

## 330601 - MPM - Modeling in Mineral Processing

Coordinating unit: 330 - EPSEM - Manresa School of Engineering  
 Teaching unit: 750 - EMIT - Department of Mining, Industrial and ICT Engineering  
 Academic year: 2019  
 Degree: MASTER'S DEGREE IN MINING ENGINEERING (Syllabus 2013). (Teaching unit Compulsory)  
 ECTS credits: 5 Teaching languages: Catalan, Spanish

### Teaching staff

Coordinator: Oliva Moncunill, Josep

### Degree competences to which the subject contributes

#### Specific:

1. (ENG) Capacitat per planificar, dissenyar i gestionar instal·lacions de tractaments de recursos minerals.
2. (ENG) Coneixement adequat de la tecnologia d'explotació de recursos minerals.
3. (ENG) Coneixement de sistemes de control i automatismes.

#### Transversal:

4. SUSTAINABILITY AND SOCIAL COMMITMENT - Level 1. Analyzing the world's situation critically and systemically, while taking an interdisciplinary approach to sustainability and adhering to the principles of sustainable human development. Recognizing the social and environmental implications of a particular professional activity.
5. TEAMWORK - Level 1. Working in a team and making positive contributions once the aims and group and individual responsibilities have been defined. Reaching joint decisions on the strategy to be followed.
6. EFFECTIVE USE OF INFORMATION RESOURCES - Level 1. Identifying information needs. Using collections, premises and services that are available for designing and executing simple searches that are suited to the topic.

### Learning objectives of the subject

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### Study load

Total learning time: 125h	Hours large group:	0h	0.00%
	Hours medium group:	45h	36.00%
	Hours small group:	0h	0.00%
	Guided activities:	0h	0.00%
	Self study:	80h	64.00%

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### Content

<p>title english</p>	<p>Learning time: 30h Theory classes: 5h 24m Laboratory classes: 5h 24m Self study : 19h 12m</p>
<p>Description: content english</p>	
<p>title english</p>	<p>Learning time: 10h Theory classes: 1h 48m Laboratory classes: 1h 48m Self study : 6h 24m</p>
<p>Description: content english</p>	
<p>title english</p>	<p>Learning time: 15h Theory classes: 2h 42m Laboratory classes: 2h 42m Self study : 9h 36m</p>
<p>Description: content english</p>	
<p>title english</p>	<p>Learning time: 25h Theory classes: 4h 30m Laboratory classes: 4h 30m Self study : 16h</p>
<p>Description: content english</p>	

## 330601 - MPM - Modeling in Mineral Processing

title english	Learning time: 20h Theory classes: 3h 36m Laboratory classes: 3h 36m Self study : 12h 48m
Description: content english	

title english	Learning time: 15h Theory classes: 2h 42m Laboratory classes: 2h 42m Self study : 9h 36m
Description: content english	

title english	Learning time: 10h Theory classes: 1h 48m Laboratory classes: 1h 48m Self study : 6h 24m
Description: content english	

### Planning of activities

name english	Hours: 30h Laboratory classes: 15h Self study: 15h
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name english	Hours: 32h Theory classes: 2h Self study: 30h
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name english	Hours: 43h Practical classes: 8h Self study: 35h
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### Bibliography

#### Basic:

King, R. P. Modeling and simulation of mineral processing systems. 2nd ed. Englewood: Society for Mining, Metallurgy and Exploration, 2012. ISBN 9780873353458.

Gupta, A.; Yan, D. S. Mineral processing design and operation: an introduction [on line]. Amsterdam: Elsevier, 2006 [Consultation: 16/11/2017]. Available on: <[https://discovery.upc.edu/iii/encore/record/C\\_\\_Rb1425962?lang=cat](https://discovery.upc.edu/iii/encore/record/C__Rb1425962?lang=cat)>. ISBN 0444516360.

Lynch, Alban, ed. Comminution handbook. Carlton Victoria: The Australasian Institute of Mining and Metallurgy, 2015. ISBN 9781925100372.

Holloway, M. D.; Nwaoha, C.; Onyewuenyi, O. A., eds. Process plant equipment: operation, control, and reliability. Hoboken: Wiley, 2012. ISBN 9781118022641.

Malhotra, Deepak, ed. Recent advances in mineral processing plant design. Littleton: Society for Mining, Metallurgy, and Exploration, 2009. ISBN 9780873353168.

Mular, A. L.; Halbe, D. N.; Barratt, D. J., eds. Mineral processing plant design, practice, and control: proceedings. Littleton: Society for Mining, Metallurgy and Exploration, 2002. ISBN 0873352238.

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: 25/05/2018]. Available on: <[https://discovery.upc.edu/iii/encore/record/C\\_\\_Rb1426100?lang=cat](https://discovery.upc.edu/iii/encore/record/C__Rb1426100?lang=cat)>. ISBN 0750628383.

Hartman, Howard L., ed. SME mining engineering handbook. 2nd ed. Littleton: Society for Mining, Metallurgy and Exploration, 1992. ISBN 0873351002.

#### Complementary:

Evertsson, C. M. Cone crusher performance [on line]. Göthenborg: Chalmers University of Technology, 2000 [Consultation: 16/11/2017]. Available on: <<http://publications.lib.chalmers.se/records/fulltext/759/759.pdf>>. ISBN ISBN 9171978569.

Kawatra, S. Komar, ed. Advances in comminution. Littleton: Society for Mining, Metallurgy and Exploration, 2006. ISBN 0873352467.

Drelich, Jaroslaw, ed. Water in mineral processing. Englewood: Society for Mining, Metallurgy, and Exploration, 2012. ISBN 9780873353496.

Lynch, Alban J.; Rowland, Chester A. The history of grinding. Littleton: Society for Mining, Metallurgy, and Exploration, 2005. ISBN 9780873352819.

Fuerstenau, Maurice C.; Han, Kenneth N., eds. Principles of mineral processing. Littleton: Society for Mining, Metallurgy, and Exploration, 2003. ISBN 0873351673.