

Project for BKC3492 Separation Process

No	Topic	Group
1	Spray dryer	
2	Freeze Dryer	
3	Rotary Dryer	
4	Tray Dryer	
5	Microwave Dryer	
6	Adsorption Tower	
7	Crystallization	
8	gas separation using membrane	
9	reverse osmosis	
10	ultra filtration membrane process	
11	microfiltration membrane process	
12	Membrane distillation	
13	centrifugal settling	
14	centrifugal filtration	
15	filtration of solid-liquid separation (Filter Press)	
16	cyclone (hydrocyclone separator)	
17	setting and sedimentation in particle fluid separation	
18	mechanical size reduction	

Task 1:

You are required to submit a report on the concept design and costing of the given topic. Your report must contain:

- i. Select one industry and briefly overview the whole process, Process Flow Diagram (PFD)
- ii. Detail description of the process and process equipment (based on topic)
- iii. Simple mass and energy balance calculation (based on data given from industry)
- iv. Basic design calculation and engineering drawing (sizing, material selection, operating condition, design code, etc)
- v. Costing
- vi. Safety issues
- vii. References

Submit before week of 15 (Monday, before 12.00 pm)