Advance Diploma in Bioinformatics

Objective of the Course:
Students having knowledge of Life Sciences, Physical and Mathematical Sciences – will be given an integrated outlook of bioinformatics and will be trained so as to be able to
1) Cater to the information needs of the researchers in life sciences
2) Comprehend and utilize existing computer software in Life Sciences;
3) Offer computing skills to develop or extend software for sequence analysis, database management and molecular modelling;
4) Utilize their skills in school, college and research libraries to provide scientific support”;
5) Appreciate and participate in research work involving life sciences and the molecular level and
6) Function as effective, information analysis in industries especially in those involved in biotechnology research and development.

Learning Outcomes:
After the completion of course, the students will be able to:
• Apply Bioinformatics in the day to day study and research needs.
• Use simple to complex Bioinformatics applications
• Develop simple Bioinformatics applications

Duration of the Course (in hours) 360 hrs

Appr. Fees (INR): Rs.10,000/-

Minimum Eligibility Criteria and pre-requisites, if any
12th Pass with Biology as a subject

Outline of Course

<table>
<thead>
<tr>
<th>S. No</th>
<th>Topic</th>
<th>Minimum No. of Hours</th>
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<tbody>
<tr>
<td>1</td>
<td>Basic Molecular Biology &amp; Genetics</td>
<td>60 hrs</td>
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<tr>
<td>2</td>
<td>Basic Bioinformatics</td>
<td>80 hrs</td>
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<tr>
<td>3</td>
<td>Computer Architecture and Programming in PERL</td>
<td>80 hrs</td>
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<tr>
<td>4</td>
<td>Basic mathematics and Statistics</td>
<td>60 hrs</td>
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<td>5</td>
<td>Application of Bioinformatics in Structural Biology</td>
<td>20 hrs</td>
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<td>6</td>
<td>Project</td>
<td>60 hrs</td>
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Theory / Lecture Hours: 200 hrs
Practical / Tutorial / Lecture Hours: 160 hrs
Total Hours: 360 hrs

Books recommended for reference and reading:
Bioinformatics sequence and genome analysis by W.B. Mount

Group Code: BINF  Group Name: Bioinformatics
Course Code: AD01  Course Name: Advance Diploma in Bioinformatics