

RMN7D002 Advanced Underground Metal Mining

Module I:

(10hours)

Techno-Economic analysis on choice of stopping methods, high productivity methods

Module II:

(10hours)

Blast hole stopping, vertical retreat methods of mining, block caving, raise stooping, u/g bench blasting.

Module III:

(14hours)

Special u/g excavation, shaft pockets, ore bins, ore transfer, ramp, decline, step mining, stope fills: preparation, transportation & filling operation.

Module IV:

(8hours)

Stope design & production Planning methods of pillar extraction, solution mining, in-situ leaching, u/g retorting, undersea mining, introduction to novel mining methods.

Books:

- [1] Underground Mining Methods: Engineering Fundamentals and International Case Studies by William A. Hustrulid, Richard L. Bullock, Society for Mining, Metallurgy, and Exploration
- [2] Techniques in Underground Mining - Selections from Underground Mining Methods Handbook by Gertsch, Richard E.; Bullock, Richard L., Society for Mining, Metallurgy, and Exploration (SME)
- [3] An Introduction to Metalliferous Mining by S. Higham, Charles Griffin & Company