Subject code: 13PH0704
Subject name: Novel Drug Delivery Systems

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

Objective: Upon completion of the course the student shall be able to
1. To understand various approaches for the development of novel drug delivery systems.
2. To understand the criteria for the selection of drugs and polymers for the development of novel drug delivery systems, their formulation and evaluation.

Teaching and assessment scheme:

<table>
<thead>
<tr>
<th>Teaching Scheme (Hours)</th>
<th>Credits</th>
<th>Theory/ Tutorial Marks</th>
<th>Practical Marks</th>
<th>Total Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theory</td>
<td>3</td>
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<td>15</td>
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<td>Tutorial</td>
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Teaching hours: 45 Hours

Unit-1

Unit-2

Unit-3

Unit-4
Targeted drug Delivery: Concepts and approaches advantages and disadvantages, introduction to liposomes, niosomes, nanoparticles, monoclonal antibodies and their applications.

Unit-5
7 Hours

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Ocular Drug Delivery Systems: Introduction, intraocular barriers and methods to overcome – Preliminary study, ocular formulations and ocuserts Intrauterine Drug Delivery Systems: Introduction, advantages and disadvantages, development of intrauterine devices (IUDs) and applications.

Tutorials will be based on the above syllabus. Teaching hours: 15 Hours

Recommended References (Latest edition):

Journals
1. Indian Journal of Pharmaceutical Sciences (IPA)
2. Indian Drugs (IDMA)
3. Journal of Controlled Release (Elsevier Sciences)
4. Drug Development and Industrial Pharmacy (Marcel & Decker)
5. International Journal of Pharmaceutics (Elsevier Sciences)