

Water. Drainage. Hydrographical Surveying. River and Harbor Improvements. Field Practice.

Topography.—As practised by the U. S. Coast Survey.

Mathematics.—Differential and Integral Calculus. Analytic Mechanics.

Applied Mechanics.—Stress. Stability, Strength, and Stiffness.

Spherical Astronomy.—Higher Geodesy. Latitude and Longitude.

Descriptive Geometry.—Applications to Masonry and Carpentry.

Drawing.—Plans, Profiles, Elevations, Sections, etc.

Physics.—Laboratory Practice.

Geology.—Physiographic Geology. Lithology. Outline of Geological History.

Dynamical Geology.

English.—Logic. Rhetoric. History of English Literature.

Constitutional History.—England and the United States.

French.—(Spanish may be substituted.)

German.

III.—COURSE IN CHEMISTRY.

Industrial Chemistry.—Study of Chemical Manufactures. Glass, Pottery, Soda-ash Acids, Soap, Gas, etc. The Arts of Dyeing, Calico Printing, Tanning, Brewing, Distilling, etc.

Metallurgy.—Metallurgical Processes, Constructions, and Implements.

Assaying.—Wet and Dry Ways.

Descriptive and Determinative Mineralogy.—Use of the Blowpipe.

The foregoing studies are elective. Each student must select one or more of them.

The following studies are required :—

Quantitative Chemical Analysis.—Laboratory Practice.

Drawing.—Chemical or Metallurgical Apparatus. Plans of Works.

Physics.—Laboratory Practice.

Geology.—Physiographic Geology. Lithology. Outline of Geological History.

Dynamical Geology.

English.—Logic. Rhetoric. History of English Literature.

Constitutional History.—England and the United States.

French.—(Spanish may be substituted.)

German.

IV.—COURSE IN MINING ENGINEERING.

Engineering.—Survey and Construction of Roads and Railways, Measurement of Earthwork and Masonry. Hydraulics. Draining. Field Practice.

Descriptive and Determinative Mineralogy.—Use of the Blowpipe.

Assaying.—Wet and Dry Ways.

Quantitative Chemical Analysis.—Laboratory Practice.

Metallurgy.—Metallurgical Processes, Constructions, and Implements. Furnaces, Crucibles, Blowing Machines, Fuels, and Fluxes.

Mathematics.—Differential and Integral Calculus. Analytic Mechanics.

Applied Mechanics.—Stress. Stability, Strength, and Stiffness.

Drawing.—Sections and Maps. Mines. Metallurgical Apparatus.

Physics.—Laboratory Practice.

Geology.—Physiographic Geology. Lithology. Outline of Geological History. Dynamical Geology.

English.—Logic. Rhetoric. History of English Literature.

Geology.—Physiographic Geology. Lithology. Outline of Geological History.

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