

Academic Year: (2022 / 2023)

Review date: 20-06-2022

Department assigned to the subject: Computer Science and Engineering Department

Coordinating teacher: MOLINA LOPEZ, JOSE MANUEL

Type: Electives ECTS Credits : 3.0

Year : 4 Semester : 2

REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

Mathematics, Statistics and Computer Science Module I (Basic training) and the material (subject) of Statistics (Operations Research) Module III (Fundamentals of Engineering)

OBJECTIVES

- Identify security objectives and vulnerabilities, threats and risks of a given information system in a defined operational environment.
- Evaluate the security services to be implemented in a given system and design and implement mechanisms and subsequent protocols.
- Evaluate and implement appropriate authentication mechanisms to access a specific system.
- Use the signature and certification systems in a particular environment.
- Design a security plan, developing the various parts of it, assessing their compliance over time and correcting deviations. Analyze and manage the risks of a particular installation.
- Develop a comprehensive recovery plan for an actual installation. Conduct a compliance audit of files and systems containing personal data.
- Use the tools that allow control of operating systems, mainly Windows and Linux.
- Manage the main techniques of collection, identification and analysis of events, guaranteeing the assurance testing and preserving the chain of custody of them. Assess and manage systems secure erase and data recovery.
- Implement databases over a transmission system. Assess and use different techniques to integrate data mining: extraction techniques and modeling analysis.

Cognitive:

- * Know the SDI and implementation experiences.
- * Become familiar with the concept of GIS and its components.
- * Know in detail the operation and applications of the different systems existing location and positioning.
- * Know in detail the operation of the systems d einformación (GIS)
- * Analyze the GIS system integration and applications arising out edicha integration d.

Procedural / Instrumental

- * Know the main experiences and projects developed in GIS.
- * Practice with different systems
- * Know the GIS (GIS) free and proprietary. Advantages and disadvantages.

Attitudinal

- * Ability to generate new ideas (creativity)
- * Attitude critical of a GIS system studied.
- * Concern Gisy system performance impact on the quality of service levels provided to users.
- * Identify new opportunities through the application of innovative technologies.

DESCRIPTION OF CONTENTS: PROGRAMME

The main objective of this course is that the student be able to know what a GIS, its usefulness and the various elements that compose it. Besides the focus will necessarily related sciences such as mapping

and geodesy.

Agenda:

- * Location and Positioning Systems
- * Geographic Information Systems
- * Systems Integration Systems Location with GIS
- * Data
- * Processes
- * Technology
- * Viewing
- * Applications and practical uses
- * SIG custodial and free

LEARNING ACTIVITIES AND METHODOLOGY

* Acquisition of knowledge (1.5 ECTS) through lectures, personal study of teaching materials and specialized readings. To facilitate its development students will receive class notes and key reference texts will allow them to complete and deepen in those subjects in which they are most interested.

* Acquisition of practical skills (1.5 ECTS) through exercises and case studies. You can also include the analysis of case studies.

ASSESSMENT SYSTEM

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|---|----|
| % end-of-term-examination: | 40 |
| % of continuous assessment (assignments, laboratory, practicals...): | 60 |

The evaluation system includes continuous assessment of student work (papers, reports of laboratory practice and skills assessment tests and theoretical and practical knowledge), and evaluation through a final written exam will be evaluated globally knowledge, skills and abilities acquired during the course. The shares allocated for each subject vary in the range: 40% -70% (continuous assessment) and 60% -30% (test).

BASIC BIBLIOGRAPHY

- Junta de Castilla y León Sistemas de Localización e Información Geográfica, Consejería de Fomento JCyL, on-line
- Junta de Castilla y León Sistemas de Localización e Información Geográfica, Consejería de Fomento JCyL, on-line-2000
- Olaya, Víctor Sistemas de Información Geográfica, Prentice Hall, 2000

ADDITIONAL BIBLIOGRAPHY

- Felicísimo, Ángel M Modelos digitales del terreno. Introducción y aplicaciones a las ciencias ambientales, <http://www6.uniovi.es/~feli/pdf/libromdt.pdf> .