The University of British Columbia

ANNOUNCEMENT
OF
THE SUMMER SESSION

SUPPLEMENT
TO
CALENDAR 1938-39

TWENTIETH SESSION

JULY 3RD TO AUGUST 18TH, 1939

VANCOUVER, BRITISH COLUMBIA

DATES

JULY		
3rd	Monday - - - - -	Supplemental Examinations. *Last day for registration of all students. Lectures begin at 8.00 a.m.
7th	Friday - - - - -	Last day for changes in students' courses. Last day for payment of fees.
AUGUST		
16th	Wednesday - - -	Last day of lectures.
17th	Thursday - - -	Final Examinations.
18th	Friday - - - -	

TIME-TABLE OF LECTURES

MONDAY, TUESDAY, WEDNESDAY, THURSDAY, FRIDAY

Courses will be arranged for time-table purposes in three groups:

A.—Biology 2(*a*)/2(*b*), Chemistry 3, Economics 1, Social Service 5/6, Education 11, Education 22, English 2, English 9(*a*), Geography 3, History 12, Mathematics 4/18, Physics 1/2, Psychology 3, Librarianship.

B.—Biology 1, Chemistry 1, Economics 6, Education 10, English 13, Geography 1, French 1, French 4(*a*), History 10, Mathematics 2(*a*)/2(*b*), Mathematics 10, German Beginners', Latin 1(*b*)/2(*b*), Philosophy 3.

C.—Botany 1(*a*), Government 1 (or equivalent new course), Economics 10, Education 21, English 19, French 2, History 4, Mathematics 1, German 2, Philosophy 6, Psychology 4, Physics 4, Music Appreciation, Guidance.

TIME-TABLE

	Group A	*Group B*	*Group C*
July 3 - 14	8 - 10 a.m.	10 a.m. - 12 m.	1 -3 p.m.
July 17 - 28	10 - 12 m.	1 - 3 p.m.	8 - 10 a.m.
July 31 - Aug. 16	1 - 3 p.m.	8 - 10 a.m.	10 - 12 m.

Examinations

Aug. 17	8 - 10 a.m.	1 - 3 p.m.	
Aug. 18			8 - 10 a.m.

Note.—The laboratory hours in Biology, Chemistry and Physics will be arranged.

A schedule of the rooms in which the above lectures are given will be posted on the bulletin board, and copies will be distributed to students at the beginning of the Summer Session.

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*The last day for registration is July 3rd—the first day of lectures—but students will find it to their advantage to register before this date, either in person or by mail.

A late fee of $2.00 will be charged all students registering after this date.

The University of British Columbia

SUMMER SESSION, 1939

OFFICERS AND STAFF

LEONARD S. KLINCK, M.S.A., D.Sc., LL.D., Officier de l'Instruction Publique, President.

DANIEL BUCHANAN, M.A., Ph.D., LL.D., F.R.S.C., Dean of the Faculty of Arts and Science.

LEMUEL ROBERTSON, M.A., Director.

STANLEY W. MATHEWS, M.A., Registrar.

A. MACLUCAS, Bursar.

JOHN RIDINGTON, Librarian.

Department of Botany

A. H. HUTCHINSON, M.A., Ph.D., F.R.S.C., Professor and Head of the Department.

FRANK DICKSON, B.A., Ph.D., Associate Professor.

JOHN DAVIDSON, F.L.S., F.B.S.E., Associate Professor.

Department of Chemistry

ROBERT H. CLARK, M.A., Ph.D., F.R.S.C., Professor and Head of the Department.

WILLIAM URE, M.A.Sc., Ph.D., Associate Professor.

Department of Classics

LEMUEL ROBERTSON, M.A., Professor and Head of the Department.

Department of Economics, Political Science, Commerce and Sociology

HENRY F. ANGUS, B.A., B.C.L., M.A., Professor and Head of the Department.

G. F. DRUMMOND, M.A., M.Sc.(Econ.), Associate Professor.

F. A. KNOX, B.A., Professor of Economics, Queen's University.

W. H. TAYLOR, B.A., Ph.D., Assistant Professor of Economics, University of Hawaii.

MISS LEAH FEDER, B.A., Ph.D., Associate Professor of Social Work, Washington University, St. Louis, Missouri.

Department of Education

W. G. BLACK, B.A., M.A., Ph.D., Associate Professor of Psychology and Education.

C. A. KRUG, M.A., B.D., Professor of Philosophy, Mount Allison University.

H. E. SMITH, B.A., M.A., B.Educ., Ph.D., Associate Professor of Education and Special Lecturer in Psychology, University of Alberta.

MERRITT M. THOMPSON, A.B., Ph.D., Associate Professor of Education, University of Southern California.

Department of English

G. G. SEDGEWICK, B.A., Ph.D., Professor and Head of the Department.

FREDERICK G. C. WOOD, B.A., A.M., Professor.

EDWARD CHAPMAN, B.A., Ph.D., Instructor, University of Utah.

MRS. JOHN H. CREIGHTON, M.A., Lecturer in the Extension Department.

Department of Geology and Geography

GORDON DAVIS, B.A., M.A., Ph.D., Instructor.
ERIC H. FAIGLE, Ph.D., Professor of Geology and Geography, Syracuse University.

Department of History

F. H. SOWARD, B.A., B.Litt., Professor.
MISS SYLVIA THRUPP, M.A., Ph.D., F.R.Hist.S., Instructor.
A. E. PRINCE, M.A., B.Litt., Professor of English History, Queen's University.

Department of Mathematics

RALPH HULL, M.A., Ph.D., Professor.
FREDERICK J. BRAND, M.A., B.Sc., Assistant Professor.
R. L. JEFFREY, M.A., Ph.D., F.R.S.C., Professor and Head of the Department of Mathematics, Acadia University.
F. C. LEONARD, S.M., Ph.D., Professor and Chairman of the Department of Astronomy, University of California at Los Angeles.

Department of Modern Languages

DAVID OWEN EVANS, M.A., D.Phil., D.Lett., Professor and Head of the Department.
MISS JOYCE HALLAMORE, M.A., Ph.D., Assistant Professor.
CHARLES E. BORDEN, Ph.D., Assistant Professor of German, Reed College, Portland.
MISS DEBORAH A. K. AISH, M.A., D.Lett., Assistant in French.
MISS JOAN YVONNE DANGELZER, B.A., D.Lett., Assistant in French and German.

Department of Philosophy and Psychology

J. A. IRVING, M.A., Professor.
J. A. SHARRARD, M.A., Professor and Head of the Department of Philosophy, University of Saskatchewan.
WILBUR LONG, Ph.D., Professor of Philosophy, University of Southern California.
FRANK DAVIS, Ph.D., Assistant Professor of Psychology, University of California at Los Angeles.

Department of Physics

O. E. ANDERSON, M.A., Ph.D., Assistant Professor.
A. M. CROOKER, B.A., Ph.D., Assistant Professor.

Music Appreciation

IRA DILWORTH, M.A., Professor of English, Regional Director, the Canadian Broadcasting Corporation, Vancouver.

Guidance

H. B. KING, M.A., Ph.D., Technical Adviser to the Department of Education, B. C.

Librarianship

MISS MURIEL B. CARRUTHERS, B.A., Librarian, Magee High School, Vancouver.

Physical Education

ERNEST LEE, B.A., B.S. in P.E., Physical Education Instructor, Normal School, Vancouver.

Admission, Registration and Attendance

For requirements for admission to the University, information in regard to registration and attendance and regulations governing courses, see University calendar.

All candidates registering for the first time are required to present their certificates. The fee for examination of certificates, other than those issued in British Columbia, is $2.00, and this fee must accompany the application for admission.

The maximum credit for Summer Session work in any one Calendar year is 6 units.

FEES

All cheques must be certified and made payable to "The University of British Columbia."

Fees are payable on or before July 7th, otherwise an additional fee of $2.00 will be exacted.

Fee for "Late Registration" $2.00.

For Undergraduates

Registration—Payable before registration	$ 2.00
Minimum Class Fee	25.00
Per "Unit"	12.00
Summer Session Association	2.00

For Graduates

Registration—Payable before registration—	
For 6 units or less	$ 2.00
For over 6 units	5.00
Class Fees, first registration	75.00
Summer Session Association Fee	2.00

Special Fees

Supplemental Examination, per paper	$ 5.00
Graduation	15.00

Applications for supplemental examinations, accompanied by the necessary fees, must be in the hands of the Registrar at least two weeks before the date set for the examinations, and graduation fees two weeks before Congregation.

Scholarships

The Summer Session Students' Association Scholarship

A scholarship of $30, given by the Summer Session Students' Association, will be awarded at the close of the Summer Session to the Summer Session student who in that session completes the second year with the highest standing. To be eligible a student must have taken his entire second year in The University of British Columbia Summer Session, Extra-sessional classes or Reading courses, and must be proceeding to a higher year in The University of British Columbia.

The British Columbia Teachers' Federation Scholarship

A scholarship of $50 given by the British Columbia Teachers' Federation will be awarded at the close of the Summer Session to the Summer Session student who, having been an active member of the British Columbia Teachers' Federation for the three years previous to the granting of the scholarship, completes, in that session, the third year of his University work with the highest standing in that year. To be eligible a student must have taken his entire third year in The University of British Columbia Summer Session, Extra-sessional classes or Reading courses, and must continue in his fourth year at The University of British Columbia.

The University of British Columbia

Courses of Study

NOTE.—By a ruling of the Board of Governors, a class may not be offered for fewer than eight students.

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 interrelationship of plants and animals; life processes; the cell and division of labour; life-histories; relation to environment.

The course is prerequisite to all courses in Botany and Zoology.

A list of reference books is supplied.

Six lectures and eight laboratory hours a week.

Mr. Dickson. 3 units.

2. (*a*) *Principles of Genetics.*—The fundamentals of Genetics illustrated by the race histories of certain plants and animals; the physical basis of heredity; variations; mutations; genes; Mendel's law with suggested applications.

Text-book: Sinnott and Dunn, *Principles of Genetics,* McGraw-Hill.

Prerequisite: Biology 1.

Three lectures and four laboratory hours a week.

Mr. Hutchinson. 1½ units.

2. (*b*) *Principles of Genetics.*—A continuation of the studies of genetic principles with suggested applications. A lecture and laboratory course. The laboratory work will consist of problems, examination of illustrative material and experiments with Drosophila.

Text-book: Sinnott and Dunn, *Principles of Genetics,* McGraw-Hill.

Prerequisite: Biology 2 (*a*), or the two may be taken concurrently.

Two lectures and six laboratory hours a week.

Mr. Hutchinson. 1½ units.

Botany

1. (*a*) *General Botany.*—A course including a general survey of the several fields of Botany and introductory to more specialized courses in Botany.

This course is prerequisite to all other courses in Botany, except the Evening Course and Botany 1 (*b*). Partial credit (2 units) toward Botany 1 may be obtained through the Evening Course.

Text-book: Coulter, Barnes & Cowles, *Text-book of Botany,* Vol. I, University of Chicago Press.

Prerequisite: Biology 1.

Five lectures and ten laboratory hours a week.

Mr. Davidson. 3 units.

Chemistry

1. *General Chemistry.*—The course comprises a general survey of the whole field of Chemistry and is designed on the one hand to provide a thorough groundwork for further study in the sciences and on the other to give an insight into the methods of chemical investigation, the fundamental theories and some important applications such as are suitable to the needs of a cultural education. Students must reach the required standard in both lecture and laboratory work.

Text-books: *Smith's College Chemistry,* revised by Kendall, 1935 Edition, The Century Co. For the laboratory: Harris and Ure, *Experimental Chemistry for Colleges,* McGraw-Hill.

Ten lectures and ten laboratory hours per week. Laboratory to be arranged.

Mr. Ure. 3 units.

3. *Organic Chemistry.*—This introduction to the study of the compounds of carbon will include the methods of preparation and a description of the more important groups of compounds in both the aliphatic and the aromatic series.

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

Text-books: Holleman-Walker, *Text-book of Organic Chemistry,* Wiley; Gatterman-Wielands, *Laboratory Methods of Organic Chemistry,* Macmillan.

Eight lectures and nine hours laboratory a week. Laboratory to be arranged.

Mr. Clark. 3 units.

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, socialism, the control of railways and trusts, etc.

Text-book: Deibler, *Principles of Economics,* McGraw-Hill; *Canada Year Book,* 1937; Slichter, *Modern Economic Society,* Holt.

Additional readings will be assigned for students offering this course for credit in the Third or Fourth Year.

Economics 1 is the prerequisite for all other courses in this department except Economics 2 and Economics 10, but may be taken concurrently with Sociology 1, or with Government 1.

Ten hours a week. Mr. Taylor. 3 units.

6. *International Trade.*—A survey of the theory of international trade and the foreign exchanges; the balance of trade, foreign investments and other fundamental factors; the problem of Reparations and of War Debts; the protective tariff and commercial imperialism; the commercial policy of the leading countries, with considerable attention to Canada.

Text-books: Taussig, *International Trade,* Macmillan; Griffin, *Principles of Foreign Trade,* Macmillan; Viner, *Studies in the Theory of International Trade,* Allen and Unwin; Haberler, *The Theory of International Trade,* Wm. Hodge & Co. Ltd., London; League of Nations Publications, viz., *World Economic Survey, Statistical Year Book of the League of Nations; Prosperity and Depression;* Ohlin, *Inter-regional and International Trade,* Cambridge, Mass.

Assigned References.

Ten hours a week. Mr. Drummond. 3 units.

10. *Economic Geography.*—A general survey of the principal resources and industries of the world, with emphasis on those entering into international trade, leading to a study of the principles and problems of transportation by sea.

Text-books: MacFarlane, *Economic Geography,* latest edition, Pitman; Whitbeck and Finch, *Economic Geography,* McGraw-Hill; Chisholm, *Handbook of Commercial Geography,* Longmans & Co.

Assigned readings: Leith, *World Minerals and World Politics,* McGraw-Hill; Holland, *Mineral Sanctions as an Aid to International Security,* Oliver & Boyd; Brookings Institute Lectures,

Mineral Economics, McGraw-Hill; A.I.M.E. *Essays,* edited by Mathewson, *Modern Uses of Non-ferrous Metals,* Maple Press; Crerar, *Future of Canadian Mining,* King's Printer; Bartholomew and Lyde, *Oxford Economic Atlas,* Oxford University Press (latest edition).

Ten hours a week. Mr. Knox. 3 units.

Government

1. *Constitutional Government.* — This course deals with the nature, origin and aims of the State; and with the organization of government in the British Empire, the United States of America, and France.

Readings to be assigned.

Ten hours a week. Mr. Angus. 3 units.

Or equivalent new course.

Social Service

5. *Case Work Methods.*—Selected case records which present complex or difficult situations are studied with a view to determining the principles of diagnosis and treatment involved.

Five hours a week. Miss Feder. 2 units.

Prerequisite: Social Service 2.

6. *Child Welfare Case Studies.* — An intensive study of the problems met by a child welfare organization through discussion of specific records.

Five hours a week. Miss Feder. 1 unit.

Prerequisite: Social Service 3.

Education

10. *Educational Psychology.*

Part 1: Elementary statistics applied to education:

Graphical representation of data; measures of central tendency; measures of variability; the normal curve; correlation.

Part 2: The application of psychology to education:

Maturation and the development of behavior; individual differences; the handicapped and the "problem" child; motivation, discipline, interests and incentives; emotions; intellectual efficiency; fatigue; the learning process; transfer of training; the social adjustments of childhood and adolescence; educational engineering.

Texts: Rugg, *A Primer of Graphics and Statistics for Teachers,* Houghton Mifflin; Gates, *Psychology for Students of Education,* Macmillan.

Prerequisite: Psychology 1.

Ten hours a week. Mr. Smith. 3 units.

11. *History of Education.*—A study of educational developments in theory and practice, with special attention to the period since 1800.

Text-book: Cubberley, *A Brief History of Education,* Houghton Mifflin.

Chief References: Cubberley, *Readings in the History of Education;* Reisner, *The Evolution of the Common School;* Kandel, *History of Secondary Education.*

Ten hours a week. Mr. Black. 3 units.

21. *Advanced Educational Psychology.*—The contribution of outstanding psychologists to educational thought and practice. A survey of recent psychological theories and a critical analysis of their implications for Education. In the light of the foregoing the following topics will be considered: the foundations of behavior; heredity and environment; individual differences; principles and theories of learning; the rôle of the emotions; interest and motivation; intelligence, its nature and measurement; the development of personality.

Text: Sandiford, *Foundations of Educational Psychology,* Longmans.

Ten hours a week. Mr. Krug. 3 units.

22. *Philosophy of Education.* (Advanced Course.)

Prerequisite: Philosophy 7.

Ten hours a week. Mr. Thompson. 3 units.

English

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

Lectures and texts illustrative of the chief authors and movements from Tottel's Miscellany to Shelley. Legouis, *A Short History of English Literature,* Oxford.

Ten hours a week. Mr. Chapman. 3 units.

9(*a*). *Shakspere.*—

i. A detailed study of the text of *Romeo and Juliet, Twelfth Night, Hamlet, King Lear, The Winter's Tale.*

ii. Lectures on Shakspere'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 five plays named above, and with *The Facts About Shakespeare*, by Neilson and Thorndike, Macmillan. They are advised to get *The Complete Works of Shakespeare*, ed. Kittredge, or the *Cambridge Shakespeare*, ed. Neilson, or the *Oxford Shakespeare*, ed. Craig.

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

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

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

19. *Contemporary Literature.* — Some tendencies of English Literature of the present generation, in poetry and the essay and the novel, will be studied in this course.

Text-books: Brown, *Essays of Our Times,* Scott, Foresman Company; Roberts, *The Faber Book of Modern Verse,* Faber & Faber. Three novels, to be assigned.

Ten hours a week. Mrs. Creighton. 3 units.

French

1. *Types of the French Short Story* (Nelson); Molière, *Le Bourgeois gentilhomme* (Didier); Mills, *Free Composition in French* (Nelson); *Les cent meilleurs poèmes lyriques* (Gowans & Gray). For independent reading: Constantin-Weyer, *Cavelier de la Salle* (Ferenczi).

For reference: Berthon, *French Grammar* (Dent).

Prerequisite: Junior matriculation French or its equivalent.

Ten hours a week. Miss Dangelzer. 3 units.

2. Balzac, *Eugénie Grandet* (Oxford); Anatole France, *Le Crime de Sylvestre Bonnard* (Nelson). Independent reading to include Balzac, *Le père Goriot* (Nelson); A. de Chateaubriand, *Monsieur des Lourdines* (Ferenczi); Louis Hémon, *Maria Chapdelaine.*

Composition in French based on the above readings.

Prerequisite: French 1 or its equivalent.

Ten hours a week. Miss Aish. 3 units.

4. (*a*) *Modern French Drama.* A study of the evolution of the drama with special reference to the 19th Century. Victor Hugo, *Hernani* (Nelson); *Ruy Blas* (Delagrave); Alfred de Vigny, *Chatterton* (Oxford University Press); Edmond Rostand, *Cyrano de Bergerac* (Fasquelle). Independent readings include specified plays of Marivaux, Voltaire, Sedaine and Banville, together with Alfred de Musset, *Three Plays* (Nelson) and Jean Giraudoux, *La guerre de Troie n'aura pas lieu* (Grasset).

Reference: Stewart and Tilley, *The Romantic Movement in French Literature* (Cambridge Univ. Press.)

Prerequisites: French 3 (*a*), 3 (*c*).

Ten hours a week. Mr. Evans. 3 units.

German

Beginners' Course.—Schinnerer, *Beginning German,* Macmillan; Durian, *Kai aus der Kiste,* Holt.

Ten hours a week. Miss Hallamore. 3 units.

2. Whitney and Stroebe, *Easy German Composition,* Holt; Diamond and Schomaker, *Lust und Leid,* Holt; Schnitzler, *Der blinde Geronimo,* Heath; Thomas Mann, *Tonio Kröger,* Crofts; Bruns, *Book of German Lyrics.*

Prerequisite: German 1 or its equivalent.

Ten hours a week. Mr. Borden. 3 units.

Geography

1. *Principles of Geography.*—This introductory course aims to develop in the student the point of view of modern geography and to furnish a foundation or background that will be useful not alone to those who may intend to continue a study of geography or to teach it in the schools, but also to those who intend to study history, economics and other subjects, or to enter business or professional careers, into which geographical considerations enter.

Since geography is a study of the surface of the earth and its relation to man, the course involves consideration of earth relations; weathering and soils; land forms and oceans; climates; natural resources; and a brief introduction to the study of man and his response to the geographical environment.

Text-book: James, *An Outline of Geography,* Ginn & Co.

An Atlas—failing a large, comprehensive atlas, one of the following cheap ones will serve: *The University Atlas,* Geo. Philip &

Son; *Canadian School Atlas,* J. M. Dent; *Goode's School Atlas,* Rand McNally Co.; *Appleton's Standard School Atlas,* D. Appleton-Century Co.

Ten hours a week. Mr. Davis. 3 units.

3. *Human and Regional Geography.*—A study of man and his physical environment treated regionally. The characteristics of man and the influence of geographical environment are most easily discerned in primitive societies; consequently these are examined in some detail. From these as a starting point, the relationships between man and his environment in complex western civilization is investigated.

Prerequisite: Geography 1.

Reference: Pomfret, *The Geographic Pattern of Mankind,* Students' Edition, Appleton-Century.

Ten hours a week. Mr. Faigle. 3 units.

History

4. *Mediaeval Europe, 500-1300.*—A general outline of mediaeval history from the fall of the Roman Empire to the 13th century. Sketches of Byzantine history and of the rise of Islam are included, but the main emphasis is laid upon the culture of the 12th and 13th centuries in the West.

Text-book: Collins, *A History of Mediaeval Civilisation in Europe.*

Essays are assigned throughout the Session.

(Extra work will be required from Third and Fourth Year students taking this course.)

Ten hours a week. Miss Thrupp. 3 units.

10. *British History to 1485.*—This course aims at an interpretation of the political, constitutional, economic and religious development of the British Isles from the earliest times to the close of the Middle Ages.

Text-books: Trevelyan, *A History of England;* Williamson, *The Evolution of England;* Lunt, *History of England;* Adams and Stephens, *Select Documents of English Constitutional History,* or Stephenson and Marcham, *Sources of English Constitutional History;* Adams, *Constitutional History of England.*

Essays will be assigned throughout the Session.

Ten hours a week. Mr. Prince. 3 units.

12. *History of the United States of America.* — This course begins with a sketch of the American colonies at the outbreak of the Revolution and traces the history of the United States from the commencement of the War of Independence to the close of the World War.

Text-books: Charles and Mary Beard, *The Rise of American Civilisation;* H. Faulkner, *American Political and Social History.*

Essays will be assigned throughout the session.

Ten hours a week. Mr. Soward. 3 units.

Latin

1. (*b*).—Bonney and Niddrie, *Latin Prose and Poetry* (pages 104-129), Ginn & Co.; Pilsbury, *Latin Prose Composition,* (Chap. XIV-XXIV), Clarendon Press; Robertson and Robertson, *The Story of Greece and Rome* (Chap. XVII-XXXII), Dent.

Five hours a week. Mr. Robertson. 1½ units.

2. (*b*).—Bonney and Niddrie, *Latin Prose and Poetry* (pages 130-158), Ginn & Co.; Robertson and Robertson, *The Story of Greece and Rome* (Chap. XLIV-LIV), Dent.

Five hours a week. Mr. Robertson. 1½ units.

Mathematics

1. *Introductory Mathematics.* — An elementary course in Algebra including proportion, variation, logarithms, progressions, theory of quadratic equations, permutations, combinations, annuities, binomial theorem; Analytical Geometry including the study of the straight line and the circle, with an introductory study of the parabola, ellipse and hyperbola; elementary Trigonometry.

Text-books: Brink, *Algebra, a College Course,* Appleton-Century Co.; Nowlan, *Analytical Geometry,* McGraw-Hill; Brink, *Plane Trigonometry with Tables,* Appleton-Century Co.

Ten hours a week. Mr. Brand. 3 units.

2. (*a*) *Algebra.* — The binomial theorem, complex numbers, induction, remainder theorem, Horner's method, exponential, logarithmic and other series, undetermined coefficients, partial fractions, convergence and divergence, determinants.

Text-book: Nowlan, *College Algebra.*

(*b*) *Calculus.* — An introductory course in differential and integral calculus, with various applications.

Text-book: Woods and Bailey, *Elementary Calculus,* Ginn and Co.

Ten hours a week. Mr. Hull. 3 units.

10. *Calculus.*—The elementary theory and applications of the subject.

Text-book: Smith, Granville, Longley, *Differential and Integral Calculus,* Ginn.

Ten hours a week. Mr. Jeffery. 3 units.

4 and 18. *Descriptive Astronomy.*—A cultural course for non-technical students in the general principles and the fundamental facts of astronomy, with particular emphasis on the solar system. Results of recent researches in sidereal astronomy and astrophysics, and progress through the use of modern methods, especially the spectroscopic and the photographic.

Ten hours a week. Mr. Leonard. 3 units.

Reference books: Baker, *Astronomy,* Van Nostrand (1933); Duncan, *Astronomy,* Harper (1935); Moulton, *Astronomy,* Macmillan (1931).

Philosophy

3. *History of Greek Philosophy from Thales to Plato* (inclusive).

Text-books: Bakewell, *Source Book in Ancient Philosophy,* Scribners; Burnet, *Greek Philosophy* (Part I) Macmillan. In connection with this course a special study will be made of Plato's *Republic, Protagoras* and *Gorgias.*

Ten hours a week. Mr. Long. 3 units.

6. *Philosophical Movements Since the Time of Kant.*—A survey of the main philosophical tendencies of the nineteenth and twentieth centuries—Post-Kantian Idealism; the Sociological Positivism of Comte and Durkheim; the evolutionary philosophy of Darwin, Spencer and Bergson; the pragmatism of James and Dewey; Modern Realism; the work of Russell, Moore and Broad of the "Cambridge School"; the logical positivism of Wittgenstein, Schlick, and Carnap.

Text-book: G. H. Mead, *Movements of Thought in the Nineteenth Century.*

References: Rand, *Modern Classical Philosophers;* Fisch and Anderson (ed.), *Anthology of American Philosophy,* Appleton-Century (1939); and various histories of Philosophy and monographs on special topics.

Ten hours a week. Mr. Sharrard. 3 units.

Psychology

3. *Social Psychology.*—A study of those particular phases of mental life and development which are fundamental in social organization and activity.

Text-book: Kimball Young, *Social Psychology,* F. S. Crofts & Co. (1936).

Prerequisite: Psychology 1 or Philosophy 1.

Ten hours a week. Mr. Irving. 3 units.

4. *Psychology of Personality.* — Development of personality; heredity and environment; history of mental measurement; current theories of the nature and growth of intelligence; measurement of intelligence; subnormal, normal and gifted children; development from birth to maturity; nature and causes of mental defects and peculiarities; juvenile deliquency; psychology of adjustment.

Text-book: Shaffer, *The Psychology of Adjustment,* Houghton-Mifflin.

Prerequisite: Psychology 1.

Ten hours a week. Mr. Davis. 3 units.

Physics

1. *Introduction to Physics.*—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 Chemistry, Engineering and Advanced Physics. Students must reach the required standard in both theoretical and practical work. Open only to students who have not matriculated in Physics.

Text-book, hours, etc., see Physics 2.

2. *Elementary Physics.*—This course consists of a general course in Physics suitable for those students who have obtained standing in Junior Matriculation Physics or its equivalent. It covers mechanics, properties of matter, heat, light, sound, electricity and some of the more recent developments and theories.

The same lectures and practically the same laboratory work will be given for courses 1 and 2.

Text-book: Stewart, *A Text-book for Colleges,* Ginn.

References: Knowlton, *Physics for College Students,* McGraw-Hill; Millikan, Gale and Edwards; *A First Course in Physics for Colleges,* Ginn.

NOTE.—The work given in these two courses will be nearly parallel to that prescribed for Senior Matriculation, and may be taken as a Refresher Course by those who do not require it for credit.

Ten lectures and four 2-hour laboratory periods a week.

Mr. Anderson. 3 units.

4. *Elementary Modern Physics.*—A survey of the fundamental ideas underlying modern physics. The arrangement of the material is designed especially to suit the needs of General Science teachers who wish to study some of the recent developments in physics. Since the treatment is, as far as possible, non-mathematical, the course is also suitable for students who are not specializing in physics, or for non-science teachers who may wish to get some appreciation of the world of modern science.

Among the topics treated are: electronic phenomena, radio and television, the nature of light and electromagnetic radiations, X-rays, the quantum theory, spectroscopy, astrophysics, relativity, natural and induced radioactivity, cosmic rays, elementary particles.

The lectures will be supplemented by laboratory work of an informal nature. Students will carry out experiments on the magnetic and electric deflection of electron beams, radio and photoelectric tubes, thyratrons, Geiger counters, spectroscopy, cosmic rays, X-rays, etc.

Text-book: Hull, *An Elementary Survey of Modern Physics,* Macmillan.

Additional reading in modern reference books and the current literature will be prescribed.

Ten lectures and two three-hour laboratory periods a week.

Mr. Crooker. 3 units.

Courses for the Academic Certificate

The following courses, namely, *Music Appreciation, Guidance, Librarianship, Physical Education,* carry no University credit but are accepted by the Provincial Department of Education for the Academic Certificate.

Music Appreciation

This course is designed to give training in listening to Music to the end that the layman may gain greater enjoyment from the music he hears. It is an attempt to develop the listener's critical capacity by enriching and extending his musical experience.

Five hours a week. Mr. Dilworth. 1½ units.

Guidance

A course designed to meet the needs of teachers engaged in the work of Guidance in Junior and Senior High Schools.

Ten hours a week. Mr. King. 3 units.

Librarianship

The Functions of the School Library.—This course is designed for teachers and administrators as well as for those engaged in school library work. It emphasizes the objective of school library work as the core of educational activity and presents the library as the integrating factor in the school programme. The course will include the place of the library in the modern school, library management and the use of the library by teachers and pupils.

(The Department of Education wishes to inform those wishing to proceed to the Teacher-librarian Certificate, issued by it, that they may substitute this course (1½ units) plus a project in school library work (1 unit) for course 211 in the Provincial Summer School Bulletin.)

Five hours a week. Miss Carruthers. 1½ units.

Physical Education

(As in the Bulletin of the Summer School of Education)
July 3rd — August 4th

160. *Introduction to Physical Education.*—Relation to general education; trends in Physical Education; general aims and objectives; programme; physical plant; organization and administrative problems.

For credit in 160H the students must make a study of secondar school programme.

For credit in 160S the students are required to submit a thesi on any one of the following: History of Physical Education Organization and Administration of the Physical Education i his situation, Philosophy of Physical Education, Tests and Measure ments in Physical Education, Modern Physical Education Move ments.

Mr. Lee. 1¼ units

168. *Advanced Physical Education Laboratory.*—Introductory and rhythmic activities; marching tactics; Swedish and Danish exercises; light apparatus work and elementary tumbling, games and relays suitable for the high school age.

For credit in 168S the student must qualify with high performance in the more difficult and intricate movements.

Mr. Lee. 1¼ units.

171. *Sports' Education, Coaching, and Refereeing (Men).*—Instruction and practice in soccer, touch football, basketball, volleyball, lacrosse, softball, track, and field. Coaching and refereeing.

Mr. Lee. 1¼ units.

SUMMER SESSION, 1938

Registration

	Registration
Partial	5
First Year	74
Second Year	231
Third Year	80
Fourth Year	90
Graduates	179
Total	659
Auditors	41
Social Service	21

The following courses will be given in the Summer Session of 1940 (arranged in groups for time-table purposes):

A	B	C
Biology 4	Biology 1	Chemistry 5
Chemistry 2	Chemistry 4	Economics 12
Economics 2	Economics 3	Government 3
Social Service 5/6	Education 10	Education 20
Education 12	English 16	English 10
Education 23	Geography 1	History 1
English 2	History 18	Mathematics 13
English 9(*b*)	Mathematics 3	German 1
Geography 2	Mathematics 12S and 15S	Latin 3
History 24	French 1	Philosophy 7
Mathematics 1	French 2	Psychology 5
French 3(*a*)	German, Beg.	Physics 5
Philosophy 2	Latin 1(*a*)/2(*a*)	
Physics 1/2	Psychology 6	

DEPARTMENT OF UNIVERSITY EXTENSION

The Department of University Extension, though not yet in a position to make a definite announcement regarding all the courses which it hopes to offer during the period of the Summer Session, has made tentative arrangements for the following courses:

(a) Dramatics: A five weeks' course with Mr. and Mrs. Burton James as guest directors.

(b) Motion Picture Appreciation.

(c) Handicrafts.

As these courses are likely to appeal to Summer Session students, it is suggested that those wishing further information should apply to the Director of the Department of University Extension.