**DEPARTMENT OF BOTANY**

**Teaching Plan 2020-21**

 **(Even Semester)**

**Dr. Divya Verma**

**B.Sc. (H) Botany 3rd Year, Sem VI**

**Discipline Specific Elective- Bioinformatics**

| **Name of Paper & Code** | **Allocation of Lectures** | **Month wise schedule**  | **Reading suggestions** |
| --- | --- | --- | --- |
| * **Unit 1. Introduction to Bioinformatics**
* **Unit 2. Databases in Bioinformatics**
 | 8 lectures | 1st– 15th Jan | * Ghosh. and Bibekanand *Bioinformatics: Principles and Applications*.
* Pevsner J. (2009) *Bioinformatics and Functional Genomics*.
 |
| * **Unit 3. Biological Sequence Databases**
 | 9 lectures | 16th– 31st Jan |
| * **Unit 3. Biological Sequence Databases**
 | 8 lectures | 1st– 15th Feb |
| * **Unit 3. Biological Sequence Databases**
* **Unit 4. Sequence Alignments**
 | 8 lectures | 16th– 28th Feb |
| * **Unit 4. Sequence Alignments**
 | 4 lectures | 1st– 15th Mar |
| * **Unit 5. Molecular Phylogeny**
 | 8 lectures | 16th– 31st Mar |
| * **Unit 5. Molecular Phylogeny**
 | 8 lectures | 1st– 15th Apr |
| * **Unit 6. Applications of Bioinformatics**
 | 8 lectures | 16th– 27th Apr |

**B.Sc. (H) Botany 3rd Year, Sem VI**

**Discipline Specific Elective- Bioinformatics (PRACTICALS)**

| **Name of Paper & Code** | **Allocation of Lectures** | **Month wise schedule**  | **Reading suggestions** |
| --- | --- | --- | --- |
| * Nucleic acid and protein databases.
* Sequence retrieval from databases.
 | 4 Practicals | 1st Jan – 31st Jan | * Ghosh. and Bibekanand
* Pevsner
 |
| * Sequence alignment
* Sequence homology and Gene annotation.
 | 4 Practicals | 1st Feb – 29th Feb |
| * Construction of phylogenetic tree.
 | 2 Practicals | 1st Mar – 31st Mar |
| * Test, Revision and Mock
 | 4 Practicals | 1st Apr – 28th Apr |