

exercised in composition by both written and oral exercises. In the Senior Class, Fernandes' Exercises, continuation of Grammar and Composition, Cervantes' Don Quixote, Quintana, Vida del Cid, and Mariana's Historia will be the subjects of study. Besides a special comparison with the Portuguese Language, a general notice, literary and historical, of the Basque and other dialects will be given.

9. MATHEMATICS AND NATURAL PHILOSOPHY.

(PETER REDPATH PROFESSORSHIP OF NATURAL PHILOSOPHY.)

Professor, ALEXANDER JOHNSON, M.A., LL.D.

(In the work of the First and Second Years assistance will be given by G. H. Chandler, B.A., Lecturer in Mathematics in the Faculty of Applied Science.)

MATHEMATICS.—(*First Year*)—Arithmetic.—Euclid, Books 1, 2, 3, 4, 6, with Definitions of Book 5 (omitting propositions 27, 28, 29, of Book 6). Todhunter's Edition.—Colenso's Algebra, Part 1, to end of Quadratic Equations.—Galbraith and Haughton's Plane Trigonometry to beginning of solution of Plane Triangles.

MATHEMATICS.—(*Second Year*)—Arithmetic, Euclid, Algebra, and Trigonometry as before.—Nature and use of Logarithms.—Remainder of Galbraith and Haughton's Plane Trigonometry—Elements of Solid Geometry, including the mensuration of Surfaces and Solids. Geometrical Conic Sections :—the Parabola with the fundamental properties of the Ellipse and Hyperbola. Text-book :—Wilson's Solid Geometry and Conic Sections, pp. 1-60 and 93-118.

The course for the Intermediate University Examination consists of the Mathematics for the first two years except Conic Sections and Solid Geometry.

MATHEMATICAL PHYSICS. — (*Third Year*) — Galbraith and Haughton's Mechanics (omitting chap 5 of Statics), Hydrostatics, Optics.

ASTRONOMY.—(*Fourth Year*)—Galbraith and Haughton's Astronomy—The lectures on this subject will be given before Christmas.

EXPERIMENTAL PHYSICS.—(*Third and Fourth Years*).—1.—*Light*.—Theories.—Reflection.—Refraction.—Dispersion.—Interference and Diffraction.—Double Refraction.—Polarisation. 2.—*Heat*.—Dilatation of Solids, Liquids and Gases.—Specific and Latent Heat.—Radiation and Conduction.—Mechanical Theory of Heat. 3.—*Electricity*.—Static and Dynamical :—including Electromagnetism—Magneto-Electricity—Thermo-Electricity—Diamagnetism—Electric Measurements—Practical Application to Telegraph, &c. 4.—*Magnetism*. 5.—*Sound*.—Theory of Undulations.—Production and Propagation of Sound—Vibrations of Strings, Rods, and Plates.—Vibrations of Fluids.—Musical sounds. Text-Books :—Ganot's Treatise translated by Atkinson, and Tyndal on Heat and Sound. This Course extends over two years.

The Subjects for the Session 1879-80 are Light and Heat.

The Lectures in Mathematical and Experimental Physics will be illustrated by Apparatus, of which the College has a very good collection.

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