



K.R. COLLEGE OF ARTS & SCIENCE

(Affiliated to Manonmaniam Sundaranar University, Tirunelveli)

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DEPARTMENT OF BIOCHEMISTRY

1.2 - ACADEMIC FLEXIBILITY

1.2.1- SKILL DEVELOPMENT, CERTIFICATE / DIPLOMA / ADVANCE DIPLOMA COURSES

Introduction

In alignment with its Vision and Mission, the Department of Biochemistry offers need-based Certificate, Diploma, and Skill Development Courses to enhance students' practical skills, employability, and industry readiness. These courses complement the university curriculum and address emerging trends in life sciences, healthcare, and laboratory sciences.

Goals of Certificate / Skill Development Courses

The major goals of offering certificate and skill development courses are:

1. To bridge the gap between academic knowledge and industry requirements.
2. To enhance practical, technical, and analytical skills among students.
3. To improve employability and entrepreneurial competence.
4. To promote hands-on training, experiential learning, and problem-solving skills.
5. To prepare students for higher education, research, and laboratory-based careers.
6. To inculcate professional ethics, safety practices, and teamwork.

Objectives of Certificate / Skill Development Courses

1. To provide domain-specific skill training relevant to Biochemistry and allied fields.
2. To familiarize students with modern laboratory instruments and techniques.
3. To develop competency in data analysis, documentation, and reporting.
4. To strengthen soft skills such as communication, time management, and professionalism.
5. To enable students to obtain certifications that add value to their academic profile.

Details of Certificate / Skill Development Courses Offered

S. No.	Name of the Course	Duration	Objectives / Skill Focus
1.	Certificate Course in Clinical Biochemistry	30 Hours	Clinical sample analysis, diagnostic parameters, quality control
2.	Certificate Course in Medical Laboratory Techniques	60 Hours	Basic lab skills, safety practices, instrumentation
3.	Certificate Course in Nutrition and Health	30 Hours	Nutritional assessment, diet planning, health awareness
4.	Skill Development Course in Molecular Biology Basics	30 Hours	DNA/RNA techniques, electrophoresis, applications
5.	Certificate Course in Bioinformatics (Basics)	30 Hours	Biological databases, sequence analysis, computational skills

(The list is illustrative and may vary based on academic year and stakeholder needs.)

Mode of Implementation

- Courses are offered beyond the regular curriculum during semesters .
- Resource persons include department faculty, industry experts, and research scholars.
- Teaching methods include hands-on training, demonstrations, case studies, assignments, and assessments.
- Student performance is evaluated through practical tests, assignments, and attendance.

Outcome of the Courses

- Enhanced laboratory competence and technical proficiency.
- Improved employability and readiness for laboratory and healthcare sectors.
- Increased confidence, professional ethics, and awareness of industry practices.
- Better preparedness for higher education, research, and competitive examinations.

Conclusion

The certificate and skill development courses offered by the Department of Biochemistry effectively support curriculum enrichment, skill enhancement, and outcome-based education, fulfilling the requirement.