COURSE DATA

Data Subject	
Code	44870
Name	Quality and project management
Cycle	Master's degree
ECTS Credits	6.0
Academic year	2023 - 2024

Study (s)

Degree	Center	Acad. year	Period
2237 - M.U. en Planificación y Gestión de Procesos Empresariales	Faculty of Economics	2	First term

Subject-matter

Degree	Subject-matter	Character
2237 - M.U. en Planificación y Gestión de Procesos Empresariales	6 - Quality and project management	Obligatory

Coordination

Name	Department
QUINTANILLA ALFARO, MARIA SACRAMENTO	257 - Business Mathematics

SUMMARY

For most companies, project management and quality management and control is of the utmost importance. Let's keep in mind that manufacturing products and offering services are correlated.

The fundamental and advanced aspects of quality management and project management have been collected in two subjects:

Project Management

Quality management

Both subjects have been designed to be taught consecutively, sharing objectives, methodology and evaluation.

PREVIOUS KNOWLEDGE

Relationship to other subjects of the same degree

There are no specified enrollment restrictions with other subjects of the curriculum.

Other requirements

OUTCOMES

2237 - M.U. en Planificación y Gestión de Procesos Empresariales

- Be able to integrate knowledge and handle the complexity of formulating judgments based on information that, while being incomplete or limited, includes reflection on social and ethical responsibilities linked to the application of knowledge and judgments.
- Know how to communicate conclusions and the knowledge and rationale underpinning these, to specialist and non-specialist audiences, clearly and unambiguously.
- Students should apply acquired knowledge to solve problems in unfamiliar contexts within their field of study, including multidisciplinary scenarios.
- Students should be able to integrate knowledge and address the complexity of making informed judgments based on incomplete or limited information, including reflections on the social and ethical responsibilities associated with the application of their knowledge and judgments.
- Students should communicate conclusions and underlying knowledge clearly and unambiguously to both specialized and non-specialized audiences.
- Students should demonstrate self-directed learning skills for continued academic growth.
- Students should possess and understand foundational knowledge that enables original thinking and research in the field.
- Know how to work in multidisciplinary teams reproducing real contexts and contributing and coordinating their own knowledge with that of other branches and participants.
- Participate in, lead and coordinate debates and discussions, be able to summarize them and extract the most relevant conclusions accepted by the majority.
- Use different presentation formats (oral, written, slide presentations, boards, etc.) to communicate knowledge, proposals and positions.
- Have a proactive attitude towards possible changes that may occur in their professional and/or investigative work.
- Be able to integrate into teams, both as managers or coordinators and for specific and limited functions and in support of the team or of others.
- To know how to apply acquired knowledge and solve problems in new or unfamiliar situations within wider contexts (or multidisciplinary) related with their field of study.

- Analyse and solve management problems by creating and validating models appropriate to the various fields of the company's activity, such as production planning and control, inventory management, distribution and logistics or project management. Work with available or possible data.
- Develop the ability to manage information, with special emphasis on quantitative information. Adequately design the process of data collection and processing.
- Carry out and coordinate projects for technological improvement and innovation in management.
- Propose and/or identify new technologies and evaluate their potential impact on current processes.
- Be able to model real situations as mathematical formulations, especially those involving decision making in complex scenarios.
- Be familiar with the optimisation and simulation tools available in the market and their possible adaptation to business problems. Consider the development of new applications.
- Be able to synthesise and communicate the results, the conclusions of models and the solutions proposed in a rigorous and clear manner.
- Be able to accept change as something connatural to economic activity and develop an attitude of alertness to the dynamism and uncertainty of the business environment.
- Be able to actively search for relevant information about the environment and the company, using different sources and procedures.
- Show creativity when facing the resolution of complex problems and be able to evaluate the implications that the alternatives designed may have on the different agents involved.
- Know how to carry out the planning, monitoring and effective follow-up of a project.
- Be able to define quality management systems and participate in the development and implementation of improvement plans.

LEARNING OUTCOMES

At the end of the teaching-learning process the student will have learned how to:

1: Carry out a project planning.

2: Effectively manage projects.

3: Define and implement a quality management system based on the ISO 9000 standard.

4: Apply the concepts of excellence of the EFQM model and to participate in its self-assessment processes.

5: Use the main tools for continuous quality improvement and to know how to manage the continuous improvement of processes.

DESCRIPTION OF CONTENTS

1. Project planning and management

1. Introduction to project management
2. Project planning
3. Project monitoring and control.

2. Quality Management

1. Basic concepts of quality
2. Quality management systems based on the ISO-9001 standard. 3.
3. Process improvement methodologies. Tools for quality improvement
4. EFQM2020 model of excellence

WORKLOAD

ACTIVITY	Hours	% To be attended
Computer classroom practice	24,00	100
Theory classes	18,00	100
Seminars	10,00	100
Development of individual work	48,00	0
Preparation of evaluation activities	23,00	0
Resolution of case studies	25,00	0
TOTAL	**148,00**	

TEACHING METHODOLOGY

The teaching methodology will consist of face-to-face classes, theoretical and practical, and a series of assignments to be developed by the student. The face-to-face classes will be divided into:

- Theoretical classes, in which the basic concepts of each of the points of the module will be presented.

- Practical classes, in which practical exercises of what was exposed in the theory classes will be developed to reinforce understanding. These classes will also serve to generate new points of view and approaches not analysed in the theoretical classes, as well as to check the degree of acquisition of the theoretical knowledge by the students.

Likewise, the student will have to develop a series of works with the help of the professor's tutorials. These works will consist on projects that will allow the student to check the degree of assimilation of the concepts seen in each module. They will be eminently practical, but they will cover theoretical aspects

seen in the module.

EVALUATION

A professor will coordinate the modules, who will be in charge of the administrative management (information to the students about the activities, access to the course materials, access to the students to the course materials, etc.) and coordination with the other professors involved.

All teachers involved in the teaching sessions and laboratories of the module will follow the same evaluation schemes and the same activities. The evaluation is the same for all subjects, but separate for each subject, i.e., there is a project work, a quality work, etc.

The evaluation of the students' learning will be done by assessing the following sections:

1. In order to pass each subject, a minimum of 50% attendance is required, to be computed within each subject and with all the sessions of the subject, including seminars.

2. Evaluation with 60-100% of weight in the works and exercises to be delivered in each subject.

3.The dates of delivery of the exercises and works of each subject to be set by the teacher and up to a maximum of one week after the end of that subject. Extensions in the delivery of work must be duly justified and previously agreed with the corresponding teacher.

4. Evaluation with a 40% of an exam in each subject, only when the teacher deems it necessary and in the case of students who do not take a continuous evaluation.

5. The dates of exams for ea

6. To pass the module a minimum of 4 out of 10 is required in each subject.

7. The final grade of the module is 0,5*projects+0,5*quality.

ch subject within the two modules will be determined by the CCA of the master's degree.

REFERENCES

Basic

- Angulo, L. Project 2016, Marcombo, 2017.
  Burke, R. , Project Management: Planning and Control Techniques, Wiley, 2013.
  Horine, G.M., Gestión de proyectos, Anaya 2010.
  Colmenar Santos, A., Sancristobal Ruiz, E. IFCD026PO Gestor de Proyectos (MS Project). Ra-Ma, 2021.
  Gil Gambarte L.A., Project 2016, Anaya Multimedia, 2016.
  Salazar Castañuela, F.M., Gestión de proyectos con Project bajo el enfoque del PMI, Marcombo SL, 2017.

Schwindt C., Zimmermann, J. (Eds), Handbook on Project Management and Scheduling, Springer, 2015.
Jozefowska, J. and Weglarz, J. (Eds.), Perspectives in Modern Project Scheduling. Springer, 2006.
Demeulemeester, E., Herroelen, W., Project Scheduling, A Research Handbook. International Series in Operations Research & Management Science, 2002.
Meredith, J. R. y Mantel, S. J. , Project Management: A managerial Approach. Wiley, 8ª edición, 2011.
Gryna, F., Chua, R., and J. Defeo, Jurans Quality Planning and Analysis for Enterprise Quality. McGraw Hill, 2005.
Pande, P., Las clases prácticas de Seis Sigma: Una guía dirigida a los equipos de mejora de procesos. McGraw Hill, 2004.
Juran, J., Godfrey, A. , Manual de Calidad. McGraw-Hill Interamericana, 2001.
Lewis, J. Woodward, The EFQM Excellence Model, Lewis Corp. 1999

Additional

- Kolisch, R. Project Scheduling under Resource Constraints. Efficent Heuristics for Several Problem Classes, Physica-Verlag, 1995.
Weglarz, J. (Ed), Project Scheduling: Recent Models, Algorithms and Applications. Kluwer, 1998.
Brucker, P., Drexl, A., Möhring, R., Neumann, K., and Pesch, E., Resource-constrained project scheduling: Notation, classification, models, and methods, Eur J Opl Res.112: 3-41, 1998.
Kolisch, R. and Hartmann, S. Experimental investigation of heuristics for resource-constrained project scheduling: an update, Eur J Opl Res. 2006,174: 23-37, 2006.
Goldratt, E.M., Cadena crítica: una novela empresarial sobre la gestión de proyectos, Diaz de santos, 2014
Norma UNE-EN-ISO 9000. AENOR. 2005.
Norma UNE-EN-ISO 9001. AENOR. 2008. ISO/DIS 9001: 2016
Norma UNE-EN-ISO 9004. AENOR. 2009.
UNE-66178=2004 mejora continua
Modelo EFQM 2010
Henry Mitonneau, Cambiar la gestión de la calidad : Los siete nuevos instrumentos Madrid : AENOR, D.L. 1991
David Hoyle, John Thompson, Del aseguramiento a la gestión de la calidad : el enfoque basado en procesos. AENOR, D.L. 2002