

About the Department

Department of Biochemistry was established in 2009 under Faculty of Life Sciences. The Department is internationally known for its contribution in Biosensor techniques, therapeutics of medicinal plants, microbial genomics/metabolomics, clinical mycology and toxicological studies in animal and plant models. The Department has major recognition for patents in innovative biosensors. The Department runs a M.Sc. Courses in Biochemistry and Ph.D. Biochemistry. The Department has been financially strengthened by DST-FIST grant and UGC Innovative grant in the last five years. There are five regular Teaching Faculty Members and one Prof. Emeritus teacher in the Department.

Vision

Department envied to be a premier science department in the university, the region and the country on the basis of globally recognized and locally relevant research and teaching and by training excellent manpower to guide the course of education, research capacity development and public service nationally and internationally.

Mission

The Department of Biochemistry imparts and disseminates the knowledge of the molecular basis of life and works on the interfacial areas of research. Department will emphasize on excellence in interdisciplinary research to produce highly skilled manpower through:

- Interactive curriculum and excellent research quality to produce world-class caliber students.
- Provide knowledge with foundation in Biochemistry to pursuit career in research, industry, education and other interdisciplinary research.
- Research programs for developing products of research and training including human resources, high impact publications and patents
- Provide cutting age subject knowledge, practical expertise with advanced research infrastructure to investigate solutions for the real-world problems utilizing all areas of modern biochemistry

Strategic Goals

To achieve its Vision and Mission, the Department of Biochemistry have following strategic goals:

A. Research Excellence

University Department with impactful research output is meant to meet the needs and aspirations of the students, faculty and other stakeholders of the society. Accordingly department envisages to setup benchmark in research. Three driving forces will give direction to our research strategy.

1. To pursue good quality and high impact research of topical importance in Biochemistry, for instance Clinical Biochemistry, System Biology, Mycology, Nano-science & Nanotechnology & Neurotoxicology.
2. To motivate, train and support faculty for conducting defining research.
3. To attempt to engage in research activities for the benefit of society.

These driving forces will allow us to achieve our targets of Research Excellence.

Strategies for Research Excellence are as follows:

- ✓ Department faculty will be encouraged to fetch research funding from various funding agencies
- ✓ Research activities will be aligned with approved thrust areas and promotion of Interdisciplinary research
- ✓ Innovative research projects in M.Sc. (Biochemistry)
- ✓ The Department will establish a industry academia connectivity to develop a road map for consultancy service.
- ✓ The Faculty will attempt for effective linkages with government institutions, premiere national and international research laboratories, and industries.
- ✓ E-resources will be expanded.
- ✓ Research ethics and integrity of the highest order will be maintained.
- ✓ Developing a innovative research ecosystem

B. Excellent Teaching, Learning and Student Experience

The Department of Biochemistry is committed to provide higher education with a holistic approach. The quality of higher education provided will be characterized by outstanding student experience, exceptionally good learning environment, research productivity and committed

social responsibility. We will create an environment that promotes creativity, discovery and scholarship, apart from developing a performance oriented culture in students. We envision that the students who graduate with good qualities from our Department will show leadership qualities in their areas of work and will contribute to knowledge advancement and influence society in a positive manner. We will work towards raising the standard of teaching quality and learning experiences for students. Following driving forces will give direction to our strategy for excellent teaching, learning and student experience.

1. To introduce innovative teaching learning methods that nurture creativity, innovation and scholarship.
2. To keep the M.Sc. Biochemistry course vibrant by revisiting course curricula at regular intervals with Choice Based Credit System and introducing topics of contemporary relevance.
3. To enhance the quality of student experiences by dynamic feedback mechanism and dialogues.
4. To attract and recruit the best quality of student by way of improving facilities work ambience.
5. To produce graduates employable readily through placement and alumni profiles.
6. To provide equal opportunities and accessibilities to students and staff.
7. To provide free thinking space to students, and undergraduate research facilities.

Strategies for excellent teaching, learning and student experience are listed below:

- ✓ Creation of an environment for leading the students towards curiosity driven interactions with mentors and teachers.
- ✓ Technical knowledge and work experience in conjugation with research skills to students for increasing their employability and overall quality attributes to face the real world challenges.
- ✓ On campus interaction of renowned academicians and successful individuals in Biochemistry with students and staff shall be facilitated.
- ✓ Learning outcomes of each academic course will be clearly outlined and evaluated with a sense of accountability.

- ✓ Innovative approaches to teaching and learning with opportunities for pedagogic development will be implemented through ICT, skill development, and hands-on exercise.
- ✓ E-learning environment will be further enhanced to provide the latest information and communication technologies.
- ✓ Engagement of students in extra-curricular programs to develop their interpersonal skills

C. Social Responsibility

Social responsibility will also be embedded in teaching learning and research in Biochemistry. The Department will endeavour to use its expertise and knowledge for solving the major Biochemistry-related challenges of the changing time that are affecting our society, country, region and world. The students will have imbibed values of ethics, integrity and leadership for playing pivotal roles in the society and the nation building. Our human resources will have humane and caring values. We shall be guided by three driving forces that will enable Department of Biochemistry known in the region and the country for its role in transforming society economically and culturally.

1. Motivate the students for social responsibilities and concern for the needs of the society
2. To be known as a seat of higher learning for holistic development.
3. Inculcate plurality, fellow-feeling and tolerance.

Our best practices and innovations that contribute to social well-being will be communicated in a variety of ways to the society, with demo whenever necessary.

We will have portfolio of flagship activities that have direct and indirect benefits for the society. The following strategies will be undertaken to achieve the targets.

- ✓ Programmes will be undertaken to impart vocational skills training to youths from disadvantaged sector.
- ✓ The Department will provide required help for setting up student and alumni enterprises and entrepreneurships.
- ✓ Seminars/ public engagements will be organized on issues of global challenges like climate change, environment, renewable energy, etc.
- ✓ Ample opportunities will be provided for educational experience that imbibes sense of social responsibility, patriotism, tolerance and plurality.
- ✓ Opportunities will be provided for learning and participating in a variety of co-curricular and extra-curricular activities.

SWOC Analysis

Strength

- Qualified, experienced and dedicated Teaching faculty
- Student centric functioning with mentoring, counselling and effective academic monitoring
- Well experienced and Research oriented teaching faculty
- Research promotion among Post graduate students through research based Dissertation
- Good network connectivity and usage of ICT in teaching and research

Weakness

- Limited Space & infrastructure to cater academic & research need of 80 students
- High student-teacher ratios in Theory as well as in practical's (16:1).
- Limited Industry – Academia interaction.
- Moderate Placement Ratio

Opportunities

- Excellence in Research and teaching
- Scope for interdisciplinary and sponsored research projects.
- Research Consultancy to Clinical, Academic and Research institutions
- Development of State in Art Research facility
- Active carrier counselling to improve students employability

Challenges

- Limited and very poor inflow of funds for Research & Trainings
- Uninspired & non directional input students
- Networking and strengthening relationship with stakeholders
- Research training of students due to limited space and teaching faculties
- Exhaustive administrative process for project implementation and execution

Action Plans

Academic year 2018-19

- ✓ Review and update current curricula to produce employable and skillful manpower for national development. Curricula will be updated by standing committees consisting of both senior and junior academic staff. Help from highly experienced academic staff with global outreach will be required which need funds.
- ✓ Use of established feedback mechanisms, i.e. students, parents; alumni and teachers feedback will be employed more vigorously. Reviewing received feedbacks to development a monitorable action plan.
- ✓ Purchase of relevant and latest edition of textbook and their e-copies to get available in the departmental library computer.
- ✓ A comprehensive review to update the laboratory practical's.
- ✓ Updation of alumni list and develop a foundation for alumni interaction and engagement.
- ✓ Establishment of an active departmental Carrier counseling cell.
- ✓ Identification of thrust Research areas for establishing industrial academia interactions.
- ✓ Encouragement of Department faculty for submission of research projects.
- ✓ Encouragement of students to spread awareness in the neighborhood about Nutritional and clinical aspects of human health, Environmental awareness and social responsibilities.
- ✓ Establishment of a process for efficient documentation of departmental activities, students & alumni database, research outcome etc.
- ✓ Performing annual academic audits by academic experts.

Academic year 2019-20

- ✓ Modern teaching aids will be acquired, deployed and maintained for effective delivery of scientific knowledge and skills. Department requires SMART boards, projectors and whiteboards.
- ✓ To encourage e-learning among students. The departmental computer library is equipped with 14 personal computers.
- ✓ Purchase of relevant and latest edition of textbook and their e-copies to get available in the departmental library computer.
- ✓ Encouragement of Department faculty for submission of research projects.
- ✓ Extension lectures for Carrier counselling.
- ✓ Active engagement of department alumni in academic and Carrier counselling.
- ✓ Inculcating environmental awareness though seminars, extension activities.
- ✓ Encouragement of students to spread awareness in the neighbourhood about Nutritional and clinical aspects of human health, Environmental awareness and social responsibilities.

- ✓ Annual departmental monitoring through departmental committee to evaluate the departmental research and academic activities
- ✓ Use of established feedback mechanisms, i.e. students, parents; alumni and teachers feedback will be employed more vigorously. Reviewing received feedbacks to development a monitorable action plan for each year.
- ✓ Involvement of industrial, academic experts to monitor the departmental research and academic activities to improve academic standards, student's employability, industrial interactions and social inclusiveness.
- ✓ Research collaboration for to create specialized research groups and to carry out a coordinated researches in biochemistry and multidisciplinary research will be made as and when required.

Academic year 2020-21

- ✓ Expansion of lab facilities, i.e. to strengthen the labs with modern equipment's so that the theoretical experience can be experienced by student practically.
- ✓ Active engagement of department alumni in academic and Carrier counselling.
- ✓ Inculcating environmental awareness though seminars, extension activities.
- ✓ Encouragement of students to spread awareness in the neighbourhood about Nutritional and clinical aspects of human health, Environmental awareness and social responsibilities.
- ✓ Annual departmental monitoring through departmental committee to evaluate the departmental research and academic activities.
- ✓ Development of a research network through collaborative research
- ✓ Encouragement of Research scholars and faculties for undertaking interdisciplinary research.
- ✓ Publication of research outcome in world class peer review journals to enhance research visibility of academic staff.
- ✓ Establishment of departmental internal quality assurance cell to monitor research and academic outcome.

Academic year 2021-22

- ✓ Review and update current curricula to produce employable and skilful manpower for national development.
- ✓ Active engagement of department alumni in academic and Carrier counselling.
- ✓ Inculcating environmental awareness though seminars, extension activities.
- ✓ Encouragement of students to spread awareness in the neighbourhood about Nutritional and clinical aspects of human health, Environmental awareness and social responsibilities.
- ✓ Annual departmental monitoring through departmental committee to evaluate the departmental research and academic activities.

- ✓ To develop prospective strategies aimed to incorporate solutions to new challenges into the new curriculum.
- ✓ Efforts will be made to establish a research for the significant contributions to in the fields of biochemistry and relevant to the community. Different supervising committees will ensure that all researches contribute significantly to existing knowledge during the allotment of research topics.

Academic year 2022-23

- ✓ Establishment of e-learning environment will be further enhanced to provide the latest information and communication technologies.
- ✓ Development of international research collaborations.
- ✓ Establishment of an active department cell for community engagement and extension activities.

Activity Calendar of the Department of Biochemistry (2018-19)

1. Induction Programme in August, 2018
2. Teacher's Day Celebration in September' 2018
3. Menter-Mentee meeting proposed in October, 2018
4. Academic audit of Department in October, 2018
5. Internal Assessment of M.Sc. students in November' 2018
6. Odd Semester exams in December' 2018
7. Extension lecture of an outside expert to inculcate the students with knowledge of a recent research activity in the world of Science, in Feb' 2019
8. Student Feedback and interaction of parents with teachers in March, 2019
9. Interaction of students with Departmental alumini in March/April, 2019 for their guidance on challenges faced in the field of Biochemistry and ways to tackle them
10. Even Semester exams in May' 2019