UNIVERSITAT POLITÈCNICA DE CATALUNYA BARCELONATECH

Course guide
330352 - 330352 - Recycling of Solid Waste

Last modified: 04/07/2023

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: 2023 **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 medium 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:
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- 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.
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- 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.
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- Deepak Malhotra, Patrick Taylor, Erik Spiller, and Marc LeVier. Recent Advances in Mineral Processing Plant Design. SME, 2009.