

Department of Microbiology
School of Biological Sciences
Dr. Harisingh Gour Vishwavidyalaya (A Central University), Sagar, MP.
470003. India

Departmental IQAC Profile

Criterion 4: Infrastructure and Learning Resources

Building Built-up Area: 10500 sq. ft.

In this area, the department has two separate rooms for MSc batches with smart board teaching facilities. classroom for MSc batch.

The department has facility for separate M.Sc. Laboratory with the regular equipments required for MSc practical works.

The department has independent space for research laboratories:

- Enzyme Technology and Molecular Catalysis
- Molecular Engineering and Imaging
- Molecular Pathogenesis and Signal Transduction

Major Research Equipments Available:

- FPLC (Fast protein liquid chromatography, AKTA pure)
- Chemiluminescence Doc (Azure Biosystems)
- Real Time PCR (Applied Biosystems)
- Nanodrop
- Ultracentrifuge (Thermo)
- Refrigerated Centrifuge (Sigma)
- Thermocycler (Gradient PCR, Applied Biosystems)
- UV Visible Digital Spectrophotometer (Thermo, Chemito)
- HPLC (Knaur)
- Lyophilizer (LabConco)
- Microplate Reader (Biorad)
- 5L Laboratory Fermenter (Bio-Age)
- Laminar Air Flow Benches 06 (Stericlean)
- Deep Freezer (Remi)
- Stereo Zoom Trinocular Microscope (Labomed)
- Research Microscope with photographic attachment (Leica, Nikon, Magnus)
- High Speed Refrigerated Centrifuge (Remi)
- Shaker Incubator 04 (Remi)
- Laboratory Water Purification System (Bio-Age)

Reading Materials

The list of books which are useful for masters and PhD level students. The list is often updated. Please visit again for any updates:

- The Microbial World by Stainier R.V., Ingraham, J.L., Wheelis, M.L. and Painter P.R. , Prentice-Hall of India (Pvt.) Ltd., New Delhi.
- Microbiology By Pelczar M., Chan E.C.S. and Krieg, N.R. Tata Mc Grew Hill Pub. Co. Ltd., N. Delhi.
- Brock-Biology of Microorganisms Madigan M.T., Martinko J.M. and Parker J., Prentice Hall Int. Inc.
- An Introduction to Mycology by Mehrotra, R.S. and K.R.Aneja, New Age International Press, New Delhi.
- Webster, J. 1985. Introduction to fungi . Cambridge University Press. Cambridge, U.K.
- Bergey's Manual of Determinative Bacteriology (8 Edition) Buchanan, R.E. and Giboson, N.E., Williams and Wilkinson company, Baltimore
- Morphology and Taxonomy of fungi By A. Bessey, Vikas Publishing House Pvt. Ltd., New Delhi.
- Biochemistry by G. Zubey.
- Biochemistry, D. Freifilder, W.H. Freeman & Company.
- Harper's Biochemistry, Murray et al., Mc Graw Hill.
- Principles of Biochemistry, Lehninger, Nelson and Cox.
- Biochemistry, Stryer 5th edition W.H. Freeman 2001
- Clinical Biochemistry by MN Chaterji and Rana Shinde
- Biochemistry Laboratory Techniques by Chaykin, S.
- Statistical Analysis in Biology by Mathur, K.
- Introductory Practical Biostatistics by Mishra and Mishra.
- Instrumental Methods of Chemical Analysis by Sharma, B.K.
- Statistical Methods in Biology by Bailey, N.T.J. (3rd).
- Fundamentals of Information Technology by Leon, A. and Leon, M. Vikas Publishing House and LeonPress Chennai.
- Advances in Bio-Imaging: From Physics to Signal Understanding Issues: State edited by Nicolas Loménie, Daniel Racoceanu, Alexandre Gouaillard, 2012
- Fundamentals of Computers by C. Xavier, New Age Publishers, New Delhi.
- Introduction to Bioinformatics by Parrysmith and Attwood.
- Atkinson D.E. 1966. Regulation of Enzyme Action. Ann Rev. Biochem. 35: 85–124.
- Fersht A. 1985. Enzyme Structure and Mechanism. 2nd ed. W.H. Freeman and Co., New York.
- Microbial Biotechnology: Fundamentals of Applied Microbiology By Alexander N. Glazer, Hiroshi Nikaido, 2007
- Advances in Enzyme Biotechnology (Eds Shukla & Pletschke), Springer 2013
- Gutfreund H. 1972. Enzyme: Physical Principles. Wiley-Intescience, New York.
- Price N.C., Stevens L. 1982. Fundamentals of Enzymology. Oxford University Press, Oxford.
- Bailey, J.E., and Ollis, D. F. 1977. Biochemical engineering fundamentals, McGraw-Hill Book Company, London.
- Sumner J.B., Somers G.F. 1953. Chemistry and Methods of Enzymes. Academic Press, Inc., New York
- Allan Svendsen 2016 Understanding Enzymes- Function, Design, Engineering, and Analysis. Pan Stanford Publishing Pvt. Ltd.