BABA FARID UNIVERSITY OF HEALTH SCIENCES, FARIDKOT

PROSPECTUS

OF M.Sc. Medical Biotechnology and PG Diploma

ABOUT BFUHS

Baba Farid University of Health Sciences was established under an Act passed by the Legislature of the State of Punjab in July, 1998. The mission of the University is to create an intellectual, academic and physical environment, conducive to free flow of ideas and exchange of information between various faculties of the University and between this University and other Universities of Health Sciences in the country and abroad, thereby opening a window to the world for the health professionals, health planners, health managers, biomedical and social scientists and educators in health sciences of the country.

University Established in the memory of Great Sufi Saint Baba Farid ji by Punjab Government in July, 1998 by an Act of the State Legislature. Fifth of its kind in India, First in Northern India – Punjab Government deserves the credit of establishing it. Due to inadequacy of health professionals (in quantity & quality) the need was imminent. Such a University is expected to be a 'Pace-setter' – in developing appropriate modes & models of Health Care. University committed to providing Community oriented need-based education & Training programs for Health professionals.

No.of affiliated colleges :

- Medical : 9
- Dental :14
- Nursing: 122
- Physiotherapy :11
- Pharmacy:01
- Sport Medicine :01
- Para Medical:07

The University has following four faculties:

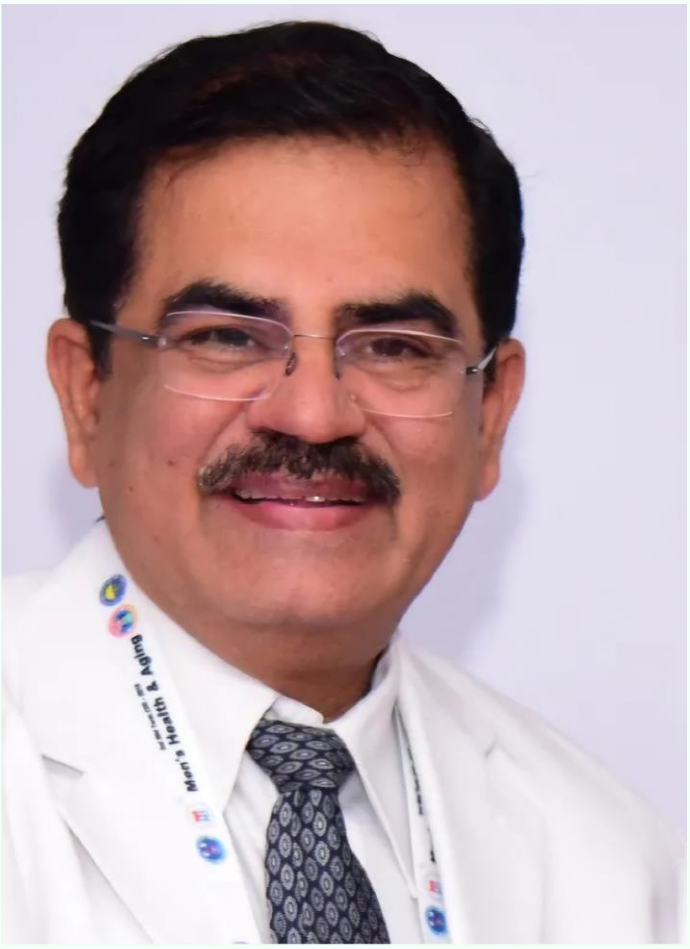
- Faculty of Medical Sciences
- Faculty of Dental Sciences
- Faculty of Nursing Sciences
- Faculty of Physiotherapy

Recognition of Degrees

a) His Excellency the Governor of Punjab has recognized all the degrees and diplomas certificates and other academic distinctions awarded by this University w.e.f. 1st July, 1999.

The Govt. of India has recognized the degrees being awarded by Baba Farid University of Health Sciences on the recommendation of NMC/DCI/INC etc.

PROF. (DR.) RAJEEV SOOD
MBBS, MS, MCh
Vice-Chancellor,
Baba Farid University of Health Sciences Faridkot



MESSAGE

Baba Farid University of Health Sciences, Faridkot is one among 13 Public Sector Universities of Health Sciences in the Country, which is making a niche in Medical Education over the last few years. It has 160 affiliated colleges of various health sciences education and about 35000 students are on roll with the University. In addition to the various courses pertaining to the health sciences, the University has a unique distinction of running skill development courses in as many as 60 streams which is helpful to develop human resources which is a great need of the society. These skill development Courses are in line with the thoughts of Hon'ble Prime Minister. The University is committed to transparency, accessibility and problem-solving approach for the students and maintaining standards as per statutory bodies like NMC, PMC PDC, DC & INC. The University and its affiliated colleges are putting best efforts to enhance the facilities, so that the ambience of better learning is created.

It is also worth mentioning that the GGSMC, Faridkot is running super specialty services in Cardiology, Neurosurgery, Neurology, Pediatric Surgery, Neonatology as well as Plastic Surgery. In all these departments, the services are provided by the specialist doctors in their respective fields.

University dedicates the effort to provide Competency Based Education and Training with a uniform curriculum to touch upon the fields of education, Medical Education Technologies (MET) and R&D.

RAJEEV SOOD
Vice-Chancellor

ABOUT CAMPUS

University Center of Excellence in Research (UCER)

University Center of Excellence in Research (UCER) was established with mandate to provide facilities and resources dedicated to achieve excellence in research in medical education in state of Punjab. Till now, Center has developed a pool research facility for industry and constituent colleges under BFUHS umbrella and to provide human resources of right caliber to state by helping Medical/Dental/Nursing/Paramedical/Physiotherapy colleges to upgrade level of research. Center also conducts various short-term training programs of 10 days, 1 month and 6 months to educate and train young scientists and physicians. Center is also coordinator for Ph.D. coursework program and helps to facilitate the exchange of information and to promote domestic & international collaborations by conducting conferences/seminars/workshops on various aspects of medical education and research. Center is running M.Sc. (Medical Biotechnology) and PG Diploma course apart from other courses. The faculty at the center has entered the name of Baba Farid University of Health Sciences, Faridkot in most prestigious medical journals of the world like Journal of American Medical Association (JAMA) and The British Medical Journal (The BMJ). Center has published more than 300 publications in journals of national and international repute since 2016.

PROGRAME OUTCOMES

- Understand and apply the core concepts of molecular biology, immunology, genetics and cell biology in context of human health and diseases.
- Perform and Interpret a wide range of laboratory techniques such as PCR, ELISA, rDNA technology, cell and tissue culture and bioinformatics.
- Develop and execute independent research projects using appropriate experimental designs, data analysis and research methodologies to address biomedical problems.
- Engage in review of scientific literature in the area of biomedical sciences.
- Apply ethical principles and understand legal and regulatory frameworks governing biomedical research, clinical trials and biotechnology applications.

DEPARTMENT LABORATORY

"The Department of Biotechnology provides students with hands-on experience using a wide range of sophisticated laboratory instruments essential for advanced research. With the availability of equipment to assist in techniques such as ELISA, Flow Cytometry, UV Spectrophotometer, PCR and Gel Electrophoresis the department ensures comprehensive training in the field of biological research. These state-of-the-art instruments enable students to contribute to innovative research. The well-equipped laboratories foster a deep understanding of modern analytical techniques, preparing students for careers in academic and industrial research."

DEPARTMENT LIBRARY

The students in the Department of Medical Biotechnology are exposed to the BFUHS University Library and Health Information System for learning and research work. The BFUHS University Library and Health Information System is on a rapid and consistent path of expansion and development since its inception, catering to the learning, teaching and research requirements of the students, researchers, teachers and other academic communities of the university and its affiliated colleges. It is located in the state-of-the-art building i.e. Academic Block of the University with productive reading spaces, apart from a quiet and restoring ambience. The interior of the library is enabled with Wi-Fi connectivity allowing the users to work within the library by accessing both offline and online resources. It is also equipped with an advanced Online Public Access Catalog (OPAC), modern reprographic and document preservation facilities.

CLASSROOM

AI-Driven Classrooms – The Department of Medical Biotechnology features cutting-edge, AI-integrated classrooms that enhance learning through advanced technology.

State-of-the-Art Infrastructure – Equipped with modern facilities, the department ensures an interactive and immersive educational experience.

Visual Concept Representation – AI-powered tools enable dynamic visual representations of biotechnology concepts, making complex topics easier to understand.

Department Of Medical Biotechnology

The Department of Medical Biotechnology at UCER was established under the visionary leadership of Prof. (Dr.) Rajeev Sood, Hon'ble Vice Chancellor of Baba Farid University of Health Sciences, Faridkot. The department is dedicated to advancing research and education in the field of herbal medicine, integrating traditional knowledge with modern scientific approaches.

Innovative Biotechnologists are in great demand in India and Abroad. Medical biotechnology aims to harness biological systems, organism and cellular components to develop innovative solutions for diagnosis, treatment and prevention of human diseases. This program focuses on development of innovative diagnostics, targeted therapies and preventive strategies through integration immunology, genetic engineering, molecular biology and bioinformatics . This program aspires to produce skilled graduates who contribute to advancements of personalized medicine, biopharmaceutical development and cutting edge healthcare technologies; ultimately enhancing patient outcomes and global health standards.

Post Graduate or Diploma qualification in Medical Biotechnology can acquire placements in research laboratories run by the government as well as the private sector. Biotech businesses are enhancing nowadays at an immense rate, with a lot of companies focusing on launching innovative biotech technologies.

ORDINANCES OF M.SC. (MEDICAL BIOTECHNOLOGY)

1. **Duration of Course:**

The program of study for M.Sc. (Medical Biotechnology) shall extend over a period of four semesters (two academic years) and the PG Diploma for one year. The curricula and syllabi for the program shall be prescribed from time to time by the University.

2. **Eligibility for admission**

A candidate for post graduate degree must possess the basic degree in science of this university or any other university recognized by the university (graduates from multidiscipline like MBBS / B.D.S /B.A.M. S / B.H.M.S /B. Pharmacy / BVSC/ B.Sc. (Life sciences/Nursing)/ B. Physiotherapy etc).

3. **Medium of Instructions and seats**

The medium of instruction during the course and examinations shall be English and the number of seats shall be 10 for each course.

4. **Examination Schedule**

Each semester shall consist of not less than 80 working days. The odd semesters shall be conducted from the month of June/July to November/December and the even semesters shall be conducted from the month of December/January to May/June in every calendar year or on such dates as determined by the University from time to time.

5. **Attendance and progress**

A candidate is required to put in at least 80% attendance in individual courses considering theory and practical separately. The candidate shall complete the prescribed course satisfactorily to be eligible to appear for the respective examinations. However, relaxation in attendance for appearing in examination will be as per University Rules.

6. **Academic work**

A regular record of attendance both in Theory, Practical, Seminar, Assignment, Journal club, Discussion with the supervisor, Research work presentation and Dissertation shall be maintained by the department/teaching staff of respective courses.

7. The course of study for M.Sc. (Medical Biotechnology) and PG Diploma shall include Semester wise Theory & Practical examination. Internal Assessment shall be submitted to the University at least two weeks before the commencement of theory examinations or within one week from the issuance of roll numbers by the University.

ELIGIBILITY AND QUALIFICATIONS:

Name of the Course	Eligibility Criteria	Duration of Course	Course Fee to be paid by the students (per annum)	No. of seats
M.Sc. Medical Biotechnology	A graduate degree in any health-related field such as MBBS/BDS/B.Sc. (Life Sciences/Nursing), B. Pharmacy, BVSC, etc.	**02years**	**40,000/-**	**10**
Post Graduate Diploma in Medical Biotechnology	A basic degree in science of this university or any other university recognized by the university (graduates from multidiscipline like MBBS / B.D.S/ B.H.M.S / B. Pharmacy/ BVSC/ B.Sc. (Life Sciences/ Nursing)/ B. Physiotherapy etc).	**01 years**	**25,000/-**	**10**

ADMISSION PROCESS

STEP-1 Go to www.bfuhs.ac.in

STEP-2 Click New Registration

STEP-3 Fill the required details

STEP-4 Fill your Name, Board/University Roll Number and year of Passing

STEP-5 Click get data (If your data does not appear automatically, a window will emerge on the screen. Click Ok to fill the details manually)

STEP-6 Click register (Login details will be sent to registred phone number and E-mail)

STEP-7 Go to Home Page

STEP-8 Click student Login on top right corner and fill the required information.

STEP-9 Pay the registration fees and submit the form.

CAREEER OPPORTUNITIES OF MEDICAL BIOTECHNOLOGY

Medical biotechnology has emerged as a rapidly advancing field with the potential to revolutionize healthcare through innovative solutions for the diagnosis, treatment, and prevention of diseases. In recent years, there has been growing global interest in medical biotechnology due to its role in developing targeted therapies, vaccines, and diagnostic tools, as well as its contribution to sustainable and personalized medicine. Recognizing the increasing national and international demand for skilled professionals in this cutting-edge field, Baba Farid University of Health Sciences, Faridkot, is taking significant steps to build human resources in medical biotechnology. In this regard, a postgraduate program, Master of Science (M.Sc.) in Medical Biotechnology, is being launched to equip students with advanced knowledge and practical skills in areas such as molecular biology, genetic engineering, bioinformatics, and biopharmaceuticals for health-related applications. The M.Sc and PG diploma courses will be open to candidates who have passed a graduate degree in any health-related field such as MBBS/BDS/B.Sc. (Life Sciences/Nursing), B. Pharmacy, BVSC, etc .or equivalent examination from a Statutory Institution/University.

CAREER OPPORTUNITIES

The M.Sc. and PG (Medical Biotechnology) program will enable the candidates for following career opportunities:

RESEARCH AND DEVELOPMENT

Graduates with an M.Sc. in Medical Biotechnology can pursue dynamic roles in R&D within pharmaceutical companies, biotechnology firms, and research institutions. These positions focus on developing innovative therapies, diagnostics, and health technologies through cutting-edge scientific research. These would include

1. Research Scientist (Biotech/Pharma)
2. Clinical Research Associate (CRA)
3. Biomedical Researcher
4. Genomics/Proteomics Specialist
5. Molecular Biologist
6. Stem Cell Researcher
7. Immunologist

CLINICAL AND HEALTHCARE SECTOR

This sector focuses on applying biotechnology tools and techniques to improve disease diagnosis, treatment, and public health outcomes. Professionals often work in hospitals, diagnostic labs, biotech companies, and public health organizations.

1. Clinical Lab Technologist
2. Medical Laboratory Scientist

3. Diagnostic Product Development Specialist
4. Translational Medicine Specialist
5. Public Health Biotechnologist

BIOPHARMACEUTICAL AND BIOTECHNOLOGY INDUSTRY

This industry focuses on the development, production, and commercialization of biologically-based products such as vaccines, therapeutic proteins, and diagnostic tools. It offers a range of roles that combine science, technology, and regulatory expertise.

1. Bioprocess Engineer
2. Quality Control/Assurance Analyst
3. Regulatory Affairs Specialist
4. Production Executive (Biotech/Pharma)
5. Medical Science Liaison (MSL)
6. Product Manager (Biotech Products)

BIOINFORMATICS AND DATA SCIENCE

This field combines biology, computer science, and statistics to analyze biological data, particularly large-scale genomic, proteomic, and clinical datasets. It's essential for personalized medicine, drug discovery, and disease research.

1. Bioinformatics Analyst
2. Computational Biologist
3. Genetic Data Analyst

ACADEMIC AND TEACHING CAREER

This path is ideal for those passionate about education, research, and mentoring. It offers opportunities to contribute to scientific knowledge while training the next generation of biotechnologists.

1. Lecturer/Assistant Professor
2. Lab Instructor
3. Academic Research Fellow

GOVERNMENT AND REGULATORY BODIES

These roles involve contributing to national research initiatives, shaping science policy, protecting intellectual property, and ensuring public safety through regulation of biotech products and practices.

1. Research Scientist (ICMR, DBT, CSIR, DRDO, etc.)
2. Patent Examiner or Analyst (Biotech/IPR)
3. Biotechnology Policy Analyst
4. Regulatory Compliance Officer

HIGHER STUDIES AND SPECIALIZATION

For those aiming to deepen their expertise or pursue advanced research and academic roles, further studies and specialization offer significant career growth and knowledge expansion.

1. Ph.D. in Medical Biotechnology or related fields
2. Postdoctoral Research
3. Specialized Certifications (e.g., Clinical Trials, Regulatory Affairs, Bioinformatics)

Activities

Celebration of National Campaign of Ashwagandha at Guru Gobind singh Medical college

Celebration of International Day for Biological Diversity supported by Punjab Biodiversity Board.

FOR ANY ENQUIRY ,PLEASE CONTACT

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