



Department of Botany

RAMAKRISHNA MISSION VIVEKANANDA CENTENARY COLLEGE

Under the DBT-STAR College Scheme

Organizes

Basics in Bioinformatics

An Online Workshop on Bioinformatics Databases,
Tools & Techniques

March 26 - 27, 2021

Virtual Platform: Google Meet

Capacity: 25 Students

Who can apply: Undergraduate Students (5th/6th Semester or 3rd year)

Registration Link: <https://surveyheart.com/form/60571efe05ab364acc9c289f#welcome>

Last Date of Registration: 24.03.2021

Registration Fee: Nil

Patron:

Swami Kamalasthananda
Principal, RKMVC College

Coordinator:

Swami Vedanuragananda
DBT-STAR College Scheme

Convener:

Dr. Anirban Kundu

Co-convener:

Dr. Anirban Bhar

Organizing Committee

Mr. Bidyut B. Chatterjee

Dr. Swapan K. Ghosh

Dr. Biswajit Ghosh

Dr. Harisankar Dey

Dr. Biswajit Roy

Dr. Avik K. Choudhury



Possible Outcome :

Bioinformatics is an emerging field of bioanalytics that utilizes computerized algorithms to predict and solve wide ranges of complex biological problems. The application of bioinformatics is now widely accepted in plant sciences, agricultural sciences, medical sciences, biochemical industries etc. Parallel development of structural & functional genomics and protein chemistry further necessitates the basic knowledge of bioinformatics to meet future expectations. The identification of problem and selection of appropriate tool is utmost requirement for a successful bioinformatic analysis. The present workshop is intended to develop an in depth knowledge in bioinformatics amongst the students that will help them to analyze biological problems employing the existing software's to extract information from large databases and to use this information in computer modeling. This will also help the undergraduate students to enhance the knowledge and awareness of the basic principles and concepts of biology at the cellular and molecular level using computer science.

Program Schedule:

Day 1: (2pm – 5 pm)

Welcome address

Working with nucleotide sequences

1. Introduction to Bioinformatics
2. Biological Sequence Databases
3. BLAST
4. *In silico* translation
5. Multiple sequence alignment
6. Construction of phylogenetic tree

End of session

Day 2: (2pm – 5 pm)

Working with protein sequences

1. Template selection
2. Prediction of chemical nature of protein
3. Secondary structure prediction
4. Generation of 3D structure of protein
5. Ramachandran plot analysis.
6. Introduction to energy minimization technique.
7. Submission of predicted model in data bank.

End of workshop & Vote of thanks

On completion of the workshop, the participants will have to submit a feedback form along with a copy of an assignment to avail the certificate.

Workshop link will be provided later to the registered candidates.

Mode of selection will be on "First-come first-served basis.

Candidates having access to desktop/laptop and uninterrupted internet connection will be preferred.

RESOURCE PERSONS: Dr. Anirban Kundu, Dr. Anirban Bhar

TECHNICAL QUERIES: 9903493071, 7686971946 **E.mail:** pghbot.rahara@gmail.com