CPIS-356 Syllabus

Catalog Description

CPIS-356 Software Metrics and Economics
Credit: 3 (Theory: 3, Lab: 0, Practical: 1)
Prerequisite: CPIS-250
Classification: Elective

The objective of this course is to study successful software development based on three factors: software technology, economic factors and human relations. This course also covers a variety of important concepts that influence the economics of software development, such as the procedures accompanying the software development process and cost accounting with an emphasis on the various measurement criteria of applications and their development process.

Class Schedule

Lab/Tutorial 90 minutes 1 times/week

Meet 50 minutes 3 times/week or 80 minutes 2 times/week

Textbook

Shari Lawrence Pfleeger, Felicia Wu, Rosalind Lewis, , "Software Cost Estimation and Sizing Methods", Rand Corporation; 1 edition (2005)

ISBN-13 9780833037138 **ISBN-10** 0833037137

Grade Distribution

Week	Assessment	Grade %

Topics Coverage Durations

Topics	Weeks
Important economic factors influencing the software development process.	1
Building software development team and empowering them.	2
Continuous improvement of procedures for the software development process.	1
Production tasks in the process of applications development.	1
Economics of operations and scale related to software development.	2
Restricted operations optimizing.	2
Cost estimation of software development.	1
Models of integrated operations.	2
Spiral model of software development and risk management in software development.	1
Standard measurement criteria for both the cost and efficiency of software and their producing processes.	1

Last Articulated

Relationship to Student Outcomes

a	b	c	d	e	f	g	h	i	j
	x	x							x

Course Learning Outcomes (CLO)

By completion of the course the students should be able to

1. To know the economic characteristics of the software development process and how to measure and deal with them. ()
2. To know the requirements and principles of choosing team work members for software developing. ()
3. To understand processes and procedures related to the software development from the economic aspect. ()
4. To familiarize with the economics and scale of operations and improvement restricted to operations and procedures. ()
5. To understand and employ the full models for the software development process and the ability to work on it. ()
6. To understand the spiral model of software development and how to use it in the process of software development. ()
7. To analyze and face the risks associated with the process of building software. ()

Coordinator(s)