

## 7. FACULTY OF LIFE SCIENCES

### 7.1 DEPARTMENT OF BIOTECHNOLOGY

#### FACULTY

##### Professors

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|------------------------------|--------------------|
| 1. Ram Sarup Singh, Ph.D.    |                    |
| 2. Aruna Bhatia, Ph.D., PDF  | <b>Re-employed</b> |
| 3. Parveen Pal Balgir, Ph.D. | <b>Re-employed</b> |

##### Associate Professors

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|--------------------------|-------------|
| 1. Minni Singh, Ph.D.    |             |
| 2. Baljinder Kaur, Ph.D. | <b>Head</b> |

##### Assistant Professors

1. Balwinder Singh, Ph.D., LL.B, MBA
2. Ranjita Bhari, M.Sc. Ph.D.
3. Harpreet Kaur, M.Sc., M.Phil

#### COURSES

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|---|--------------------|
| <b>1. M.Sc. Hon's (Biotechnology) (2 years)</b><br>(Under Choice Based Credit Scheme) | Student Intake: 22 |
|---|--------------------|

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| <b>2. M.Sc. Hon's (Microbial &amp; Food Technology) (2 years)</b><br>(Under Choice Based Credit Scheme) | Student Intake: 22 |
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**Pre-requisite:** Bachelor degree in Faculty of Life Sciences/Biological Sciences/Physical Sciences/ Agricultural Sciences/Medical Sciences/Food Science & Technology/Engineering.

**Thrust Areas:** Food and Fermentation Biotechnology, Medical Biotechnology and Environmental Biotechnology

**Note:** Candidate should have secured a minimum of 50% marks in the Bachelor degree examination in Faculty of Life Sciences/Biological Sciences/Physical Sciences/ Agricultural Sciences/Medical Sciences/Food Science & Technology/Engineering.

Admission will be based on the the merit list prepared by adding 50% of the marks obtained in the qualifying exams at graduate level and 50% marks obtained in the Entrance Test.

**Note:** The Department adheres to RUSA scheme of MHRD.

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**Brief of Department-** The Department of Biotechnology, Punjabi University, Patiala was established under the aegis of University Grants Commission, New Delhi in 1987. The Department of Biotechnology (DBT), Govt. of India, New Delhi accorded recognition to its M.Sc. course in the academic session 1993-94. To meet the growing HRD requirements of the food and agro based industries, the department also started a Diploma course in Microbial and Food Technology from the academic session 1991-92 which was raised to a full-fledged M.Sc. course, funded by Govt. of Punjab, from the session 1994-95. In addition to two M.Sc. Hon's programmes, department has successfully completed the Interdisciplinary Programme in Life Sciences (IPLS) scheme granted by DBT, Govt. of India. The department has a faculty of eight highly qualified teachers who are working in thrust areas of Food and Fermentation Biotechnology, Medical Biotechnology and Environmental Biotechnology. The research efforts of the faculty members have been strengthened as it has been recognized under the FIST programme of DST, Govt. of India from 2003-08. Many major research projects have been awarded to the department by various funding agencies like AICTE, CSIR, DBT, DST, DRDO, ICAR-NAIP and UGC etc. The

department is actively engaged in the research work and has more than 500 publications with high impact factors and some patents to its credit. The faculty members are involved in various collaborative projects with national Institutes such as IIIM, Jammu; PGI, Chandigarh; AIIMS, New Delhi; IARI, Delhi; IIT, Delhi and International Institutes such as University of Aberdeen, UK; Chembiotech Laboratories, UK; Deakin University and Griffith University, Australia. Various faculty members are providing consultancy to industries of Punjab. Facilities like cold room; culture room; fermentation technology, downstream processing, molecular biology and genetic engineering, nanotechnology laboratories etc. are equipped with sophisticated instruments such as HPLC, FPLC, HP-TLC, Freeze Dryer, Rota-Vac, Electrochemical stations, Fiberoptic spectrometer, Uv-Vis and Vis spectrometers, PCRs, RT-PCRs, Genetic Analyzer, Microplate Reader, Zeta sizer, Fermentors, Ultrasonic Processors, Gel -DOC, Ultracentrifuge, BOD-Incubators, CO2 Incubators and Deep Freezers etc. of more than 1 crore. The department has a well established Bio-informatics lab with internet facility and softwares such as Biomed Cache, ChemDraw, T-sar, Gencheck, Exiom Horizon. 10 state of the art Work stations were added in the year 2014. All the classrooms are equipped with LCD Projectors for teaching and seminars. Department has an in-house library with specialized books for teaching and research activities. An IPR club was also established in collaboration with Punjab State Council for Science & Technology. The students of the department are placed in various industries, academic and research organizations of national as well as international repute.

## 7.2 DEPARTMENT OF BOTANY

### FACULTY

#### Professors

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|-------------------------------|--------------------|
| 1. Jasvir Inder Singh, Ph.D.  | <b>Head</b>        |
| 2. Munruchi Kaur, Ph. D.      |                    |
| 3. Davinder Pal Singh, Ph. D. |                    |
| 4. R.C. Gupta, Ph.D.          | <b>Re-employed</b> |
| 5. N.S. Atri, Ph.D.           | <b>Re-employed</b> |
| 6. M.I.S. Saggoo, Ph.D.       | <b>Re-employed</b> |
| 7. Amarjit Singh, Ph.D.       | <b>Re-employed</b> |

#### Assistant Professors

1. Manish Kapoor, Ph.D.
2. Geetika Sirhindi, Ph. D.
3. Arneet Grewal, Ph. D.
4. Avneet Pal Singh, Ph. D.

### COURSES

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| <p><b>1. M.Sc. Hon's Botany (2 years)</b></p> <p>Pre-requisite: B.Sc. with Botany or B.Sc. (Hons. School in Botany). Admission will be based on <b>Entrance Test</b>. Detailed Syllabus is attached as Annexure.</p> <p>Career Options: Teaching, Research.</p>                                      | Student Intake: 30 |
| <p><b>2. M.Sc. Hon's in Botany (FYIC)</b></p> <p>Pre-requisite: 10+2 (Medical). Admission will be based on the merit of NEET- 2018, CBSE, New Delhi Entrance Test. If seats remain vacant then admission will be based on the basis of merit of 10+2.</p> <p>Career Options: Teaching, Research.</p> | Student Intake: 20 |
| <p><b>3. M.Phil. (1½ years)</b></p> <p>Pre-requisite: M.Sc. Botany</p> <p>Career Options: Teaching, Research.</p>  | Student Intake: 10 |

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### 7.3 DEPARTMENT OF HUMAN GENETICS

#### FACULTY

##### Professors

1. Satbir Kaur, Ph.D.
2. S.M.S. Chahal, Ph.D.
3. Promila Mehta, Ph.D.

**Head**  
*Re-employed*  
*Re-employed*

##### Assistant Professors

1. Rupinder Kaur, Ph.D.
2. Rajinder Kaur, Ph.D.
3. Ginjinder Kaur, Ph.D.
4. Puneetpal Singh, Ph.D.

#### COURSES

**1. M.Sc. Human Genetics (2 years)**

Student Intake: 30

Pre-requisite: B.Sc. with any of the following subjects: Botany, Zoology, Chemistry, Anthropology, Anatomy, Physiology, Micro-Biology, Bio-Chemistry, Human Genetics, Bio-informatics.

Career Options: Teaching, Research.

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## 7.4 DEPARTMENT OF ZOOLOGY AND ENVIRONMENTAL SCIENCES

### FACULTY

#### Professors

1. Devinder Singh, Ph.D.
2. Suman Sharma, Ph.D.
3. Harbhajan Kaur, Ph.D.
4. Jagbir Singh, Ph.D.

**Head**  
**Re-employed**  
**Re-employed**

#### Associate Professor

1. Navpreet Kaur Gill, Ph.D. (On Leave)

#### Assistant Professors

1. Harpreet Kaur, Ph.D. (on Leave)
2. Himender Bharti, Ph.D.
3. Onkar Singh Brraich, Ph.D.
4. Gurinder Kaur Walia, Ph.D.
5. Amritpal Singh, Ph.D.
6. Madhu Bala, Ph.D.

### COURSES

|   |                    |
|---|--------------------|
| <p><b>1. M.Sc. Zoology (2 years)</b></p> <p>Pre-requisite: B.Sc. with Zoology or B.Sc. (Hons. School in Zoology) or B.Sc. (Industrial fish and fisheries) with Zoology as one of the subjects.</p> <p>Career Options: Teaching, Research.</p> | Student Intake: 45 |
| <p><b>2. M.Sc. Environmental Sciences (2 years)</b></p> <p>Pre-requisite: Graduation with one subject of Biological Sciences.</p>   | Student Intake: 10 |
| <p><b>3. M.Phil. (1½ years)</b></p> <p>Pre-requisite: M.Sc. Zoology (Only M.Sc. Zoology students are eligible for M.Phil Zoology course)</p>  | Student Intake: 10 |

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