CORE PRACTICAL VI

COMPUTATIONAL BIOLOGY

Sem	Subject Code	Category	Lecture		Theory		Practical		Credit
			Per week	Per sem.	Per week	Per sem.	Per week	Per sem.	
IV	21CPBC43	Core Practical	-	-	-	-	5	75	5

COURSE OBJECTIVE

The course aims to provide the students with an experimental and computational knowledge to embrace a Computational biology and to know the importance of computational biology for biologists.

I.BIOLOGICAL DATABASE

1. Nucleotide Sequence databases
2. Protein Sequence databases
3. Structure databases
4. Motif and domain databases
5. Metabolic pathway databases
6. Genomic databases

7. Other databases

II.SEQUENCE ANALYSIS

1. Dynamic programming
2. Heuristic methods
3. Pair wise Sequence alignment
4. Multiple Sequence alignment
5. Similarity Search
6. File format conversion

III.PROTEIN STRUCTURE PREDICTION

1. Primary structure prediction
2. Secondary structure Prediction
3. Tertiary structure Prediction
4. Function Prediction

TEXT BOOKS:

S.NO.	AUTHORS	TITLE	PUBLISHERS	YEAR OF PUBLICATION
1	D.W. Mount	Bioinformatics	Cold spring Press	2001
2	Westhead D.R, Parish J.H and Twyman R.M.	Instant notes in BioInformatics	Cambridge University press	2003
3	Attwood.T.K. Parry D.J. and Smith	Introduction to BioInformatics	Oxford University Press	2001

REFERENCE BOOKS:

S. NO.	AUTHORS	TITLE	PUBLISHERS	YEAR OF PUBLICATION
1	Veerabalarastogi	Biotechnology	Ane books India	2008
2	Dr.K.ManiN.Vijayaraj	Bioinformatics	Kalaikathirachchagam	2002
3	Rastogi.S.C, Namita	Bioinformatics	Ane books India	2008

SYLLABUS DESIGNER:

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