R.K. PHARMACY COLLEGE

COURSE HANDOUT

Pharmaceutics (Theory)

COURSE CODE: ER20-11P

VISION

Train the minds to think logically and become a success

MISSION

To Develop inventive, pioneering research & high-quality technical education

PROGRAMME EDUCATIONAL OBJECTIVES

PEO 1: To produce graduates with sound theoretical knowledge and technical skills required for career opportunities in various domains.

PEO 2: To incite the students towards research and to address the challenges with their innovative Contributions for the benefit of mankind.

PEO 3: To bring forth a quality professional equipped with technological advances to adapt easily to changes in the ever-evolving pharma and allied industry, hospital and clinical pharmacy setup, pharma retailing and distribution, and governmental and health agencies.

PEO 4: To engage graduates in professional ethical practices in a multidisciplinary environment, while contributing to organization through leadership and building team spirit.

PEO 5: Pharmacists can become lifelong learners, absorb new technologies, and then offer leadership roles in society.

Programme Name	Diploma in Pharmacy (D. Pharm)
Course Name	Pharmaceutics (Theory)
Course Code	ER20-11P
Session	2025-26
Year	I
Labs (Per Week)	3
Course Credit	2
Course Coordinator Name	

1. Scope of the Course:

This course is designed to impart basic knowledge and skills on the art and science of formulating and dispensing different pharmaceutical dosage forms.

2. Course Outcomes (COs):

CO.1. Describe about the different dosage forms and their formulation aspects.
CO.2. Explain the advantages, disadvantages, and quality control tests of different dosage forms.
CO.3. Discuss the importance of quality assurance and good manufacturing practices.

3. Reference Books:

1. History of Pharmacy in India by Dr. Harikishan Singh
2. Indian Pharmacopoeia, Govt. of India Publication
3. A Text book of Pharmaceuticals Formulation by B.M. Mithal, Vallabh Prakashan.
4. Bentleys' Text book of Pharmaceutics, Editor E.A. Rawlins, Elsevier Int.,

4. Other Readings & Relevant Websites:

Sr.No.	Link of Journals, Magazines, Websites and Research Papers
1	https:// www.ijpsm.com /
2	https:// www.ijisrt.com /
3	http://doi.org/10.2147/DHPS.S282420
4	http://dx.doi.org/10.22270/ajprd.v9i3.955

5	https://www.researchgate.net/publication/5533900
6	https://www.dixonvalve.com/

5. Lab Plan:

Sr. No.	Experiment	Dates (tentative)	
		Batch A	Batch B
01	Handling and referring the official references: Pharmacopoeias, Formularies, etc. for retrieving formulas, procedures, etc..		
02	Formulation of the following dosage forms as per monograph standards and dispensing with appropriate packaging and labelling.		
03	Liquid Oral: Simple syrup, Piperazine citrate elixir, Aqueous Iodine solution		
04	Emulsion: Castor oil emulsion, Cod liver oil emulsion		
05	Suspension: Calamine lotion, Magnesium hydroxide mixture		
06	Ointment: Simple ointment base, Sulphur ointment		
07	Cream: Cetrimide cream		
08	Gel: Sodium alginate gel		
09	Liniment: Turpentine liniment, White liniment BPC		
10	Dry powder: Effervescent powder granules, Dusting powder		
11	Sterile Injection: Normal Saline, Calcium gluconate Injection		
12	Hard Gelatine Capsule: Tetracycline capsules		
13	Tablet: Paracetamol tablets		
14	Formulation of at least five commonly used cosmetic preparations – e.g. cold cream, shampoo, lotion, toothpaste etc		
15	Demonstration on various stages of tablet manufacturing processes		
16	Appropriate methods of usage and storage of all dosage forms including special dosage such as different types of inhalers, spacers, insulin pens		
17	Demonstration of quality control tests and evaluation of common dosage forms viz. tablets, capsules, emulsion, sterile injections as per the monographs		

6. Content Beyond Syllabus (CBS):

Sr.No.	Topics	PO (Annexure 1)
1)	To demonstrate the working of UV spectrophotometry instrumentation.	PO1, PO3, PO4

7. Evaluation Scheme:

The marks allocated for the continuous mode of internal assessment shall be awarded for attendance, practical records, regular viva voce, etc. Two practical sessional exams shall be conducted during mid of the semester. The average marks of the two practical sessional exams shall be computed for internal assessment. A practical sessional exam shall be conducted for 40 marks and shall be computed for 10 marks. Weightage for various evaluation components is as below:

Sr.No.	Evaluation Component	Weightage
1	Internal Assessment	
	1. Continuous Mode	15
	2. Practical Sessional Exams	15
2	End Semester Practical Exam	10

	Total	**40**

As per PCI and University guidelines, minimum 75% attendance is required to become eligible for appearing in the End Semester Practical Examination.

This document is approved by:

Designation	**Name**	**Signature**
Course Coordinator		
HOD		
Principal		

ANNEXURE I: PROGRAM OUTCOMES

1. **Pharmacy knowledge:** Possess knowledge and comprehension of the core and basic knowledge associated with the profession of pharmacy, including biomedical sciences; pharmaceutical sciences; behavioral, social, and administrative pharmacy sciences; and manufacturing practices.
2. **Planning abilities:** Demonstrate effective planning abilities including time management, resource management, delegation skills and organizational skills. Develop and implement plans and organize work to meet deadlines.
3. **Problem analysis:** Utilize the principles of scientific enquiry, thinking analytically, clearly and critically, while solving problems and making decisions during daily practice. Find, analyze, evaluate and apply information systematically and shall make defensible decisions.
4. **Modern tool usage:** Learn, select, and apply appropriate methods and procedures, resources, and modern pharmacy-related computing tools with an understanding of the limitations.
5. **Leadership skills:** Understand and consider the human reaction to change, motivation issues, leadership and team-building when planning changes required for fulfillment of practice, professional and societal responsibilities. Assume participatory roles as responsible citizens or leadership roles when appropriate to facilitate improvement in health and wellbeing.
6. **Professional identity:** Understand, analyze and communicate the value of their professional roles in society (e.g., health care professionals, promoters of health, educators, managers, employers, employees).
7. **Pharmaceutical ethics:** Honour personal values and apply ethical principles in professional and social contexts. Demonstrate behavior that recognizes cultural and personal variability in values, communication and lifestyles. Use ethical frameworks; apply ethical principles while making decisions and take responsibility for the outcomes associated with the decisions.
8. **Communication:** Communicate effectively with the pharmacy community and with society at large, such as, being able to comprehend and write effective reports, make effective presentations and documentation, and give and receive clear instructions.
9. **The pharmacist and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety and legal issues and the consequent responsibilities relevant to the professional pharmacy practice.
10. **Environment and sustainability:** Understand the impact of the professional pharmacy solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change. Self-assess and use feedback effectively from others to identify learning needs and to satisfy these needs on an ongoing basis.