**Faculty of Computers and Information Technology**

**Software Engineering-2**

## Information :

**Course Code :** CSC 352          **Level** : Undergraduate          **Course Hours :** 3.00- Hours

**Department :** Department of Information Systems

### Area Of Study :

This course provides a review of Software Development and Requirements Engineering Process. Software Architecture Design, Object Oriented Design, Software Testing, Software Reuse, Component Based Software Development, Software Verification and Validation,  Critical System Development

### Description :

Critical systems: dependability, critical systems specification, critical systems development. Verification and validation: software testing, critical system validation. Management: managing people, software cost estimation, quality management, processing improvement. Evolution: legacy systems, software change, software re-engineering. Configuration management

### Course outcomes :

**a.Knowledge and Understanding: :**

| | |
|---|---|
| 1 - | 1. Understand that the engineering discipline is necessary for software development. |
| 2 - | 2. Understand  the concept of reuse and its benefits |
| 3 - | 3. Understand the special characteristics of Critical System Development. |
| 4 - | 4. Understand the different types of testing |

**b.Intellectual Skills: :**

| | |
|---|---|
| 1 - | 1. Utilize critical thinking in analysis and evaluation of different models and techniques that are used in software development |

**c.Professional and Practical Skills: :**

| | |
|---|---|
| 1 - | 1. Develop a Software Architectural  Design for a given system requirement document, |
| 2 - | 2. Design and implement an Object Oriented System |
| 3 - | 3. Practice teamwork in developing software project. |
| 4 - | 4. Develop a standard software design document. |

**d.General and Transferable Skills: :**

| | |
|---|---|
| 1 - | 1. Use an effective way for oral and written communication |

### Course Topic And Contents :

| Topic | No. of hours | Lecture | Tutorial / Practical |
|---|---|---|---|
| Review of software development Process | 3 | 2 | 2 |
| Software Requirements Engineering | 3 | 2 | 2 |

Ô[ ]ˆ¦ã˜@¢Á˝ÁŒ€FH¾Z˝č˙¦^ÁMˌã¸^¦•ã´ÁˌÁÒˆˆ]œ¾ŒĦÁã˜@•Á^•^¦ç^åÈ

## Course Topic And Contents :

| Topic | No. of hours | Lecture | Tutorial / Practical |
|---|---|---|---|
| Software Architectural Design I | 3 | 2 | 2 |
| Software Architectural Design II | 3 | 2 | 2 |
| Object Oriented Design I | 3 | 2 | 2 |
| Object Oriented Design II | 3 | 2 | 2 |
| Software Testing I | 3 | 2 | 2 |
| Software Testing II | 3 | 2 | 2 |
| Software Verification and Validation I | 3 | 2 | 2 |
| Software Verification and Validation II | 3 | 2 | 2 |
| The software Reuse I | 3 | 2 | 2 |
| The software Reuse II | 3 | 2 | 2 |
| Critical System Development | 3 | 2 | 2 |

## Teaching And Learning Methodologies :

| |
|---|
| Lectures |
| Exercises |
| Open Discussion |
| Practical training |
| Presentation |
| Projects |
| Case Study |

## Course Assessment :

| Methods of assessment | Relative weight % | Week No | Assess What |
|---|---|---|---|
| 1.Mid Term Exam. | 20.00 | 7 | To assess Topics No: 1,2,3,4,5,6 |
| 2- Open Discussion | 10.00 | 3 | To assess Topics No: 5-12 |
| 3- Project. | 20.00 | 12 | To assess Topics No: 3-8 |
| 4- Presentation | 10.00 | 14 | To assess TopicsNo:1,2,3,4,13 |
| 5- Final Exam | 40.00 | 16 | To assess Topics No:3-8 |

Ô[ ] ˆ¦ã @øÁ ÁGⱻFHÃZˇ cˇ¦^Á\¸ã¸^¦•ã¨Á¸ÁÒ*ˆ]cãZOⱨ¦Áã @•Á^•^¦ç^åÈ