

SARDAR PATEL UNIVERSITY
Programme: MSC (Pharmaceutical Chemistry)
Semester: IV
Syllabus with effect from: June 2010

Paper Code: PS04CPCH01	Total Credits: 4
Title Of Paper: Advances in Pharmaceutical Technology and Drug Delivery systems	

Unit	Description in detail	Weightage (%)
1	Advanced Pharmaceutical Technology: Recent advances in Tablet technology Recent advances in Parenteral Drug technology	25 %
2	Process Automation and Packing: Process automation in Pharmaceutical manufacturing Packing materials, packing methods for tablets, capsules, injection, disposable, sterile packages, bulk packing including carton design.	25 %
3	Drug Delivery systems: Fundamentals of Control drug delivery systems: Fundamentals and rational of controlled drug delivery systems, factors influencing the design and performance of sustained/controlled release products. Design and fabrication of oral controlled drug delivery systems. Polymeric Drug Delivery systems: Introduction and application of Natural polymers (viz. Chitosan, Xanthan gum, Gaur gum.) and Synthetic polymers (viz. PLA, PCL, PLGA.)	25 %
4	Novel Drug delivery system: Targeted drug delivery: Active and passive targeting, monoclonal antibodies for drug targeting, particulate carrier systems, Microspheres, Nanoparticles, Lyposomes, Niosomes. Transdermal Drug Delivery: Permeation through skin, Permeation enhancers, gel, technologies for developing transdermal drug delivery systems and evaluation there of.	25 %

Basic Text & Reference Books:

- **Pharmaceutical Dosage Forms: Tablets, Vol. 1, 2 & 3 (Hardcover); 2nd edition**, Editors: Herbert Lieberman, Leon Lachman, Joseph B. Schwartz, Publisher: Informa Healthcare; **Volume 1:** ISBN 10: 0824780442, ISBN-13: 978-0824780449. **Volume 2:** ISBN-10: 0824782895, ISBN-13: 978-0824782894. **Volume 3:** ISBN-10: 082478300X, ISBN-13: 978-0824783006.
- **Pharmaceutical Dosage Forms: Parenteral Medications, 2nd Edition**, Vol. 1,2 & 3; Author: Kenneth E. Avis, Avis E. Avis, Kenneth E. Avis, Publisher: Informa Healthcare; **Volume 1:** ISBN: 0824785762, ISBN- 3: 9780824785765, 978-0824785765, **Volume 2:** ISBN: 0824787714, ISBN-13: 9780824787714, 978- 0824787714, **Volume 3:** ISBN: 0824790200, ISBN-13: 9780824790202, 978-0824790202.
- **The Theory And Practice Of Industrial Pharmacy, Spl. Indian Ed. 2009**, Author: Lachman, Publisher: CBS Publishers & Distributors, ISBN: 8123916795, ISBN-13: 9788123916798, 978-8123916798.
- **Microcapsules and microencapsulation techniques (Chemical technology review);** Marcia H Gutcho (Author), Hardcover: 351 pages, Publisher: Noyes Data Corp (1976), Language: English, ISBN-10: 0815506252, ISBN-13: 978-0815506256.
- **Ansel's Pharmaceutical Dosage Forms and Drug Delivery Systems;** 8th edition; Author: Howard C Ansel, Loyd V Allen, Publisher: Lippincott Willimas & Wilkins, ISBN: 8189836609, ISBN-13: 9788189836603, 978-8189836603.
- **Remington: The Science and Practice of Pharmacy,** 19th edition (Two Vols.); Alfonso R. Gennaro (Editor); Publisher: Mack Pub. Co.; 19th edition (June 1995); ISBN-10: 0912734043, ISBN-13: 978-0912734040.

