MINERAL PROCESSING (MNPR)

MNPR 505: Particle Separation

3 Credits

This course will provide the students with the fundamentals and state-of-the-art techniques in particle separations and their applications in recovery of minerals and elements from primary and secondary sources. The topics covered in this course include: Data Evaluation and Mass Balancing, Gravity Concentration, Forth Flotation, Advanced Dry Separations, Advanced Dewatering Techniques, Classifications, Magnetics, Clarification, Processing of Primary Mineral Resources, and Recycling.

RECOMMENDED PREPARATIONS: Students should be familiar with the fundamentals of mineral process engineering and the content of MNPR 413, or equivalent.

MNPR 507: Hydrometallurgical Processing

3 Credits

Fundamental physico-chemical factors underlying the aqueous extraction and recovery of metals and nonmetals from ores, minerals, and scrap metal. MN PR 507 (MATSE 560) Hydrometallurgical Processing (3) This 3-credit course is concerned with the fundamental physico-chemical processes associated with the processing, utilization, and recycling of materials in aqueous systems. The topics covered cut across a wide range of practical applications. The course is therefore suitable for a broad spectrum of scientists and engineers concerned with processes and processing in aqueous systems, e.g., in materials science and engineering, mineral processing, geoscience, soil science, environmental engineering, chemistry, chemical engineering, petroleum and natural gas engineering, mining engineering, nuclear engineering, and electronic and electrical engineering. A required term paper provides a formal mechanism for ensuring that students have the opportunity to apply ideas discussed in the course to their specific areas of interest.

Prerequisite: MATSE426
Cross-listed with: MATSE 560

MNPR 596: Individual Studies

1-9 Credits/Maximum of 9

Creative projects, including nonthesis research, which are supervised on an individual basis and which fall outside the scope of formal courses.

MNPR 600: Thesis Research

1-15 Credits/Maximum of 999

No description.

MNPR 601: Ph.D. Dissertation Full-Time

0 Credits/Maximum of 999

No description.