

C-11

R.R. COLLEGE OF PHARMACY

Chikkabanavara, Bengaluru-560090
Affiliated to Rajiv Gandhi University of Health Sciences Bangalore, and recognised by PCI, NAAC 'A'

Lesson Plan

College Name: RR College CDI	
College Name: RR College of Pharmacy Programme: M.Pharm.	Academic vear :2023-2024
Subject Name : Molecular Pharmaceutics	Semester or Year: II
Total control of the Aviolectian Pharmaceutics	Subject Code: MPH201T
Total contact hours: 60	IA Marks: 35
Faculty Name: Prof. Hindustan Abdul Ahad	
Thindustall Abdul Anad	Reviewed by: Ke pr harm

Significance of the Subject:

This course is designed to impart knowledge on the area of advances in novel drug delivery systems.

PROGRAM OUTCOMES (POS)

- 1. Pharmacy Knowledge 2. Planning Abilities 3. Problem analysis 4. Modern tool usage
- 5. Leadership skills 6. Professional Identity 7. Pharmaceutical Ethics 8. Communication
- 9. The Pharmacist and society 10. Environment and sustainability 11. Life-long learning

Programme Specific outcomes (PSOs)

- **PSO1:** Know the various approaches for development of novel drug delivery systems.
- **PSO2:** Know the criteria for selection of drugs and polymers for the development of NTDS.
- **PSO3:** Know the formulation and evaluation of novel drug delivery systems

Course Outcomes

- CO 1: Understand the various approaches for the development of targeted drug delivery systems.
- CO 2: Explain the types of targeting methods of nanoparticles and liposomes.
- CO 3: Understand the various approaches for development and evaluation of Microcapsules/microspheres, Monoclonal Antibodies, Niosomes, Aquasomes, Phytosomes, Electrosomes
- CO 4: Explain approaches for the development and evaluation of pulmonary drug delivery systems.
- CO 5: Access the various approaches for development of veterinary drug delivery systems.

	Class No	Class: M. Pharm s Unit No. an Hours	RR College of Pharmacy:: Lesson Place (Pharmaceutics) Sub: Molecular Pharmaceutics Topic to be covered	racuity: L	Dr. Hindustan Ab Date	Status/
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Rloom,	s Taxonomy Level										
L1-Rem	embering L2-Understanding 1.2 Applying 1.4 Applying 1.5-Evaluating L6-Creating										
Text Bo	oks:										
1	Y W. Chien, Novel Drug Delivery Systems, 2nd edition, revised and expanded, Marcel Dekker, Inc., New York, 1992.										
2	S.P.Vyas and R.K.Khar, Controlled Drug Delivery - concepts and advances, VallabhPrakashan, New Delhi, First edition 2002.										
3	3. N.K. Jain, Controlled and Novel Drug Delivery, CBS Publishers & Distributors, NewDelhi, First edition 1997 (reprint in 2001).										
Journals											
1	Indian Journal of Pharmaceutical Sciences (IPA)										
2	Indian drugs (IDMA)										
3	Journal of controlled release (Elsevier Sciences) desirable 4. Drug Development and Industrial Pharmacy (Marcel & Decker) desirable										
Referen	ce Books:										
1	Y W. Chien, Novel Drug Delivery Systems, 2nd edition, revised and expanded, Marcel Dekker, Inc., New York, 1992.										
2	S.P.Vyas and R.K.Khar, Controlled Drug Delivery - concepts and advances, Vallabh Prakashan, New Delhi, First edition 2002.										
3	N.K. Jain, Controlled and Novel Drug Delivery, CBS Publishers & Distributors, NewDelhi, First edition 1997 (reprint in 2001).										

Self-Stu	idy topics (not inclu	ided in syllabus)	Cos						
Sl.No.	Self-Study topics	Suggested reference							
1	Micro Spheres	Y W. Chien, Novel Drug Delivery Systems, 2nd edition, revised and expanded, Marcel Dekker, Inc., New York							
2	Aerosols	N.K. Jain, Controlled and Novel Drug Delivery, CBS Publishers & Distributors, NewDelhi, First edition 1997 (reprint in 2001).	Co3						
3	Veterinary Tablets	S.P.Vyas and R.K.Khar, Controlled Drug Delivery - concepts and advances, Vallabh Prakashan, New Delhi, First edition 2002.	Co5						

Course Articulation Matrix

	PO1	P02	P03	P04	P05	P06	P07	P08	P09	PO10	P011	PO12	PSO1	PSO2	PSO3
CO1	1										✓	✓	✓	✓	✓
CO2	✓										✓	✓	✓	✓	✓
CO3	1										✓	✓	✓	✓	✓
CO4	1										✓	✓	1	1	✓
CO5	✓										1	✓	✓	✓	✓

Curricula Gap Analysis Sl.No. Curricula Gap Action taken Date-Resource % of Relevance to POs, Inchitutació Vs. Conduted gro-Month-Person with students **PSOs** Year designation present Lachera Inderra 23.75cp 1 PLKUSRTEGG Bridge ap blu application 100% Micolah Int Krewler & I expore. Bogalan

> Signature of HOD pharmacy Signature of Faculty

Chikrahanavara, Beng.