SEMESTER I
LSM4245 ADVANCED EPIGENETICS AND CHROMATIN BIOLOGY

Prerequisite: LSM3235
Workload: 26 lecture hours + 16 tutorial hours

Course description:
The aim of this module is to introduce concepts and molecular mechanism of epigenetics. Students will learn the historic discoveries of epigenetic research, DNA methylation, post-translational histone modifications, non-coding RNAs, chromatin remodeling and epigenetic reprogramming. The module will focus on the role of epigenetic modifications in biological functions. The clinical applications of epigenetics will also be discussed.

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<thead>
<tr>
<th>S/N</th>
<th>Topics</th>
<th>Lecture hours</th>
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<tbody>
<tr>
<td>1</td>
<td>Introduction of epigenetics</td>
<td>2</td>
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<tr>
<td>2</td>
<td>Epigenetic technologies in prognosis and diagnosis</td>
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<tr>
<td>3</td>
<td>DNA methylation</td>
<td>4</td>
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<td>4</td>
<td>Histone modifications</td>
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<td>5</td>
<td>Epigenetic reprogramming</td>
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<td>6</td>
<td>Chromatin remodeling</td>
<td>4</td>
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<td>7</td>
<td>Non-coding RNAs</td>
<td>4</td>
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<tr>
<td>8</td>
<td>Cancer epigenetics</td>
<td>4</td>
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Total Lectures: 26 h
Tutorials: 16 h
Total hours: 42 h

TEXT BOOK (Recommended text):

MODE OF ASSESSMENT:
1. CA Tests – 20%
2. Essay (Term Paper) – 20%
3. Final Examination – 60%

MODULE CO-ORDINATOR:
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