properties of minerals, Thursday, 7–9; general principles of mining, Friday, 7–8. July, August, and September: Physical geography (physiography), Wednesday, 7–8; rocks—principles of stratigraphy and geological surveying, Wednesday, 8–9; metallic minerals, Thursday, 7–9; general principles of mining, Friday, 7–8. October, November, and December: Stratigraphical geology, Wednesday, 7–8; non-metallic minerals, Thursday, 7–9; coal-mining, Wednesday, 8–9; metalliferous mining, Friday, 7–8.

Geology.—Syllabus of subjects :—*Physical Geography (Physiography) :* First term—The earth as a whole, its form, dimensions, and weight; the atmosphere; the sea; the land; volcanoes and earthquakes. Second term—Rain, rivers, ice, snow, and their work; sketch of geological record; climate, past and present; the earth's position in the universe. Text-book, "Physical System of the Universe," Skertchley. *Rocks and the Principles of Stratigraphy and Geological Surveying :* Eruptive and sedimentary rocks, their character and discrimination; structural movements in the crust of the earth, with attendant phenomena of anticlines, synclines, faults, &c., and the methods of delineating these on maps; elevations and depressions of the land, with conformities and unconformities. *Stratigraphical Geology :* A comparison of the European beds with those of Australasia, and the main distinguishing features (lithological and palæontological) of the different systems; development of life in time. Text-book, "Text-book of Geology," Dana.

Mineralogy.—*Crystallography :* The forms of crystals, and the recognition of minerals by their crystalline form. *Physical Properties of Minerals :* Recognition of minerals by the following properties: taste, colour, lustre, hardness, specific gravity, transparency, translucency, refraction and double refraction, polarization, magnetism and electricity, fusibility, and blowpipe characters. *Metallic Minerals :* Gold, platinum, osmium, iridium, palladium, tellurium, silver, lead, mercury, copper, tin, titanium, tungsten, molybdenum, zinc, iron, nickel, cobalt, manganese, chromium, uranium, antimony, arsenic, bismuth, and their mineral species. *Non-metallic Minerals :* Carbon, sulphur, haloids and salts, earths, silicates, and precious stones. Text-books : "Mines and Minerals," Cox and Ratte; "Crystallography," Jordan.

Mining.—General principles of mining: First term—Surface-characters, and relations of lodes and coal-seams to the strata in which they occur; surface-prospecting; boring and blasting; driving levels: second term—shaft-sinking, pumps, drainage, winding and underground haulage; payment of men. Coal-mining: Occurrence of coal-seams; rules for tracing faults, dykes, and troubles generally; value of properties; working coal-seams; lighting and ventilation; surface-plant, screens, washing coal, &c. Metalliferous mining: Distribution of minerals, and occurrence of rich parts in lodes; working lodes; heaves. &c.; value of mining properties; working lodes; lighting and ventilation; alluvial workings and dressing machinery. Text-books : "Mines and Minerals," Cox and Ratte; "Coal-mining," Smyth; "Metalliferous Mining," Collins; "Coal-mining," André; "Lectures on Mining," Callon; "Mining-machinery," André. Students wishing fuller information or advice should apply to the instructor in geology.

Department of Mathematics (Instructor, Mr. J. Kinloch, M.A.).

Mathematical course, three years.—First year, Wednesday, 7 p.m. to 9 p.m.: First term—(*a*) Plane geometry without ratio; (*b*) algebra to simple equations, including fractions: second term—(*a*) plane geometry with ratio, and geometry of planes and solids; (*b*) algebra, quadratics series, binomial theorem, logarithms, plane trigonometery to solution of triangles. Second year, Thursday, 7 p.m. to 9 p.m.: First term—(*a*) Plane trigonometry, mensuration of some planes and solids, spherical trigonometry to solution of triangles; (*b*) analytical geometry: second term—(*a*) statics; (*b*) differential calculus, including maxima and minima. Third year, Monday, 7 p.m. to 9 p.m.: First term—(*a*) Differential calculus; (*b*) dynamics: second term—(*a*) integral calculus, &c., mensuration of surfaces and solids; (*b*) establishment of engineering and other formulæ. The (*b*) classes begin at 8 p.m. A student who wishes to obtain an expert's certificate in any subject in this department must attend the whole course of instruction as laid down above, pass a satisfactory examination in each subject, and obtain the class-certificate in each case. A student may, however, attend any course of lessons in any subject, and if he pass a satisfactory examination shall be granted a class-certificate.

Subjects in Mathematical Course.—A. *Surveying.*—First year: First term—Mathematics, 1, Wednesday; mineralogy, 1, Friday; drawing, 1, Thursday: second term—mathematics, 1, Wednesday; mineralogy, 1, Friday; drawing (scale), 1, Monday. Second year: First term—Mathematics, 1, Thursday; geology, 1, Friday, 7 p.m. to 8 p.m.; physics, 2, Tuesday and Friday, 8 p.m. to 9 p.m: second term—the same in continuation. Third year: First term—Mechanics, 2, Tuesday and Thursday; geodesy, 2: second term—the same in continuation. Class-certificates must be obtained in (B) mineralogy, drawing, geology, and physics. Students wishing fuller information or advice should apply to the instructor in mathematics.

Navigation (Teacher, Lieutenant Campion, R.N.).—First year, Monday, Wednesday, and Friday, at 7 p.m.: First term—Mathematics, 1, Wednesday; freehand drawing, 2, Thursday and Friday: second term—mathematics, 1, Wednesday; drawing (to scale), 2, Monday and Friday; physiography, 2. Second year: First term—Mathematics, 1, Thursday; teacher of navigation—navigation, 3, Monday, Wednesday, and Friday: second term—the same in continuation. Third year: First term—Applied mechanics, 2, Tuesday and Thursday; shipbuilding, 1, Friday; law (in relation to shipping), 1: second term—the same in continuation. Text-book, Ainslie's "Extra Master's Guide." Class-certificates must be obtained in applied mechanics and freehand drawing.

Department of Elocution (Instructor, Mr. John Conenry).

Six months' course of study. Tuesday and Friday, at 7 p.m. Students who attend the whole course and pass a satisfactory examination will be granted a class-certificate. The class