



BLDE

(DEEMED TO BE UNIVERSITY)

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The Constituent College

SHRI. B. M. PATIL MEDICAL COLLEGE, HOSPITAL & RESEARCH CENTRE, VIJAYAPURA

M.Sc. MEDICAL BIOCHEMISTRY

Goal:

The broad goal of the teaching and training of post graduate students in Medical Biochemistry is to make them understand the scientific basis of the life process at the molecular level and to orient them towards the application of the knowledge acquired in solving clinical problems. At the end of his/her training be capable to take up a career in teaching institution or in diagnostic laboratory or in research field or into the Ph.D. programme.

Objectives:

A. Knowledge:

At the end of the course the student shall be able to:

1. Explain the structure, function and inter-relationships of biomolecules and the deviation from normal and its consequences.
2. Summarize the fundamental aspects of enzymology and alteration in enzymatic activity with reference to clinical application.
3. Explain the molecular and biochemical basis of inherited disorders with their associated sequelae.
4. Explain the mechanisms involved in maintenance of body fluids and pH homeostasis.
5. Integrate the various aspects of metabolism and their regulatory pathways.
6. Outline the molecular mechanisms of gene expression and regulation, the principles of genetic engineering and their application in medicine.
7. Explain the molecular concept of body defences and their application in medicine.
8. Explain the biochemical basis of environmental health hazards, biochemical basis of cancer and carcinogenesis.
9. Familiarize with the principles of various conventional and specialized laboratory investigations and instrumentation, analysis and interpretation of a given data.
10. Effectively organize and supervise diagnostic laboratory to ensure quality control / Assurance.

B. Skills:

At the end of the course, the student shall be able to:


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1. Make use of conventional techniques/ instruments to perform biochemical analysis relevant to clinical screening and diagnosis.
2. Analyze and interpret investigative data.
3. Demonstrate the skills of solving scientific and clinical problems and decision making.
4. Develop skills as a self-directed learner, recognize continuing educational needs; select and use appropriate learning resources.
5. Demonstrate competence in basic concepts of research methodology and be able to critically analyse relevant published research literature.

C. Integration:

The knowledge acquired in biochemistry shall help the students to integrate molecular events with structure and function of the human body in health and disease.