

MINERALOGY AND GEOLOGY.

- Elements of these Sciences.
- Blowpipe Practice.
- Determination of Minerals.

FRENCH OR GERMAN.

SUBJECTS OF THE THIRD YEAR.

APPLIED MATHEMATICS.

- Dynamics of Machines.
- Thermodynamics and theory of the Steam Engine.
- Hydraulics.

EXPERIMENTAL PHYSICS.

- Heat : Use of the Cathetometer, Dividing Engine, and Spherometer, Thermometry and Calorimetry. Principle of Least Squares.

DRAWING.

- Subjects of previous years continued.
- Shades and Shadows, Stone Cutting, Perspective.
- Original Designs (Bridges, Roofs, Floors, etc.).

ENGINEERING.

- Subjects of previous years continued.
- Levelling.
- Application of principles to practical problems connected with the design and construction of various Structures and Machines, *e. g.*, Foundations, Retaining Walls, Arches, Roofs, Bridges, Roads, Railways, Canals, Sewers, Water Wheels, Steam Engines, Hydraulic Machinery, Mining Machinery, etc.
- Practical Astronomy.
- Geodesy (considering the Earth a Spheroid).

CHEMISTRY (APPLIED).

- Mortars and Cements.
- Bricks and Artificial Stones.
- Preservation of Wood, Iron and Stone.
- Water, Air and Sewage.

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