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

## 1. COURSE

CS403. Capstone Project III (Mandatory)

## 2. GENERAL INFORMATION

| | | |
|---|---|---|
| **2.1 Course** | : | CS403. Capstone Project III |
| **2.2 Semester** | : | $10^{th}$ Semester. |
| **2.3 Credits** | : | 4 |
| **2.4 Horas** | : | 1 HT; 5 HP; |
| **2.5 Duration of the period** | : | 16 weeks |
| **2.6 Type of course** | : | Mandatory |
| **2.7 Learning modality** | : | Face to face |
| **2.8 Prerrequisites** | : | CS402. Capstone Project II. ($9^{th}$ Sem) |

## 3. PROFESSORS

Meetings after coordination with the professor

## 4. INTRODUCTION TO THE COURSE

This course aims at the student to conclude his thesis project.

## 5. GOALS

- That the student is in the capacity to formally present his thesis project with the theoretical framework and complete bibliographic survey.
- That the student master the state of the art of his area of research.
- The deliverables of this course are:

  **Avance parcial:** Thesis plan progress including motivation and context, problem definition, objectives, schedule of activities up to the final thesis project and the state of the art of the topic addressed.

  **Final:** Complete thesis plan and advancement of Thesis including theoretical framework chapters, related works and preliminary (formal or statistical) results oriented to your thesis topic.

## 6. COMPETENCES

**1)** Analyze a complex computing problem and apply principles of computing and other relevant disciplines to identify solutions. (Assessment)

**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. (Assessment)

**3)** Communicate effectively in a variety of professional contexts.. (Assessment)

**4)** Recognize professional responsabilities and make informed judgments in computing practice based on legal and ethical principles. (Assessment)

**5)** Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline. (Assessment)

**6)** Apply computer science theory and software development fundamentals to produce computing-based solutions. (Assessment)

**7)** Develop computational technology for the well-being of all, contributing with human formation, scientific, technological and professional skills to solve social problems of our community. (Assessment)

## 7. TOPICS

| **Unit 1: Thesis project (30 hours)** | |
|---|---|
| **Competences Expected:** | |
| **Topics** | **Learning Outcomes** |
| • Thesis project. | • Description of the format used by the University for the thesis[Evaluar]<br>• Conclude the thesis project plan[Evaluar]<br>• Present the state of the art thesis topic(50%)[Evaluar] |
| **Readings :** [IEE08], [Ass08], [Cit08] | |

| **Unit 2: Thesis progress (30 hours)** | |
|---|---|
| **Competences Expected:** | |
| **Topics** | **Learning Outcomes** |
| • Thesis Progress. | • Description of the format used by the University for the thesis[Evaluar]<br>• Conclude the chapter of the theoretical framework of the Thesis[Evaluar]<br>• Complete the chapter on related works(35%)[Evaluar]<br>• Plan, develop and present results (formal or statistical) of experiments oriented to your thesis topic (35%)[Evaluar] |
| **Readings :** [IEE08], [Ass08], [Cit08] | |

## 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


[Ass08] Association for Computing Machinery. *Digital Libray*. http://portal.acm.org/dl.cfm. Association for Computing Machinery, 2008.

[Cit08] CiteSeer.IST. *Scientific Literature Digital Libray*. http://citeseer.ist.psu.edu. College of Information Sciences and Technology, Penn State University, 2008.

[IEE08] IEEE-Computer Society. *Digital Libray*. http://www.computer.org/publications/dlib. IEEE-Computer Society, 2008.