## SUBJECTS OF STUDY. CHEMISTRY.

-25-

Professor: William L. Goodwin, D.Sc., Edin.

Demonstrators: John Waddell, B.A., D.Sc., Ph.D.; C. W. Dickson, M.A.

1. Lectures on the principles of Chemistry as follows :

Chemical Species—Crystals and Crystallization—Chemical Change— Laws of Combination—Relations of Heat to Chemical Changes— Notation—Equations—Nomenclature—Volume Relations of Gases in Chemical Change—Volume Formulae—The Atomic Theory— Descriptive Chemistry of the Commoner Elements and their Compounds—Electrolysis—Spectrum Analysis.

Books.-Goodwin's Chemistry.

Remsen's Inorganic Chemistry (Advanced Course).

Waddell's Arithmetic of Chemistry.

Mondays and Tuesdays at 11 a.m.

2. Laboratory practice, consisting of simple experiments, by means of which the student may become acquainted with the properties of common substances. Wednesdays or Thursdays at 11 a.m.

3. Qualitative Analysis is begun in the second term.

SENIOR.

Before taking this class students must have passed in Junior Chemistry.

(Ist TERM). I. Lectures on Elementary Organic Chemistry.

2. Lectures on the chemistry of the metals, their occurrence in nature, reduction and uses. Thursdays and Fridays at 11 a.m.

3. Qualitative Analysis is continued. Notes on systematic qualitative analysis are given in a course of lectures in October.

(2nd TERM). I. Lectures on chemical laws and theories. Thursdays and Fridays at 11 a.m.

2. Qualitative Analysis of Minerals and Simple Quantitative Analysis. This work may occupy from two to four hours a day. The greater part of the time is spent in the laboratories. Lectures on Quantitative Analysis on Thursdays at 3 p.m. The minimum amount of work in quantitative analysis is comprised in Bolton's Quantitative Analysis, Nos. 1, 2, 3, 4, 5, 6, 7, 8 and 13. The practical work in qualitative analysis must be completed before admission to examination. This applies also to quantitative analysis.

Text-Books-Van Deventer's Physical Chemistry (J. Wiley & Sons.)

Goodwin's Chemistry and Supplement.

Thorpe & Muir's Qualitative Analysis (Longmans, Green & Co.) Bolton's Quantitative Analysis.

## THIRD YEAR.

(Ist TERM). I. Lectures and Class Work on Organic Chemistry. (Course B only.) The student is expected to master the contents of Remsen's Organic Chemistry. Wednesdays at 3 p.m.

2. Quantitative Analysis is continued throughout the third year by students taking the courses in Chemistry and Assaying, or Chemistry and Mineralogy. Special attention is given to the quantitative analysis of minerals.

Text-Book-Fresenius' Quantitative Analysis.