UNIVERSITI KUALA LUMPUR	YEAR: 2025	SEMESTER: MARCH	COURSE CODE: JFB 22904

UniKL MITEC

COURSE LEARNING PLAN (CLP)

To be shared with students.

SECTION A: COURSE DETAILS

1.	**Name of Course :**	FACILITIES PLANNING AND DESIGN
	Course Code :	JFB 22904
2.	**Synopsis :**	As good pacilities planning and design is essential to ensure the facilities meet it opertaion obectives. A facilities maintenance engineers need to understand how the planning and design process which presents a variety of quantitative approaches that can be used to model specific aspects of facilities planning problems and discusses the treatment of facilities planning for maintenance and as well in management. This subject is to equip student with design, modeling, and documentation process plants with CAD Plant 3D software which brings modern 3-dimensional design to plant engineers. The students will expose on the application of familiar CAD software platform emphasizing on Piping and Instrumentation Drawing that related to Facilities Planning and Design.
3.	**Name(s) of academic staff :**	Ts. Dr. Zuraidah Binti Rasep
4.	**Semester and Year offered :**	**Semester** 2 **Year** 2
5.	**Credit Value :**	4

6. **Student Learning Time (SLT):**	Lecture (F2F)	Tutorial (F2F)	Practical (F2F)	Others (F2F)	Guided / Online / Technology-mediated (Synchronous)	Independent Learning (N-F2F)	TOTAL
	10	0	46	5	24	75	160

7	**Prerequisite/co-requisite: (if any)**	Nil
8	**Course Learning Outcomes (CLO): At the end of the course the students will be able to...** (example) explain the basic principles of immunisation (C2,PLO1)	
	CLO1	Examine the requirement for location, personnel, security and facilities maintenance management system. (C4, PLO3)
	CLO2	Perform hands-on exercise on layout design, facilities and system simulation modeling. (P4, PLO4)
	CLO3	Construct 2-Dimensional (2D) and 3-Dimensional (3D) drawing based on standard, features and symbols used in Facilities Planning Design. (P4, PLO5)
	CLO4	Demonstrate their ability to work in team either as a leader or a team member. (A3, PLO 8)

9 Mapping of the Course Learning Outcomes to the Programme Learning Outcomes, Teaching Methods and Assessment :

Please select the Learning Outcome Domain (LOD) for each PLO in the cells above it. E.g. PLO1 - Knowledge, PLO2 - Cognitive, PLO3 - Practical Skills

Course Learning Outcomes (CLO)	Programme Learning Outcomes (PLO)												Learning and Teaching Method(s)	Assessment Method(s)
	C1 - Knowledge and understanding	C2 - Cognitive skills			C3A - Practical skills			C3B - Interpersonal skills						
	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6 (PLO 9 ETAC)	PLO7 (PLO10 ETAC)	PLO8 (PLO6 ETAC)	PLO9 (PLO 8 ETAC)	PLO10 (PLO 7 ETAC)	PLO11	PLO12		
CLO 1			√										Lectures, tasks which involve students	Written Test, Online Test
CLO 2				√									Practical tasks, simulation	Practical Test, Practical Task
CLO 3					√								Project or trouble-shooting of problems,	Project Report
CLO 4								√					Groupwork, cooperative learning	Project Presentation

10	**Transferable Skills (if applicable)** (Skills learned in the course of study which can be useful and utilized in other settings)	**1**	Cognitive skills
		2	Personal skills
		3	Leadership, autonomy and responsibility

11	**Assessments**	**Type**	**Methods**	**Weightage (%)**
		Continuous Assessment(s)	Written Test (CLO 1)	20
			Practical Test (CLO 2)	20
			Practical Report (CLO2)	20
			Project (CLO3)	20
			Presentation (CLO4)	20
		Final Assessment(s)	Nil	Nil
		Total	**5 assessment methods**	**100%**

12	**References** (include required and further readings that are most current)	**Required reading:**	Tickoo, S. (2017), AutoCAD Plant 3D 2018: For Designers, USA: CADCIM Technologies.
		Further readings:	1. Singh, V. K., & Lillrank, P. (Eds.). (2017). Planning and Designing Healthcare Facilities: A Lean, Innovative, and Evidence-based Approach. Taylor & Francis. 2. Wu, X. P., Li, H., & Wang, X. (2017). Integrated Building Information Modelling. Bentham eBooks imprint. 3. Sunderesh S. Heragu (2016), Facilities Design, 4th Edition, CRC Press.
13	**Other additional information :**	NONE	

UniKL MITEC

COURSE LEARNING PLAN (CLP)

To be shared with students.

SECTION B: LEARNING SCHEDULE

Week	Topics	CLO	Delivery Methods	Assessments
WEEK 1	Briefing on subject synopsis, objectives and learning outcome and teaching plan for the whole semester.		Course briefing Ice breaking Lecture/Group discussion	
WEEK 2	CHAPTER 1:Defining Facility Requirement 1.1 Facilities Planning Defined 1.2 Objective of Facilities Planning 1.3 Facilities Planning Process	CLO 1, CLO 3, CLO 4	CLO 1: Lectures, tasks which involve students CLO 3: Project or trouble- shooting of problems CLO 4: Groupwork, cooperative learning	Written Test, Project Report, Project Presentation
WEEK 3	CHAPTER 2: Space Determination and Area Allocation 2.1 Determining Space Requirement 2.2 Office Facilities Planning 2.3 Storage and Retrieval 2.4 Employee service requirements	CLO 1, CLO 3, CLO 4	CLO 1: Lectures, tasks which involve students CLO 3: Project or trouble- shooting of problems CLO 4: Groupwork, cooperative learning	Written Test, Project Report, Project Presentation
WEEK 4	Case Study/Project – Facilities Planning & Design Project using AUTOCAD PLANT 3D	CLO 3, CLO 4	CLO 3: Project or trouble- shooting of problems CLO 4: Groupwork, cooperative learning	Project Report, Project Presentation
WEEK 5	CHAPTER 3: Personnel Requirements 3.1 Employee and Facilities Interface 3.2 Rest Rooms and Health Services 3.3 Food Services	CLO 1, CLO 3, CLO 4	CLO 1: Lectures, tasks which involve students CLO 3: Project or trouble- shooting of problems CLO 4: Groupwork, cooperative learning	Written Test, Project Report, Project Presentation
	Practical Task 1: Overview to CAD 3D Plant Design and P&ID Specifications and Symbols	CLO 2	CLO 2: Practical tasks, simulation	Practical Test, Practical Task
WEEK 6	CHAPTER 4: Facilities Planning 4.1 Structural System requirements 4.2 Atmospheric and Enclosure System (vent) 4.3 Electrical and Lighting System 4.4 Building Automation System 4.5 Facilities Maintenance Management System 4.6 Facility Security Management	CLO 1, CLO 3, CLO 4	CLO 1: Lectures, tasks which involve students CLO 3: Project or trouble- shooting of problems CLO 4: Groupwork, cooperative learning	Written Test, Project Report, Project Presentation
WEEK 7	Practical Task 2: Creating 3D Plant P&ID Drawing	CLO 2	CLO 2: Practical tasks, simulation	Practical Test, Practical Task
WEEK 8	CHAPTER 5: Introduction to CAD 3D Plant Design and P&ID 5.1 Overview of 3D CAD Design Planning 5.2 User Interface and File Commands 5.3 Drawing Setup	CLO 2, CLO 3, CLO 4	CLO 2: Practical tasks, simulation CLO 3: Project or trouble- shooting of problems CLO 4: Groupwork, cooperative learning	Practical Test, Practical Task, Project Report,Project Presentation
WEEK 9	CHAPTER 6: 3D Plant Design and P&ID Specifications and Symbols 6.1 General information in Plant Design and P&ID Specifications 6.2 Standard Parts and Symbols & Codes 6.3 Equipment 6.4 Line and Piping 6.5 P&ID standard information			
WEEK 10	CHAPTER 7: Creating 3D Plant and P&ID Drawing 7.1 Creating Structure Design 7.2 Adding Equipment 7.3 Design Piping lines	CLO 2, CLO 3, CLO 4	CLO 2: Practical tasks, simulation CLO 3: Project or trouble- shooting of problems CLO 4: Groupwork, cooperative learning	Practical Test, Practical Task, Project Report,Project Presentation
WEEK 11	7.4 Generate accurate isometrics, orthographic, and other documents 7.5 P&ID Drawing construction			
WEEK 12	Practical Task 3: CAD P&ID Project report and review Practical Task 4: Facilities Design and Modelling	CLO 2	CLO 2: Practical tasks, simulation	Practical Test, Practical Task
WEEK 13	CHAPTER 8: CAD P&ID Project report and review 8.1 Query and manipulate data 8.2 Generate materials reports 8.3 Export to PCF files	CLO 2, CLO 3, CLO 4	CLO 2: Practical tasks, simulation CLO 3: Project or trouble- shooting of problems CLO 4: Groupwork, cooperative learning	Practical Test, Practical Task, Project Report,Project Presentation
	Practical Task 5: Analysis on Facilities Layout	CLO 2	CLO 2: Practical tasks, simulation	Practical Test, Practical Task
WEEK 14	Project Presentation, Report Writing	CLO 3, CLO 4	CLO 3: Project or trouble- shooting of problems CLO 4: Groupwork, cooperative learning	Project Report,Project Presentation

COURSE LEARNING PLAN APPROVAL

Course Name	FACILITIES PLANNING AND DESIGN
Course Code	JFB 22904

	Subject-Matter Expert & Expert Work Group	Signature	Date
1	Ts. Dr. Zuraidah Binti Rasep		3-Mar-25
2			

*Approved by
(Signature and Stamp) **Name** : HJ MOHAMAD SHAHRUL EFFENDY BIN KOSNAN **Position** : HEAD OF SECTION

Note:

1. Approval of Head of Section/Programme or someone of higher authority.
2. Names of academic staff in this page may not be repeated.