principles, so that the student should have no trouble in understanding ordinary electrical terms, or in tracing out and operating a simple system of generator, motor and lights. He learns about the materials used in electrical measuring instruments. The elementary principles of electric lighting and heating are studied, as well as the telephone and telegraph. The course is non-mathematical as far as possible, and as simple and practical as it can well be made.

In the laboratory the student learns to operate the various classes of electrical machinery, direct current generators and motors, shunt, compound and series; alternators and the corresponding motors, transformers, etc., of various types. He makes measurements of voltage, current, and power, calculates the efficiency of various types of machinery at various loads, and plots the curves showing the variations in load during a run, changes of voltage, current, and the losses due to some of the simpler causes.

Not only does he learn to operate the various machines, but he is led to understand the principles which underlie such operation, so that he is able to give the reasons for the different steps which he takes, and insures himself against unnecessary or dangerous experiments. When he finishes the course he may not be an expert electrical engineer but he ought to know how to run a simple generator or motor without damage to himself or the machine, he ought to know how to do simple wiring for bells, lights, transformers or motors, and to repair any simple breakage.

As a preparation for these two courses one year of physics is essential. A little algebra and less trigonometry make up the requirements in mathematics. Having this preparation, if a student is willing to do earnest work he will find at the end of the year that he has largely increased his store of every-day practical information and has obtained a broader view of modern life and industrial methods.

J. H. Bond.