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 (WBSCT&VE&SD)
Accredited by NAAC with "A" Grade, NBA for B. Pharm & QCI

Lesson Plan

Class: B. Pharm 4th year 7th Semester **Session: 2026-27**
Date of Commencement of Session: 30th July 2026
Subject Name: Novel Drug Delivery System **Subject code: PT716B**

Faculty In charge: Dr. Saumya Das

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

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

Available Periods/week _____2_____ Available periods in the total semester _____27_____Extra Classes_____
Guest Lectures planned if any with justification _____NIL_____

Scope & Objective of the course:

Scope: This subject is designed to impart basic knowledge on the area of novel drug delivery systems.

Objectives: Upon completion of the course student shall be able

1. To understand various approaches for development of novel drug delivery systems.

2. To understand the criteria for selection of drugs and polymers for the development of Novel drug delivery systems, their formulation and evaluation

Reading materials:

A. Text Books

Sl. No.	Name of the Text Book(s)	Author	Edition	Publisher	Accession No.	Rack No
1	Novel Drug Delivery Systems	Y W. Chien	2nd	Marcel Dekker, Inc., New York	1166	14C
2	Controlled and Novel Drug Delivery	N.K. Jain	1st	CBS Publishers & Distributors,	6997	13E
3	Controlled Drug Delivery - concepts and advances	S.P. Vyas and R.K. Khar	1st	Vallabh Prakashan	6836	13G

B. Reference Books

Sl. No.	Name of the Text Book(s)	Author	Edition	Publisher	Accession No.	Rack No

C. Journals / Website/Any other resources

Sl. No.	Name of the journal (s)/website/others	Source	Vol. no.	Month & Year
1	Sarah A. Stewart, Juan Domínguez-Robles, Ryan F. Donnelly and Eneko Larrañeta- Implantable Polymeric Drug Delivery Devices: Classification, Manufacture, Materials, and Clinical Applications- *Polymers (MDPI*	Internet	10	2018
2	VJ Mohanraj and Y Chen- Nanoparticles – A Review- Tropical Journal of Pharmaceutical Research	Internet	5 (1)	2006
3	Rampal Rajera, kalpana Nagpal, shailendra kumar Singh, and Dina Nath Mishra, Niosomes: A Controlled and Novel Drug Delivery System, *Biol. Pharm. Bull.*	Internet	34 (7)	2011

Daily Teaching Schedule for UNIT-I (CDDS- Dr. Saumya Das)

Sl. No.	Date	Day	Title to be covered	Teaching Pedagogy / T.L.P.	**Suggested Knowledge Resources**
1	3.8.26	Monday	Introduction, terminology/definitions and rationale	PPT	A1,A2,A3
2	4.8.26	Tuesday	CRDF- Introduction & Terminology	PPT	A1,A2,A3
3	10.8.26	Monday	CRDF Physicochemical and biological properties of drugs relevant to controlled release formulations	PPT	A1,A2,A3
4	11.8.26	Tuesday	CRDF- Approaches to design controlled release formulations based on diffusion	PPT	A1,A2,A3
5	17.8.26	Monday	CRDF - dissolution controlled	PPT	A1,A2,A3
6	18.8.26	Tuesday	CRDF- ion exchange principles.	PPT	A1,A2,A3
7	24.8.26	Monday	CRDF- Intelligent DDS	PPT	A1,A2,A3
8	25.8.26	Tuesday	CRDF- Revision		

Daily Teaching Schedule for UNIT-III (Nasopulmonary- Dr. Saumya Das)

Sl. No.	Date	Day	Title to be covered	Teaching Pedagogy / T.L.P.	**Suggested Knowledge Resources**
9	31.8.26	Monday	Introduction to Nasal and Pulmonary routes of drug delivery	PPT	A1,A2,A3
10	1.9.26	Tuesday	Nasal and Pulmonary routesof drug delivery- factors	PPT	A1,A2,A3
11	7.9.26	Monday	Formulation of Inhalers	PPT	A1,A2,A3
12	8.9.26	Tuesday	Nasopulmonary DDS- Dry powder	PPT	A1,A2,A3
13	14.9.26	Monday	Nasopulmonary DDS- Metered dose	PPT	A1,A2,A3
14	15.9.26	Tuesday	Nasopulmonary DDS- nasalsprays, nebulizers	PPT	A1,A2,A3
15	21.9.26	Monday	Revision		

Daily Teaching Schedule for UNIT-IV & V (Dr. Saumya Das)

Sl. No.	Date	Day	Title to be covered	Teaching Pedagogy / T.L.P.	Suggested Knowledge Resources
16	22.9.26	Tuesday	Targeted DDS- Liposomes	PPT	A1,A2,A3
17	28.9.26	Monday	Targeted DDS- Liposomes	PPT	A1,A2,A3
18	29.9.26	Tuesday	Targeted DDS-Niosomes	PPT	A1,A2,A3
19	5.10.26	Monday	Ocular Drug Delivery Systems: introduction intra ocular barriers	PPT	A1,A2,A3
20	6.10.26	Tuesday	Ocular Drug Delivery Systems: Methods to over come, Preliminary study	PPT	A1,A2,A3
21	12.10.26	Monday	Ocular formulations and ocuserts	PPT	A1,A2,A3
22	13.10.26	Tuesday	Revision	PPT	A1,A2,A3
23	27.10.26	Monday	Intra Uterine DDS- Introduction, advantages and disadvantages development of intra uterine devices (IUDs) and applications	PPT	A1,A2,A3
24	2.11.26	Monday	Intra Uterine DDS- anatomy of uterus	PPT	A1,A2,A3
25	3.11.26	Tuesday	Development of intra uterine devices	PPT	A1,A2,A3
26	17.11.26	Tuesday	Development of intra uterine devices- Types of IUDs	PPT	A1,A2,A3
27	23.11.26	Monday	Revision	PPT	A1,A2,A3