

**122040064 - Bachelor of Computer Science (face to face and online) (2026)****0064012 - Systems Security and Networks*****Dades generals*****Codi:** 0064012**Tipus:** OB**Semestre:** 4**Crèdits:** 10.0**Llengua
d'impartició:** Anglès**Llengua de suport:** Anglès***Informació*****Presentació del mòdul:**

This module aims to enable students to design, deploy, and manage computer networks and services in real-world environments, ensuring their correct operation, availability, and performance. Through the administration of network systems and services, students develop a comprehensive overview of distributed architectures, virtualised environments, and the mechanisms required to deliver basic and advanced services, as well as to monitor their status and manage their lifecycle.

In an integrated manner, the module also aims for students to apply the fundamental principles of computer security to protect networks, systems, and services. This includes risk identification, the configuration of protective measures, access management, and incident response, thereby incorporating security as a core element of system administration.

Overall, the module seeks to train professionals capable of operating network infrastructures and services efficiently, securely, and in alignment with best practices in contemporary computing environments, while simultaneously enabling them to communicate in English within technological contexts.

Metodologia:

Teaching methods combine a theoretical approach with a practice-oriented focus in order to guide and provide the students with the necessary skills to carry out the different activities of the module and, more specifically, to solve the challenge.

The implementation of this methodology requires continuous collaboration between the teaching staff and the students. Consequently, each week, this module includes 6 scheduled face-to-face teaching sessions dedicated to seminars, as well as 1 guided work session.

Alternatively, for students following their training in a virtual modality, and as a complement for face-to-face students, seminars and guided work sessions will be monitored through the virtual campus, as well as through online consultations and tutorials. Furthermore, students in the virtual modality have the opportunity to attend any of the face-to-face sessions dedicated to seminars or guided work that they consider appropriate.

During the seminar sessions, the teaching staff provide students with the content and tools required to develop the activities and challenge of the module.

During the guided work sessions, the academic tutor provides guidance and monitors students' progress in the development of the challenge.

In addition, independent study, which is required throughout the entire semester, intensifies during the final weeks in order to achieve the final resolution of the module's challenge.

Avaluació continuada:

Students may choose to be assessed on their learning outcomes either through virtual assignments and face-to-face examinations scheduled throughout the semester, or through virtual assignments and a single face-to-face examination held at the end of the teaching period.

The various continuous assessment activities (virtual assignments and face-to-face examination/s) are determined by the teaching staff and will be available in the seminar schedule.

The dates regarding the submission and presentation of the challenge will be provided in the module's challenge classroom.

Please consult the syllabus for each seminar and the challenge virtual classroom.

Avaluació final:

Students who have not passed or completed the continuous assessment must take the face-to-face final examination for the seminar.

The various final assessment activities (virtual assignments and the final examination) are determined by the teaching staff and will be available in the seminar schedule.

The dates regarding the submission and presentation of the challenge will be provided in the module's challenge virtual classroom.

Please consult the syllabus for each seminar and the challenge virtual classroom.

Bibliografia bàsica:

Each seminar will detail the basic bibliography.

Bibliografia complementària:

Each seminar will detail the complementary bibliography.

Observacions:

The module has associated learning outcomes, which are described in its syllabus. These learning outcomes are assessed using a numerical scale from 0 to 10 to one decimal place.

To pass the module, the grade for all associated learning outcomes must be greater than or equal to 5.

The final grade for the module is calculated as the arithmetic mean of the grades obtained in the learning outcomes.

Furthermore, the learning outcomes of the module, each at its respective competence level, contribute to the assessment of the specific and transversal competences that the students will have acquired by the end of their studies.

Competències / Resultats d'aprenentatge específics (4)

	Codi - Competències (C) / Resultat d'aprenentatge específic (RA)	Nivell
C	BInfo26-E005 - Manage information systems, IT services, and software applications.	
RA	BInfo26-E005-03 - Manage services, information systems, and distributed components by applying criteria of security, availability, and efficiency.	3
C	BInfo26-E008 - Configure operating systems and computer networks.	
RA	BInfo26-E008-03 - Configure network services and operating systems in distributed environments, ensuring connectivity, functionality, and system integrity.	3
C	BInfo26-E012 - Apply the fundamental principles and basic techniques of cybersecurity.	
RA	BInfo26-E012-02 - Apply basic measures to mitigate risks and limit vulnerabilities within systems and networks.	2
RA	BInfo26-E012-03 - Configure tools and mechanisms to detect and manage security incidents in real-world environments.	2

Competències / Resultats d'aprenentatge transversals (1)

	Codi - Competències (C) / Resultat d'aprenentatge transversal (RA)	Àrea	Nivell
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C	BInfo26-T001 - Master communication in different languages in order to express and understand messages in a variety of personal, social and professional contexts and situations.	Comunicació
RA	BInfo26-T001-04 - Communicate orally and in writing, in English, the outcomes of a technical project, using precise terminology suitable for a professional context.	2

Continguts (2)

1. Seminar: Computer Security
2. Seminar: Network and Services Management