	Vancouver.
Nurse, Uriah	South Vancouver.
Oliver, Edward John	Vancouver.
Phillips, Charles	Vancouver.
Rippon, Albert	Vancouver.
Simpson, Andrew	South Vancouver.
Tootell, Adam	Vancouver.
Wood, Robert Keers	Victoria.

Machinist—

Andison, Thomas William	Burnaby.
Barrett, William	Vancouver.

<i>Name.</i>	<i>Home Address.</i>
Cosh, Robert Monteith	Vancouver.
Duckworth, James Henry	Victoria.
Edgington, Albert	Vancouver.
Gibson, Joseph McDermid	Vancouver.
Green, John Thomas	Vancouver.
Hainsworth, James	Vancouver.
Howard, Ernest Henry	Vancouver.
Lang, Frederick John	Long Bay.
Mahy, Edgar	Point Grey.
McCoy, Frank	Ladysmith.
McLean, Donald	Vancouver.
Newbold, John S. H.	Vancouver.
Perks, Cecil Thomas	Vancouver.
Swanson, Swan	Vancouver.
Williamson, William Edward	Victoria.
Machine-shop—	
Manning, John	Vancouver.
White, Herbert	Vancouver.
Mechanical Draughting—	
Wicken, Henry James	South Vancouver.
Mechanical Engineering—	
Bolton, Arthur	Vancouver.
Motion Picture—	
Fenton, Charles William	McKay P.O.
Green, Joseph Berton Woodland	Vancouver.
Howard, Alfred William	Vancouver.
Paul, Frederick	Victoria.
Motor Mechanics—	
Adams, Harry Edmond	Kelowna.
Atherton, William H.	Vancouver.
Banks, William Manning	New Westminster.
Baron, Percy	Vancouver.
Beasley, Percy Michael	Vancouver.
Bottup, Leonard C.	Vancouver.
Bontin, Alfred	South Vancouver.
Bowles, Malcolm Martin	Vancouver.
Brady, Hugh	Vancouver.
Brewstor, James P.	Vancouver.
Britt, Aaron	Vancouver.
Brierton, Edward	Vancouver.
Brown, James	Vancouver.
Brownlee, George Clarence	South Vancouver.

<i>Name.</i>	<i>Home Address.</i>
Carrall, William Edward	Vancouver.
Chamberlain, Robert	Vancouver.
Clerihue, M. W.	Coquitlam.
Currie, Fred	Vancouver.
Dick, Thomas Braidwood	Victoria.
Dooley, John	Vancouver.
Downey, Morris John	South Vancouver.
Ethell, James	Vancouver.
Fennings, John Nesbitt	Vancouver.
Glenn, William George	North Vancouver.
Gordon, C.	Vancouver.
Grady, George	Burnaby.
Graham, Marmaduke J.	Vancouver.
Greer, James Alexander	Gateway.
Gruich, Nitar	Vancouver.
Hamson, Horace Edward	Steveston.
Heath, James John	Vancouver.
Higgs, Frank Ernest	Vancouver.
Howard, Alan B.	Vancouver.
Kearsley, Frederick	Surrey.
Marshall, John Robert	Vancouver.
McIntosh, James	South Vancouver.
Mill, John Stewart	Vancouver.
Northwood, James Henry	Vancouver.
Patchell, Wilson Douglas	New Westminster.
Payne, Edwin Aston	Vancouver.
Penhall, Francis William	Sutherland, Sask.
Quinlivan, Wm.	Vancouver.
Quinn, Edward James	Vancouver.
Railton, Charles Edward	Vancouver.
Russell, John	Vancouver.
Shield, Charles	Vancouver.
Smith, John Bennie	Victoria.
Thorn, Robert Neil	Victoria.
Thompson, Frank	Burnaby.
Wilmott, A. J.	Vancouver.

Steam Engineering—

Alexander, Hugh Franklin	Burnaby.
Bailey, Thomas	Michel.
Bowers, Charles Henry	South Vancouver.
Bradley, Harold	Vancouver.
Brown, James	New Westminster.
Carpenter, Edwin	Vancouver.
Cook, William Henry	Vancouver.
Coulthard, J. Oswald	Vancouver.
Davies, Edward James Henry	Vancouver.

<i>Name.</i>	<i>Home Address.</i>
Eagle, Jack	Vancouver.
Essler, Henry	Victoria.
Fleming, Robert	Victoria.
Garner, Llewelyn	Vancouver.
Gibbons, Percy	Vancouver.
Gilbody, John Frederick	Vancouver.
Graham, Robert Simpson	North Burnaby.
Green, Alfred Charles	Vancouver.
Green, Francis Irvine	South Vancouver.
Gregg, John	Vancouver.
Hogarth, John	Vancouver.
Jones, Thomas	Vancouver.
MacLeod, Alexander	Vancouver.
McDonald, George	South Vancouver.
Miller, Robert	Vancouver.
Morrison, William A.	New Westminster.
Price, William	Vancouver.
Sellar, Alexander Cruickshank	South Vancouver.
Smith, James Henry	Collingwood East.
Smith, Michael Joseph	Vancouver.
Sorenson, Niels Martin	Vancouver.
Spears, Albert	Vancouver.
Stady, John E.	South Vancouver.
Stark, Russell	Vancouver.
Taylor, John Albert	Vancouver.
Thomas, Gordon	Victoria.
Trussler, Alfred H.	Vancouver.
Turner, Harold	Vancouver.
Waddington, John	Michel.
Ward, George	Vancouver.
West, William	Vancouver.

REGISTRATION FOR 1918-19.

MEN.

	U.	C.	P.	G.	S.O.S.	Total.
Arts, IV.	17	.....	1	2	.....	20
III.	13	4	3	.....	.....	20
II.	36	6	5	.....	.....	47
I.	75	15	6	.....	14	110
						— 197
Applied Science, IV.	2	.....	.....	.....	.....	2
III.	7	3	2	.....	.....	12
II.	13	1	2	.....	.....	16
I.	18	3	2	.....	.....	23
						— 53

	U.	C.	P.	G.	S.O.S.	Total.
Agriculture, II.	3	2	2	.....	.....	7
I.	4	2	2	.....	.....	8
						<u>15</u>
						<u>265</u>
WOMEN.						
Arts, IV.	30	.....	3	3	.....	36
III.	27	3	3	.....	.....	33
II.	56	14	1	.....	.....	71
I.	98	17	11	.....	4	130
						<u>270</u>
Applied Science, I.	1	.....	.....	.....	.....	1
						<u>1</u>
Agriculture, II. ....	.....	.....	1	.....	.....	1
I.	1	.....	.....	.....	.....	1
						<u>2</u>
						<u>273</u>
Total						<u>538</u>

SHORT COURSES.

	Returned Soldiers.	Civilians.	No. in Class.
Fruit-growing, Feb. 3rd-14th, 1919, incl.....	42	18	60
Agronomy and Animal Husbandry, Jan. 6th-17th, 1919, incl.	25	27	52
Poultry Husbandry, Jan. 20th-31st, 1919, incl.	42	30	72
Mining, Jan. 13th-March 8th, 1919	6	4	10
Vocational Training for Returned Sol- diers in:—			
Chauffeur Work	9	.....	9
Electrical	35	.....	35
Gas-engines	26	.....	26
Machinist	17	.....	17
Machine-shop	2	.....	2
Mechanical Draughting	1	.....	1
Mechanical Engineering	1	.....	1
Motion Picture	4	.....	4
Motor Mechanics	50	.....	50
Steam Engineering	40	.....	40
	<u>318</u>	<u>79</u>	<u>379</u>
Total			379
Total Registration			917

PASS LISTS, SESSIONAL EXAMINATIONS, 1919-20.

FACULTY OF ARTS AND SCIENCE—FOURTH YEAR.

1. Governor-General's Gold MedalPauline Emma Gintzburger.
2. The Frank Fairchild Wesbrook Prize,
\$50 (Second in Graduating Class)Roy Lars Vollum.
3. The Frank Fairchild Wesbrook Prize,
\$50 (First in English)Margaret Marion Burleigh
4. The Women's Canadian Club Prize for Cameron,
Returned Soldiers, \$25William John Allardyce.

FACULTY OF ARTS AND SCIENCE—THIRD YEAR.

1. University Scholarship, \$75Elizabeth Patricia Hamilton
Smith.
2. University Scholarship, \$75Rena Victoria Alice Grant.
3. The Gerald Myles Harvey Prize, \$50
Book Prize (in Economics and Political
Science)James Gerald McClay.

FACULTY OF ARTS AND SCIENCE—SECOND YEAR.

1. The McGill Graduates' Scholarship, \$125
(First in English and French)Dorothy Blakey.
2. University Scholarship, \$75Dorothy Blakey.
By reversionVictoria Herman.
3. University Scholarship, \$75Victoria Herman.
By reversionFlorence Cowling.
4. The Terminal City Club Memorial
Scholarship in English and Economics,
\$100Dorothy Blakey.
By reversionIsabella Elliott Crozer.

FACULTY OF ARTS AND SCIENCE—FIRST YEAR.

1. Royal Institution Scholarship, \$75Leonard Breckon Wrinch.
2. Royal Institution Scholarship, \$75Helen Douglas Neill.
3. Royal Institution Scholarship, \$75Cora Irma Metz.
4. University Scholarship for Returned
Soldiers, \$75Ralph King Cameron.
5. University Scholarship for Returned
Soldiers, \$75Alphonse M. Crawford.

FACULTY OF APPLIED SCIENCE—THIRD YEAR.

1. The Dunsmuir Scholarship, Mining En-
gineering, \$150Clayton Leslie Aylard.

FACULTY OF APPLIED SCIENCE—SECOND YEAR.

1. University Scholarship, \$75Clarence Otto Swanson.

FACULTY OF APPLIED SCIENCE—FIRST YEAR.

1. Royal Institution Scholarship, \$75Henry Maurice Shockley.

FACULTY OF AGRICULTURE.

1. University Scholarship, \$75Cecil Alexander Lamb.

FACULTY OF ARTS—CONFERRING DEGREE OF
MASTER OF ARTS.

Ruth Vivia Fulton.
Isobel Harvey.

FACULTY OF ARTS—CONFERRING DEGREE OF
BACHELOR OF ARTS.

PASSED.

(Names in Order of Merit.)

Class I.

Pauline Emma Gintzburger.	William John Allardyce.
Roy Lars Vollum.	Janet Burnett Bain.
Isabel Thomas.	Margaret Marion Burleigh
Inglis Hosang.	Cameron.
Ian Alastair Shaw.	Muriel Grant.
Helen Fairchild Wesbrook.	Norah Elizabeth Wallace.

Class II.

Richard Conrad Emmons.	Ruth Stewart.
William George Sutcliffe.	Constance Elizabeth Highmoor.
Clara Belle Dalton.	Evelyn Christiana McKay.
Edna Mary Ellen Marwick.	Marjory Gowan Peck.
Donna Enid Kerr.	Joseph Gordon Fraser.
Iris Ashwell.	Annie Marguerite Archibald. }
Ellen Craig Hunter.	Thomas Ian Gibson. }
Muriel Helen Costley.	Eva Jean Rollston.
Alice Stockton Gross.	Catherine Florence Weir-Baxter.
Margaret Susannah Gill.	May Lilian Barclay.
Leopold Joseph Mahrer.	Catherine Easterby Maynard.
Henry Adam Dunlop.	Gordon Wood Scott.

Passed.

Gertrude Kathleen Reid.	Kosaburo Shimizu.
Dylora Mary Swencisky.	Eldred Almack Murphy.
Lillian Martha Boyd.	William Sidney Bell.
Laura Marguerite Ketcheson.	Hugh MacKay Fletcher.
Joseph Thomas Smeeton.	Miriam Bedingfield Wolfe.
William Albert Dawe.	
Olive Edmondson McLean (ægotrotat).	

FACULTY OF ARTS—THIRD YEAR.

PASSED.

(Names in Order of Merit.)

Class I.

Elizabeth Patricia Hamilton Smith.	George Ernest MacKinnon.
Rena Victoria Alice Grant.	Elizabeth Barclay Abernethy.
Walter James Couper.	Henrietta Roy.
Evylin Caroline Lucas.	

Class II.

Hugh Llewellyn Keenleyside.	Gertrude Gladys Porter.
Katherine Hall Pillsbury.	Jean Munro Davidson.
Willson Havelock Coates.	Louie Stirk.
Hester Elizabeth Draper.	Frances Ethel Magee.
Allan Peebles.	Edwin Telford James (S ₂).
Marjorie Copping.	Agnes Helen Matheson.
Norah Kathleen Nowlan.	Daphne Maud Scharschmidt.

Passed.

John Donald Siddons.	Ellen May Ballentine (S ₂).
Mary Catherine Inrig (S).	Aleen Harrison Gladwin.
James Gerald McClay (S).	Laura May Swencisky (S).
Marjorie Day.	John Noel Weld (S ₂).
Verna Edna Morris.	Margaret Agnes Damer (S).
Alfred Harold Joseph Swen-	John Cecil Nelson (S).
cisky (S).	Harry Wilfrid Colgan.
Robert Frederick Adams.	Merle Helena Alexander (S).
Adela Elizabeth Smith.	Eugenie Ida Fournier (S).

GRANTED STANDING.

Ethel Harris.
Jessie Roy.

COMPLETED THIRD YEAR.

Annie Graham Hill.
 Hermine Dorothea Bottger.
 Florence Annabel Irvine.

Janet Kathleen Gilley (S₂).

FACULTY OF ARTS—SECOND YEAR.

PASSED.

(Names in Order of Merit.)

Class I.

Dorothy Blakey.
 Victoria Herman.
 Florence Cowling.
 Cyril Moss Goldstein.

Class II.

Harold Garfield Ingledew.	Miriam Barbara Carson.
Arthur Evan Boss.	Hazel Erma McConnell.
Evelyn Isabel Wright.	Marjorie Crawford Matheson.
Frank John Studer.	Jessie Alexandra MacBeth.
Violet Evelyn Dunbar.	James Reid Mitchell.
Freda Mary Handford.	Annie Marie Smith.
Marion Evangeline Lawrence.	Isabella Elliott Crozier.

PASSED.

Leslie Thomas Fournier.	Joseph McLure Schell (S).
Enid Muriel McKee.	Marjorie Evelyn Gilley.
Eleanor May McLean.	Arthur Frederick Wilks (S).
Frederick William Laird.	Frederic Arthur Lazenby (S).
Irene Davin McAfee.	Hattie May McArthur.
Dorothy Margaret Bowes (S).	Harold William McLean.
Russell Earl Foerster. }	Muriel Rose Munro.
Kathleen Esme Harper. }	Winston Robinson Smith. }
Sylvia Goldstein. }	George Van Wilby.
Greta Hope McKee. }	Norah Vivian Jones.
Reginald Edward Cribb.	Marion Eleanor Martha Sauder.
Thomas Preston Peardon.	James Carrell Lynch.
Myrtle Esther Kilpatrick.	Alan Macpherson Russell.
Margaret Clarke.	Freda Lenore Wilson (S).
Sadie Edwards. }	Rhoda Kathleen St. George Parker.
Ethel Gwendolyn Suttie. }	Agnes Coupland Healy.
Alfred Rive.	Edgar Solloway.

Evelina Jessie Sutherland.	Gertrude Anna Kion. }
Patricia Louise Cowan (S ₁)	Arthur Edward Lord. }
Helen McGregor Robson.	Nina Vivian Munn. }
Laura May Gilroy (S ₁). }	Ruth Harrison.
Beatrice Lucy Lehman (S ₁). }	Dorothy Elizabeth Lyne.
Henry Jacob Vincent Fink. }	Vera Alexandra James (S).
Bonnie Helen Gill. }	Grace Agnes Wilson (SS ₁).
Jessie Katrina Lett. }	Victor Anders. }
George Rutherford Martin.	Ruth Emily Lyness. }
Wilbur Stuart Rogers.	Kathleen Gwynneth Lewis.
Dorothy Ann Bennett Brenchley (S ₁)	Jack MacDougall Arkley (S).
Margaret Watt Robson (S ₁).	Muriel Ruth Reed.
Mary Dunlop (S).	Bernard Dodge Pratt.
Phyllis Marion Ulmer Partridge.	Nora Kathleen Keatley (S).
Lacey Julian Fisher (S).	Myrtle Evelyn Shannon. }
Edith Charlotte Irene Barlow.	Dwight Hillis Osborne (S).
Nina Adell Mathers (S).	Lionel Frank Pumphrey (S).
Julia Elizabeth Greenwood (S).	Everett William Faulkner (SS ₁). }
Lillian Belle Hobson. }	Arnold Alexander Webster (SS ₁).
Helen Mortimer (S ₁). }	Margaret Aileen McCabe (S).
	Joseph Christian dePencier (SS ₁).
	Lila Frances Coates (ægotat).

COMPLETED SECOND YEAR.

Edwin Ethelbert Day.
Margaret Ralston Morrison.
Agnes Margaret Ure.

FACULTY OF ARTS—FIRST YEAR.

PASSED.

(Names in Order of Merit.)

Class I.

Leonard Breckon Wrinch.
Helen Douglas Neill.
Cora Irma Metz.
William Donald Burton.

Class II.

James Arnold Dauphinee.	Rice Howard Meredith.
Isobel Selina Miller.	Ralph Christian Graham Lidgely.
Joseph Allen Harris.	Audrey Muriel Moe.
Arthur Bramley. }	Edna Florence Ballard.
Mary Isabel Buxton. }	Arthur Henry Lionel Stevenson.
John Eden Walker.	John Gordon Bell.
Mae Edith Annie McMynn.	Lilian Helen FitzGerald. }
Lillian Francis Cowdell.	James Albert Henry Imlah. }

Isaac John Edwards (Sm.)	}	Norah Evangeline Willis.
Geoffrey Coope.		Doris Jessie Fulton.
Frederick Winfield Coffin.		Marguerite Harvey.
Margaret Agnes Hamilton.		Henry Cecil Gunning.

Passed.

Vera Evelyn Laking.	}	Henry George Boswell Rushbury
Norman Leon Cutler.		(S).
Blythe Alfred Edmund Eagles.	}	Anna Rabina Birnie.
Edith Ethel Price.		Marion Moore Leitch (S).
Doris Ada Dowling.	}	Alphonse M. Crawford.
Robert Gerald McKee.		Susie Wallock.
Ralph King Cameron.	}	Harrold Leland Hunter.
Frances Rena Grant.		Richard William Lamb.
Doris Ellen Gertrude Pye.	}	Howard O'Hagan (Sm).
Eva Wade.		Harold John Greer (S).
Joscelyne Sylvia Frith.	}	William Wallace Forrester.
Sylvia Mary Webster.		Donald Manning McIntyre.
Barnett Abraham Lipson.	}	George Day (SSm).
Edward Alfred Johnston.		Philip Bateman Stroyan (S).
Albert Earl Pound (S).	}	Hugh Milligan Ross (S).
Thomas Spargo.		Raymond Whitfield Parker (S).
Etoile Patricia Gignac	}	Edna Mary Johnston.
Cecil Howard Green.		Marion Isabelle Mercer
Agnes Helen Rankin.	}	William Vicars Smitheringale (S).
Mary Jeannie Shaw.		Dena Weinberg (SSm).
Edna Dodson.	}	Janie Polson Gammie (S).
Helen Keir.		Lila Marjorie Switzer (S).
Evelyne Ada Monkman.	}	Marjory Maude Bulman (S).
Valentine M. W. Gwyther.		Violet Jean Rae (S).
Harold Reginald Offord.	}	Edna Jessie Rogers.
Marion Evelyn Gibbon.		Kathleen Langille Grant (SSm).
George Clarence Gross.	}	Alice Edith Standen.
Gordon McIntosh Letson (Sm).		Wallace Risser Baker (S).
Jessie Elizabeth Casselman.	}	Margaret Isobel Kerr
Henrietta Elizabeth Johnston.		Eric Blair Lusby (S).
Helen Virginia Frances Hooper	}	Mary Alexandra Charnley.
Sm.).		Greta Elizabeth Curwen.
Ernest Albert Campbell.	}	Katherine Kirk (S).
Clarence Alvin Dougan.		Douglas Stuart Campbell (S).
Charles Roy Elsey.	}	Lillian Maud Fletcher.
William Murray Cameron		Annie Eileen Gerhart (S).
George Crompton Darts.	}	Margery Elizabeth Partington.
Annie Louise Campbell		John William Shier (S).
Annie Slight Moodie (S).	}	Lily Mabel Johnson.
Keith Duncan Shaw.		Margaret Elizabeth King (S).

Gwendolyn Muriel Kemp (Sm).	Charles Harold Clegg (S).
George Henry Limpus (S).	Albert Edward Jure (S).
Edmund Mitchell Molyneux } (SSm.) }	Margaret Salmond Simpson (S).
Margaret Isabella Clarke. }	Jessie Lena Steves (S).
Mary Katherine Swanson. }	William Harold Fanning (S).
Harold William Gwyther. }	Muriel Alice McLoughry.
Marjorie Edna Trembath (S). }	Mary Dorothea Helen Horsman (S).
Vernon Knight Hall (S).	Marion Clara Atherton. }
Marion Wilcox. }	Alice Olivia Sisley (S).
Nathanael Vernon Simpson (S). }	Ivan Marcus Taylor (S).
Clifford Chalmer Ternan (S).	Duncan Fraser (SSm). }
Vivian Helen McLoughry (S). }	Dorothy Alexander Gill (S). }
Flora Rhoda Mackenzie (SSm). }	Arthur Edward Vogee (SSm). }
Mary Catherine Laura Astell (S).	Mary Helen English (S).
Bertha Lipson (S). }	Alma Beryle Hayton (S).
Vera Izeyle Aconley (Sm). }	Philip Alfred Wootten (S).
Robert Edgar Cummings.	Gordon Craig Allen (S).
Lilian Jean Mackenzie (Sm).	Douglas Alexander Davidson (S).

COMPLETED FIRST YEAR.

Ethel Belle Livingstone.

Maude Elizabeth Rowan.

FACULTY OF APPLIED SCIENCE—FIRST YEAR.

PASSED.

(Names in Order of Merit.)

Class II.

Henry Maurice Shockley (S).	Rona Alexander Hatt.
Wallace Swanzey Peck.	Charles Edwin Moody (S).
Stewart Robertson McDougall.	Levi Handy (S).
Roy Walter Goranson.	Gerald Taylor Evans.

Passed.

Archibald Laurence Harold Som-	Logan Seaforth McLennan (S).
merville (S).	Morris Weinrobe (S).
Lee Donald Shaw (S).	

ÆGROTAT (PASSED).

William Henry Gray.

FACULTY OF APPLIED SCIENCE—SECOND YEAR.

*Class I.*Clarence Otto Swanson.
James Edward Gill.

Class II.

Harold Doyle.
Joshua Rowland Kingham (S).

Passed.

John Melville.
Gordon Maurice Thompson.
Donald Frank Stedman (S).
Robert Griffith Anderson (S).

FACULTY OF APPLIED SCIENCE—THIRD YEAR.

Class I.

Clayton Leslie Aylard.

Class II.

Donald Cowan McKechnie (S).
Henry Ivan Andrews.
Edward Herbert Boomer.
George Gladstone Gilchrist (S).
Seiji Tamenaga (S).
James Waller Rebbeck.

FACULTY OF APPLIED SCIENCE—FOURTH YEAR.

Class I.

Harry Farnham Germaine Letson.

FACULTY OF AGRICULTURE—SECOND YEAR.

PASSED.

(Names in Order of Merit.)

Class II.

Cecil Alexander Lamb.

Passed.

Henry Harris (S).
Robert Cecil Woodward (S).

Passed Conditionally.

Marion Jean Mounce.
Claude Perrin Leckie.

FACULTY OF AGRICULTURE—FIRST YEAR.

PASSED.

Raymond Anderson Fisher.
John Bruce Leavens.
Martha Stirling McKechnie.
Bertram Stanley Sweeting (S).

Passed Conditionally.

George Ernest Wesley Clarke.
Charles Wesley Traves.

PASS LISTS IN SUBJECTS.

FACULTY OF ARTS—FOURTH YEAR.

ADVANCED CALCULUS.

Class I.—Barclay.

Class II.—Dalton; Archibald.

CHEMISTRY, 6.

Class I.—Vollum; Kerr, D. E.

CHEMISTRY, 7.

Class I.—Shaw, I. A.; Fulton, R. V.

Class II.—Kerr, D.; Vollum; Allardyce.

CHEMISTRY, 9.

Class I.—Vollum; Allardyce and Shaw, I. A.

Class II.—Thomas.

Passed.—Kerr, D. E.

THEORY OF EQUATIONS.

Class I.—Dalton.

Class II.—Barclay; Archibald.

FRENCH, 4.

Class I.—Gintzburger; Browne, M.; Wallace, N. E.; Bain; Gill, M. S., and Wesbrook.

Class II.—Cameron, M. M. B.

Passed.—Peck, M. G.; Reid, G. K.

LATIN, 4.

Class I.—Ashwell, I.; Gross, A. S.

Class II.—Archibald; Highmoor.

FACULTY OF ARTS—THIRD AND FOURTH YEARS.

THE SCIENTIFIC BASIS OF AGRICULTURE.

Class I.—Shimizu.

Class II.—Fletcher, H. M., and Swencisky, D. M.; Morris.

Passed.—Hill; Alexander; Stewart, R.; Weld; Damer.

BACTERIOLOGY.

Class I.—Highmoor; Morrison, M. R.

Class II.—Stewart, R., and Walsh, V. C.; Bell, W. S.; Dunlop, H. A.

Passed.—Swencisky, L. M.; Curtis, E. J. A.

BACTERIOLOGY, 2.

Class I.—Vollum; Mounce, I.; Fulton, R. V.; McLean, O. E.

Class II.—Grant, M., and Kerr, D. E.; Allardyce and Gill, M. S.; Boyd.

Passed.—Baxter.

ECONOMICS, 2.

Class I.—Hosang; Shaw, I. A.; Couper and Peebles.

Class II.—Thomas; Mahrer; Scott, G. W.; Roy, H., and Westbrook; Dawe and McClay and MacKinnon; Fraser, J. G.; Dalton and Peck, M. G.; Gibson; Keenleyside and Swencisky, A. H. J.; Boyd and Smeeton; Adams, R. F.

Passed.—Fletcher, H. M.; Weld; Scharschmidt and Swencisky, D. M.; Gilley, J. K., and Morrison, M. R.; Magee and Swencisky, L. M.; Highmoor; Siddons; Ballentine, E. M.; Porter; Hill and Colgan; Irvine.

ECONOMICS, 5.

Class I.—Couper; Sutcliffe; Mahrer.

Class II.—Hosang and McKay; Peebles; Costley; Gibson; Gintzburger; Fraser, J. G., and Scott, G. W.; Maynard; Swencisky, A. H. J., and Bell, W. S.

Passed.—Dawe and Murphy; Dunlop, H. A.; Davidson, J. M.; Wolfe; Siddons; Emmons; Nelson.

ENGLISH, 6.

Class I.—Cameron, M. M. B.; Grant, M.; Walsh, V. C.; Roy, H., and Costley and Marwick.

Class II.—Baxter; Magee; Morris; Porter; Shimizu.

Passed.—Alexander; Rollston; Swencisky, L. M., and Ketcheson; Gladwin; Adams, R. P., and Stirk; Gilley, J. K.; Swencisky, A. H. J., and Fletcher, H. M., and Damer.

ENGLISH, 8.

Class I.—Abernethy.

Class II.—Ure; Stewart, R.; Kerr, D. E.; Reid, G. K.; Fournier, E. I.; Baxter; Day, M.

Passed.—Nelson; Wright, T. H.

ENGLISH, 10.

Class I.—Smith, E. P. H.; Keenleyside; Cameron, M. M. B., and Grant, M.; Abernethy and Browne, M.; Costley and Westbrook; Roy, H., and Walsh, V. C.

Class II.—Harvey, I., and Marwick; Couper; Gintzburger; Boyd; Nowlan; Mahrer and Peck, M. G.; Scharschmidt; Gilley, J. K.; Pillsbury and Porter.

Passed.—Swencisky, D. M.; Magee and Smith, A. E.; Fournier, E. I., and Morris; Shimizu; Ketcheson; Irvine; Fraser, J. G.; Swencisky, L. M.; Inrig and Ballentine, E. M.; Alexander and Davidson, J. M., and Gladwin; Damer and Nelson and Smeeton and Weld.

ENGLISH, 11.

Class I.—Grant, R. V. A.; Cameron, M. M. B., and McKay; Westbrook and Harvey, I.; Browne, M.; Costley; Lucas and Marwick and Thomas.

Class II.—Coates, W. H., and Copping and Davidson, J. M.; Nowlan; Peebles; Peck, M. G.; MacKinnon; Inrig; Ashwell, I., and Maynard and Scharschmidt and Stirk; Magee; Fraser, J. G., and Hunter, E. C.

Passed.—Ketcheson; Gibson; Rollston; Gross, A. S., and Scott, G. W.; Houston; Siddons; Adams, R. F., and Gill, M. S.; Smith, A. E.; Matheson, A. H., and Morrison, M. R.; Fletcher, H. M., and Reid, G. K., and Weld; Colgan.

ENGLISH, 12.

Class I.—Grant, R. V. A.; Harvey, I.

Class II.—Grant, M.; Marwick.

FRENCH, 3.

Class I.—Gintzburger; Smith, E. P. H.; Wallace; Grant, R. V. A., and Pillsbury.

Class II.—Lucas and Roy, H.; Bain and Draper; Copping; Abernethy and Coates, W. H.; Hunter, E. C.; MacKinnon and Nowlan and Porter.

Passed.—Berto; Morris; Irvine and Matheson, A. H.; Inrig; Schar-schmidt; Barclay and Fournier, E. I.; Wolfe; Gladwin; Maynard.

GEOLOGY, 2.

Class I.—Thomas; Beltz; Aylard and McKechnie, D. C.; Hunter, E. C., and Lucas; Grant, R. V. A.; Hosang.

Class II.—Ashwell, I.; Porter; Roy, H.; Highmoor and Reid, G. K.; Rollston; Archibald and Dalton.

Passed.—Swencisky, L. M.; Ashwell, E. L.; Gilchrist; Adams, R. F., and Swencisky, A. H. J.; Murphy; Mahrer; Costley; Day, M.; McKay; Bell, W. S., and Fletcher, H. M.

GEOLOGY, 5.

Class I.—Kerr, D. E.; Marwick.

Class II.—Maynard; Keenleyside.

Passed.—Gilley, J. K.; Hill.

GERMAN, 3.

Class I.—Gintzburger and Harvey, I.

Class II.—McKay; Bottger.

HISTOLOGY.

Class I.—Allardyce.

Class II.—Curtis, E. J.

HISTORY, 4.

Class I.—Smith, E. P. H.; Keenleyside and MacKinnon.

Class II.—Abernethy; Stirk; Peebles; Magee and Siddons; Gill, M. S., and Gross, A. S.; Ketcheson; Vollum; James, E. T.; Gibson and McClay.

Passed.—Wolfe; Ballentine, E. M., and Colgan and Damer; Davidson, J. M. Scott, C. W.; Boyd; Dawe.

HISTORY, 6.

Class I.—Cameron, M. M. B.; Grant, M.; Hosang; Sutcliffe and Wesbrook.

Class II.—Stirk; Baxter; Swencisky, L. M.; Peebles; Hokkyo; Abernethy and Ballentine, E. M., and Fletcher, H. M.

Passed.—Scott, D. W.

LATIN, 3.

Class I.—Smith, E. P. H.; Pillsbury.

Class II.—Dalton; Ashwell, I.; James, E. T.; Highmoor.

Passed.—Dunlop, H. A.; Barclay and Boyd and Gross, A. S.; Hunter, E. C., and Stewart, R.; Murphy; Archibald; Swencisky, A. H.; Wolfe; Morris.

PHILOSOPHY, 2.

Class I.—Couper; Harris, E.; Grant, M.; Coates, W. H.; Browne, M.

Class II.—Matheson, A. H.; Sutcliffe; Pillsbury; Shimizu; Gladwin; Baxter.

Passed.—Smith, A. E.; Smeeton, J.; Swencisky, D. M.; Hokkyo; Weld.

PHILOSOPHY, 4.

Class I.—Couper.

Class II.—Nowlan; Scharschmidt; Dawe and Rollston.

PHYSICS, 3.

Class I.—Copping and Sutcliffe.

Class II.—Wallace, N. E.; Draper.

SOCIOLOGY.

Class I.—McKay; Sutcliffe; Couper; Hosang.

Class II.—Fletcher, H. M.; Costley and Mahrer; Fraser, J. G.; Peck, M. G.; Maynard; Marwick and Rollston; Archibald; Ketcheson and McClay.

Passed.—Smeeton; Murphy; Emmons; Bell, W. S., and Stewart, R.; Alexander; Denham, J., and Nelson; Colgan.

SPANISH.

Class I.—Vollum; MacKinnon; Stewart, R.

Class II.—Barclay and Day, M.; Morrison, M. R.

ZOOLOGY, 3.

Class I.—Vollum; Bell, W. S.; Dunlop, H. A.; Allardyce.

FACULTY OF ARTS—SECOND, THIRD, AND FOURTH
YEARS.

ECONOMICS, 1.

Class I.—Coates, W. H.; Boss and Ingledew.

Class II.—Shaw, I. A.; Rive; Crozier and Lucas; Blakey and Fisher, L. J., and Gibson and Peardon and Smeeton; Foerster and Wallace, N. E.; Gilley, J. K.; Russell, A. M.; Adams, R. F., and Fournier, L. T., and Pratt; Handford; Draper and Matheson, A. H., and Nowlan.

Passed.—Lord and Scott, G. W.; Harrison and Smith, A. M.; McKee, G. H.; Dawe; McConnell; Gilley, M., and Lynch and McKee, E. M., and Smith, W. R., and Smith, A. E.; Mitchell; Hamilton, M., and Kion; Edwards, S., and Lett and Stirk and Suttie; Osborne and Schell and Taylor, C. D.; Gladwin and Goldstein, S., and McArthur; Fink and Gilroy; Anders and Ashwell, I., and Brenchley and Solloway; McLean, H. W., and Wilson, F. L.; Denham; Lehman; Webster, A. A.; Barlow, E. C. I., and Lyness; Wilby; Hobson; Dunlop and Greenwood, J. E., and Mortimer and Partridge and Rogers, W. S.

GEOLOGY, 4.

Class I.—Beltz, E. W.; Emmons.

Class II.—Martin.

FACULTY OF ARTS—FIRST, SECOND, THIRD, AND
FOURTH YEARS.

ZOOLOGY, 1.

Class I.—Sutherland; Allardyce and Day, E. E.; Boss and Schell.

Class II.—Coates, L. F., and Dunbar; Goldstein, C. M.; Wright, E.; Goldstein, S., and Inrig and Wilby; McAfee and Martin; Lehman and Solloway; Emmons and Wilks.

Passed.—Rogers, W. S.; Mortimer; Lynch; Kilpatrick; Peardon; Jones, V.; Mathers; Dunlop, M.; Colgan; Lewis and Parker, R. K. S.; Lett; Lyne; Healy; Bulman; Greenwood, J. E., and Hobson and Lyness.

FACULTY OF ARTS—THIRD YEAR.

ENGLISH, 7.

Class I.—Smith, E. P. H.; Harris, E.; Grant, R. V. A.; Roy, H.; Couper; Abernethy and Pillsbury; Lucas; Keenleyside and MacKinnon; Ure, A. M.

Class II.—Porter; Copping and Nowlan; Siddons; Damer and Inrig and Scharschmidt; Nelson and Peebles; Alexander and Stirk; Coates, W. H., and Draper and Magee and McClay and Morris; Irvine and James, E. T., and Matheson, A. H.; Swencisky, A. H. J.

Passed.—Gladwin and Gilley, J. K., and Smith, A. E.; Colgan and Davidson, J. M., and Fournier, E. I.; Adams, R. F.; Coates, K. M.; Day, M.; Swencisky, L. M.; Ballentine; Hill; Hokkyo and Weld.

ANALYTIC GEOMETRY.

Class I.—Draper.

Passed.—Copping.

FACULTY OF ARTS—SECOND YEAR.

ALGEBRA.

Class I.—Herman and Studer; Lazenby.

Class II.—Ingledew; Laird; Hanford and Mitchell and Osborne.

Passed.—McConnell and Robson, H. M.; Argue and Reed, M. R.; Arkley; Barlow, E. C. I.

ENGLISH, 4.

Class I.—Blakey; Lanning; Rogers, W. S., and Smith, A. M.

Class II.—Argue; McConnell; Goldstein, C.; Lazenby; Cowan; Carson and Ingledew; MacBeth; Adams and Cowling and Keatley; Handford and Herman and Jones, N. V., and Rive and Schell and Wright, E. I.

Passed.—Bowes and Crozier and Denham and Lawrence and McAfee and Mortimer and Sutherland and Suttie and Peardon; Goldstein, S., and Gilroy and Mitchell; Edwards, S., and Pratt; Parker, R. K. S.; Boss and Greenwood, J., and Healy and James, V. A., and McKee, E. M., and Munro, M. R., and Robson, H. M., and Studer and Smith, A. E.; Clarke, M., and Foerster and Laird and Mathers and Russell, A. M., and Shannon; Cribb and Fournier, L. T., and Lord and Matheson, M. C.; Dunbar and Fisher, L. J., and Grimmett, N. T., and Lyne and Munn and dePencier and Faulkner; Anders and Gill, B. H., and McArthur and McKee, G. H., and Partridge; Osborne and Robson, M. W., and Webster, A. A., and Wilby; Day, E. E., and Harper, and Keir, J. M., and Lyness and Pumphrey and Reed, M. R.; Barlow, E. C. I., and Hopper and Lehman and Wilson, G. A.; Smith, W. R.; Fink and Harrison and Hobson and Lewis and Martin and Nicholson and Taylor, C. D., and Wilson, F. L.; Brenchley and Dunlop, M., and English, J. F. K., and Gilley, M.; Kilpatrick and Lynch and McLean, E. M., and McLean, H. W., and Munro M., and Solloway and Thomson, H. M., and Wilks; Arkley; Sauder; Kion and Lett and McCabe.

ENGLISH LITERATURE.

Class I.—Blakey; Coates, L. F., and Cowling; Crozier and Goldstein, C. M.; Carson and McConnell and Lanning.

Class II.—Herman and MacBeth and Smith, A. M.; Handford and Matheson, M. C.; Wright, E. I.; Goldstein, S., and Mathers and McArthur; Adams, D. I.; Lehman and Munro, M. R.; McAfee and McKee, E. M., and Rive; Cribb and Willis; Healy; Fisher, L. J., and Lyness.

Passed.—Harper and Lamb, C. A., and McLean, H. W.; Day, E. E., and McKee, G. H.; Lett and Martin and Mitchell; Clarke, M., and

Fournier, L. T., and McLean, E. M.; Hobson and Pratt; Barlow and Dunbar and Greenwood, J. E., and Lazenby; Boss and Cowan and Gilroy and Lyne and Peardon; Brenchley and Denham; Gilley M., and Ingledew and Keatley; Kilpatrick and Harrison and Lewis and Lynch and Mortimer and Webster, A. A.; Bowes and Edwards, S., and Lawrence and Rogers, W. S.; Gill, B. H., and Keir, J. M., and Lord; Laird and Schell and Smith, C. D.; McCabe and Hopper and Solloway; Kion and Shannon and Suttie; Dunlop; Studer; Foerster; dePencier; Nicholson; James, V. A.; Robson, H. M., and Sauder; Parker, R. K. S.; Munn and Robson, M. W., and Russell, A. M.; Fink and Faulkner and Smith, W. R., and Wilson, F. L.; Anders.

FRENCH.

Class I.—Blakey; Lanning; Coates, L. F., and Herman; Cowling.

Class II.—Bowes; Goldstein, C. M.; Handford and McConnell; Adams, D. I., and Lawrence; Studer; Crozier and McKee, E. M.; McAfee; Goldstein, S.; Boss and Edwards and Jones, N. V.

Passed.—Laird and McKee, G. H.; Fournier and Healy; Kilpatrick and Suttie and Wilson, F. L.; Faulkner and Lehman and Mitchell and Robson, M. W., and Smith, A. M.; Carson and Clarke, M.; Keatley and MacBeth and Mathers and Wilson, G. A.; Munn and Sauder; Cowan; Foerster and Hobson and Lyne; Dunbar and Greenwood, J. E., and Partridge; Harper and Mortimer and Pumphrey; McLean, H. W., and Rowan and Smith, W. R.; Gilroy; Ure; McArthur and Munro, M. R.; Gill, B. H., and Hopper and Reed, M. R.; Pratt and Wilby; Fisher, L. J., and Gilley, M., and Kion; Arkley and Matheson, M. C.; Barlow, E. C. I. and dePencier and Lewis and Schell; Grimmett, N. T., and Harrison; Lord and Lyness and McCabe and Parker and Rive and Robson, H. M., and Russell, A. M., and Shannon and Brenchley and Sutherland.

GEOMETRY.

Class I.—Studer; Herman.

Class II.—Lazenby; Mitchell; Handford and Ingledew.

Passed.—Laird; McConnell and Robson, H. M.; Osborne; Argue; Reed; Arkley; Barlow, E. C. I.

GERMAN, 2.

Passed.—McCabe.

GREEK.

Class II.—Cribb.

Passed.—Denham; Webster, A. A.

HISTORY, 2.

Class I.—Wright, E. I.; Hosang; Keenleyside and Matheson, M. C.; MacBeth.

Class II.—Cowling; Harper and Mahrer; Fraser, J. G., and Rollston; Carson and Clarke, M., and Murphy; Munro, M. R.; Cribb; Bain and Keatley; Ballentine, E. M., and Cowan and Gill, B. H., and Nelson and Siddons.

Passed.—Munro, M., and Shannon; Kilpatrick and McAfee; Lanning; Arkley and Jones, N. V., and McLean, E. M.; Sauder; Parker, R. K. S.; McCabe; Munn; Lewis and Robson, M. W.

LATIN, 2.

Class I.—Blakey; Goldstein, C. M.; Bowes and Cowling; Herman.

Class II.—Lawrence; Lanning and Wright, E. I.; Ingledew.

Passed.—Edwards, S.; Barlow, E. C. I., and MacBeth; Studer; Peardon; Lazenby; Clarke, M.; Fink and Gilroy and Robson, M. W.; Crozier and Munro, M. R.; Munn; Wilks; dePencier and Robson, H. M.; Matheson, M. C., and McLean, E. M., and Pumphrey; Faulkner; Rogers, W. S.; Lynch and Lyness; Anders and James, V. A., and Lehman and Lett and Lord and Martin and Partridge and Reed, M. R., and Sauder and Shannon and Solloway.

LOGIC.

Class I.—Blakey; Ingledew.

Class II.—Smith, A. M.; Adams, D. I., and Wright, E. I.

Passed.—Lett; Fisher, L. J.; McConnell and Peardon and Rive; Harper and Rogers, W. S.; Foerster and Lawrence; Coates, L. F., and English, J. F. K., and Fink; McKee, E. M., and McKee, G. H.; Fournier, L. T., and Russell, A. M.; McLean, E. M., and Suttie; Clarke, M., and McAfee; Bowes and Goldstein, S., and Mathers; Grimmitt, N. T.; Kilpatrick and Gilroy; Cribb and Healy and Hobson and James, V. A., and Kion and Lord and McLean, H. W., and Brenchley; Carson and McArthur; Anders and Edwards, S., and Gill, B. H., and Gilley, M. E., and Jones, N. V., and Lewis and Lyne and Munn and Shannon and Smith, W. R., and Cowan and Harrison and Mortimer and Wilson, G. A.

Passed, Supplemental.—Ure.

PHYSICS, 2.

Class I.—Studer; Dunbar.

Passed.—Laird; Sutcliffe; Crozier and Munro; Sutherland.

PSYCHOLOGY.

Class I.—Blakey; Ingledew; Smith, A. M.

Class II.—Coates, L. F., and Wright, E. I.; McConnell; Bowes; Rogers, W. S.; Adams and Harper and McKee, G. H.; Peardon; McKee, E. M.; Fournier, L. T., and Kilpatrick and Lett.

Passed.—McLean, E. M., and Smith, W. R.; Edwards, S., and Greenwood, J. E.; McAfee; Healy and Jones, N. V., and Rive and Suttie; Harrison; Clarke, M.; Goldstein, S., and McArthur; Carson and Russell, A. M.; English, J. F. K., and Lawrence and Lord and McLean, H. W., and Shannon; Faulkner; Hobson; Anders and Cribb and Fisher, L. J.; Foerster and Lyne; Wilson, G. A.; Denham; Kion and Mathers

and Brenchley and Keir, J. M.; Fink; Grimmitt, N. T., and Pumphrey; Lewis and Taylor, C. D., and Webster; James, V. A., and Gilroy and Munn and Wilson, F. L.; Cowan and Gill, B. H., and Gilley, M. E.

FACULTY OF ARTS—FIRST AND SECOND YEARS.

GEOLOGY, 1.

Class I.—Crickmay; Matheson, M. C.; Carson and McLean, E. M.; Lawrence; Cowling; Gilley, M.; Grant, F. R.; Hamilton; McLeod, G. V.; Coope and Mitchell.

Class II.—Casselma and Smith, W. R.; McLean, H. W.; Letson, G. M.; Roberts, L. A. L., and Sauder; Brenchley; McArthur; Parker, R. K. S., and Pearson, G. C.; Partridge.

Passed.—Anders and Rankin; Harper; Rive; Cribb and Dunlop, M., and James, V. A.; Gross, G. C., and Fink; MacBeth; Switzer; Simpson, N. V.; Rowan; Arkley and Harrison and Kion and Webster, A. A.

FACULTY OF ARTS—FIRST YEAR.

ALGEBRA.

Class I.—Lidgey; Bramley and Dauphinee; Urquhart; Gross, G. C.; Harris, J. A., and McMynn; Dodson; Gunning; Cowdell; McKee, R. G.; Bell, J. G.; Imlah and Johnson, E. A.; Hunter, A. D., and Laking and Lipson, B. A.; Meredith and Wrinch; Rushbury; Metz; Baker; Coffin and Moodie, A. S.

Class II.—Eagles; Cameron, R. K.; Kerr, M. I.; Buxton and Cameron, W. M., and Darts; Gammie and Gerhart; Crowley and Gignac and Hunter, H. L., and Switzer; Fulton, D. J.; Parker, R. W., and Miller, I. S.; Shier and Willis; Coope and King and Mercer and Molyneux; Birnie and Gwyther, V. M. W.; Green and Hallett and Letson, G. M., and McKechnie, M. S., and Pound and Worsley; Greer and Hunter, R., and Johnston, A. E., and Offord.

Passed.—Campbell, D. S., and Ford and Price; Buxton and Edwards, I. J., and Garlick and Gibbon and Moe; Allen, G. C., and Campbell, E. A., and Hall and Monkman; Fitzgerald and Keir, H.; McIntyre and Ross; Cutler and Forrester and Harvey, M.; Gwyther, H. W., and Neill and Rae and Shaw, M. J., and Sisley and Gale and Taylor, I. M.; Morrison, M. R., and Rowan; O'Hagan and Spargo; Broadfoot and Fraser, D., and Johnston, E. M.; Bulman and Fanning and Horsman and Stroyan; Day, G., and Dougan and Hayton and Jure and Pye; Trembath; Dowling; Casselman; Barlow, M. Y., and Fisher, R. A., and Hamilton; Frith and Limpus and Standen and Ternan; Curwen and Cummings and Hooper and Livingstone and Thompson, J. M.; MacKenzie, L. J.; Rankin and Rogers, E. J., and Shaw, K. D.; Collard and Lamb, R. W., and Lusby and Partington and Walker, J. E., Chu and Wootten; Clandinin; Simpson, M. S., and Steves; Wilcox; Kemp;

Crawford and Fletcher, L. M., and MacKenzie, F. R.; McLoughry, V. H.; Davidson, D. A., and Leavens and Stevenson; Atherton and Clegg; Ballard and Campbell, A. L., and Elsey and Fraser, G. W. B., and Wade and Wallock; Grant, F. R., and Johnson, L. M.; Clarke, M. I.; Aconley; Kirk, K., and Sutherland; Swanson, M. K.; Bottger and Charnley and McLoughry, M. A., and Sweeting and Webster, S. M.

Passed, Supplemental.—Bennett; Harrison; McNaughton; Morrison; Nicholson; Smith.

ENGLISH, I.

Class I.—Stevenson; Walker, J. E.; Hamilton; Miller, I. S.; Harvey, M.; Ballard; FitzGerald and Metz; Dauphinee and Dodson and Fulton, D. J., and Wrinch; Bell, J. G., and Laking; Coope and Johnson, E. A., and Limpus and MacNeill; Cowdell and Fletcher, L. M., and Frith and Offord.

Class II.—Harris, J. A., and Lipson, B. A.; Simpson, N. V.; Coffin and Imlah and Leitch and Shaw, K. D.; Dougan and Price; Darts and Grant, F. R.; Lamb, R. W., and Pye; McIntyre and Pound and Wallock and Willis; Cameron, W. M., and Elsey and Gammie and McMynn and Meredith; Cummings and Hallett and Kirk, K., and Lipson, B., and McKee, R. G.; Buxton and Hunter, R., and Neill; Cutler and Moe and Pearson, G. C.; Curwen and Gunning; Campbell, D. S., and Monkman; Baker and Collard and Eagles and Hayton and Hunter, H. L., and Keir.

Passed.—Bramley and Reid, J.; Cameron, R. K., and Campbell, A. L., and Forrester and Rae; Agar and Rankin and Spargo; Barton and Clarke, M. I., and MacKenzie, M. I., and Ross and Rushbury; Dowling and Gwyther, V., and MacKenzie, F. R., and Moodie, A. S., and Parker, R. W., and Partington and Weinberg; Gerhart and Green and Horsman and McKee, W. H., and Pittendrigh and Shaw, M. J.; Allen, G. C., and Casselman and Clegg and English, M. H., and Gibbon and Letson, G. M., and O'Hagan and Rogers, E. J., and Urquhart; Hooper and Johnston, E. M., and Kemp and MacKenzie, L. J., and Wade; Campbell, E. A., and Garlick and Gignac and Greer and Taylor, I. M., and Smitheringale; Trembath; Graham and Lidgley; Crawford and Edwards, I. J., and Stevens, E. G. B., and Thomson, H. I.; Fraser, G. W. B., and Johnston, H. E., and Kerr, M. I., and Knowlton and McLoughry, V. H., and Stuart, K., and Swanson, M. K., and Voege and Wootten and Webster, S. M.; Astell and Clandinin and Ferguson and Ogilvie and Woodside; Aconley and Allen, M. E., and Coburn and Fanning and Grant, K. L., and Gross, G. C., and Hall and Johnson, L. M., and Jure and Shier and Reid, H. E., and Simpson, M. S., and Stroyan and Webster, J. O., and Broadfoot; King; Atherton; Bulman and Charnley and Standen and Wilcox; Birnie and McLoughry, M. A., and Switzer and Molyneux and Ternan; Gwyther, H. W.; Steves; Mercer and Sisley; Lusby.

ENGLISH, 2.

Class I.—Wrinch; FitzGerald and Stevenson; Harvey, M., and Walker, J. E., and Wade; Hamilton and McMynn and Miller, I. S., and Willis; Crawford and Grant, F. R., and Leitch and Metz and Pound and Simpson, N. V., and Urquhart and Webster, J. O.

Class II.—Moe; Neill and Shaw, K. D.; Webster, S. M.; Meredith and Partington; Offord; Standen; Curwen and Price; Ballard and Cowdell and MacKenzie, M. I., and O'Hagan; Coope and Rae and Parker, R. W.; Switzer and Vogee; Astell and Burton and Grant, K. L., and Johnston, E. M., and Keir, H., and McLoughry, V. H.; Campbell, A. L., and Dodson and Frith and Gill, D. A., and McIntyre and McKee, R. G., and Pye and Steves and Stroyan and Thomson, H. I.; Burton and Cameron, R. K., and Dauphinee and Dowling and Elsey and Fulton, D. J., and Harris, J. A., and Hayton and Imlah and Johnston, H. E., and Knowlton and Laking and Swanson, M. K.

Passed.—Coffin and Darts and Johnson, E. A., and Letson, G. M., and Pearson, G. C., and Spargo and Sisley; Horsman and Hunter, H. L., and Hunter, R., and McCandless; Aconley and Allen, G. C., and Barlow, M. Y., and Clandinin and Forrester and King; Fletcher, L. M., and Gammie and Hooper and Kemp and Lamb, R. W., and McLeod, G. V., and Monkman and Stevens, E. G. B.; Bulman and Hallett and Hunter, A. D., and MacKenzie, F. R., and Ogilvie and Stevens, W. L., and Thompson, J. M., and Rushbury and Wallock; Agar and Kerr, M. I., and MacKenzie, L. J., and Ross and Shaw, M.; Dougan and Fraser, G. W. B., and Cross and Johnston, L. M., and Kirk, K., and Stuart, K., and Woodworth; Collard and Pearson, C. S., and Rogers, E. T., and Trembath and Wilcox; Campbell, E. A., and Garlick and Limpus and Rankin and Saunders and Taylor, I. M.; Bramley and Clegg and Cummings and Cutler and Gibbon and Hazlitt and Lipson, B., and MacNeill and Pittendrigh and Russell and Spangelo and Wootten; Bell, J. G., and Clarke, M. I., and Campbell, D. S., and Lidgely and Lipson, B. A., and McLoughry, M. A., and Mercer and Pedlow and Reid, J., and Reid, H. E., and Smitheringale and Ternan; Cameron, L. E., and Lusby; Ford and Geekie and Grimmett, H. E., and Gwyther, H. W., and Webb; Crowley and Coburn and Eagles and Fanning and Greer and Gunning and Moodie, A. S., and Scott, F. E., and Shier; Atherton and Broadfoot and Cameron, W. M., and Charnley and Clarke, M. A., and Davidson, D. A., and Embree and English, M. H., and Edwards, I. J., and Casselman and Gignac and Gwyther, V. M. W., and Hankinson and Jure and McKee, J. R., and McKee, W. H., and Molyneux; Weinberg; Simpson, M. S.; Green and Day, G.; Birnie and Hall; Gerhart; Baker.

FRENCH.

Class I.—Neill; Ballard; Moe; Miller, I. S.; Cowdell and Metz; Buxton; Rankin; Harvey, M., and Willis.

Class II.—Price; Gignac and Stevenson and Pye; Walker, J. E.; Bell, J. G., and Dowling and Hazlitt; Shaw, M. J.; Birnie and Grant, K. L., and Hooper; FitzGerald and Johnson, L. M., and Monkman; Fulton, D. J.; Charnley; Kirk, K.

Passed.—Clarke, M. I., and Johnston, H. E.; Bramley and Horsman and Johnston, E. M., and Leitch; Frith and Grant, F. R., and Keir, H., and McLoughry, V. H.; Imlah and Kemp and Partington and Swanson, M. K., and Webster, S. M., and Weinberg; Campbell, A. L., and Dodson and Mercer; Gibbon and Hunter, H. L., and Standen; Aconley and Astell and Collard and Dauphinee and Gerhart and Johnson; E. A., and McKee, J. R., and Pedlow; Lavery and Lidgley and Vogee and Wallock and Wilcox; Atherton and Coope and Gammie and McNaughton, R. R., and Rae; Forrester; O'Hagan and Simpson, M. S., and Stuart, K.; Dougan and MacKenzie, F. R.; Cameron, W. M., and Greer and Harris, J. A., and Scott, F. E., and Trembath; Hamilton and McCandless; Limpus; Curwen and Gross, G. C., and Gunning and Moodie, A. S., and Offord and Simpson, N. V.; English, M. H., and King and Laking and Rogers, E. J., and Switzer; Casselman and Lipson, B., and MacKenzie, L. J., and Stroyan; Shaw, K. D.; Kerr, M. I., and Lamb, R. W., and Sager; Cummings and Fraser, D., and Livingstone; Green; Bulman and Campbell, D. S., and McLoughry, M. A.; Clegg and Coffin and Cutler and Elsey and Gill, D. A.; Eagles and Hall; Fletcher, L. M., and Steves; Letson, G. M.; Lusby; McIntyre; Day, G., and Gwyther, V. M. W.

GEOMETRY.

Class I.—Laking; Moodie, A. S.; Wrinch; Reid, J., and Urquhart; Gunning; Parker, R. W.

Class II.—Burton; Green and Gross, G. C.; Coope and Metz; Bramley and Cameron, W. M., and Cameron, R. K., and Campbell, E. A., and Lidgley and Mercer and Meredith and Neill; Dauphinee and Wade and Walsh, V. C.; Baker and Johnston, E. M.; Coffin and Cowdell and Crowley and Garlick and McMynn and Rushbury and Smitheringale; Russell, G., and Stevenson; McKee, R. G., and Sisley; Fletcher, L. M., and Gignac and Rankin and Steves and Shier; Chu and Dougan and Greer and Harvey, M., and Lipson, B. A.; Shaw, K. D.; Buxton and Fulton, L. J.; Crawford and Cummings and Edwards, I. J., and Imlah and Johnston, H. E.; Monkman and Shaw, M. J., and Spargo and Switzer; Ternan and Willis and Weinberg.

Passed.—Dodson and Day, G., and Ford and Gammie and Lamb, R. W., and Price; Campbell, D. S., and Keir, G., and Ure and Wilcox; Fraser, D., and Letson, G. M., and Pye and Cutler and Gale and Gerhart and Gibbon and Sutherland; Frith and Gwyther, V. M. W., and Johnson, E. A., and Pound and Standen; Ballard and Dowling and Hamilton and Molyneux and Offord and Rogers, E. J.; Bell, J. G., and Clandinin and Ogilvie and Stroyan; Bulman and Charnley and Grant, F. R., and Harris, J. A., and Livingstone and Moe and Rowan;

Davidson, D. A., and Eagles and Fraser, G. W. B., and Gwyther, H. W., and Johnson, L. M., and Miller, I. S., and Walker, J. E.; Trembath; Hall; Hayton and Hunter, A. D., and Partington and Pedlow and Ross and Webb and Webster, S. M.; Curwen and King and O'Hagan and Sweeting and Worsley; Agar and Atherton and MacNeill and Wallock and Woodworth; Clegg and Darts and Elsey and Lusby and Rae and Wootten; Casselman and Grant, K. L., and Hooper; Collard and Forrester and Hunter, H. L., and McKechnie, M. S., and Simpson, M. S.; Kerr, M. I.; Fanning and Fisher, R. A.; Birnie and McLoughry, V. H.; Gill, D. A., and Leavens and Limpus; FitzGerald and Leitch; Clarke, M. I., and McLoughry, M. A.; Campbell, A. L., and Bottger; Allen, G. C., and Jure; Kemp; Aconley; Lipson, B.; Kirk; Swanson, M. K.; Horsman and MacKenzie, L. J.

Passed, Supplemental.—Bennett; Boldrick.

GERMAN.

Class I.—Buxton.

Passed.—Dowling.

HISTORY, I.

Class I.—Harris, J. A.; Urquhart; Edwards, I. J., and Walker, J. E.; Pound; Hamilton and Miller, I. S., and Rae.

Class II.—Price and Vogee; Coffin; Rankin and Stevenson; Ballard and Grant, F. R., and Monkman; Coope and McMynn; Buxton and Dowling and Eagles and Geekie; Fanning and Fulton, D. J., and Leitch and Metz and Spargo and Webster, S. M., and Willis and Wrinch; Frith and Swanson, M. K., and Wallock; Hooper; Aconley and Bell, J. G., and Clandinin and Cutler and Elsey and FitzGerald and Letson, G. M., and Mercer and Neill; Fletcher, L. M., and MacKenzie, L. J., and MacKenzie, M. I., and Shaw, K. D.; Bramley and Cameron, R. K., and Moe and Taylor, I. M.; Burton and Cowdell and Gill, D. A., and Greer and Imlah and Hunter, H. L., and Smitheringale and Trembath; Dougan and McIntyre and Wade.

Passed.—Pye; Campbell, A. L., and English, M. H., and Gibbon and McKee, R. G., and MacKenzie, F. R., and Reid, J., and Standen; Hayton and Horsman and Johnson, E. A., and Parker, R. W.; Crawford and Ford and Offord and Ternan; Clegg and Gammie; Lipson, B., and Partington; Embree and Garlick and MacNeill and Meredith and Simpson, N. V., and Thompson, J. M.; Coburn and Curwen and Darts and Fraser, G. W. B., and Gignac and Johnston, H. E., and McLeod, G. V.; Clarke, M. I., and Grimmett, H. E., and McKee, J. R., and Weinberg; Davidson, D. A., and McLoughry, M. A., and Molyneux; Cameron, W. M., and Dauphinee and Forrester and Gunning and Ogilvie and O'Hagan and Stroyan; Day, G., and Fay and Hunter, R., and Johnston, E. M., and Kemp; Astell and Campbell, E. A., and Gwyther, H. W., and Hunter, A. D.; Kerr, M. I., and McLoughry, V. H.; Collard and Grant, K. L., and Lipson, B. A., and Wootten; Allen, G. C., and Birnie and Dodson and Gross, G. C., and Hankinson

and Hazlett and Lamb, R. W., and Limpus and Russell, G., and Steves and Stevens, E. G. B.; Ross and Wilcox; Charnley and Gerhart; Campbell, D. S., and Casselman and Johnson, L. M.; Rushbury; Atherton and Green; Laking and Lidgley; Baker and Keir, H., and Sisley; Cummings; Gwyther, V. M. W., and Shaw, M. J.

LATIN.

Class I.—Wrinch; Miller, I. S.; Metz and Neill and Webster, S. M.; Bramley.

Class II.—Pye; FitzGerald; Burton and Moe; McMynn; Keir, H., and Willis; Ballard and Birnie and Harvey, M.; Cowdell; Buxton and Shaw, M. J.; Frith; Hooper.

Passed.—Gignac; Stevenson; Fulton, D. J., and Kirk, K.; Lipson, B., and O'Hagan; Charnley and Dodson and Laking and Rogers, E. J.; Cameron, R. K., and Campbell, E. A., and Edwards, I. J.; Astell; Collard and Gammie and Rae; Wade; Campbell, A. L.; King; Grant, K. L. and Monkman; Taylor, I. M.; Kemp; Meredith and Wilcox; Johnson, L. M., and McLoughry, M. A., and Spargo and Weinberg; MacKenzie, F. R., and MacKenzie, L. J., and Shaw, K. D.; Aconley and McKee, R. G.; Clarke, M. I., and Darts and Mercer and Rowan; Atherton and Standen; Swanson, M. K.; Crawford and Gwyther, H. W., and Kerr, M. I.; Simpson, M. S.; Curwen; Molyneux.

PHYSICS.

Class I.—Burton; Lidgley; Dauphinee and Harris, J. A.; Wrinch; Day, G., and Meredith; Coffin and Edwards, I. J., and Green; Urquhart; Ross; Gunning and Parker, R. W., and Pound; Bramley and Ferguson and Gwyther, V. M. W.

Class II.—Baker and Neill and Wade and Walker, J. E.; Eaglès; Ballantyne, W. H., and McIntyre and Spargo; Rushbury; Molyneux; Cutler and Greer and Lipson, B. A.; Offord and Stroyan; Metz; McMynn; Imlah and McKee, R. G.; Johnson, H. E.; Forrester and Johnson, E. A., and Shier; Crawford.

Passed.—Woodworth; Laking; Bell, J. G., and Bulman and Cowdell and Darts and Elsey and Gibbon and Letson, G. M., and Limpus and Smitheringale and Stevenson; Ballard and Cameron, W. M., and Dowling and Lusby and Ternan; Cameron, R. K., and Campbell, E. A.; Campbell, H. L., and Miller, I. S.; Casselman and Davidson, D. A., and Fraser, G. W. B., and Wallock; Fulton, D. J., and Jure and Stevens, W. L.; Frith and McKechnie, M. S., and Shaw, K. D.; Fraser, D.; Campbell, D. S., and Price and Stevens and Ure; Fletcher and Harvey, M.; Bottger and Coope and FitzGerald and Gross, G. C.; Fanning and Gerhart and Lamb and Leavens; Allen, G. C., and Coburn and Curwen and Hallett and Hunter, A. D., and Kerr and Monkman and Scott; Clegg and McLoughry, V. H., and Moe; Dougan and Webster, S. M., and Weinberg; Clandinin and Dodson; Fisher, R. A., and Hunter, H. L., and Johnston, E. M., and Rankin and Switzer;

Keir and Simpson, N. V., and Sisley and Trembath; Gwyther, H. W., and MacKenzie, F. R., and Wootten; Shaw, M. J.; Crowley and Grant, F. R., and dePencier and Simpson, M. S.; Gale and Lawson and McLoughry, M. A., and Ogilvie and Rogers, E. J., and Thompson, J. M.; English, M. H., and Gignac and Hayton and Hooper and Leitch and Livingstone and Moodie, A. S., and O'Hagan and Swanson, M. K., and Vogee; Collard; Birnie and Mercer and Standen; Cummings and Horsman and Wilcox and Willis; Aconley and Grant, K. L., and Lipson, B., and MacKenzie, L. J., and Partington and Taylor, I. M.; Charnley and Johnson, L. M., and Pye; Atherton and Clarke, M. I., and Kemp and King.

TRIGONOMETRY.

Class I.—Wrinch; Urquhart; Bramley; Dauphinee and Meredith; Johnson, E. A.; Eagles and Laking; Harris, J. A.; Day, G., and Gross, G. C.; Hunter, A. D.; Coffin and Lidgey; Lamb, R. W., and Rushbury; Broadfoot; Gwyther, V. M. W.

Class II.—Imlah and Burton; Campbell, D. S.; Metz; Crowley and King and Monkman; Mercer and Shaw, M. J., and Parker, R. W., and Gignac; Green and Kerr, M. I., and Neill; Bell, J. G., and Shaw, K. D., and Cutler; Spargo and Ure; Elsey and Fulton, D. J., and Pound and Pye; Lipson, B. A., and O'Hagan; Cameron, R. K., and Gunning and McKee, R. G., and Moe and Standen and Rowan; Coope and Moodie, A. S., and Russell, G., and Trembath; Birnie and Gerhart and Greer and Gwyther, H. W., and Miller, I. S., and Wade; Casselman and Clarke, M. I.

Passed.—Cameron, W. M., and Hunter, R., and Bulman and Keir, H., and Rogers, E. J.; Johnston, H. E., and Smitheringale and Molyneux and Webb; Buxton and Gibbon and Price; Baker and FitzGerald and Hunter, H. L., and McMynn; Allen, G. C., and Campbell, A. L., and Dodson and Morrison, M. R., and Willis; Cowdell and Partington; Davidson, D. A., and Grant, K. L., and McIntyre and Offord and Reid, J., and Scott, F. E., and Wootten and Simpson, M. S.; Garlick; Campbell, E. A., and Ford and Dowling and Hooper and Hamilton and Edwards, I. J.; Hayton and Kemp and Ross and Stevenson and Ternan and Worsley and Johnston, E. M.; Clandinin and Hall and Letson, G. M., and Livingstone and Walker, J. E., and Webster, S. M., and MacKenzie, L. J.; Charnley and Gale; Crawford and Frith and Gammie and Grant, F. R., and Harvey, M., and Leitch and Pedlow and Stroyan and Fraser, G. W. B., and Chu and Fisher, B. A.; Bottger and Clegg and Lusby and Jure and McLoughry, M. A., and Shier and Swanson, M. K., and Taylor, I. M., and Sweeting and Leavens; Geekie and Kirk, K., and Sisley and Wallock; Ballard; Aconley and McKechnie, M. S.; Fanning and Wilcox; Cummings and English, M. H., and Johnson, L. M., and Rankin; Atherton and Rae; Curwen; Darts and Fletcher, L. M., and Limpus and McLoughry, B. H., and Steves and Switzer; Lipson, B.; Forrester and MacKenzie, F. R.

Passed, Supplemental.—Bennett, J. L.; Keir, J. M.; Milledge, E.

FACULTIES OF ARTS AND APPLIED SCIENCE—THIRD AND FOURTH YEARS.

CHEMISTRY, 5.

Class I.—McKechnie, D. C.; Allardyce; Shaw, I. A.

Class II.—Thomas; Gross, A. S.; Day, E. E.

Passed.—Tamenaga; Morrison, D. M.

CHEMISTRY, 8.

Class I.—Shaw, I. A.; Morrison, D. M.

Class II.—Allardyce and Fulton, R. V.

GEOLOGY, 3.

Class I.—Aylard and Emmons.

Class II.—McKechnie, D. C.; Andrews and Gilchrist.

Passed.—James, E. T.; Smith, A. E.; Boomer; Ketcheson; Tamenaga; Rebbeck and Shimizu.

CHEMISTRY, 4.

Class I.—Stedman; Andrews.

Class II.—Wallace, D. A.; Day, E. E.; Boomer and Tamenaga; Martin.

Passed.—Rebbeck.

FACULTIES OF ARTS AND APPLIED SCIENCE—SECOND AND THIRD YEARS.

DIFFERENTIAL AND INTEGRAL CALCULUS.

Class I.—Gill, J. E.; Draper; Swanson, C. O.; Eckardt.

Class II.—Thompson, G. M.; Kingham; Copping; Stedman; Melville.

Passed.—Anderson, R. G.; Doyle; Meekison.

CHEMISTRY, 3.

Class I.—Stedman.

Class II.—Andrews; Curtis, E. J., and Day, E. E., and Fulton, R. V.

Passed.—Tamenaga; Martin; Boomer; Rebbeck.

FACULTIES OF ARTS, APPLIED SCIENCE, AND AGRICULTURE.

CHEMISTRY, 2.

Class I.—Stedman; Swanson, C. O.; Gill, J. H.; Dunbar; Andrews; Wilks; Boss; Aylard.

Class II.—Wilby; Boomer; Wilson, F. L.; Anderson, R. G.; Ashwell, E. L.; Thompson, G. M.; Gilchrist; Kingham; Melville; Dunlop, H. A.; Letson, H. F. G., and Lynch and Russell, A. M.

Passed.—Woodward; Rebbeck and Wilson, G. A.; Eckardt; Bell, W. S., and Schell and Solloway; Laird; Ballantyne, W. H., and Lamb, C. A.; Fournier, E. I.; Sutherland and Smith, A. M., and Wallace, D. A.; Pratt; Harris, H.; English, J. F. K.

FACULTIES OF ARTS, APPLIED SCIENCE, AND AGRICULTURE—FIRST, SECOND, THIRD, AND FOURTH YEARS.

BOTANY.

Class I.—Davidson, J. M.; Mounce, M. J.; Bain.

Class II.—Hill; Cutler; McKee, G. H.; Dougan and Walker, R. E.; Suttie; Baxter; Lamb, C. A., and McKee, E. M.; Gill, B. H., and Leckie.

Passed.—Sweeting; Cowan; Chu; Leavens and Woodward; Greenwood, H. D.; McKechnie, M. S.; Clarke, G. E. F., and Harris, H., and Leitch and Robson, M. W.; Thompson, H. M.; Fisher, R. A.; Hall.

FACULTIES OF ARTS, APPLIED SCIENCE, AND AGRICULTURE—FIRST AND SECOND YEARS.

CHEMISTRY, 1.

Class I.—Herman^{*}; Wrinch; Urquhart; Doyle and Goldstein, C. M.; Burton.

Class II.—Harris, J. A.; Dauphinee; Emmons, R. C., and Handford; Handy; McMynn; Foerster and Fournier, L. T.; Eagles and Gwyther, V. M. W.; Meredith; Edwards, I. J.; Lazenby and McKee, R. G., and Moodie, A. S., and Mounce, M. J.

Passed.—Bell, J. G.; Lusby; Cameron, R. K., and Darts and Eckardt and Elsey and Imlah and Smitheringale; Gunning; Gibbon; Lidgley; Argue and Banfield and Hall and Robson, H. M.; Coffin and Green, C. H.; Crawford and Lamb, R. W.; and Pound and Shier; Price and Spargo; Stevens, W. L., and Wallock; Anderson, S., and Gill, D. A., and Lipson, B.; Gwyther, H.; Campbell, E. A., and Offord and Wade; Rushbury; Hunter, H. L.; Cummings; Jure and Lipson, B. A.; Cameron, W. M., and Forrester and McIntyre; Fisher, R. A.; Fletcher, L. M., and Leavens and Livingstone; Johnson, E. A.; Leckie; Johnston, E. M., and Johnston, H. E., and McKechnie, M. S., and Partington and Sweeting and Taylor, I. M.; Healy and Lyne and Reed, M. R.

FACULTIES OF ARTS AND AGRICULTURE.

BIOLOGY, 1.

Class I.—Cutler and Dunlop, H. A., and Coates, K. M.; Mounce, M. J.; Wilby; Sweeting; Goldstein, C. M., and Walker, J. E., and Wilks.

Class II.—McKee, E. M.; Martin; Boss and Thomas; Bain and Dougan and Dunbar and Leckie; Davidson, J. M.; Inrig and Sutherland; Emmons and Healy and Maynard; Coates, L. F.; Kilpatrick and Lyne; Lyness and Schell; Leitch and McKee, G. H.; Suttie and Wright, E. I.

Passed.—Dunlop, M., and Goldstein, S.; Buell and Hobson and Jones, N. V.; Bulman and Lewis; McAfee and Thomson, H. M.; Fisher,

R. A., and Lynch; Chu and Gill, B. H., and Hall and Parker; Solloway; Robson, M. W.; Wolfe; Mortimer and Rogers; Day, E. E., and Mathers; Leavens; Grimmer, N. T., and Lehman; Lett and Peardon and Yip and Cowan.

FACULTY OF APPLIED SCIENCE—FOURTH YEAR.

DESIGN AND DRAUGHTING.

Class I.—Letson, H. F. G.

ELECTRICAL ENGINEERING.

Class II.—Letson, H. F. G.

ELECTRICAL ENGINEERING, 2.

Class II.—Letson, H. F. G.

GAS ENGINEERING.

Class II.—Letson, H. F. G.

MECHANICAL ENGINEERING.

Class I.—Letson, H. F. G.

STEAM ENGINEERING.

Class I.—Letson, H. F. G.

MACHINE-SHOP.

Class II.—Letson, H. F. G.

PLANT OPERATION.

Class I.—Letson, H. F. G.

SUMMER ESSAY.

Class II.—Letson, H. F. G.

THERMODYNAMICS.

Class II.—Letson, H. F. G.

THESIS.

Class I.—Letson, H. F. G.

WORKS MANAGEMENT.

Class I.—Letson, H. F. G.

FACULTY OF APPLIED SCIENCE—THIRD YEAR.

ENGINEERING ECONOMICS.

Class I.—Ashwell, E. L.; Andrews.

Class II.—Aylard and Boomer; Wallace, D. A.; Gilchrist and Tamenaga; McKechnie, D. C.

Passed.—Rebbeck.

GENERAL ENGINEERING, 2.

Class I.—Aylard.

Class II.—McKechnie, D. C.; Andrews.

Passed.—Tamenaga; Boomer; Rebbeck.

MECHANICAL ENGINEERING, 2.

Class II.—Aylard; Wallace, D. A.; Boomer and McKechnie, D. C.; Andrews; Gilchrist.

Passed.—Rebbeck; Morrison, D. M.; Ashwell, E. L., and Tamenaga.

MECHANICAL ENGINEERING, 3.

Class I.—Boomer; Ashwell, E. L.; Aylard; Andrews.

Class II.—McKechnie, D. C., and Tamenaga; Morrison, D. M.

Passed.—Wallace, D. A., and Gilchrist; Rebbeck.

MECHANICAL ENGINEERING, 4.

Class II.—Andrews and Boomer.

STRUCTURAL ENGINEERING, 3.

Class I.—Boomer; Aylard.

Class II.—Andrews; Rebbeck; Gilchrist.

Passed.—Ashwell.

METALLURGY.

Class I.—McKechnie, D. C.; Aylard.

Class II.—Wallace, D. A.

Passed.—Boomer; Andrews; Rebbeck; Gilchrist.

GENERAL MINING.

Class II.—Aylard and McKechnie, D. C.; Gilchrist.

MINE SURVEYING.

Class I.—Aylard and McKechnie, D. C.; Gilchrist.

Passed.—Ashwell, E. L.

ORE-DRESSING.

Class I.—McKechnie, D. C.

Class II.—Aylard.

Passed.—Gilchrist; Ashwell, E. L.

SUMMER ESSAY.

Class I.—Aylard; Ashwell, E. L.

Passed.—Gilchrist and McKechnie, D. C.

FACULTY OF APPLIED SCIENCE—SECOND YEAR.

MECHANICAL DRAUGHTING.

Class I.—Gill, J. E., and Kingham and Swanson, C. O.

Class II.—Thompson, G. M.; Anderson, R. G.; Melville; Doyle; MacDonald; Meekison.

Passed.—Waun.

GENERAL ENGINEERING, 1.

Class I.—Kingham; Swanson, C. O.

Class II.—Gill, J. E.; Doyle; Thompson, J. M.

Passed.—Anderson, R. G.; Anderson, S.; Meekison and Melville; MacDonald; Walker, J. F.

MECHANICAL ENGINEERING, 1.

Class I.—Swanson, C. O.; Gill, J. E.; Doyle.

Class II.—Thompson, G. M.

Passed.—Kingham; Melville; Anderson, R. G.; Eckardt.

STRUCTURAL ENGINEERING, 1.

Class I.—Swanson, C. O.

Class II.—Thompson, G. M.; Anderson, R. G., and Gill, J. E.

Passed.—Walker, J. F.; Doyle; MacDonald and Melville; Kingham.

FIELD-WORK.

Class I.—Swanson, C. O.; Kingham; Gill, J. E.

Class II.—Melville and Thompson, G. M.; Jane; Parks.

Passed.—Doyle and Stedman, D. F.; Anderson, R. G., and MacDonald and Meekison.

ANALYTIC GEOMETRY.

Class I.—Parks; Swanson, C. O.; Gill, J. E.; Doyle; MacDonald.

Class II.—Stedman, D. F.

Passed.—Melville; Anderson, R. G.; Thompson, G. M.

MAPPING.

Class I.—Kingham; Gill, J. E.

Passed.—Swanson, C. O.; Thompson, G. M.; Doyle and Melville; Anderson, R. G.; MacDonald.

MECHANICS, 2.

Class I.—Swanson, C. O.

Class II.—Gill, J. E.; Stedman, D. F.; Doyle.

Passed.—Thompson, G. M.; Anderson, R. G.; Melville; Eckardt.

PHYSICS, 2.

Class I.—Swanson, C. O.; Gill, J. E.; Stedman.

Class II.—Kingham.

Passed.—Thompson, G. M.; Doyle; Melville.

SHOP-WORK, 2.

Class II.—Thompson, G. M.; Kingham and Swanson, C. O.; Melville.
Passed.—Doyle; Anderson, R. G.; Gill, J. E.; MacDonald; Meekison;
 Walker, J. F.

SURVEYING.

Class I.—Gill, J. E.; Swanson, C. O.; Kingham.
Class II.—Melville; Thompson, G. M.
Passed.—Anderson, R. G.; MacDonald; Doyle; Walker, J. F.

FACULTY OF APPLIED SCIENCE—FIRST YEAR.

ALGEBRA.

Class I.—Peck, W. S.
Class II.—McDougall and Shockley; Hatt; Goranson.
Passed.—Evans; Shaw, L. D.; Weinrobe; Moody, C. E.; Somerville.

FREEHAND DRAWING.

Class I.—McLennan.
Class II.—Moody, C. E.; Peck, W. S.; Goranson; Hatt and Houghton;
 Somerville; Handy and Shaw and Tuckey; Gray and Shockley.
Passed.—McDougall; Kidd; Weinrobe; Evans and Thurston; Hynd.

MECHANICAL DRAUGHTING.

Class I.—McLennan and Moody, C. E.
Class II.—Banfield; McDougall; Goranson and Somerville; Hatt and
 Peck, W. S., and Shockley; Handy; Tuckey; Evans; Houghton; Gray.
Passed.—Thurston and Weinrobe; Shaw, L. D.; Kidd; Hynd.

GEOMETRY.

Class I.—Somerville; Peck, W. S.; Goranson; Weinrobe and Moody;
 Hatt; McDougall.
Class II.—Shaw, L. D.; Evans; Kidd and Shockley.
Passed.—Handy; McLennan; Thurston; Gray; Houghton and
 Tuckey.

DESCRIPTIVE GEOMETRY.

Class I.—Shockley.
Class II.—Moody.
Passed.—Somerville; McDougall; Evans; Hatt; Peck, W. S.; Shaw,
 L. D.; Goranson.

MECHANICS, 1.

Class II.—McDougall; Shockley.
Passed.—Handy; Somerville; Peck, W. S.; Evans; Hatt; Goranson
 and Gray and McLennan and Moody and Shaw, L. D.

PHYSICS, 1.

Class I.—McDougall and Shockley; Hatt; Peck, W. S.; Evans;
 Moody, C. E., and Somerville.

Passed.—Goranson; McLennan; Weinrobe; Handy; Shaw and Tuckey.

SHOP-WORK, 1.

Class II.—Goranson; Somerville; Evans; Moody, C. E.; McDougall.

Passed.—Kidd and Peck, W. S.; Shockley; Hatt and McLennan; Tuckey; Handy; Hynd and Shaw, L. D., and Thurston and Weinrobe.

TRIGONOMETRY.

Class I.—Peck, W. S.; Shockley; McDougall.

Class II.—Weinrobe; Goranson.

Passed.—Hatt; Evans and Tuckey; Shaw, L. D.; Handy.

FACULTY OF AGRICULTURE—SECOND YEAR.

AGRONOMY, 2.

Class I.—Lamb, C. A.; Mounce, M. J.

Class II.—Harris, H.; Leckie.

Passed.—Woodward; Wright, W. M.

ANIMAL HUSBANDRY, 2.

Class II.—Mounce, M. J.; Lamb, C. A., and Woodward, R. C.; Wright, W. M.

ENGLISH, 4.

Passed.—Lamb, C. A.; McKenzie, F. F.

GERMAN.

Class II.—McKenzie, F. F.

FACULTY OF AGRICULTURE—FIRST AND SECOND YEARS.

FRENCH.

Class II.—Fisher, R. A.; Sweeting; McKechnie, M. S., and Woodward; Leavens and Leckie.

Passed.—Lamb, C. A.; Harris, H.; Chu; Clarke, G. E. W.; Greenwood, H. D.

HORTICULTURE, 2 AND 3.

Class I.—Mounce, M. J.; Leckie, C. P.; Lamb, C. A.

Class II.—McKenzie, F. F.; Woodward; Traves; Clarke, G. E. W.

Passed.—Greenwood, H. D.; Harris, H.

POULTRY HUSBANDRY, 1.

Class I.—Clarke, G. E. W.; Lamb and Woodward; Mounce, M. J.; Greenwood, H. D.; Traves; McKenzie, F. F.; Harris, H.

Class II.—Leckie.

FACULTY OF AGRICULTURE—FIRST YEAR.**AGRONOMY, 1.**

Class I.—Mounce, M. J.

Class II.—Leckie; Leavens; Fisher, R. A., and Sweeting.

Passed.—McKechnie, M. S.

ANIMAL HUSBANDRY, 1.

Class II.—Mounce, M. J.; Traves.

Passed.—McKechnie, M. S.; Leckie and Sweeting; Clarke, G. E. W.;
Leavens; Chu; Fisher, R. A.

ENGLISH COMPOSITION.

Class I.—Sweeting.

Class II.—McKechnie, M. S.

Passed.—Fisher, R. A.; Leavens.

HORTICULTURE, 1.

Class I.—Leckie.

Class II.—Mounce, M. J.; Fisher, R. A.; Sweeting.

Passed.—McKechnie, M. S.; Chu and Leavens.

1919-1920

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