

Course Syllabi

1. TICS-00072 SOFTWARE VERIFICATION AND VALIDATION

2. 96 credits hours.

3. Bibliography

- Software Testing A Craftsman's Approach /
<https://malenezi.github.io/malenezi/SE401/Books/Software-Testing-A-Craftsman-s-Approach-Fourth-Edition-Paul-C-Jorgensen.pdf>, Paul Jorgensen, 2014
- Software testing and quality assurance - Theory and Practice /
<https://www.softwaretestinggenius.com/download/staqtpsn.pdf>, Kshirasagar Naik, Priyadarshi Tripathy, 2008
- Software Testing Foundations. A study guide for the certified tester exam /
<https://github.com/elenastef/proj01/blob/master/Foundations%20of%20software%20testing%20-%20ISTQB%20Certification%20book.pdf>, Andreas Spillner, Tilo Linz, Hans Schaefer, 2014

4. Specific Course Information

- a. This subject empowers the student to use different strategies to perform software testing throughout the software development process and also provides basic tools for the management of this function within an organization.
- b. Prerequisites:
 - TICS-00047 ARTIFICIAL INTELLIGENCE
 - TICS-00042 PROJECT MANAGEMENT
 - TICS-00036 DATABASES II: ADMINISTRATION AND OPTIMIZATION
 - TICS-00045 SOFTWARE ENGINEERING
 - TICS-00067 OPERATING SYSTEMS

5. Learning Objectives of the Course

- a. To train students in the Software Verification and Validation processes during the stages of the software development cycle.
 - To understand the need to verify and validate the software.
 - To analyze the quality criteria that are evaluated in the software and in the process of its development.
 - To know different techniques of verification and validation of the software.
- b. Learning Outcomes
 - Know how to carry out systematic inspections of software products.
 - It uses the most appropriate techniques for the software product to perform verification and validation.
 - Know the standards related to software verification and validation.
 - Know how to carry out systematic inspections of software products.
 - Check and validate the quality of the software product using a support tool.
 - Know the standards related to software verification and validation.

6. Course Topics

- Introduction to software verification and validation
- Software reviews
- Software testing

- Tools for software verification and validation
- Planning for software verification and validation
- Metrics of software verification and validation