



BENGAL SCHOOL OF TECHNOLOGY

AUTONOMOUS

Estd. by Supreme Educational Development and Charitable Organization (SEDCO)

Recognised by UGC & included u/s 2(f) of UGC Act 1956

Approved by Pharmacy Council of India, New Delhi

Affiliated to: Maulana Abul Kalam Azad University of Technology (MAKAUT) &

West Bengal State Council of Technical and Vocational Education and Skill Development (WBST&VE&SD)

Accredited by NAAC with "A" Grade, NBA for B. Pharm & QCI

Lesson Plan

Class: B.Pharm

Session: 2026-27

Date of Commencement of Session: 30.7.2026

Subject Name: Pharmaceutical Engineering

Subject code: PT- 317 and PT-397

Faculty In charge: Mrs. Trisha Chatterjee

Schedule of allotted class work (w.e.f)

Days	Monday	Tuesday	Wednesday	Thursday	Friday
Time/period Section A			9:40-10:40 AM	10:40AM-11:40 AM	
Section B			11:40AM - 12:40PM	12:40 PM-1:40 PM	

Available Periods/week 4 Available periods in the total semester 27 Extra Classes N.A

Guest Lectures planned if any with justification N.A

Scope & Objective of the course: a. Examine every single unit activity carried out by pharma manufacturing.

b. For the best use of resources, students should be able to know the relevance of plant layout design and the many techniques employed in the manufacturing process.

c. To learn about several corrosion control preventive strategies for the pharmaceutical industry.

d. Students will be able to learn about all the machinery utilized in the pharmaceutical industry after completing the pharmaceutical engineering practical course.

Reading materials:

A. Text Books

Sl. No.	Name of the Text Book(s)	Author	Edition	Publisher	Accession No.	Rack No
1	The textbook of 'Pharmaceutical Engineering'	CVS Subrahmanyam	2 nd Edition	Vallabh Prakashan	5237	6G& 7B
2	Unit Operations of Chemical Engineering	Warren L. McCabe	7 th Edition	McGraw Hill Education (India) Pvt Ltd	4918	6C

B. Reference Books

Sl. No.	Name of the Text Book(s)	Author	Edition	Publisher	Accession No.	Rack No
1	Pharmaceutical Engineering	K.Sambamurthy	1 st Edition	New age publishers	Personal Book	Personal Book

C. Journals / Website/Any other resources

Sl. No.	Name of the journal (s)/website/others	Source	Vol. no.	Month & Year

Daily Teaching Schedule for UNIT-I

Sl. No.	Date	Day	Title to be covered	Teaching Pedagogy / T.L.P.	Suggested Knowledge Resources

Daily Teaching Schedule for UNIT-II

Sl. No.	Date	Day	Title to be covered	Teaching Pedagogy / T.L.P.	Suggested Knowledge Resources
1	30.07.2026	Thursday	Objectives, applications and Heat transfer mechanisms	Offline (Smart Class & Black-Board)	A1, A2, B1
2	05.08.2026	Wednesday	Fourier's law	Offline (Smart Class & Black-Board)	A1, A2, B1
3	06.08.2026	Thursday	Heat transfer by conduction	Offline (Smart Class & Black-Board)	A1, A2, B1
4	12.08.2026	Wednesday	Heat transfer by convection	Offline (Smart Class & Black-Board)	A1, A2, B1
5	13.08.2026	Thursday	Heat transfer radiation	Offline (Smart Class & Black-Board)	A1, A2, B1
6	19.08.2026	Wednesday	Heat interchangers & heat exchangers	Offline (Smart Class & Black-Board)	A1, A2, B1
7	20.08.2026	Thursday	Heat interchangers & heat exchangers	Offline (Smart Class & Black-Board)	A1, A2, B1
8	27.08.2026	Thursday	Objectives, applications and factors influencing evaporation, differences between evaporation and other heat process	Offline (Smart Class & Black-Board)	A1, B1
9	02.09.2026	Wednesday	Principles, construction, working, uses, merits and demerits of Steam jacketed kettle, horizontal tube evaporator	Offline (Smart Class & Black-Board)	A1, B1
10	03.09.2026	Thursday	Principles, construction, working, uses, merits and demerits of Climbing film evaporator and Forced circulation evaporator	Offline (Smart Class & Black-Board)	A1, B1
11	09.09.2026	Wednesday	Multiple effect evaporator & Economy of multiple effect evaporator.	Offline (Smart Class & Black-Board)	A1, B1
12	16.09.2026	Wednesday	Basic Principles and methodology of simple distillation, flash distillation	Offline (Smart Class & Black-Board)	A1, B1
13	23.09.2026	Wednesday	Basic Principles and methodology of Fractional distillation	Offline (Smart Class & Black-Board)	A1, B1
14	24.09.2026	Thursday	Distillation under reduced pressure, steam distillation & molecular distillation	Offline (Smart Class & Black-Board)	A1, B1

Daily Teaching Schedule for UNIT-III

Sl. No.	Date	Day	Title to be covered	Teaching Pedagogy / T.L.P.	Suggested Knowledge Resources
15	30.09.2026	Wednesday	Objectives, applications & mechanism of drying process, measurements & applications of Equilibrium Moisture Content,	Offline (Smart Class & Black-Board)	A1, B1
16	01.10.2026	Thursday	Rate of drying curve	Offline (Smart Class & Black-Board)	A1, B1
17	07.10.2026	Wednesday	Principles, construction, working, uses, merits, and demerits of Tray dryer, drum dryer and spray dryer	Offline (Smart Class & Black-Board)	A1, B1
18	08.10.2026	Thursday	Principles, construction, working, uses, merits, and demerits of Fluidized bed dryer, vacuum dryer	Offline (Smart Class & Black-Board)	A1, B1
19	14.10.2026	Wednesday	Principles, construction, working, uses, merits, and demerits of Freeze dryer	Offline (Smart Class & Black-Board)	A1, B1

20	28.10.2026	Wednesday	Objectives, applications & factors affecting mixing, Difference between solid and liquid mixing,	Offline (Smart Class & Black-Board)	A1, B1
21	29.10.2026	Thursday	Mechanism of solid mixing, liquids mixing and semisolids mixing	Offline (Smart Class & Black-Board)	A1, B1
22	04.11.2026	Wednesday	Principles, Construction, Working, uses, Merits and Demerits of Double cone blender and Twin shell blender	Offline (Smart Class & Black-Board)	A1, B1
23	05.11.2026	Thursday	Principles, Construction, Working, uses, Merits and Demerits of Ribbon blender, Sigma blade mixer, Planetary mixers and Propellers	Offline (Smart Class & Black-Board)	A1, B1
24	18.11.2026	Wednesday	Principles, Construction, Working, uses, Merits and Demerits of Turbines, Paddles and Silverson Emulsifier	Offline (Smart Class & Black-Board)	A1, B1

Daily Teaching Schedule for UNIT-IV

Sl. No.	Date	Day	Title to be covered	Teaching Pedagogy / T.L.P.	Suggested Knowledge Resources

Daily Teaching Schedule for UNIT-V

Sl. No.	Date	Day	Title to be covered	Teaching Pedagogy / T.L.P.	Suggested Knowledge Resources
25	19.11.2026	Thursday	Factors affecting during materials selection for Pharmaceutical plant construction,	Offline (Smart Class & Black-Board)	A1, B1
26	25.11.2026	Wednesday	Ferrous and nonferrous metals, inorganic and organic nonmetals, basic of material handling systems.	Offline (Smart Class & Black-Board)	A1, B1
27	26.11.2026	Thursday	Ferrous and nonferrous metals, inorganic and organic nonmetals, basic of material handling systems.	Offline (Smart Class & Black-Board)	A1, B1
Grand total number of classes planned for the semester: 27					

Daily Teaching Schedule for Practical

Sl. No.	Date	Day	Group	Title to be covered
1	30.07.26	Thursday	B	Lab safety
	31.07.26	Friday	C	
	03.08.26	Monday	D	
	05.08.26	Wednesday	A	
2	30.07.26	Thursday	B	Study the effect of concentration on rate of filtration
	31.07.26	Friday	C	
	03.08.26	Monday	D	
	05.08.26	Wednesday	A	
2	06.08.26	Thursday	B	Study the effect of surface area on rate of filtration.
	07.08.26	Friday	C	
	10.08.26	Monday	D	
	12.08.26	Wednesday	A	
3	13.08.26	Thursday	B	Study the effect of viscosity on rate of filtration
	14.08.26	Friday	C	
	17.08.26	Monday	D	
	19.08.26	Wednesday	A	
4	20.08.26	Thursday	B	Study the effect of pressure drop on rate of filtration

	21.08.26	Friday	C	
	24.08.26	Monday	D	
	02.09.26	Wednesday	A	
5	27.08.26	Thursday	B	Determination of rate of evaporation of given sample
	11.09.26	Friday	C	
	31.08.26	Monday	D	
	09.09.26	Wednesday	A	
6	03.09.26	Thursday	B	Study the effect of surface area on rate of evaporation of given sample
	18.09.26	Friday	C	
	07.09.26	Monday	D	
	16.09.26	Wednesday	A	
7	10.09.26	Thursday	B	Study the effect of temperature difference on rate of evaporation
	25.09.26	Friday	C	
	14.09.26	Monday	D	
	23.09.26	Wednesday	A	
8	17.09.26	Thursday	B	Experiment on batch scale tray dryer to study drying characteristics of given sample
	09.10.26	Friday	C	
	21.09.26	Monday	D	
	30.09.26	Wednesday	A	
9	24.09.26	Thursday	B	Determination of Moisture Content and Loss on Drying of given sample
	30.09.26	Friday	C	
	28.09.26	Monday	D	
	07.10.26	Wednesday	A	
10	01.10.26	Thursday	B	Determination of Critical Speed and grinding efficiency of ball mill
	06.11.26	Friday	C	
	05.10.26	Monday	D	
	14.10.26	Wednesday	A	
11	01.10.26	Thursday	B	Size distribution analysis by sieving method
	06.11.26	Friday	C	
	05.10.26	Monday	D	
	14.10.26	Wednesday	A	
12	08.10.26	Thursday	B	Determination of heat loss by natural convection & radiation through unpainted glass
	13.11.26	Friday	C	
	12.10.26	Monday	D	
	28.10.26	Wednesday	A	
13	08.10.26	Thursday	B	Study of overall heat transfer coefficient by heat exchanger
	13.11.26	Friday	C	
	12.10.26	Monday	D	
	28.10.26	Wednesday	A	
14	29.10.26	Thursday	B	Determination of Humidity using Dry bulb, wet bulb, and dew point method
	20.11.26	Friday	C	
	02.11.26	Monday	D	
	18.11.26	Wednesday	A	
15	29.10.26	Thursday	B	Determination of efficiency of steam distillation
	20.11.26	Friday	C	
	02.11.26	Monday	D	
	18.11.26	Wednesday	A	
16	05.11.26	Thursday	B	Demonstration of colloidal mill, Planetary Mixture, Fluidized bed Dryer and other major equipment
	27.11.26	Friday	C	
	09.11.26	Monday	D	
	25.11.26	Wednesday	A	
17	05.11.26	Thursday	B	Demonstration of various types of equipment used in laboratory
	27.11.26	Friday	C	
	09.11.26	Monday	D	
	25.11.26	Wednesday	A	

