



**DCT'S DHEMPE COLLEGE OF ARTS & SCIENCE  
MIRAMAR – GOA**

**DEPARTMENT OF BIOTECHNOLOGY**

**REPORT ON CERTIFICATE COURSE IN “CORE BIOMOLECULES IN  
PHYSIOLOGY”**

The Department of Biotechnology, in collaboration with the DBT Star College Scheme, successfully conducted a certificate course on "Core Biomolecules in Physiology" for second-year Biotechnology students. Mr. Kamlesh Korgaonkar, Assistant Professor in Biotechnology coordinated the course starting from 30<sup>th</sup> November 2024 to 30<sup>th</sup> December 2024.

This course served as a foundational prerequisite for the Biochemical processes and metabolism paper, equipping students with an in-depth understanding of the structural and functional aspects of essential biomolecules. The course was designed to introduce students to the chemical structure and biological roles of carbohydrates, lipids, proteins, and nucleic acids in physiological processes, explain biomolecular interactions in cellular and physiological processes, and apply knowledge by connecting biomolecules to human health and disease.

The course was structured into five main topics, each covered by an expert faculty member from the Biotechnology Department. Mr. Kamlesh Korgaonkar covered carbohydrates, explaining their structure, classification, and role in metabolism and energy storage. Mrs. Mrunal Phadke discussed proteins, detailing their structural organization, enzymatic functions, and physiological importance. Dr. Manasi Pawaskar led sessions on amino acids, covering their classification, metabolism, and role in biochemical pathways. Dr. Reshma Zakane conducted lectures on lipids and nucleic acids, focusing on lipid metabolism, signaling, and the fundamental roles of DNA and RNA in genetic processes.

A blended learning approach was adopted, incorporating lectures, interactive discussions and case studies, to enhance student engagement. Students participated actively in Q&A sessions strengthening their understanding of biomolecular functions and their impact on health and disease. The course spanned 30 hours over several weeks in November and December.

**Number of beneficiaries = 38 S.Y.B.Sc. Biotechnology students (10 males and 28 females).**

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2. The course helped students bridge theoretical knowledge with practical applications in biochemistry and human health.
3. Enhanced analytical and problem-solving skills in understanding biomolecular interactions in cellular processes.
4. Increased confidence and preparedness for advanced studies in Biochemistry through interactive and application-based learning.



Mr. Kamlesh Korgaonkar  
(Faculty Course Co-ordinator)

Mrs. Mrunal R. Phadke  
(In-charge, Dept. of Biotechnology)

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