

Instituto Tecnológico y de Estudios Superiores de Monterrey
Campus Santa Fe
División de Diseño, Ingeniería y Arquitectura
Departamento de Tecnologías de la Información y Computación

Course Data

Course name:	Software Quality and Testing
Course code:	TC3045
Hyperlink program for the course:	classroom.google.com code: tj17uk GitHub Link https://github.com/ariellucien/cypss17_2.git
ABBET Learning outcomes:	An ability to apply design and development principles in the construction of software systems of varying complexity

Data of the group and the teacher

Class schedule:	Tue 07:00 – 10:00 hrs and Fri 07:00 – 10:00 hrs
Classroom:	2201
Name of the teacher:	Dr. Ariel Lucien García Gamboa
Contact info:	ariel.garcia@itesm.mx

Overall objective of the course: At the end of the course the student will be able to apply different software testing techniques and to evaluate the overall quality of a developed software tool

Specific Objective 1	Type of evidence of learning	Assessment Instrument
To learn the concepts of software testing	Survey	Rubrics

Specific Objective 2	Type of evidence of learning	Assessment Instrument
To know different software testing tools	Problem solving	Rubrics

Specific Objective 3	Type of evidence of learning	Assessment Instrument
To know different frameworks and standards for software quality assurance	Survey	Rubrics

General policies for the development of the course:**Class schedule:** Tuesday and Friday from 7:00 to 10:00**Attendance:**

- If a student arrives after 7:15 hrs he/she will be marked absent.
- Students are permitted to enter classroom before 7:30 hrs.
- If a student has been at an appointment, he/she should bring in a note from the doctor or parent to excuse the tardy
- Students with early dismissal will be marked absent.

Discipline:

- Electronic devices must remain off during sessions, unless the teacher indicates the contrary (for any learning activities)
- Minor Referral. Minor referrals are given to students who misbehaves occasionally, or for minor behavior problems. If the misbehavior continues the student will receive a minor consequence (been marked absent). Two minor referrals will result in a major referral.
- Major Referral. Major referrals are for those students repeating the misbehavior. When a major referral occurs the student must conference with Dr. Javier Cuevas, MsC. Gerardo Servera and Dr. Ariel Garcia. If the student refuses the conference, he/she will not have access to the classroom.

Activities:

- All the course assignments will be available in classroom
- All student assignments must be submitted through Blackboard. E-mail submissions are automatically rejected.
- Late submissions diminish the assigned grade by 10% per day.
- No "extra assignments", "extra points" or any "extra" is acceptable

Session No.	Date	Contents	Instructional activities	Support resources	Type of evidence learning
1 y 2		<ul style="list-style-type: none">• Introduction to software testing•		Course Lectures	Survey
3 y 4		<ul style="list-style-type: none">• Software testing methodologies and types of test		Course Lectures	Survey
5 y 6		<ul style="list-style-type: none">o Software testing tools		Course Lectures	Survey

7 y 8		<ul style="list-style-type: none"> Code coverage testing 		Course Lectures	Programming code
9 y 10		<ul style="list-style-type: none"> Memory usage testing and optimization 		Course Lectures	Programming code
11 y 12		<ul style="list-style-type: none"> Load testing 		Course Lectures	Survey
13 y 14		<ul style="list-style-type: none"> Stress testing 		Course Lectures and programming code	Survey
15 y 16		<ul style="list-style-type: none"> HTTP load and stress tessting 		Course lectures and Programming code	Report
17 y 18		<ul style="list-style-type: none"> Database load stress testing 		Programming code	Report
19 y 20		<ul style="list-style-type: none"> FTP load and stress testing 		Course Lectures and programming code	Report
21 y 22		<ul style="list-style-type: none"> Usability testing 		Programming code	Report
23 y 24		<ul style="list-style-type: none"> Alpha and beta testing 		Course Lectures	Survey
25 y 26		<ul style="list-style-type: none"> Software Testing Standards 		Course Lectures	Survey
27 y 28		<ul style="list-style-type: none"> Software Testing Frameworks <ul style="list-style-type: none"> CMMI 		Course Lectures	Survey
29 y 30		<ul style="list-style-type: none"> Final project presentation 			Programming code and testing results

Teaching-learning (brief description of how the course will be developed):

Problem Solving Methodology

Learning activities and other teaching techniques are:

The teaching methodology is a combination of the traditional lecture mode, to learn all the concepts and active learning, for the concepts application.

Some of the techniques that will be used during the course are:

- Problem solving

Suggested Bibliography:**Text Books**

- Lewis, William E., Software testing and continuous quality improvement / William E. Lewis., , Boca Raton : Auerbach, c2000., , , , [08492398339 (alk. Paper)]
- Galin, Daniel., Software quality assurance : from theory to implementation. Pearson/Addison Wesley, 2004., England, 2004

Books for consultation

- Zahran, Sami., Software process improvement : practical guidelines for business success. Addison-Wesley Pub. Co., 1998.
- Humphrey, Watts S., Managing the software process. Addison-Wesley, 1998., Massachusetts, c1989., eng, [0201180952]

Support material:

Provided by the teacher

Grading system:

Evaluation	Percentage	Activity
First Evaluation	40%	Homework and activities Exams
Second Evaluation	40%	Homework and activities Exams
Final	20%	Final Project and Exam
Total	100%	