

Course Syllabi

1. TICS-00045 SOFTWARE ENGINEERING

2. 144 credits hours.

3. Bibliography

- Software engineering, Software engineering Ian, 2015
- Ingeniería de software. Teoría y práctica, Lawrence Pfleeger, Shari, 2002

4. Specific Course Information

- a. The Software Engineering subject provides a comprehensive understanding of the principles, methodologies, techniques and essential tools in software development. It covers from initial conceptualization and analysis of requirements to the design, implementation, verification and management of software projects. It focuses on developing practical and theoretical skills necessary to create high quality software that meets the needs of the user, meeting the standards of the industry.
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b. Prerequisites:

- TICS-00033 SOFTWARE ANALYSIS AND DESIGN

5. Learning Objectives of the Course

- a. It creates devices of software engineering that reflect the decisions made through the application of methods and techniques related to the phases of analysis, design, planning, development, verification and validation, as well as the management of software configuration.
- Analyze software development life cycle models.
 - Create clear and detailed requirements specifications through the application of requirements engineering techniques and tools
 - Create specifications design that reflects design decisions described by appropriate design artifacts.
 - Implement test plans for software validation
 - Plan software projects using project management tools and techniques.
 - Use version control tools to manage changes in source code.

b. Learning Outcomes

- Includes the life cycle of software development and its phases
- Create software development plans using project management techniques
- Apply configuration management tools
- Creates requirements specifications based on user requirements analysis
- Creates requirements specifications based on user requirements analysis
- Create design specifications that reflect the right decision-making to meet the requirements
- Create software development plans using project management techniques
- Create software development plans using project management techniques
- Apply configuration management tools
- Includes the life cycle of software development and its phases
- Create software development plans using project management techniques
- Creates requirements specifications based on user requirements analysis
- Evaluate software quality using software verification and validation techniques

6. Course Topics

- Introduction

- Analysis of requirements
- Software design
- Development
- Verification and validation of software
- Management of configuration
- Management of software engineering projects