

## School of Interdisciplinary Sciences and Technology

The school promotes education and research in interdisciplinary sciences and currently offers B.Tech in Food Technology, M. Tech. in Food Technology and Ph.D. in Bio-informatics, Chemo-informatics, Food and Fermentation Technology, and in Molecular Medicine, besides the areas where the nature of work is interdisciplinary, demanding expertise from different disciplines. The School provides opportunity to researchers and academicians to interact with the faculty and students of all the faculties of the University and carry out research in interdisciplinary areas as well as promote opportunities for higher education in identified areas. Faculty has entered into collaboration with URDIP (CSIR), Pune, and has established a very strong PhD program in the area of Bioinformatics and Fermentation in place. Presently over a dozen students are registered in PhD programme. The Department of Food Technology has received a substantial grant of Rs.75 lakhs from Ministry of Food Processing Industries and has strengthened the laboratories and infrastructure of the Department.

### Department of Food Technology

Food technology is a branch of science in which knowledge of food science is applied in manufacturing and preservation of food products. Food technologists study the chemical, physical and microbiological make-up of the food and are involved in its processing, preservation, packaging and storage in safe, wholesome and nutritious form. The demand of professionals and trained personnel in the food industry as well as in research and development in government and industrial setup is immense. Food technologists are employed in food industries, mills, distilleries, packaging industry and hotels. They are employed as professionals in quality assurance, food production, analytical and research laboratories and new product development. Food technology professionals also work as consultants, advisors, auditors in inspection boards or quality assurance departments. Companies like Hindustan Unilever, Britannia, Danone, Heinz, Kellogg, Nestle and many others recruit food technologists periodically as product development manager, food safety experts, quality assurance personnels as well as scientists for developing new products or bringing about an improvement in existing products.

The Food Technology program at Jamia Hamdard aims at producing professionally competent, proficient and highly skilled personnel in the field of food technology, with a knowledge of various aspects of food science and technology including the quality of raw material, packaging standards and methodology, health and hygiene parameters, processing techniques, storage and food value and educate them on the methodologies for extracting useful byproducts. The course content includes the functional foods, nutraceuticals, nonalcoholic beverages, medicated water, dietary supplements, novel biodegradable material, transgenic and organic food, good manufacturing and post-harvest practices, fundamentals of chemical engineering, dairy technology, and bioprocess engineering.

### B. Tech. Food Technology

**Duration:** Four years (Eight Semesters)

**Seats:** 30 (25 General + 5 NRI/ Sponsored); additional seats are available for Foreign nationals

**Eligibility:** A candidate seeking admission to the program must have passed Senior Secondary (12th / Intermediate) examination with Mathematics/Biology from CBSE or any other Board recognized by JH as equivalent thereto, securing at least 50% marks or equivalent CGPA in aggregate.

**Selection procedure:** Selection will be based on merit in Paper-1 of JEE (Main) 2017/NEET 2017, conducted by CBSE. Non NEET/Non JEE candidates may also also apply. *In case of*

*non-availability of sufficient number of applicants with above mentioned qualification, University has the right to admit candidates on the basis of merit of qualifying examination or the merit of internal test and/or Interview conducted by Jamia Hamdard which will be announced separately, if situation arises. Non JEE / Non NEET candidates may also apply. However, JEE / NEET candidates will be preferred. Subject to availability of vacant seats, non JEE / non NEET applicants may be considered on the basis of merit in qualifying examination with Physics, Chemistry, Maths / Biology and interview. The weightage of interview shall be 15 %.*

### **M. Tech. Food Technology**

**Duration:** Two years (Four Semesters)

**Seats:** 18 (15 General + 3 NRI/ Sponsored); additional seats are available for Foreign Nationals.

**Eligibility:** B. Tech. in Food/ Dairy /Agriculture /Chemical/ Biotechnology and Mechanical Engineering or MSc in Food Science/Chemistry/ Biochemistry or allied disciplines or B. Pharm. with at least 55% marks in aggregate; appeared in the Entrance Test /Interview conducted by Jamia Hamdard.

**Selection procedure:** Interview will be conducted to test the knowledge of the candidates in Physics, Chemistry, Biology, Maths, Biochemistry, Biotechnology and Food Science of B.Sc level.

### **Ph.D. Bioinformatics / Ph.D. Chemoinformatics**

**Duration:** Minimum 3 years

**Eligibility:** (i) Masters degree with minimum of 55% marks in aggregate in subjects such as Bioinformatics, Biotechnology, Biochemistry, Microbiology, Toxicology, Pharmacology, Information Technology and other allied subjects having relevance to Bioinformatics / chemoinformatics from a recognized University/Institute,

### **PhD Food and Fermentation Technology**

**Duration:** Minimum 3 years

**Eligibility:** (i) Candidates having passed MTech (Food Technology), MTech (Biotechnology) MSc (Food Science), MPharm (Pharmaceutics/ Pharmacognosy & Phytochemistry/ Pharmaceutical Biotechnology), MSc (Biotechnology) or MSc (Biochemistry) with minimum of 55% marks or equivalent grade from a recognized University/Institute,

### **PhD in Molecular Medicine**

**Duration:** Minimum 3 years

**Eligibility:** (i) Candidates having passed MSc in any branch of Life Sciences, M.Tech (Biotechnology) or any other related qualification with minimum of 55% marks or equivalent grade from any recognized Indian University or foreign University recognized by Association of Indian Universities (AIU)

**PhD in Interdisciplinary Sciences** – In areas where the nature of work is interdisciplinary, demanding expertise from different disciplines.

**Eligibility and selection procedure:** Applicants seeking admission to PhD in any of the above mentioned disciplines are advised to read JH PhD Bylaws 2016 before applying.