University of Asia Pacific (UAP)
Department of Computer Science

Course Outline

Program:	Computer Science and Engineering (CSE)
Course Title:	System Analysis and Design
Course Code:	CSE 305
Semester:	Fall 2020
Level:	3rd Year 1st Semester
Credit Hour:	3.0
Name & Designation of Teacher:	Shammi Akhtar, Assistant Professor.
Office/Room:	7th Floor, Teacher's Compound
Class Hours:	
Consultation Hours:	**TBA**
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Rationale:	Required course and a pre-requisite for software engineering. This course will help how to program in an efficient way to all kind of micro computing systems.
Pre-requisite (if any)**:**	CSE 211: Database Systems

Course Synopsis:
Information, Data, Role, Tasks, Information Sources, Gathering techniques, System requirements, Steps of systems, technical facilities, cost analysis, confidence level, project timing, effort analysis, hardware analysis, software analysis, project management, documentation, Ethics & Privacy etc.

Course Objectives:

The objectives of this course are to:

1. **Understand** the objective of Information system designing.
2. **Explain** the principles, methods and techniques of system development.
3. **Analyze** requirements, feasibilities to develop a system.
4. **Apply** normalized concept to select the best methodology to develop a system
5. **Create** project proposal, behavioral diagrams, and structural diagrams.

Course Outcomes (CO) and their mapping with Program outcomes (PO) and Teaching-Learning Assessment methods:

CO No.	CO Statements: Upon successful completion of the course, students should be able to:	Corresponding POs (Appendix-1)	Bloom's taxonomy domain/level (Appendix-2)	Delivery methods and activities	Assessment Tools
CO1	**Identify** the system requirements using formal language and tools.	2	Analyze	Lecture, System Examples.	Spot Q&A, Class Tests
CO2	**Analyze** design flow and sequence of a system.	4	Analyze	Lecture, Example from Real Life Systems	Class Tests, Class Works
CO3	**Model** data in a system.	3	Analyze	Problem Exercise	Assignment, Project Planning Exercise
CO4	**Apply** standard project planning and project management techniques**.**	3	Apply	Multimedia, Problem Solve	Case study

Weighting COs with Assessment methods:

Assessment Type	% weight	CO1	CO2	CO3	CO4
Final Exam	**50%**	12.5	12.5	12.5	12.5
Mid Term	**20%**	**13.33**			**6.67**
Class tests, Open book exam	**20%**	**6.67**	**6.66**	6.67	
Class performance	**10%**				**10**
Total	**100%**	32.5	19.16	19.17	29.17

Grading Policy: As per the approved grading policy of UAP (Appendix-3)

Course Content Outline and mapping with COs

Weeks	Topics / Content	Course Outcome	Delivery methods and activities	Reading Materials

1	Introduction to information system, System Development Life Cycle (SDLC)	CO4	Lecture, Multimedia	1) Book- Kendall and Kendall 2) Ch-01
2	System Development Life Cycle(contd.), SDLC phases description	CO4	Lecture, Multimedia	1) Book- Kendall and Kendall 2) Ch-03
3	System Analyst Responsibilities, Information Gathering	CO1	Lecture, Multimedia	1) Book- Kendall and Kendall 2) Ch-03, 04
4	Information Gathering, **CT#01**	CO1	Lecture, Written Exam	1) Book- Kendall and Kendall 2) Ch-04
5	Interviews, Human Requirements Analysis	CO1	Lecture, Multimedia	1) Book- Kendall and Kendall 2) Ch-04
6	System Methodologies	CO2	Lecture, Multimedia	1) Book- Kendall and Kendall 2) Ch-06
7	System Methodologies, **CT#02**	CO2	Lecture, Multimedia, Written Exam	1) Book- Kendall and Kendall 2) Ch-06
MID SEMESTER EXAMINATION				
8	E-R Diagram, Data Flow Diagram	CO3	Lecture, Problem Solve	1) Book- Kendall and Kendall
9	Data Flow Diagram	CO3	Problem Solving in Group	1) Home Work 2) Book- Kendall and Kendall
10	USE CASE Diagram, Activity Diagram	CO3	Lecture, Problem Solve	Book- Kendall and Kendall
11	Class Diagram, **CT#03**	CO4	Lecture, Written Exam	Book- Kendall and Kendall
12	Project Scheduling(PERT Diagram, Gantt Chart)	CO4	Lecture, Example Problem	Book- Kendall and Kendall
13	Feasibility Analysis	CO4	Lecture, Problem Solve	Book- Kendall and Kendall
14	**CT#04,** Review Class	All CO	Written Test, Consultation	Verbal Lecture

Required Reference(s): **-System Analysis and Design by Kendall & Kendall**
-System Analysis and Design by Elias M. Awad

Special Instructions:

- Minimum 70% attendance is required for a student to appear in the final exams

- Late presence Any student coming after 20 minutes will miss the attendance

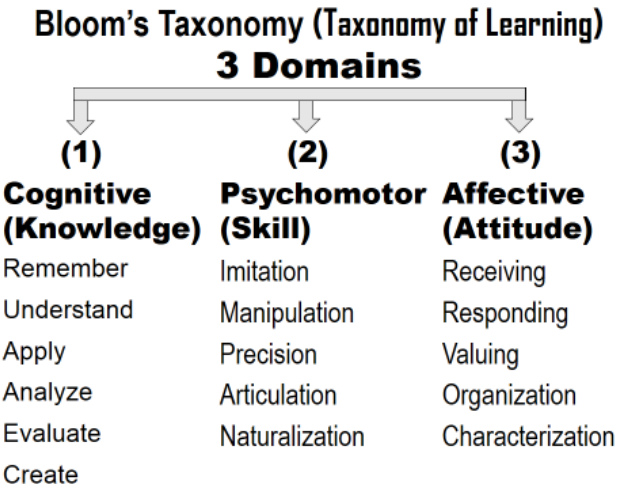
Prepared by	Checked by	Approved by
Shammi Akhtar	Chairman, PSAC committee	Head of the Department

Appendix-1:

Washington Accord Program Outcomes (PO) for engineering programs:

No.	PO	Differentiating Characteristic
1	Engineering Knowledge	Breadth and depth of education and type of knowledge, both theoretical and practical
2	Problem Analysis	Complexity of analysis
3	Design/ development of solutions	Breadth and uniqueness of engineering problems i.e. the extent to which problems are original and to which solutions have previously been identified or codified
4	Investigation	Breadth and depth of investigation and experimentation
5	Modern Tool Usage	Level of understanding of the appropriateness of the tool
6	The Engineer and Society	Level of knowledge and responsibility
7	Environment and Sustainability	Type of solutions.
8	Ethics	Understanding and level of practice
9	Individual and Team work	Role in and diversity of team
10	Communication	Level of communication according to type of activities performed
11	Project Management and Finance	Level of management required for differing types of activity
12	Lifelong learning	Preparation for and depth of Continuing learning.

Appendix-2



Appendix-3

UAP Grading Policy:

Numeric Grade	Letter Grade	Grade Point