



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 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. Dharmajit Pattanayak

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

Days	Monday	Tuesday	Wednesday	Thursday	Friday
Time/period			11:40 to 12:40 p.m		
Section A					
Section B			9:40 a.m to 10:40 a.m		

Available Periods/week 1 Available periods in the total semester 14 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	2 nd	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	VallabhPrakashan	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	SubhashisDebnath, P Lavanya, R Thejovathi, M. NiranjanaBabu-Polymer used in designing control drug delivery system,-Research Journal of Pharmacy Technology	Internet	10(3)	2017
2	Krushnakumar J Gandhi, Subhash V Deshmene, Kailash R Biyani,-Polymers in pharmaceutical drug delivery system: a review-International Journal of Pharmaceutical Sciences Review and Research	Internet	14(2)	2012
3	VaibhavRastogi, PragyaYadav, Transdermal drug delivery	Internet	14	2012

	system: An overview, Asian Journal of Pharmaceutics			
4	AudumbarDigambar Mali, Ritesh Bathe and ManojkumarPatil, An updated review on transdermal drug delivery systems, <i>International Journal of Advances in Scientific Research</i>	Internet	1(06)	2015
5	Uttam Kumar Mandal , Bappaditya Chatterjee, Faria Gias Senjoti, Gastro-retentive drug delivery systems and their in vivo success: A recent update, asian journal of pharmaceutical s c i e n c e s	Internet	11	2016
6	MirmeeraGirishNiharika, KannanKrishnamoorthy, MadhukarAkkala, Overview on Floating Drug Delivery System, International Journal of Applied Pharmaceutics	Internet	10 (6)	2018

Daily Teaching Schedule for UNIT-I(Polymer Sciences- Dr. Dharmajit Pattanayak)

Sl. No.	Date	Day	Title to be covered	Teaching Pedagogy / T.L.P.	Suggested Knowledge Resources
01	5.8.26	Monday	Introduction and classification	PPT	A1,A2,A3
02	12.8.26	Monday	Polymer- properties, advantages	PPT	A1,A2,A3
03	19.8.26	Monday	Polymer- application of polymers in formulation of controlled release drug delivery systems.	PPT	A1,A2,A3
04	2.9.26	Monday	Polymer- application of polymers in formulation of controlled release drug delivery systems.	PPT	A1,A2,A3

Daily Teaching Schedule for UNIT-III (TDDS & GRDDS- Dr. Dharmajit Pattanayak)

Sl. No.	Date	Day	Title to be covered	Teaching Pedagogy / T.L.P.	Suggested Knowledge Resources
05	9.9.26	Monday	GRDDS- Introduction and rationality and their applications	PPT	C-5, A1,A2
06	16.9.26	Monday	GRDDS- advantages and disadvantages	PPT	C-5, A1,A2
07	23.9.26	Monday	Approaches for GRDDS	PPT	C-5, A1,A2
08	30.9.26	Monday	GRDDS- Floating and high-density systems	PPT	C-5, A1,A2
09	7.10.26	Monday	GRDDS- Inflatable and gastroadhesive systems	PPT	C-5, A1,A2
10	14.10.26	Monday	TDDS- Introduction,	PPT	C-3&4
11	28.10.26	Monday	Permeation through skin&factors affecting permeation	PPT	C-3&4
12	4.11.26	Monday	Permeation enhancers, basic components of TDDS	PPT	C-3&4
13	18.11.26	Monday	Formulation approaches	PPT	C-3&4
14	25.11.26	Monday	Formulation approaches	PPT	C-3&4