University of Asia Pacific (UAP)
Department of Computer Science and Engineering (CSE)

Course Outline

Program:	Computer Science and Engineering (CSE)
Course Title:	System Analysis and Design Lab
Course Code:	CSE 306
Semester:	Spring-2020
Level:	5th Semester
Credit Hour:	**.75**
Name & Designation of Teacher:	**Abdullah Al Omar, Lecturer** **Md. Shopon, Lecturer**
Office/Room:	**#701,** 7th Floor, UAP
Class Hours:	**TBA.**
Consultation Hours:	**TBA.**
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Rationale:	Required course for completion of Bachelor's in CSE.
Pre-requisite (if any)**:**	**CSE 212**
Course Synopsis:	This course implements the theoretical knowledge covered in CSE 305. The practical implementations of Project Selection, Feasibility Analysis, Requirement Analysis, UML diagrams formation, Methodology Selection will be the main target of the course. The course will progress through group works.

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	**Develop** a project proposal.	1,2,3	Apply	Lecture, Demostration	Group Presentation
CO2	**Perform** requirement analysis of a project	10,12	Apply	Lecture, Demostration	Group Presentation
CO3	**Design** analytical UML diagrams using modern designing tools.	6	Apply	Lecture, Demostration	Group Presentation
CO4	**Analyze** feasibilities and preferred development methodology resulting in a complete documentation and presentation.	4,5,7,9,10,11	Analyze	Lecture, Demostration	Group Presentation and Documentation

Weighting COs with Assessment methods:

Assessment Type	% weight	CO1	CO2	CO3	CO4
Class-wise Presentation	40%	10	10	10	10
Final Presentation	30%	5	5	10	10
Documentation	30%		10	10	10
Total	100%	15	25	30	30

Course Content Outline and mapping with COs

Weeks	Topics / Content	Course Outcome	Delivery methods and activities	Reading Materials
1	Introduction to the course, group selection, introduction to the objective of the course	CO1	Lecture	-
2	Submission of Three different project proposal to select one to work on.	CO1	Multimedia	Group-wise discussion
3	Submission of Requirement Analysis of the selected project with formal project presentation.	CO2	Lecture	CSE 305 slides & book
4	Getting adapted to using modern designing tools, perform example designing.	CO3	Lecture	CSE 305 slides & book
5	Design ER diagram, level 1 data flow diagram, use-case diagram	CO3	Lecture	CSE 305 slides & book
6	Design Class diagram, Select best methodology for the project development	CO3, CO4	Lecture	CSE 305 slides & book
7	Final Presentation	CO1, CO2, CO3, CO4	Lecture	CSE 305 slides & book

Minimum attendance: 70% class attendance is mandatory for a student in order to appear at the final examination.

Textbook: **System Analysis and Design by kendall and kendall**

Required References: **Textbook**

Recommended References: **CSE 305 slides; Kendall & Kendall book;**

Grading System: As per the approved grading scale of University of Asia Pacific (Appendix-3).

Special Instructions:

- **Project submission rules**- If you miss the due date then the full marks will be deducted respectively to the number of days you have missed. (It is maintained very strictly unless any very serious issue arises)
- **Plagiarism** of the assignments/documentation will be checked strictly
- **Attendance**- Minimum Required Attendance 80% to pass the course and to get a higher grade you need to attend all the classes. (**For A+ 100% attendance is a must**)

Student's responsibilities: Students must come to the class prepared for the course material covered in the previous class (es).

They must submit their assignments on time.

Prepared by (Course Teacher)	**Checked by** (Chairman, PSAC committee)	**Approved by** (Head of the Department)
Sakib Hasan		

Appendix-1:
Washington Accord Program Outcomes (PO) for engineering programs:

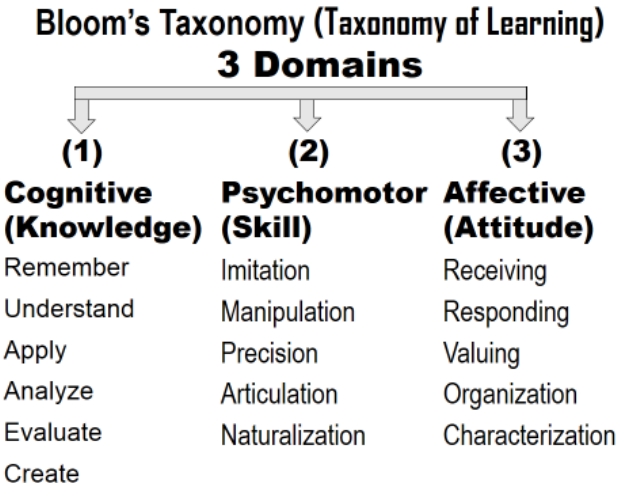
No.	PO	Differentiating Characteristic
1	Engineering Knowledge	Breadth and depth of education and type of knowledge, both theoretical and practical
2	Problem Analysis	Complexity of analysis
3	Design/ development of solutions	Breadth and uniqueness of engineering problems i.e. the extent to which problems 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.

Generic Skills (Detailed):

1. **Engineering Knowledge (T)** -Apply knowledge of mathematics, sciences, engineering fundamentals and manufacturing engineering to the solution of complex engineering problems;
2. **Problem Analysis (T)** – Identify, formulate, research relevant literature and analyze complex engineering problems, and reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences;
3. **Design/Development of Solutions (A)** –Design solutions, exhibiting innovativeness, for complex engineering problems and design systems, components or processes that meet specified needs with appropriate consideration for public health and safety, cultural, societal, economical, ethical, environmental and sustainability issues.

4. **Investigation (D)** Conduct investigation into complex problems, displaying creativeness, using research-based knowledge, and research methods including design of experiments, analysis and interpretation of data, and synthesis of information to provide valid conclusions;
5. **Modern Tool Usage (A & D)** -Create, select and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modelling, to complex engineering activities, with an understanding of the limitations;
6. **The Engineer and Society (ESSE)** -Apply reasoning based on contextual knowledge to assess societal, health, safety, legal, cultural, contemporary issues, and the consequent responsibilities relevant to professional engineering practices.
7. **Environment and Sustainability (ESSE)** -Understand the impact of professional engineering solutions in societal, global, and environmental contexts and demonstrate knowledge of and need for sustainable development;
8. **Ethics (ESSE)** –Apply professional ethics with Islamic values and commit to responsibilities and norms of professional engineering code of practices.
9. **Communication (S)** -Communicate effectively on complex engineering activities with the engineering community and with society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions;
10. **Individual and Team Work (S)** -Function effectively as an individual, and as a member or leader in diverse teams and in multi-disciplinary settings.
11. **Life Long Learning (S)** -Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.
12. **Project Management and Finance (S)** -Demonstrate knowledge and understanding of engineering management and financial principles and apply these to one's own work, as a member and/or leader in a team, to manage projects in multidisciplinary settings, and identify opportunities of entrepreneurship.

Appendix-2



Appendix-3
UAP Grading Policy:

Numeric Grade	Letter Grade	Grade Point
80% and above	A+	4.00
75% to less than 80%	A	3.75
70% to less than 75%	A-	3.50
65% to less than 70%	B+	3.25
60% to less than 65%	B	3.00
55% to less than 60%	B-	2.75
50% to less than 55%	C+	2.50
45% to less than 50%	C	2.25
40% to less than 45%	D	2.00
Less than 40%	F	0.00