Department of Architecture Engineering

Cihan University - Sulaimaniya

Building Services III

Course Book – Year: 4th year

Lecturer's name: Sarko Hassan Sleman

Academic Year: 2023/2024

First Semester

Course Book

1. Course name	**Building Services III**
2. Lecturer in charge	**Sarko Hassan Sleman**
3. Department/ College	**Architecture Engineering**
4. Time (in hours) per week	**Two hours**
5. Office hours	**One hour**
6. Course code	
7. Teacher's academic profile	**Assistant Lecturer**
8. Keywords	**Complementary, sustainable, systems**

9. Course overview:

The importance of the course lays in the fact that it comes as an extension and complementary to the previous two courses of the subject in the previous (3rd) year where the basic well known and in touch with engineering service systems were taken and understood by the student while there are other non- well known and not in touch with service systems have not been highlighted but they are vital and play a crucial role in running any building, including certain sustainable and smart systems whether on the level of a single building or on the level of urban context. Some of these systems will be selected, reviewed, and highlighted as well as some practical examples of some selected systems within certain buildings to be taken by the student.

10. Course objective:

1- Defining these additional systems and their position among the whole service systems in the building.

2- The rule of these systems in providing comfort, light, and safety to the users of the building.

3- Applying these and the other previous systems on certain project plans.

4- Knowing and getting in touch with the principles of sustainable building through sustainable building service systems.

5- Knowing and getting in touch with the principles of smart building through smart building service systems.

11. Student's obligation: Attending the lectures in order to get the main information from the lecture text as well as what are written on the board, and what are said by the tauter, as well as the other supplementary obligations inside and outside the class.

12. Forms of teaching: By giving the theoretical input through the lectures, performing a limited number of site visits to certain buildings which are in the stage of eng. Services execution, and presenting reports and presentations privately or within group work as well as the semester, monthly, and quiz exams.

13. Assessment scheme

Midterm Examination	**30**
Paper, Quiz, Project	**10**
Lab exam	**NA**
Final Practical Examination	**NA**
Final theory exam	**60**

14. Student learning outcome: The student, after finishing the course and according to the objectives, is supposed to earn knowledge in the following

subjects:

1- These additional systems and their position among the whole service systems in the building.

2- The rule of these systems in providing comfort, light, and safety to the users of the building.

3- Designing and distributing these and the other previous systems on certain project plans.

4- Knowing and getting in touch with the principles of sustainable building through sustainable building service systems.

5- Knowing and getting in touch with the principles of smart building through smart building service systems.

15. Course Reading List and References:

1- Permanent references:

- Mechanical & Electrical Equipment. McGraw Hill publications. USA
- Barry series of building construction and services.
- Mitchell series of building construction and services.
- American, European, and local regulations and standards concerning eng. services systems in buildings and urban areas.

2- Assistant references (for temporary referring):

-A number of Articles, Papers, and lectures on the Subject from Web-sites. It is student's task to search for web sites relating the subject.

16. The Topics:

Lecture No	Topic
1	Introduction to the subject.
2	Standard popular systems and non in touch with (and may be not seen) systems in the building.
3	Comparison between the above two.
4	Pneumatic – vacuum elevators.
5	Garbage chutes.
6	Natural environmental elements and their role in efficient design of building

7	A designed example for electric power supply to a house.
8	A class work for the above item.
9	Continuation the item above.
10	A designed example for air cooling and conditioning in a house.
11	A class work for the above item.
12	A designed example for sanitary system in a house.
13	A class work for the above item.
14	Earth system in the building.
15	Fire alarm in the building.
16	CCTV and Lightening systems in the building.
Final Examination	

17. Peer review

Main Lecturer in charge **Head of The Department**

Sarko Hassan Sleman **Tara Azad Rauof**