VEER SURENDRA SAI UNIVRSITY OF TECNOLOGY, BURLA
Lesson plan
Semester: 6th
Subject: Process Equipment Design

Lecture	Module	Topic
1	1	Introduction, operating conditions, normal conditions
2	1	Selection of material, corrosion allowance
3	1	Shells subjected to internal pressure
4	1	Shells subjected to external pressure
5	1	Heads
6	1	Design of rectangular tank
7	1	Material and energy balance in a dryer
8	1	Calculation os drying time
9	1	Batch reactor, CSTR
10	1	Plug flow reactor
11	1	Calculation of reaction time and volume of reactor
12	2	Energy balance in heat exchanger and in total condenser
13	2	Overall heat transfer coefficient, LMTD
14	2	Variable overall coefficient, multipass exchanger
15	2	Individual heat transfer coefficient
16	2	Calculation of overall coefficient from individual coefficient
17	2	Fouling factors
18	2	Empirical equations
19	2	Dropwise and fil type condensation
20	2	Cross flow area, pressure drop calculation
21	2	Calculation of number of tubes, length of tube
22	3	Types of evaporators
23	3	Evaporator capacity
24	3	Boiling point elevation and Duhring's rule
25	3	Effect of liquid head on temperature drop
26	3	Evaporator economy
27	3	Enthalpy balance
28	3	Single effect calculation
29	3	Multiple effect evaporator
30	3	Continuous binary distillation
31	3	McCabe Thiele method
32	4	Operating line and q line
33	4	Minimum reflux ratio, total reflux
34	4	Optimum reflux ratio
35	4	Calculation of number of stages
36	4	Gas absorption operation
37	4	Calculation of packed height
38	4	Minimum liquid rate
39	4	Concept of HETP

Signature of the Faculty Member: Counter Signature of H.O.D
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