

**Faculty of Allied Health Sciences**  
**Department of Allied Health Sciences**  
**PhD Biotechnology**  
**Semester I**

<b>PhD BIOTECHNOLOGY</b>		
<b>Sr. No.</b>	<b>Course Title</b>	<b>Course Credit Hours</b>
1	(Core)	3
2	(Elective)	3
3	(Elective)	3
4	Understanding of Holy Quran-I	0+1

## Semester II

<b>PhD BIOTECHNOLOGY</b>		
<b>Sr. No.</b>	<b>Course Title</b>	<b>Course Credit Hours</b>
1	(Core)	3
2	(Elective)	3
3	(Elective)	3
4	Understanding of Holy Quran-II (Compulsory)	0+1

## Semester III & onward

5	Thesis	12
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## **List of CORE COURSE for PhD Biotechnology**

- Advanced Molecular Biology
- Advances in Nanobiotechnology
- Industrial Enzymology
- Trends in Omic Technologies
- Biosensors and Bioelectronics
- Biotechnology Patents and Public Health
- Advances in Clinical Biochemistry
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## **List of Elective COURSE for PhD Biotechnology**

- Environmental Biotechnology
- Advances in Agricultural Biotechnology
- Biostatistics and Data Analysis
- Biotechnology Business and Entrepreneurship
- Skills and Research Methodology
- Biological Oxidation Reduction
- Biochemistry of Vitamins and Minerals
- Recombinant DNA Technology and Gene Manipulation
- Current Topics in Biochemistry and Molecular Biology
- Metabolism in Health and Disease
- Protein Structural Biology
- Principles of Biotechnology
- Advanced rDNA Technology
- Cell & Tissue Culture (EC)
- Health Biotechnology
- Molecular Basis of Plant Development (EC)
- Transgenic Organisms (EC)
- Applications of Biotechnology
- The Molecular Basis of Cancer
- Advanced Techniques in Biotechnology
- Advances in Plant Biotechnology
- GM Technology and Environmental Management
- Biotechnology of Renewable Resources
- Advances in Animal Biotechnology
- Artificial intelligence in Biochemistry
- Artificial intelligence in Public Health
- Recent Trends in Biochemistry / Biotechnology
- Advances in Bioinformatics