

Course guide

330352 - 330352 - Recycling of Solid Waste

Last modified: 21/04/2026

Unit in charge: Manresa School of Engineering
Teaching unit: 750 - EMIT - Department of Mining, Industrial and ICT Engineering.
Degree: MASTER'S DEGREE IN MINING ENGINEERING (Syllabus 2013). (Optional subject).
Academic year: 2026 **ECTS Credits:** 5.0 **Languages:** Spanish, English

LECTURER

Coordinating lecturer: Hoffmann Sampaio, Carlos

Others:

REQUIREMENTS

has no requirements

TEACHING METHODOLOGY

The subject consists of 1 hour a week of lectures in the classroom, 1 hour a week also in the classroom in which more applied aspects and problem solving are developed, and 1 hour a week in the computer room.

LEARNING OBJECTIVES OF THE SUBJECT

Obtaining advanced knowledge in solid waste recycling technologies. Knowledge of different equipment, processes and flow charts used in the solid waste recycling industry.

STUDY LOAD

Type	Hours	Percentage
Hours large group	45,0	36.00
Self study	80,0	64.00

Total learning time: 125 h

CONTENTS

Solid waste concentration and separation equipment. Revision.

Description:

Description of solid waste concentration methods and processes: Comminution and granulometric classification; Separation by density; Magnetic and electrostatic separation; Floatation; leaching; Other concentration processes.

Related activities:

Master class of basic concepts.

Full-or-part-time: 33h 20m

Theory classes: 12h

Self study : 21h 20m



Description and comparison of solid waste recycling.

Description:

Description of solid waste concentration plants and comparison of the equipment used.

Related activities:

Master class of basic concepts.

Full-or-part-time: 91h 40m

Theory classes: 33h

Self study : 58h 40m

GRADING SYSTEM

EXAMINATION RULES.

Other generic prior skills and qualities applicable to any activity within the university academic field are required, such as: the spirit of sacrifice, neatness, the ability to synthesize, teamwork, respect for other colleagues and to the teacher, the record, etc.

BIBLIOGRAPHY

Basic:

- Wills, B. A. Mineral processing technology : an introduction to the practical aspects of ore treatment and mineral recovery [on line]. 6th ed. Oxford: Butterworth-Heinemann, 1997 [Consultation: 20/07/2023]. Available on: <https://www-sciencedirect-com.recursos.biblioteca.upc.edu/book/9780750644501/wills-mineral-processing-technology>. ISBN 0750628383.
- King, R. P. Modeling and simulation of mineral processing systems [on line]. Boston: Butterworth Heinemann, 2001 [Consultation: 20/07/2023]. Available on: <https://www-sciencedirect-com.recursos.biblioteca.upc.edu/book/9780080511849/modeling-and-simulation-of-mineral-processing-systems>. ISBN 0750648848.
- Mular, Andrew L; Halbe, Doug N; Barratt, Derek J. Mineral processing plant design, practice, and control : proceedings. Littleton: Society for Mining, metallurgy and exploration, 2002. ISBN 9780873352239.
- Gupta, A; Yan, D. S. Mineral processing design and operation : an introduction [on line]. Amsterdam: Elsevier, 2016 [Consultation: 06/10/2023]. Available on: <https://www-sciencedirect-com.recursos.biblioteca.upc.edu/book/9780444635891/mineral-processing-design-and-operationS>. ISBN 9780444635921.
- Kelly, Errol G; Spottiswood, David J. Introduction to mineral processing. New York [etc.]: John Wiley and sons, cop. 1982. ISBN 0471033790.
- Darling, Peter. SME mining engineering handbook [on line]. 3rd ed. Littleton, Col.: Society for Mining, Metallurgy and Exploration, 2011 [Consultation: 20/07/2023]. Available on: <https://ebookcentral-proquest-com.recursos.biblioteca.upc.edu/lib/upcatalunya-ebooks/detail.action?pq-origsite=primo&docID=655790>. ISBN 9780873352642.
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