

DALHOUSIE.

(Continued from Ninth Page.)

T. McCulloch was professor of natural philosophy 1863-5.

Dr. Cornish, of McGill college, was for a few years professor of classics at Dalhousie.

Dr. Tompkins, now a barrister of London, G. B., and a writer on Roman law, instructed the Dalhousie students for a number of years in mathematics.

The Rev. Jas. McIntosh preceded him in that subject.

Alexander Romans, one of the best classical scholars of his time, was professor of Classics from 1838-42.

Rev. Thos. McCulloch, D. D., was from 1838 to '43 professor of Moral Philosophy. He was Dalhousie's first president, and in that time there was not a more respected man in Nova Scotia, and none who could have filled the position as ably as he did.

The Instructors of To-Day.

Of the present academic staff it is not saying too much to assert that there is not another university of the size of Dalhousie in Canada that has a staff superior to it; it is questionable if it is surpassed by some of the larger universities. The name of George Lawson, Dalhousie's Professor of Chemistry and Mineralogy, is known and respected by men of science the world over.

Richard Chapman Weldon, Professor of Constitutional and International Law, is a tower of strength to the law faculty as he is to his party in the house of commons. In him, on the field of the constitution, the Hon. Edward Blake meets a foe worthy of his steel—perhaps his superior. Space will not allow of our referring at length to all the professors, lecturers, etc. We will have to content ourselves with naming them, and if you desire any information about any of them you can obtain it from almost any one interested in higher education in the maritime provinces. In fact some of them are known to college men throughout America and Great Britain.

ACADEMIC STAFF.

Rev. President Forrest, D. D., D. C. L., F. S. Sc. Lond., George Munro Professor of History and Political Economy.

Charles Macdonald, M. A. (Aberd.), Professor of Mathematics.

John Johnson, M. A. (Dub.), McLeod Professor of Classics.

George Lawson, Ph. D., LL. D., F. I. C., F. R. S. C., McLeod Professor of Chemistry and Mineralogy.

James Liechti, M. A. (Vind.), McLeod Professor of Modern Languages.

James Gordon MacGregor, M. A. (Dal.), D. Sc. (Lond.), F. R. S. S. E. & C., George Munro Professor of Physics.

Richard Chapman Weldon, A. M. (Mt. All.), Ph. D. (Yale), George Munro Professor of Constitutional and International Law.

Benjamin Russell, A. M. (Mt. All.), Professor of Contracts, Lecturer on Bills and Notes, Sales and Equity.

James Seth, M. A. (Edin.), George Munro Professor of Philosophy.

Archibald MacMechan, B. A. (Toronto), Ph. D. (J. H. U.), George Munro Professor of English Language and Literature.

Hon. Samuel Leonard Shannon, D. C. L. (Vind.), Q. C., Judge of Probate, examiner in Medical Jurisprudence.

E. L. Newcombe, M. A., L. L. B., (Dal.), Lecturer on Insurance.

John Young Payzant, A. M., (Acad.), Lecturer on Torts.

C. Sidney Harrington, Q. C., Lecturer on Evidence and Partnership.

F. T. Congdon, L. L. B., Lecturer on Equity Jurisprudence.

William Henry Waddell, Lecturer on Voice Culture and Elocution.

John Somers, M. D. (Bell. Hosp. Med. Coll., N. Y.), Examiner in Medicine.

George L. Sinclair, M. D. (Coll. P. and S., N. Y.), M. D. (Univ. Hal.), Examiner in Anatomy and Practical Anatomy.

D. A. Campbell, M. D., C. M. (Dal.), Examiner in Materia Medica and Therapeutics.

A. W. H. Lindsay, B. A. (Dal.), M. D., C. M. (Dal.), M. B., C. M. (Edin.), Examiner in Anatomy and Practical Anatomy.

John Stewart, M. B., C. M. (Edin.), Examiner in Surgery.

A. C. Page, M. D. (Harv.), President N. S. Medical Board, Examiner in Obstetrics and Diseases of Women and Children.

Hon. D. McN. Parker, M. D. (Edin.), L. R. C. S., Edin., Examiner in Medicine.

Edward Farrell, M. D. (Coll. P. and S., N. Y.), Examiner in Surgery.

Andrew J. Cowie, M. D., (Univ. Penn.), M. R. C. P. Lond., Examiner in Clinical Medicine.

John F. Black, M. D. (Coll. P. and S., N. Y.), Examiner in Clinical Surgery.

Alexander P. Reid, M. D., C. M. (McGill), L. R. C. S. (Edin.), L. C. P. and S. Can., Supt. Hospital for Insane, Examiner in Medical Jurisprudence.

Arthur Morrow, M. B., C. M. (Edin.), Examiner in Physiology and Histology.

Howard Murray, B. A. (Lond.), Lecturer on Classics.

M. A. Curry, M. D. (Univ. N. Y.), Examiner in Obstetrics and Diseases of Women and Children.

Murray McLaren, M. D., Examiner in Physiology and Histology.

A. H. MacKay, B. A. (Dal.), B. Sc. (Hfx.), F. R. S. C., Lecturer on Zoology.

Martin Murphy, D. Sc. (Vind.), C. E., Provincial Government Engineer, Lecturer on Civil Engineering.

Edwin Gilpin, Jr., A. M. (Vind.), F. G. S., F. R. S. C., Inspector of Mines, Lecturer on Mining.

F. W. W. Doane, C. E., Halifax City Engineer, Lecturer on Surveying.

Sergeant Kelly, Instructor in Gymnastics.

Educational Work of the College.

The educational work of the college is conducted by the four faculties of arts, science, law, and medicine. The Faculty of Arts is as old as the college itself. The Faculty of Science after having been for some years an adjunct of the Faculty of Arts has recently been extended and made an independent body. The Faculty of Law was organized in 1883 in consequence of the foundation of the Munro chair of Constitutional and International Law. The Faculty of Medicine was organized in 1868, became in 1875 a distinct medical school under the name of the Halifax Medical College and was re-organized in its present form in 1885.

FACULTY OF ARTS.

The Faculty of Arts consist of eight professors and one lecturer. In addition, however, the classes conducted by the Professors of Constitutional History and of Contracts in the Faculty of Law, by the Lecturer on Zoology in the Faculty of Science, and by the Professors of Hebrew and New Testament Greek in the Halifax Theological college, are recognized as qualifying for Arts degrees. And thus the work of this Faculty is really conducted by fourteen instructors.

COURSES OF INSTRUCTION.

In the department of classics, there are three classes in Latin, three in Greek, and one in which the higher subjects of both are studied. Both of these languages may there be studied in higher and higher stages during four years,—indeed, during six years, if it be desired; for in the three higher classes different authors are read in consecutive sessions. By a judicious selection of typical authors, the student is carried through the whole range of classical literature, while he studies at the same time the history of the periods whose literary movements he is reading. In all the classes prose composition is constantly practised. In the lower ones special attention is given to the grammatical structure of the languages, and in the higher the philological relations of Latin and Greek to Sanskrit, and the modern Roman languages are discussed. The amount of knowledge assumed at the outset is such as may be obtained at the better class of high schools and academies in Nova Scotia.

In French there are three and in German four consecutive classes, the courses of study in the higher classes extending over two years, so that in these languages also students may if they wish pursue their studies in advancing stages through four or five years. In the lowest classes very little previous knowledge is assumed, as in the Nova Scotian schools instruction in the department of modern languages has hitherto been very meagre. Attention is specially directed to giving the student a thorough knowledge of the grammatical structure and idiomatic peculiarities of the languages, rather than merely a fluency in using them. But regular exercises in composition are given, and the work of the higher classes is frequently conducted in the language which forms the subject of study. The authors read are so selected as to afford a comprehensive view of French and German literature; and in the highest German class the philological relations of the modern German to the middle high German and to the Swiss and low German dialects are studied.

In English language and literature four consecutive classes are provided, the studies of the two higher classes, extending over two years each. In the lower classes the course is purely literary, the literature being studied in representative works of the different periods. The method pursued is historical. First the eighteenth century is taken up, then the Elizabethan period, then Chaucer, and finally the literature of the present period as represented by Scott, Byron, Wordsworth, Carlyle, Ruskin, Tennyson and Browning. The aim of the instructor is to show the action of the forces at work in the growth of our literature and to enable the student to comprehend and appreciate the great writers of our own time by a preliminary survey of preceding periods. Criticism is in all cases reserved till the classes are familiar with the works to be criticized. Composition is taught practically by oral instruction and by exercises, daily in the first, and weekly in the second class. The highest class is intended both to familiarize the student with the earlier forms of our language by the study of Old English and Middle English Grammar, and to broaden his knowledge of the Elizabethan period.

In History there are in the Faculty of Arts three consecutive classes. In the first the student is made to take a general survey of Mediaeval History and Modern History to the year 1555. In the second a similar survey is taken of Modern History from 1555 to the present period. In the third a more detailed study is carried on of English History during the period extending from 1603 to 1688, Clarendon, Gardiner, Green, Hallam, Ranke and other authorities being studied. The student who is interested in this subject may take in addition the two allied classes of the Faculty of Law, viz., Constitutional History, in which the development of the British Constitution is traced, and Constitutional Law, in which the Constitution of the Dominion of Canada, as determined by the British North America Act and subsequent decisions of legal tribunals, is studied in detail.

In Political Economy there are two consecutive classes, the work of the first being of a general nature and founded upon a study of Mills' principles, that of the second, entering in to special questions more fully and involving, consequently a more extended course of reading, intended to lead the student to look at the questions discussed from the points of view of the different schools.

The study of philosophy is carried on in four classes. In the most elementary, the subjects of logic and psychology are treated, forming the basis of subsequent work. The next two classes are co-ordinate. In the one the chief types of metaphysical theory are expounded in the light of their historical development, and subjected to critical examination, dualism, as exemplified in the common sense philosophy, materialism, and idealism, as exemplified by Berkeley, being brought successfully under review. In the other the chief theories of ethics, the Intuitionist, the Utilitarian and the transcendental, are expounded critically examined and the consequences of the ethical postulate of freedom are discussed at length. The work of the highest class consists of two parts (1) a detailed study of the philosophy of Kant, viewed in the light of the preceding development of modern philosophy and (2) a careful study of the essentially latter-day subject of physiological psychology.

The work of the department of Mathematics is conducted on British rather than on American lines, the aim being to enable the student to make a thorough study of the departments taken up rather than to acquire a slight familiarity with a larger number of mathematical methods. There are three classes, the work of the third extending over two years. The classes are less numerous than in some other subjects, but they meet more frequently. The work of the first class is devoted to Algebra and Geometry; that of the second class to the

higher departments of their subjects, together with Trigonometry; and that of the highest class to analytical and spherical Trigonometry, analytical Geometry, theory of Equations, differential and integral calculus, and differential Equations, the illustrative problems being frequently chosen so as to give practice in the application of Mathematics to physical and astronomical questions.

In the subject of Physics there are three lecture classes. In the first, a general survey of the whole subject is taken. Elementary Dynamics, Heat, Light, Sound, and Electricity and Magnetism being all discussed. Only very elementary mathematical knowledge is assumed, and the treatment is therefore largely experimental.

In the second class, in a course extending over two years, the subjects of Dynamics, Elasticity, Hydrodynamics, Heat and Electricity and Magnetism are treated with greater mathematical detail. In the third class, in a course extending also over two years, an introduction is given to the application of the higher mathematics to Kinematics, Dynamics, Thermodynamics and Electrodynamics. Besides the lecture classes there is a practical class in which students are trained in illustrative experimentation, in the exact determination of physical constants, and in the conducting of physical investigations. The resources of the Physical Laboratory are not great, when compared with the collections of apparatus to be found in

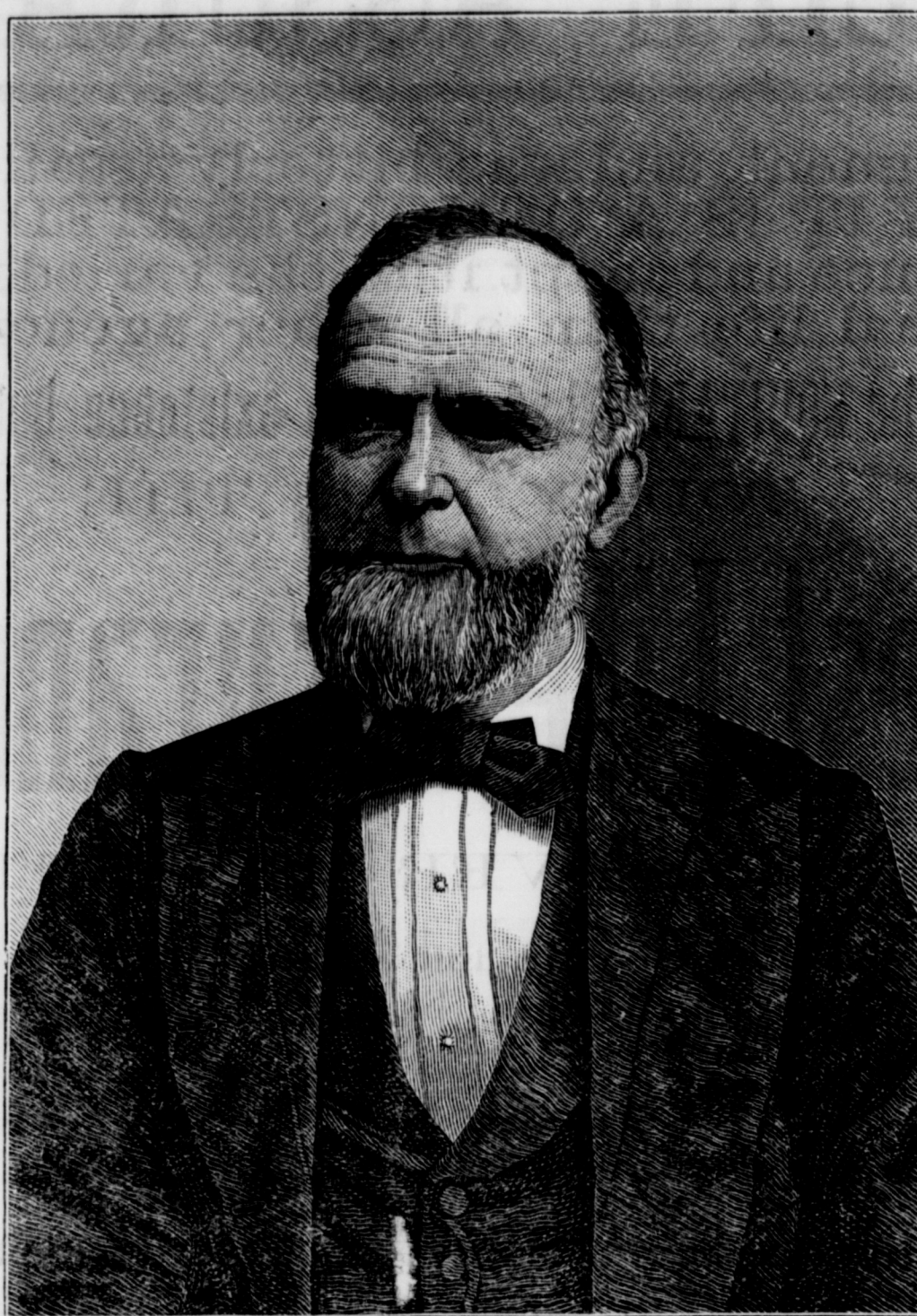
courses. This examination is called the matriculation examination, because passing it is the condition which must be fulfilled before the student can enter his name on the *Matricula*, or roll of undergraduates, i. e. of students who are candidates for degrees. The standard and extent of the matriculation examination is determined by the educational facilities afforded by the better class of academies and high schools in the province.

B. A. AND B. L. DEGREES.

Two baccalaureate degrees are given in this faculty, those viz., of Bachelor of Arts (B. A.) and Bachelor of Letters (B. L.). The B. A. curriculum includes the study of a variety of literary philosophical and scientific subjects, but its distinctive characteristic, which it shares with B. A. courses the world over, is that its backbone consists of classical and mathematical study. The B. L. curriculum differs from it only in the substitution of modern languages for classics and in a diminution of the extent of mathematical study required.

COURSES OF STUDY FOR B. A. AND B. L.

The courses of study by which these degrees may be obtained extend in all cases over four years. They consist of a certain number of subjects which must be taken up, and of others, called electives, which the student is permitted to select from among the other classes mentioned above. During recent years the tendency



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larger colleges; but they are quite sufficient to enable the first one or two years of practical training to be conducted with efficiency and success.

The subject of Chemistry, so far as instruction by lectures is concerned, is treated in the classes, the first being devoted to two inorganic, the second to the organic section of the subject. In their classes a systematic course of instruction is provided, covering the whole ground and illustrated by experiments throughout. The systematic treatment of the lectures is supplemented by an extensive course of practical instruction in the Laboratory, beginning with the preparation of gases and reagents, passing, through the qualitative analysis of acids bases and salts, to the quantitative determination of the composition of bodies of all kinds, and finally being extended to such departments as mineral analysis, soil analysis, quantitative estimation of inorganic poisons, sanitary analysis, &c., the particular department selected by a student in the final stage, being determined by his tastes or his intentions as to subsequent professional work.

In botany there is but one class, the course embracing not only a detailed study of the North American natural orders, but also the subjects of structural and physiological botany. The course is illustrated by diagrams, collections of dried plants, microscopic examination of specimens and laboratory experiments on living plants.

METHODS OF INSTRUCTION.

The methods of instruction in the above classes vary of course with the subject. In general, courses of lectures are given and the students are referred to the best published discussions of the subjects under treatment. They are expected to possess the books most frequently referred to and to consult the others in the library. The class exercises are very different in different cases, taking the form of recitation of prescribed work, written and oral examinations, free discussion, preparation of essays, theses or reports on assigned subjects, preparation of composition papers, solution of problems, etc. In all cases students are encouraged in the formation of habits of private study by the award of class distinctions, based partly on the ordinary class work and partly on the success with which they acquire, by following for themselves courses of reading suggested by the Professors, a mastery of subjects not treated or only partially treated in the classes.

ADMISSION OF STUDENTS.

The classes may be attended by all persons without restriction as to sex or race, and all the more elementary classes may be entered without any preliminary examination. In the case of the advanced classes, only those are permitted to enter who have shown by the success of their previous studies that they have sufficient ability to do the work they involve. Students who aim at obtaining degrees, however, must pass a preliminary examination in school subjects before entering upon the degree

has been to diminish the number of required subjects and increase the number of electives. But to avoid all danger to which the elective system is subject, viz., the selection of a miscellaneous set of subjects by a student of immature judgment the faculty require the selection made by every student to be submitted to them at the beginning of each session for their approval.

The courses for B. A. and B. L. may be divided into ordinary and special courses, the former including only a comparatively elementary study of the subjects taken up, the latter a more advanced study of a smaller range of subjects.

ORDINARY B. A. COURSE.

In the ordinary B. A. courses, Latin must be studied for at least two years and either Latin or Greek for at least three years (it being permitted therefore to omit Greek altogether), mathematics and English must be studied for two years each and history, logic and psychology, chemistry and physics for one year each. Considerable acquaintance is thus demanded with at least one of the classical languages and with elementary mathematics and the study of English, and of a certain range of historical, philosophical and scientific subjects is ensured. Other subjects, or more advanced grades of the above subjects, to the number of five per year, must be taken in addition. In the first and second years Greek is elective with French or German, so that if Greek is omitted a modern language must be taken instead. In the third year two subjects are elective, and in the fourth all five subjects are selected by the student from among those for which he has acquired a taste or has found himself to possess special aptitude.

ORDINARY B. L. COURSE.

In the ordinary B. L. courses German and French must both be taken for two years each, while the study of one or other must be pursued for at least three years. Only one year of mathematical study is required. But in other respects the courses for this degree are the same as for B. A. The choice of subjects begins in the courses for this degree in the second year, in which physics may be substituted for the second Mathematical class. In the third and fourth years the numbers of elective subjects are the same as in the B. A. course.

PROFESSIONAL ELECTIVES.

Among the electives of these courses are included a sufficient number of the non-technical subjects usually included in Theological, Legal and Medical courses to enable the student, if he wishes it, to complete what is, formally at least, equivalent to one year of study in one or other of these professional departments. The electives which are thus allowed are in all cases of liberal character. They are Hebrew and New Testament Greek in the department of Theology, Constitutional History, Constitutional Law and Contracts, in that of Law and Chemistry, Practical Chemistry and Botany, in that of Medi-

cine. The B. A. and B. L. courses are not rendered less liberal by the inclusion of these subjects, but they are rendered more practically useful.

The number of classes from which electives may be chosen is very large, considering the comparative smallness of the teaching staff. The variety of the courses leading to the above degrees is correspondingly great in so much that few students follow the same course in working for their degrees. There is one incidental advantage in this which may be mentioned, viz., that while the students of any one year are brought together in the prescribed classes to a sufficient extent to develop an *esprit de corps*, they are in the elective classes associated with students of other years, and thus the antagonism and jealousy which sometimes arise between the different grades of students is necessarily diminished.

A student taking any of the ordinary courses, who gains distinction in the work of a number of classes in related subjects is awarded a degree "with general distinction."

SPECIAL B. A. AND B. L. COURSES.

Besides the ordinary courses for B. A. and B. L. others, called special courses, are open to students who have proved during the first two years of their curriculum that they have sufficient ability to carry the study of special subjects to a higher pitch than the ordinary student. To avoid successive specialisation the departments in which these courses are offered, consists in general, of two related subjects. Students who enter upon these courses must take all the advanced classes provided in their department, and must at the same time carry on very extensive private reading. As an off set to this, they are not required to attend quite so many classes as the others in the third and fourth year.

The special courses are as follows: (1) Classics, the course including a critical study of a long series of Latin and Greek authors, made partly with the aid of the Professor, and partly in private, together with the history of classical literature and philology. (2) Latin and English and (3) Greek and English, there being combinations of one half of the classical course, with a study of the historical development of the English language and literature down to the year 1300, and of the history of the Elizabethan and early Stuart literature. (4) English and German, being a combination of the English subjects just mentioned with a study of representative German authors of the 16th, 17th, and 18th centuries and selections from Middle High German writers and from German dialect literature.

(5) English and English History, being a combination of the subjects mentioned above in English language and literature, with a minute investigation of a period of English History, the period selected being that extending from 1603 to 1689.

(6) Philosophy, including both Mental and Moral Philosophy, the course of reading extending from Plato and Aristotle through Locke, Berkeley, Hume, Kant, Reid, and Mill to Spencer and other philosophical writers of the present day.

(7) Mathematics and Mathematical Physics, a course which aims at furnishing an extensive knowledge of the higher trigonometry, analytical geometry, the differential and integral calculus, and differential equations and some experience in the applications of these mathematical weapons in the solution of physical problems.

(8) Experimental Physics and Chemistry, a course requiring an extensive knowledge of the two great branches of experimental science and considerable experience in the use of experimental methods.

These courses not only enable students who have special tastes or aptitudes to follow them, but they are also in many cases suited to the wants of persons who have already decided what their life's work is to be, and wish their studies to bear upon it. Thus the teacher may prepare himself for some department of his work in any of the above courses; but in the present state of the schools the classical, mathematical, English and historical and scientific courses would seem to be especially suited to him. The intending clergyman would naturally take the classical or Greek and English, or English and historical, or philosophical course. The prospective medical student would naturally select the course in experimental science; the legal practitioner one in English and English history or one of the literary courses, or philosophy. The engineer would naturally select mathematics and mathematical physics; the manufacturer, experimental physics and chemistry.

The work done in these courses is tested by an examination held at the end of the fourth year. The high standard of these examinations is already well known abroad, experience in recent years having shown that a student who has distinguished himself in one of these special courses is pretty sure of a scholarship or bursary at one or other of the larger American universities to enable him to continue his studies. It may be mentioned here moreover that of the men and indeed women also who have thus secured opportunities of further prosecuting their studies a remarkably large number have subsequently been appointed to important teaching positions.

Students who distinguish themselves at the examinations in the special courses are awarded degrees with honors in the department in which they studied. Medals also are offered and are awarded in cases of extraordinary distinction.

SHORT COURSES.

Besides the various courses for degrees, the Faculty of Arts provides a number of two-years courses for the benefit of students who are unable to take the full four years. One is a course of liberal study, a combination of literary, philosophical, historic and scientific classes. Another is more largely scientific. A third is intended for journalists and includes such subjects as English and French literature, Logic, Political Economy, Ethics, Constitutional History, Constitutional Law. The fourth is intended for young men who are to go into business, and includes French, German, English, Political Economy, and Elementary Science. These courses do not lead to degrees, but students who have completed them receive certificates to that effect.

Finally evening classes are occasionally conducted by members of the faculty for the benefit of artisans.

FACULTY OF PURE AND APPLIED SCIENCE.

This faculty consists of seven professors

who are also members of the faculty of arts, and four lecturers. In addition, however, the classes conducted by the professors of physiology, anatomy and histology in the Halifax Medical College, and by the three instructors in drawing in the Victoria School of Art and Design, are recognized as qualifying for Degrees; and thus the studies of this faculty are really presided over by seventeen instructors.

COURSES OF INSTRUCTION.

Many of the classes of this faculty are common both to it and to the faculty of arts, and have already been sketched. Such are, for example, the French, German and English classes and those in mental science, mathematics, physics, chemistry and botany. The following have not been referred to:

Applied Physics, in which heat and heat engines, electricity and magnetism and dynamo-electric machinery, elasticity and the strength of materials, and hydrostatics and hydraulics, are treated in a course extending over two years.

Applied Mechanics, in which the mechanics of machinery and the theory of structures are treated in successive years, graphical methods being extensively employed throughout.

Mineralogy and Lithology, in which minerals and rocks are studied systematically with the assistance of the collections of the museum, and mineral analysis and the assaying of ores are studied practically in the laboratory.

Zoology, in which the work is mainly practical, typical animals being dissected and microscopic examinations of minute structures made in the laboratory, but which includes also a systematic treatment of the subject in lectures.

Civil Engineering, in which such subjects as earthwork, masonry, structural timber, stone and iron, common roads, bridges, railways, etc., are discussed, the lectures being illustrated by visits to engineering works in progress.

Surveying, in which systematic instruction is given by lectures in the adjustment and use of instruments and in the various methods of surveying, and levelling and practical operations are carried on in the field and completed in the drawing room.

Mining, in which, after an introduction on such portions of geological science as are practically useful, the modes of discovering veins and beds, the sinking of shafts, and the operation of mines are discussed in illustrated lectures.

As stated above students obtain instruction in Freehand, Geometrical, Mechanical, and Architectural Drawing in the Art School, but in addition the application of drawing to the solution of engineering problems by graphical methods, the plotting of surveys, etc., are taught in connection with the classes in Applied Physics, Applied Mechanics, Surveying, and Civil Engineering.

The subjects of the classes in Human Anatomy, Physiology and Histology taken in the Medical College are the usual subjects of the Medical Curriculum.

B. SC. AND B. E. DEGREES.

As in the Faculty of Arts, any of the classes may be taken by students without preliminary examination. But candidates for degrees must have passed the Matriculation Examination.

The degrees conferred in this faculty are Bachelor of Science (B. Sc.) and Bachelor of Engineering (B. E.) the former at the end of a four years' course of study, the latter in Bachelors of Science who have been engaged for five years in practical Engineering work, and who submit to the faculty original designs, estimates, etc., for some assigned construction work in the department of Engineering in which they have been engaged.

COURSES OF STUDY FOR B. SC.

The courses of study for the degree of B. Sc. are designed on a different plan from the B. A. courses, and consist for the most part of prescribed classes with few electives, the reason being that students who enter this Faculty are supposed to desire to fit themselves for engaging in definite professional work. They are all intended to combine a certain amount of liberal education with a special training in the department selected. Hence in all, English literature, French and German are included, both because of the practical value of a study of these subjects and from the point of view of literary culture. In all also more or less of some department of Drawing is included, and various departments of pure science. There are seven such courses.

(1) The Mathematical course is intended for students who aim at high teaching positions in this subject, and for those who wish to obtain a very thorough foundation for subsequent engineering study. Its backbone consists of Mathematics and Mathematical Physics, which are studied during four and three years respectively, and this is supplemented on the one side by a study of mental science and on the other by experimental science.

(2) The experimental science course is intended for students who aim at high teaching positions in chemistry or physics or who intend to engage in chemical industries. The main subjects are chemistry and physics which are studied during four and three years respectively both systematically and practically. These subjects are supplemented by mathematics on the one side and applied physics and such subjects as mineralogy on the other.

(3) The science teachers course is intended to prepare teachers for conducting the science departments of our common and high schools. Besides the literary studies referred to above it includes two years of mathematical training, a thorough elementary study, both systematic and practical, of physics, chemistry, botany, zoology and mineralogy, one year each in mental science and physiology and a three years course in drawing, including freehand, geometrical and shaded drawing, modelling in clay, decorative design and perspective.

(4) The medical students' course is intended to prepare for entering upon the study of medicine. It includes among other subjects mathematics, physics, chemistry, botany and zoology, together with human anatomy, physiology and histology. The course includes a full year of the less technical of the subjects of the medical curriculum, and thus enables the student to shorten his subsequent medical course to that extent.

(5) The three engineering courses, designed for civil, mechanical and mining engineers, consist mainly of a thorough study of mathematics and physics, and the applications of these subjects to the various