

Course guide

330467 - PRO - Project Management

Last modified: 03/06/2024

Unit in charge:	Manresa School of Engineering	
Teaching unit:	750 - EMIT - Department of Mining, Industrial and ICT Engineering.	
Degree:	BACHELOR'S DEGREE IN MINERAL RESOURCE ENGINEERING AND MINERAL RECYCLING (Syllabus 2021). (Compulsory subject).	
Academic year: 2024	ECTS Credits: 6.0	Languages: Catalan, Spanish

LECTURER

Coordinating lecturer: Anticoi Sudzuki, Hernán Francisco

Others: Oliveras Mejías, Jordi

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:

1. (ENG) Coneixement de la metodologia, gestió i organització de projectes.
2. (ENG) Aconseguir dominar l'execució i contingut dels projectes del camp de la mineria.
3. (ENG) Capacitat per analitzar, organitzar i desenvolupar.

Transversal:

4. SUSTAINABILITY AND SOCIAL COMMITMENT - Level 3. Taking social, economic and environmental factors into account in the application of solutions. Undertaking projects that tie in with human development and sustainability.
5. TEAMWORK - Level 3. Managing and making work groups effective. Resolving possible conflicts, valuing working with others, assessing the effectiveness of a team and presenting the final results.
6. SELF-DIRECTED LEARNING - Level 3. Applying the knowledge gained in completing a task according to its relevance and importance. Deciding how to carry out a task, the amount of time to be devoted to it and the most suitable information sources.
7. EFFICIENT ORAL AND WRITTEN COMMUNICATION - Level 3. Communicating clearly and efficiently in oral and written presentations. Adapting to audiences and communication aims by using suitable strategies and means.
8. ENTREPRENEURSHIP AND INNOVATION - Level 3. Using knowledge and strategic skills to set up and manage projects. Applying systemic solutions to complex problems. Devising and managing innovation in organizations.

TEACHING METHODOLOGY

All classes, including theory classes, are open to student participation and are taught with the support of slides, overhead transparencies and the Internet.

LEARNING OBJECTIVES OF THE SUBJECT

To guide the student to know the different parts of a project. To know how to interpret the regulations that must be taken into account to process and present projects in general and their application to the final degree project; focusing on the particularity of mining, energy and safety projects. Construction management and project management. Develop various typical projects for the degree.

STUDY LOAD

Type	Hours	Percentage
Self study	90,0	60.00
Hours medium group	60,0	40.00

Total learning time: 150 h

CONTENTS

Title of content 1: THE PROJECT. OBJECTIVE AND JUSTIFICATION DOCUMENTS THAT MAKE UP THE PROJECT.

Description:

Definition of the objective. Approach and justification of the chosen solution. Develop all the documents that make up the project: report, plans, budget, specifications and health and safety document.

Related activities:

Study of the databases found on the Internet to obtain the unit prices of the different products involved in each project. Examples of specifications to highlight their importance, both technical and legal. Preparation and development of examples of spreadsheets in the determination of the total budget and its importance for the speed that allows to make changes to obtain different proposals.

Full-or-part-time: 14h

Theory classes: 5h

Self study : 9h

Content Title 2: TECHNICAL REGULATIONS: MINING AND ENVIRONMENTAL LEGISLATION

Description:

Study of the legislative norms that condition the development of projects. Emphasis will be placed on the regulations that directly affect the most common mining, safety and environmental projects.

Related activities:

Master class and support, through internet, on the web of the Administrations involved (Industry, Mnas, Environment, ...).

Full-or-part-time: 17h

Theory classes: 8h

Self study : 9h

Content Title 3: IMBRICATION BETWEEN THE SAFETY DOCUMENT AND THE PROJECT. PROJECT EXECUTION AND MANAGEMENT AND COORDINATION. SUBCONTRACTED COMPANIES

Description:

To emphasize the importance and responsibility of the safety document that must necessarily accompany mining projects. Also in the modifications.

Related activities:

Master class defining and giving examples of the most important basic concepts.

Full-or-part-time: 18h

Theory classes: 6h

Self study : 12h



Title of content 4: TYPE AND LIBERALIZED PROJECTS

Description:

Study of the standard projects and the difference between the groups corresponding to liberalized and non-liberalized projects, indicating the different types of projects that fall into one or the other group.

Related activities:

Activities are proposed to be developed by the student from a project; their guidelines have been explained in class.

Full-or-part-time: 36h

Theory classes: 16h

Self study : 20h

Content Title 5: MANAGEMENT METHOD. CONTROL OF PROJECT EXECUTION

Description:

Practical development of the management and development of the planning of a project. Forms of control of the different stages. Graphic presentations and reports.

Related activities:

Development in a computer classroom of a customized exercise that will consist of planning a project and the different forms of instantaneous control.

Full-or-part-time: 65h

Theory classes: 25h

Self study : 40h

ACTIVITIES

PRACTICE: RECOMMENDATIONS FOR ACCESSING THE BIBLIOGRAPHY USING A REFERENCE MANAGER FOR FDW APPLICATION

Description:

Practice that takes place in the library to identify the bibliography necessary for the development of the Final Degree Project with recommendations that will help them to prepare the FDW.

Specific objectives:

The students, in groups of a maximum of fifteen, must be able to do an exercise where they put into practice the knowledge acquired.

Material:

Computer room equipment in the library.

Delivery:

Each student must present a summary paper of the internship.

Full-or-part-time: 3h

Theory classes: 2h

Self study: 1h

GRADING SYSTEM

The final grade is calculated with the following formula: $N_{final} = 0.25 N_{ex1} + 0.35 NT1 + 0.4 NT2$

N_{final}: final grade.

N_{ex1}: theoretical exam grade.

NT1: grade for type project work. NT2: planning work grade.

The theoretical exam consists of questions on the most important concepts explained during the theoretical classes. The aim is for students to demonstrate the knowledge acquired.

The grade NT1 corresponds to the average grade of the type projects to be presented by the students. The grade NT2 will be the grade for the project planning work.

The final exam will consist of a theoretical and a practical part.

EXAMINATION RULES.

The activities foreseen in the course consist of the use of the computer to obtain the information necessary for the preparation of the project. It is also essential to use the computer to carry out the project planning work, which is based on the Microsoft Project software (or similar) step by step. During the class hours with the computer, the teacher will clarify any doubts raised by the students during the development of their individual work. It is intended that on the last day of class, the work will be completed.

BIBLIOGRAPHY

Basic:

- Espanya. Ministerio de Industria y Energía. Reglamento general de normas básicas de seguridad minera e instrucciones técnicas complementarias [on line]. Madrid: Centro de Publicaciones. Ministerio de Industria y Energía, DL 1999 [Consultation: 03/12/2021]. Available on: <https://inremin.es/wp-content/uploads/2013/01/RGNBSMreglamentacio%CC%81n-desde-2007-incluidas-ET.pdf>. ISBN 8474749379.
- Espanya. Reglamento electrotécnico para baja tensión: RBT: incluye instrucciones técnicas complementarias. Madrid: Paraninfo, DL 2002. ISBN 8428329257.
- AENOR. UNE 1027:1995: Dibujos técnicos. Plegado de planos [on line]. Madrid: AENOR, 1995 [Consultation: 12/11/2020]. Available on: https://portal-aenormas-aenor-com.recursos.biblioteca.upc.edu/aenor/Suscripciones/Personal/pagina_per_sus.asp.
- AENOR. Normas UNE 20460-5-523-2004: Instalaciones eléctricas en edificios. Parte 5: Selección e instalación de los materiales eléctricos. Sección 523: Intensidades admisibles en sistemas de conducción de cables [on line]. Madrid: AENOR, 2004 [Consultation: 12/11/2020]. Available on: https://portal.aenormas.aenor.com/aenor/Suscripciones/Personal/pagina_per_sus.asp.
- AENOR. UNE 21166:1989: Cables para alimentación de bombas sumergidas [on line]. Madrid: AENOR, 1989 [Consultation: 12/11/2020]. Available on: https://portal-aenormas-aenor-com.recursos.biblioteca.upc.edu/aenor/Suscripciones/Personal/pagina_per_sus.asp.
- Microsoft Project 2016. Cornellà de Llobregat, Barcelona: Ediciones ENI, [2016]. ISBN 9782409002854.

Complementary:

- Fernández Tamames, José. Project 2013. Madrid: Anaya Multimedia, cop. 2013. ISBN 9788441534629.