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Department of Mechanical Engineering	
Building Systems (67529)	
Total Credits	**3**
major compulsory	
Prerequisites	P1 : Fluid Mechaics I (67320) OR Fluid Mechanics (67313)

Course Contents

Introduction to buildings systems. Analysis, design, and selection of fluidic, thermal, electro-mechanical and electrical systems. Cold water, hot water, sewer and drainage systems analysis, standards, codes, specifications and networks, fire-fighting systems and alarms. Elevators and escalators, and accelerators systems standards, selection and specifications. Introduction to electrical power supply networks specifications, standards, and selection.

	Intended Learning Outcomes (ILO's)	Student Outcomes (SO's)	Contribution
1	1 An ability to design the different types of the plumbing systems, Firefighting systems, medical gases, Elevators and Escalators.	C	80 %
2	An ability to work in teams in designing an integrated systems for actual application.	D	20 %

Textbook and/ or Refrences

1. Mechanical and Electrical equipment for building, 11th Ed. 2. Standard Plumbing Engineering Design, 2nd Ed. Louis S. Nielsen. 3. NFPA, Standard of installation of standpipe, private hydrant, and hose systems.

Assessment Criteria	Percent (%)
First Exam	15 %
Second Exam	15 %
Quizzes	10 %
Projects	20 %
Final Exam	40 %

Course Plan

Week	Topic
1	Plumbing Systems
2	First Exam
3	Firefighting systems
4	Second Exam
5	Medical gas pipeline systems, Elevators and escalators.
6	Final Exam