



**National University of Engineering (UNI)**  
School of Cybersecurity  
Syllabus 2024-II

**1. COURSE**

CS393. Information systems (Mandatory)

**2. GENERAL INFORMATION**

- 2.1 Course : CS393. Information systems
- 2.2 Semester : 6<sup>th</sup> Semester.
- 2.3 Credits : 4
- 2.4 Horas : 2 HT; 4 HP;
- 2.5 Duration of the period : 16 weeks
- 2.6 Type of course : Mandatory
- 2.7 Learning modality : Face to face
- 2.8 Prerequisites : CS291. Software Engineering I. (5<sup>th</sup> Sem)

**3. PROFESSORS**

Meetings after coordination with the professor

**4. INTRODUCTION TO THE COURSE**

Analyze techniques for the correct implementation of scalable, robust, reliable and efficient information systems in organizations.

**5. GOALS**

- Implement correctly (scalable, robust, reliable and efficient) Information Systems in organizations.

**6. COMPETENCES**

- 2) Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline. (Usage)
- 6) Apply security principles and practices to maintain operations in the presence of risks and threats. (Assessment)

**7. TOPICS**

Unit 1: Introduction (15 hours)	
Competences Expected:	
Topics	Learning Outcomes
<ul style="list-style-type: none"><li>• Introduction to information management.</li><li>• Software for information management.</li><li>• Technology for information management.</li></ul>	<ul style="list-style-type: none"><li>• Correctly apply technology for information management [Evaluat]</li></ul>
Readings : [Sommerville2010], [Pressman2014], [Kenneth17]	

<b>Unit 2: Strategy (15 hours)</b>	
<b>Competences Expected:</b>	
<b>Topics</b>	<b>Learning Outcomes</b>
<ul style="list-style-type: none"> <li>• Strategy for information management.</li> <li>• Strategy for knowledge management</li> <li>• Strategy for information system.</li> </ul>	<ul style="list-style-type: none"> <li>• Apply and evaluate correctly management strategies [Evaluat]</li> </ul>
<b>Readings : [Sommerville2010], [Pressman2014]</b>	

<b>Unit 3: Implementation (15 hours)</b>	
<b>Competences Expected:</b>	
<b>Topics</b>	<b>Learning Outcomes</b>
<ul style="list-style-type: none"> <li>• Management Information Systems Development.</li> <li>• Change management</li> <li>• Information Architecture</li> </ul>	<ul style="list-style-type: none"> <li>• Implement and correctly evaluate implementation strategies [Evaluat]</li> </ul>
<b>Readings : [Sommerville2010], [Pressman2014]</b>	

## 8. WORKPLAN

### 8.1 Methodology

Individual and team participation is encouraged to present their ideas, motivating them with additional points in the different stages of the course evaluation.

### 8.2 Theory Sessions

The theory sessions are held in master classes with activities including active learning and roleplay to allow students to internalize the concepts.

### 8.3 Practical Sessions

The practical sessions are held in class where a series of exercises and/or practical concepts are developed through problem solving, problem solving, specific exercises and/or in application contexts.

## 9. EVALUATION SYSTEM

\*\*\*\*\* EVALUATION MISSING \*\*\*\*\*

## 10. BASIC BIBLIOGRAPHY