



## SRI VENKATESWARA COLLEGE OF ENGINEERING

## COURSE DELIVERY PLAN - LABORATORY

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Department of Biotechnology	LP: BT18713 Rev. No: 01 Date: 03.07.2023
B.E/B.Tech/M.E/M.Tech : <u>B.Tech Biotechnology</u> PG Specialisation : -- Sub. Code / Sub. Name : BT18713 – Bioinformatics Laboratory	

Session No*	List of Experiments
CYCLE-I	
1	Introduction to UNIX basic commands
2	UNIX pipelines and UNIX filters
3	Basics of SQL queries
4	Perl programming and applications to Bioinformatics – Basic scripting
5	Perl programming and applications to Bioinformatics – Subroutines & functions, Writing scripts for automation
6	Perl programming and applications to Bioinformatics – Regular expressions, File I/O & control statement
CYCLE-II	
7	Types of Biological databases – Protein Data Bank, Uniprot, Genbank
8	Types of Biological databases –Genome, dbSNP, ClinVar
9	Sequence Analysis Tools – Use of BLAST, FASTA
10	Sequence Analysis Tools – Use of ClustalW, EMBOSS
11	Phylogenetic Analysis – Use of PHYLIP
12	Molecular Modeling – Homology modeling using SWISS MODELER
13	Molecular modeling – Molecule sketching, editing visualization using AVOGADRO
Content beyond syllabus (if any): Viewing and analyzing the protein structure using BIOVIA Discovery Studio Visualizer.	

\* Session Duration: 150 minutes

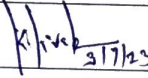
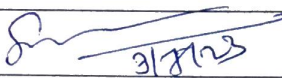


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Sub. Code / Sub. Name: BT18713 – Bioinformatics Laboratory

	Prepared by	Approved by
Signature		
Name	Dr. K. Divakar	Dr. E. Nakkeeran
Designation	Associate Professor	Professor and HoD
Date	03.07.2023	03.07.2023
Remarks* :	same lesson plan showed in the previous & present Academic year.	
Remarks* :		

\* If the same lab plan is followed in the subsequent semester/year it should be mentioned and signed by the Faculty and the HOD

  
8/7/23