CPIT-250 Syllabus

Catalog Description

CPIT-250 System Analysis and Design
Credit: 3 (Theory: 3, Lab: 0, Practical: 1)
Prerequisite: CPCS-204
Classification: Department Required

The objective of this course is to provide a methodical approach to developing computer systems, including systems planning, analysis, design, and implementation. The course approaches the development of information systems from a problem-solving perspective, placing emphasis is on the strategies and techniques of systems analysis and design for producing logical methodologies for dealing with complexity in the development of information systems.

Class Schedule

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

Lab/Tutorial 90 minutes 1 times/week

Textbook

Jeffrey A. Hoffer, Joey F. George, Joseph S. Valacich, , "Modern Systems Analysis and Design", Pearson Education; 6 edition (2010-01-01)

ISBN-13 9780135094891   **ISBN-10** 0135094895

Grade Distribution

Week	Assessment	Grade %
8	Group Project 1	10
12	Exam 1	20
15	Graded Lab Work	5
15	Group Project 2	25
16	Exam	40

Topics Coverage Durations

Topics	Weeks
Systems Development in an Organizational Context	2
Determining System requirements	2
Analyzing System Process Requirements	2
Object-Oriented Analysis and Design - UML	6
Forms and Reports Design	1
Implementation and Maintainance	1
Review Week	1

Last Articulated

April 1, 2018

Relationship to Student Outcomes

a	b	c	d	e	f	g	h	i	j	k	l	m	n
x	x	x											

Course Learning Outcomes (CLO)

By completion of the course the students should be able to

1. Define and explain Information Systems Analysis and Design along with Systems Development Life Cycle (SDLC) while discussing different methodologies (RAD, Prototyping, CASE, SOA, Agile and eXtreme Programming) of SDLC. (a)
2. Define Object-Oriented Analysis and Design with Rational Unified Process and appreciate its usefulness. (a)
3. Describe how traditional methods help to determine system requirements by developing a plan to conduct interview, by observation and analyzing business documents. (a)
4. Describe contemporary and radical approaches and participate in a Joint Application Design Session to determine system requiremenets. (b)
5. Describe the logical process modeling by studying examples of data flow diagrams (DFDs) as tool and apply the rules and guidelines that lead to accurate and well structured process models to analyze the system process requirements. (a)
6. Describe how to decompose and balance DFDs and apply DFDs to discuss process modeling on real world applications such as Finger print Recognition System, ATM systems. . (b)
7. Comprehend the concepts of unified modeling language (UML), the standard approach for modeling a system in the object-oriented world and show how each UML diagram leads to the development of other UML diagrams. (a)
8. **Analyse the system to define use cases, use case diagrams and use case scenarios, in order to model system functionality with use cases for real world applications. (b)**
9. **Analyse the system to represent systems logic with activity diagrams in order to show flow of control from activity to activity by identifying organizational units involved in carrying out the business process . (b)**
10. **Design the system to represent system logic with sequence and communication diagrams in order to show interaction between the Classes involved in the system and creation and destruction of objects with respect to timeline. (b)**

CPIT-250 Syllabus

Course Learning Outcomes (CLO)

By completion of the course the students should be able to

11. **Design forms and reports with the help of general guidelines, how to assess the usability of forms and reports. (c)**
12. **Design interfaces and dialogues with the help of general guidelines. (c)**
13. Define some key data modelling terms and explain how to draw a Class Diagrams to represent common business situations and the unique capabilities of class diagram for modeling data. (c)

Coordinator(s)

Dr. Fazal Khan, Assistant Professor