

Quality Models in ICT Management

Code: 102781
ECTS Credits: 6

Degree	Type	Year	Semester
2502441 Computer Engineering	OB	3	2
2502441 Computer Engineering	OT	4	2

Contact

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Use of Languages

Principal working language: catalan (cat)
Some groups entirely in English: No
Some groups entirely in Catalan: Yes
Some groups entirely in Spanish: Yes

Teachers

Mario Yelamos Rebolledo

Prerequisites

There are no prerequisites

Objectives and Contextualisation

Conocer las estrategias y marcos de trabajo en gestión de servicios de Tecnologías de la Información, y tener la base suficiente como para poder dar soporte a la implementación de una estrategia de servicio en empresas y otras organizaciones.

Competences

- Computer Engineering
- Acquire personal work habits.
 - Acquire thinking habits.
 - Capacity to design, develop, evaluate and ensure the accessibility, ergonomics, usability and security of computer systems, services and applications, as well as of the information that they manage.
 - Have the capacity to conceive, develop and maintain computer systems, services and applications employing the methods of software engineering as an instrument to ensure quality.
 - Have the capacity to identify, evaluate and manage potential risks.
 - Have the capacity to solve problems with initiative, decision making, autonomy and creativity. Have the capacity to know how to communicate and transmit the knowledge and skills of the IT engineering profession.
 - Have the capacity to understand and apply the principles of risk evaluation and apply them properly to the preparation and execution of action plans.

Learning Outcomes

1. Demonstrate a high capacity for abstraction.
2. Know and apply the quality and maintenance requirements of service installations in ICT environments.
3. Know and understand the main quality models and their applications to ICT servers.
4. Know and understand the principles and fundamentals of software engineering applied to ICT servers.
5. Know how to apply the fundamental principles of quality management models to achieve continuous improvements in processes.
6. Know how to communicate and transmit knowledge and skills in relation to the integration of software.
7. Know, identify and control the main risks in software production systems and in ICT based services.
8. Know, understand and be able to incorporate the principles of risk evaluation in the design of ICT based services and software production systems.
9. Prevent and solve problems.
10. Resolve software quality management problems with initiative and autonomy.

Content

1) Basic Fundamentals of IT Management

2) Service Support

- Service Desk
- Management of Petitions
- Incident Management
- Problem Management
- Change Management
- Configuration Management
- Version Management

3) Service Delivery

- Capacity Management
- Availability Management
- Financial Management
- Service Level Management and Service Catalog Management
- Continuity Management
- Security Management
- Supply management

4) Quality and Continuous Improvement

- Quality plans and continuous improvement
- Service information (Service Reporting)
- Quality frames (ISO9000 and ISO20000)

5) Other reference frameworks in the design, management and governance of the service:

- Lean Management for services.
- Agile methodologies for the management of services. SCRUM
- Service Design Thinking

6) The role of the CIO

- The IOC as responsible for the management and administration of ICT
- The CIO and the digital transformation
- Leading business technology
- Attract talent

Methodology

The dates of continuous evaluation and work delivery will be published on the virtual campus and may be subject to changes of programming for reasons of adaptation to possible incidents. The virtual campus will always be informed about these changes as it is understood to be the usual mechanism for exchanging information between teacher and students.

This subject has as a methodological base the learning based on the knowledge given in the theoretical sessions and the application of them in the workshops developed in the course as well as the possible practical application in the annual project that students carry out in parallel. during the course.

The teaching methodology is based on:

1. Knowledge lessons (Master Class). The theory sessions explain the concepts that students will apply in the exercises classes.
2. Exercise sessions. In the problem sessions, exercises are proposed that students must do individually or in groups and deliver them to class or CV before the prescribed deadline. The objective is for students to apply the concepts and procedures learned in the theory sessions. At the beginning of the sessions, the exercises are discussed and corrected. The objective is to give feedback on the work done and give the opportunity to reinforce the learning process. In some sessions of class exercises you can give the opportunity to refer the answers in a deferred way via CV
3. Practical workshops or research. Workshop exercises, evaluation of management solutions for workgroups and longer-term exercises will be possible.

Languages: The vehicular language will be Catalan. If there are attendees with major difficulties to continue in Catalan, it will be in Spanish. A very significant part of the support materials (transparencies, statements of exercises, cases, software, etc.) will be in English. The exams and works can be answered in Catalan, Spanish or English.

Cross-curricular competences: will be worked on throughout the exercises sessions and in the workshops T01.04 - Development of systemic thinking and T02.04 - Preventing and solving problems.

Annotation: Within the schedule set by the centre or degree programme, 15 minutes of one class will be reserved for students to evaluate their lecturers and their courses or modules through questionnaires.

Activities

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Laboratory Practices	12	0.48	3, 4, 10, 7
Master classes	26	1.04	3, 4, 2, 8, 10, 5, 6, 7
Problems and exercises	12	0.48	3, 4, 2, 8, 10, 5, 6, 7
Type: Supervised			
Tutoring	15	0.6	3, 4, 2, 8, 10, 5, 6, 7
Type: Autonomous			
Preparation of reports and preparation of exercises and practices	30	1.2	3, 4, 2, 8, 10, 5, 6, 7
Study	45	1.8	3, 4, 2, 8, 5, 6, 7

Assessment

Continuous assessment (50 points)

Participation, exercises and works: 25 points

Problem-based learning exercises, case discussion, individual or team work, class presentation of results and other tests to be determined. Participation will also be valued. If the tests involve more than 10 points you will be notified well in advance, otherwise they may appear at any time in class. Only students present will be able to score and will not be able to recover or deliver them after the indicated date. In total this part will mean a maximum of 25 points. If the attendance is less than 50% will mean the suspension of the subject.

In the case of repeating students (and always the grade of the previous year was higher than 12.5 out of 25) this part will not need to be repeated and will be validated (if the student wishes) with a grade of 12.5 out of 25 points.

Laboratory Practices: 25 points

The laboratory sessions will be done in 50% face-to-face and 50% online mode. If the attendance is less than 50% will mean the suspension of the subject.

They will be made in groups and will consist of several intermediate deliveries (between 2 and 4) and a final delivery. If two or more deliveries are not made, the maximum mark for laboratory practices will be 10 points out of 25.

Several laboratory sessions require individual prior work (it is therefore the students' responsibility to read and understand the different materials proposed).

There will also be an individual final test (there may also be partial individual tests) to ensure active participation and contribution to the group. In case of not passing the individual tests, the maximum mark of the laboratory practices will be 10 points out of 25.

In the case of repeating students (and always the mark of the previous course was higher than 12.5 out of 25) this part will not have to be repeated and will be validated (if the student wishes) with a mark of 12.5 out of 25 points.

The mark of the Continuous Assessment will be average and if it does not reach 50% of the score of the AC (25 points), it will suppose the suspension of the subject.

Please note: There is no recovery of the Continuous evaluations part.

Review (50 points)

Final written test on concepts and aspects treated throughout the course. Two partials will be made. Maximum 50 points. In the case of not reaching 25 points, it will be necessary to go to the examination of recovery of all the subject matter. If you pass the recovery exam, the maximum grade will be 5 (out of 10).

For each assessment activity, a place, date and time of revision will be indicated in which the student will be able to review the activity with the teacher. In this context, claims can be made about the activity note, which will be evaluated by the teachers responsible for the subject. If the student does not submit to this review, this activity will not be reviewed later.

General Considerations:

In order to pass the subject, 50 points out of the 100 possible points must be obtained, having reached a minimum of 25 points in the Continuous Assessment part and 25 points in the Exam part.

Only students with a score of 9 points will be able to obtain a MH. Since the number of MH can not exceed 5% of students enrolled, students who have the highest final grades will be awarded.

Notwithstanding other disciplinary measures deemed appropriate, and in accordance with the current academic regulations, irregularities committed by a student that may lead to a variation of the qualification will be classified by zero (0). Assessment activities qualified in this way and by this procedure will not be

recoverable. If it is necessary to pass any of these assessment activities to pass the subject, this subject will be suspended directly, without opportunity to recover it in the same course. These irregularities include, among others:

- the total or partial copy of a practice, report, or any other evaluation activity;
- let copy;
- present a group work not done entirely by the members of the group;
- present as own materials prepared by a third party, even if they are translations or adaptations, and generally works with non-original and exclusive elements of the student;
- Have communication devices (such as mobile phones, smart watches, etc.) accessible during theoretical-practical assessment tests (individual exams).

If you do not pass the subject due to the fact that none of the evaluation activities do not reach the minimum grade required, the numerical note of the file will be the lowest value between 4.5 and the weighted average of the notes. With the following exceptions:

- The "non-evaluable" qualification will be awarded to students who have one or no delivery in assessment activities
- The numerical note of the students' file that does not exceed the subject will be the lowest value between 3.0 and the weighted average of the marks in case the student has made irregularities in any act of evaluation (and therefore will not be possible the approved one for compensation)

Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Final written test	50	6	0.24	3, 4, 2, 8, 1, 10, 5, 6, 7
Laboratory Practices	30	2	0.08	3, 4, 2, 8, 1, 9, 10, 5, 6, 7
Participation, exercises and work	20	2	0.08	3, 4, 2, 8, 9, 10, 5, 6, 7

Bibliography

It will be published on the Virtual Campus

Software

No software is required