

VEER SURENDRA SAI UNIVERSITY OF TECHNOLOGY, BURLA

LESSON PLAN

Semester: 6th

Subject: Process Equipment Design (Theory)

Branch: Chemical Engineering

Name of the Faculty Member: Veda Prakash

Period	Module/Number	Topic to be covered
1	01	Design of heat exchangers
2	01	Double pipe heat exchangers
3	01	Shell and tube heat exchangers
4	01	LMTD and Average temperature
5	01	Baffles and different parts
6	01	Concurrent and counter current flow
7	01	Overall heat transfer coefficient
8	02	Equivalent diameter
9	02	Routing of fluids
10	02	Condensers
11	02	De superheater
12	02	Tube pitch
13	02	General considerations
14	02	Number of tube passes
15	02	Pressure drop
16	03	Baffle spacing
17	03	Viscosity correction factor
18	03	Fouling factor
19	03	Evaporator
20	03	Capacity, economy, steam consumption
21	03	Boiling point elevation
22	03	During rule
23	03	Single effect evaporation
24	03	Method of feeding
25	03	Material and energy balance
26	04	Multiple effect evaporation
27	04	Design of absorber
28	04	Binary systems without reactions
29	04	Distillation columns
30	04	Calculation of trays
31	04	Column height ,total reflux and minimum reflux conditions
32	04	Mc Cabe Thiele method
33	04	Different thermal feed conditions
34	04	Optimum reflux ratio
35	04	Rotary dryer