

# JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY

(Established by H.P. State Legislature vide Act No. 14 of 2002)

Date:

## Department of Biotechnology and Bioinformatics

A meeting of Board of Studies (BoS) of the **Department of Biotechnology and Bioinformatics** was held as per the following schedule

|                         |  |                                   |  |
|-------------------------|--|-----------------------------------|--|
| <b>Meeting Name:</b>    | Board of Studies –Department of Biotechnology and Bioinformatics |                                   |  |
| <b>Date of Meeting:</b> | 17.06.2024   | <b>Time:9:15-10 AM</b>            |  |
| <b>Chairman:</b>        | Prof. (Dr.) Sudhir Kumar   | <b>Location: Board and Online</b> |  |

### **1. Meeting Objective: BoS meeting of Deptt of Biotechnology and Bioinformatics**

#### **2(a). Meeting Attendees: The following members were present**

|   |                              |
|---|------------------------------|
| Prof. Sudhir Kumar, HOD, Department of Biotechnology and Bioinformatics               | Chairman                     |
| Dr. Anil Kant, Associate Prof, Department of Biotechnology and Bioinformatics         | Member Secretary/Coordinator |
| Prof. T.C. Bhalla Ex-Professor Emeritus Department of Biotechnology HPU Shimla        | External Member (Academic)   |
| Prof. G.P.S. Raghava, Prof and Head, Deptt of Computational Biology, IIIT-Dehli       | External Member (Academic)   |
| Prof. Sunil Kumar Khah, Incharge IQAC, JUIT   | Member                       |
| Dr Tiratha Raj Singh, Professor, Department of Biotechnology and Bioinformatics       | Member                       |
| Dr Jata Shankar, Professor, Department of Biotechnology and Bioinformatics            | Member                       |
| Dr Rahul Shrivastava, Associate Prof, Department of Biotechnology and Bioinformatics  | Member                       |
| Dr Udaybanu M, Associate Prof, Department of Biotechnology and Bioinformatics         | Member                       |
| Dr Poonam Sharma, Associate Prof, Department of Biotechnology and Bioinformatics      | Member                       |
| Dr Jitendraa Vashistt, Associate Prof, Department of Biotechnology and Bioinformatics | Member                       |
| Dr Hemant Sood, Associate Prof, Department of Biotechnology and Bioinformatics        | Member                       |

# JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY

(Established by H.P. State Legislature vide Act No. 14 of 2002)

|  |                               |
|--|-------------------------------|
|  |                               |
| Dr Saurabh Bansal, Associate Prof, Department of Biotechnology and Bioinformatics                        | Member                        |
| Dr Gopal Bisht, Associate Prof, Department of Biotechnology and Bioinformatics                           | Member                        |
| Dr V. Garlapati Vijay Kumar, Associate Prof, Department of Biotechnology and Bioinformatics              | Member                        |
| Dr Ashok Kumar Nadda, Assistant Prof., Department of Biotechnology and Bioinformatics                    | Member                        |
| Mr. Aditya Sahni, JUIT Alumni, Founder of ELEM, India (Industry Expert)                                  | External Member (JUIT Alumni) |
| HOD, Department of Electronics & Communication Engineering   | Member                        |
| HOD, Department of Physics and Material Science  | Member                        |
| HOD, Department of Civil Engineering   | Member                        |
| <b>2 (b). Leave of Absence: The following members were granted leave of absence by the Chairman, BOS</b> |                               |
| HOD, Department of Computer Science & Engineering  | Member                        |
| HOD, Department of Humanities and Social Sciences  | Member                        |
| HOD, Department of Mathematics   | Member                        |
| Dr. Shruti Jain  | Member                        |

Dr Anil Kant offered a welcome note to the members, Prof. Sudhir Kumar addressed the house and welcomed all the members of BoS. Dr. Anil Kant invited Dr Udayabanu, B.Tech. Program coordinator, Dr Rahul Shrivstava M.Sc. Microbiology Program coordinator to present the agenda pertaining to their respective program. Dr Anil Kant presented agenda details regarding the M.Sc Biotechnology program. Dr. Udayabanu M. presented details regarding B.Tech. Biotechnology & B.Tech. Bioinformatics course structure.

# JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY

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### 3. Action Items / Instructions: Following decisions were taken/approved by the members of BoS.

**Agenda Item 3(a) To consider and approve modification and restructuring of the course curriculum of B.Tech Biotechnology.**

#### Existing Courses in B.Tech Biotechnology Semester I

| SEMESTER - 1 |                              |              |  |              |   |   |             |                 |
|--------------|------------------------------|--------------|--|--------------|---|---|-------------|-----------------|
| S. No.       | Course Category              | Subject Code | Name of the Subjects   | Course Hours |   |   | Credits     | Total Hours     |
|              |                              |              |  | L            | T | P |             |                 |
| 1            | Humanities & Social Sciences | 21B11HS111   | English  | 2            | 0 | 0 | 2           | 2               |
|              |                              | 21B17HS171   | English Lab  | 0            | 0 | 2 | 1           | 2               |
| 2            | Basic Science                |              | Basic Mathematics I (3-1-0) - 4 Credits/ Fundamental Biology & Fundamental Biology Lab |              |   |   | 4           | 4 or 5          |
| 3            | Basic Sciences               | 18B11PH112   | Basic Engineering Physics-I  | 3            | 1 | 0 | 4           | 4               |
| 4            | Engg Science                 | 19B11CI111   | Programming for Problem Solving-2  | 2            | 0 | 0 | 2           | 2               |
| 5            | Engg Science                 | 18B17GE173   | Engineering Graphics   | 0            | 0 | 3 | 1.5         | 3               |
| 6            | Basic Sciences               | 18B17PH172   | Basic Engineering Physics Lab-I  | 0            | 0 | 2 | 1           | 2               |
| 7            | Engg Science                 | 19B17CI171   | Programming for Problem Solving Lab-2  | 0            | 0 | 4 | 2           | 4               |
|              |                              |              | <b>TOTAL</b>   |              |   |   | <b>17.5</b> | <b>23 or 24</b> |

#### Existing Courses in B.Tech Biotechnology Semester 1

**Modified & Approved by BoS**

#### B.Tech Biotechnology Semester I

| S. No. | Course Category              | New / Revised | Subject Code | Name of the Subjects                          | Course Hours |   |   |   | Credits     | Total Hours  |
|--------|------------------------------|---------------|--------------|---|--------------|---|---|---|-------------|--------------|
|        |                              |               |              |   | L            | T | P | S |             |              |
| 1      | Humanities & Social Sciences |               |              | English                                       | 2            | 0 | 0 |   | 2           | 2            |
| 2      | Humanities & Social Sciences |               |              | English Lab                                   | 0            | 0 | 2 |   | 1           | 2            |
| 3      | Basic Sciences               | New           |              | Mathematics for Life Sciences I <b>OR</b>     | 3            | 1 | 0 |   | 4           | 4            |
| 4      | Basic Sciences               |               |              | Fundamental Biology                           | 3            | 0 | 0 |   | 3           | 3            |
| 5      | Basic Sciences               |               |              | Fundamental Biology Lab                       | 0            | 0 | 2 |   | 1           | 2            |
| 6      | Basic Sciences               |               |              | Basic Engineering Physics                     | 3            | 1 | 0 |   | 4           | 4            |
| 7      | Engg Science                 | Revised       |              | Problem Solving and Programming               | 3            | 0 | 0 |   | 3           | 3            |
| 8      | Engg Science                 |               |              | Engineering Graphics                          | 0            | 0 | 3 |   | 1.5         | 3            |
| 9      | Basic Sciences               |               |              | Basic Engineering Physics Lab                 | 0            | 0 | 2 |   | 1           | 2            |
| 10     | Engg Science                 | Revised       |              | Problem Solving and Programming Lab           | 0            | 0 | 2 |   | 1           | 2            |
| 11     | Project                      |               |              | Project                                       | 0            | 0 | 2 | 2 | 1           | 2            |
| 12     | Mandatory Course             |               |              | Mandatory Induction Program (including UHV-1) |              |   |   |   |             | 2 Weeks      |
|        |                              |               |              | <b>TOTAL</b>                                  |              |   |   |   | <b>18.5</b> | <b>24/25</b> |

# JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY

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## Existing Courses in B.Tech Biotechnology Semester II

| S. No.       | Course Category              | Subject Code | Name of the Subjects                             | Course Hours |   |   | Credits     | Total Hours |
|--------------|------------------------------|--------------|--|--------------|---|---|-------------|-------------|
|              |                              |              |  | L            | T | P |             |             |
| 1            | Humanities & Social Sciences | 23B11HS211   | Universal Human Values II: Understanding Harmony | 2            | 1 | 0 | 3           | 3           |
| 2            | Humanities & Social Sciences | 23B11HS212   | Professional Communication Practice              | 0            | 0 | 2 | Audit       | 2           |
| 3            | Basic Science                | 18B11MA212   | Basic Mathematics II                             | 3            | 1 | 0 | 4           | 4           |
| 4            | Basic Sciences               | 18B11PH212   | Bioinstrumentation Techniques                    | 3            | 1 | 0 | 4           | 4           |
| 5            | Engg Science                 | 18B11EC212   | Basic Electrical Sciences                        | 3            | 1 | 0 | 4           | 4           |
| 6            | Engg Science                 | 18B17EC272   | Basic Electrical Sciences lab                    | 0            | 0 | 2 | 1           | 2           |
| 7            | Engg Science                 | 18B11CI211   | Data Structure & Algorithms                      | 3            | 1 | 0 | 4           | 4           |
| 8            | Engg Science                 | 18B17CI271   | Data Structure & Algorithms Lab                  | 0            | 0 | 4 | 2           | 4           |
| 9            | Engg Science                 | 18BI7GE171   | Workshop Practices                               | 0            | 0 | 3 | 1.5         | 3           |
| <b>TOTAL</b> |                              |              |  |              |   |   | <b>23.5</b> | <b>30</b>   |

## Modified & Approved by BoS

### B.Tech Biotechnology Semester II

#### SEMESTER - II

| S. No.       | Course Category              | New / Revised | Subject Code | Name of the Subjects                        | Course Hours |   |   |   | Credits     | Total Hours |
|--------------|------------------------------|---------------|--------------|---|--------------|---|---|---|-------------|-------------|
|              |                              |               |              |   | L            | T | P | S |             |             |
| 1            | Humanities & Social Sciences |               |              | UHV II: Understanding Harmony               | 2            | 1 | 0 |   | 3           | 3           |
| 2            | Humanities & Social Sciences |               |              | Professional Communication Practice (AUDIT) | 0            | 1 | 0 |   | 0           | 1           |
| 3            | Basic Sciences               | New           |              | Mathematics for Life Sciences II            | 3            | 1 | 0 |   | 4           | 4           |
| 4            | Basic Sciences               |               |              | Bioinstrumentation Techniques               | 3            | 1 | 0 |   | 4           | 4           |
| 5            | Engg Science                 |               |              | Basic Electrical Sciences                   | 3            | 1 | 0 |   | 4           | 4           |
| 6            | Engg Science                 |               |              | Basic Electrical Sciences lab               | 0            | 0 | 2 |   | 1           | 2           |
| 7            | Engg Science                 |               |              | Data Structure & Algorithms                 | 3            | 0 | 0 |   | 3           | 3           |
| 8            | Engg Science                 |               |              | Data Structure & Algorithms Lab             | 0            | 0 | 4 |   | 2           | 4           |
| 9            | Engg Science                 |               |              | Workshop Practices                          | 0            | 0 | 3 |   | 1.5         | 3           |
| 10           | Project                      |               |              | Project                                     | 0            | 0 | 2 | 2 | 1           | 2           |
| <b>TOTAL</b> |                              |               |              |   |              |   |   |   | <b>23.5</b> | <b>30</b>   |

# JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY

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## Existing Courses in B.Tech Biotechnology Semester III

### SEMESTER-III

| S. No. | Course Category              | Subject Code | Name of the Subjects                    | Course Hours |   |   | Credits   | Total Hours |
|--------|------------------------------|--------------|---|--------------|---|---|-----------|-------------|
|        |                              |              |   | L            | T | P |           |             |
| 1      | Humanities & Social Sciences | 23B11HS311   | Life Skills and Interpersonal Dynamics  | 2            | 1 | 0 | 3         | 3           |
| 2      | Basic Sciences               | 18B11MA312   | Probability & Statistical Techniques    | 3            | 1 | 0 | 4         | 4           |
| 3      | Professional Core            |              | Genetics                                | 3            | 1 | 0 | 4         | 4           |
| 4      | Professional Core            | 18B11BT312   | Biochemistry                            | 3            | 0 | 0 | 3         | 3           |
| 5      | Engg Science                 | 18B11BT313   | Thermodynamics & Chemical Processes     | 3            | 1 | 0 | 4         | 4           |
| 6      | Basic Sciences               | 18B11BT314   | General Chemistry                       | 3            | 0 | 0 | 3         | 3           |
| 7      | Professional Core            | 18B17BT371   | Genetics Lab.                           | 0            | 0 | 2 | 1         | 2           |
| 8      | Professional Core            | 18B17BT372   | Biochemistry Lab                        | 0            | 0 | 2 | 1         | 2           |
| 9      | Engg Science                 | 18B17BT373   | Thermodynamics & Chemical Processes lab | 0            | 0 | 2 | 1         | 2           |
| 10     | Basic Sciences               | 18B17BT374   | General Chemistry Lab                   | 0            | 0 | 2 | 1         | 2           |
|        |                              |              | <b>TOTAL</b>                            |              |   |   | <b>25</b> | <b>29</b>   |

### Modified & Approved by BoS

### B.Tech Biotechnology Semester III

### SEMESTER -III

| S. No | Course Category              | New / Revised | Subject Code | Name of the Subjects                    | Course Hours |   |   |   | Credits   | Total Hours |
|-------|------------------------------|---------------|--------------|---|--------------|---|---|---|-----------|-------------|
|       |                              |               |              |   | L            | T | P | S |           |             |
| 1     | Humanities & Social Sciences |               |              | Life Skills and Interpersonal Dynamics  | 2            | 1 | 0 |   | 3         | 3           |
| 2     | Basic Sciences               | New           |              | Probability & Statistical Methods       | 2            | 0 | 0 |   | 2         | 2           |
| 3     | Basic Sciences               | New           |              | Probability & Statistical Methods Lab   | 0            | 0 | 2 |   | 1         | 2           |
| 4     | Professional Core Course     |               |              | Genetics                                | 3            | 0 | 0 |   | 3         | 3           |
| 5     | Professional Core Course     | Revised       |              | Biochemistry                            | 3            | 0 | 0 |   | 3         | 3           |
| 6     | Engg Science                 | Revised       |              | Thermodynamics & Chemical Processes     | 3            | 0 | 0 |   | 3         | 3           |
| 7     | Professional Core Course     | New           |              | Chemistry for Life Sciences             | 3            | 0 | 0 |   | 3         | 3           |
| 8     | Professional Core Course     |               |              | Genetics Lab.                           | 0            | 0 | 2 |   | 1         | 2           |
| 9     | Professional Core Course     | Revised       |              | Biochemistry Lab                        | 0            | 0 | 2 |   | 1         | 2           |
| 10    | Engg Science                 | Revised       |              | Thermodynamics & Chemical Processes lab | 0            | 0 | 2 |   | 1         | 2           |
| 11    | Professional Core Course     | New           |              | Chemistry for Life Sciences Lab         | 0            | 0 | 2 |   | 1         | 2           |
| 12    | Project                      |               |              | Project                                 | 0            | 0 | 2 | 2 | 1         | 2           |
|       |                              |               |              | <b>TOTAL</b>                            |              |   |   |   | <b>23</b> | <b>29</b>   |

# JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY

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| <b>Existing Courses in B.Tech Biotechnology Semester IV</b> |                              |              |   |              |   |   |           |             |
|---|------------------------------|--------------|---|--------------|---|---|-----------|-------------|
| <b>SEMESTER- IV</b>   |                              |              |   |              |   |   |           |             |
| Sr. No  | Course Category              | Subject Code | Name of the Subjects                      | Course Hours |   |   | Credits   | Total Hours |
|   |                              |              |   | L            | T | P |           |             |
| 1   | Humanities & Social Sciences | 18B11HS411   | Finance and Accounts                      | 3            | 0 | 0 | 3         | 3           |
| 2   | Professional Core            | 18B11BT411   | Cell Biology and Culture Technologies     | 3            | 1 | 0 | 4         | 4           |
| 3   | Professional Core            | 18B11BT412   | Molecular Biology                         | 3            | 0 | 0 | 3         | 3           |
| 4   | Professional Core            | 18B11BT413   | Introduction to Bioinformatics            | 3            | 1 | 0 | 4         | 4           |
| 5   | Professional Core            | 18B11BT414   | Microbiology                              | 3            | 1 | 0 | 4         | 4           |
| 6   | Professional Core            | 18B17BT471   | Cell Biology and Culture Technologies lab | 0            | 0 | 2 | 1         | 2           |
| 7   | Professional Core            | 18B17BT472   | Molecular Biology Lab                     | 0            | 0 | 2 | 1         | 2           |
| 8   | Professional Core            | 18B17BT473   | Introduction to Bioinformatics lab        | 0            | 0 | 2 | 1         | 2           |
| 9   | Professional Core            | 18B17BT474   | Microbiology Lab                          | 0            | 0 | 2 | 1         | 2           |
| 10  | Mandatory Course             | 18B11GE411   | Environmental Studies                     | 2            | 0 | 0 | 2         | 2           |
| <b>TOTAL</b>  |                              |              |   |              |   |   | <b>24</b> | <b>28</b>   |

**Modified & Approved by BoS  
B.Tech Biotechnology Semester IV**

| <b>SEMESTER - IV</b> |                              |               |              |   |              |   |   |           |           |             |
|----------------------|------------------------------|---------------|--------------|---|--------------|---|---|-----------|-----------|-------------|
| S. No                | Course Category              | New / Revised | Subject Code | Name of the Subjects                      | Course Hours |   |   |           | Credits   | Total Hours |
|                      |                              |               |              |   | L            | T | P | S         |           |             |
| 1                    | Humanities & Social Sciences |               |              | Finance and Accounts                      | 3            | 0 | 0 |           | 3         | 3           |
| 2                    | Professional Core Course     | Revised       |              | Cell Biology and Culture Technologies     | 3            | 0 | 0 |           | 3         | 3           |
| 3                    | Professional Core Course     | Revised       |              | Molecular Biology                         | 3            | 0 | 0 |           | 3         | 3           |
| 4                    | Professional Core Course     |               |              | Introduction to Bioinformatics            | 3            | 1 | 0 |           | 4         | 4           |
| 5                    | Professional Core Course     | Revised       |              | Microbiology                              | 3            | 0 | 0 |           | 3         | 3           |
| 6                    | Professional Core Course     | Revised       |              | Cell Biology and Culture Technologies lab | 0            | 0 | 2 |           | 1         | 2           |
| 7                    | Professional Core Course     | Revised       |              | Molecular Biology Lab                     | 0            | 0 | 2 |           | 1         | 2           |
| 8                    | Professional Core Course     |               |              | Introduction to Bioinformatics lab        | 0            | 0 | 2 |           | 1         | 2           |
| 9                    | Professional Core Course     |               |              | Microbiology Lab                          | 0            | 0 | 2 |           | 1         | 2           |
| 10                   | Engg Science                 |               |              | Environmental Studies                     | 2            | 0 | 0 |           | 2         | 2           |
| 11                   | Project                      |               |              | Project                                   | 0            | 0 | 2 | 2         | 1         | 2           |
| <b>TOTAL</b>         |                              |               |              |   |              |   |   | <b>23</b> | <b>28</b> |             |

# JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY

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## Existing Courses in B.Tech Biotechnology Semester V

| SEMESTER-V |                              |              |   |              |   |   |           |             |
|------------|------------------------------|--------------|---|--------------|---|---|-----------|-------------|
| S. Nno     | Course Category              | Subject Code | Name of the Subjects                    | Course Hours |   |   | Credits   | Total Hours |
|            |                              |              |   | L            | T | P |           |             |
| 1          | Humanities & Social Sciences | 18B11HS511   | Project Management and Entrepreneurship | 3            | 0 | 0 | 3         | 3           |
| 2          | Professional Core            | 18B11BT511   | Bioprocess Engineering                  | 3            | 1 | 0 | 4         | 4           |
| 3          | Professional Core            | 18B11BT512   | Genetic Engineering                     | 3            | 1 | 0 | 4         | 4           |
| 4          | Professional Core            | 18B11BT513   | Immunology                              | 3            | 1 | 0 | 4         | 4           |
| 5          | Professional Core            | 18B17BT571   | Bioprocess Engineering Lab              | 0            | 0 | 2 | 1         | 2           |
| 6          | Professional Core            | 18B17BT572   | Genetic Engineering Lab                 | 0            | 0 | 2 | 1         | 2           |
| 7          | Professional Core            | 18B17BT573   | Immunology Lab                          | 0            | 0 | 2 | 1         | 2           |
| 8          | Professional Elective        |              | Departmental Elective-I                 | 3            | 0 | 0 | 3         | 3           |
| 9          | Project                      | 18B19BT591   | Minor Project Part-I                    | 0            | 0 | 2 | 1         | 2           |
|            |                              |              | <b>TOTAL</b>                            |              |   |   | <b>22</b> | <b>26</b>   |

## Modified & Approved by BoS

### B.Tech Biotechnology Semester V

| SEMESTER - V |                              |               |              |   |              |   |   |   |           |             |
|--------------|------------------------------|---------------|--------------|---|--------------|---|---|---|-----------|-------------|
| S. No        | Course Category              | New / Revised | Subject Code | Name of the Subjects                    | Course Hours |   |   |   | Credits   | Total Hours |
|              |                              |               |              |   | L            | T | P | S |           |             |
| 1            | Humanities & Social Sciences |               |              | Project Management and Entrepreneurship | 3            | 0 | 0 |   | 3         | 3           |
| 2            | Professional Core Course     | Revised       |              | Bioprocess Engineering                  | 3            | 1 | 0 |   | 4         | 4           |
| 3            | Professional Core Course     | Revised       |              | Genetic Engineering                     | 3            | 1 | 0 |   | 4         | 4           |
| 4            | Professional Core Course     | Revised       |              | Immunology                              | 3            | 1 | 0 |   | 4         | 4           |
| 5            | Professional Core Course     | Revised       |              | Bioprocess Engineering Lab              | 0            | 0 | 2 |   | 1         | 2           |
| 6            | Professional Core Course     |               |              | Genetic Engineering Lab                 | 0            | 0 | 2 |   | 1         | 2           |
| 7            | Professional Core Course     | Revised       |              | Immunology Lab                          | 0            | 0 | 2 |   | 1         | 2           |
| 8            | professional Elective        |               |              | PE-I                                    | 3            | 0 | 0 |   | 3         | 3           |
| 10           | Project                      |               |              | Project                                 | 0            | 0 | 4 | 2 | 2         | 4           |
|              |                              |               |              | <b>TOTAL</b>                            |              |   |   |   | <b>23</b> | <b>28</b>   |

# JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY

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## Existing Courses in B.Tech Biotechnology Semester VI

### SEMESTER-VI

| S. No        | Course Category       | Subject Code | Name of the Subjects                    | Course Hours |   |   | Credits   | Total Hours |
|--------------|-----------------------|--------------|---|--------------|---|---|-----------|-------------|
|              |                       |              |   | L            | T | P |           |             |
| 1            | Professional Core     | 18B11BT611   | Downstream Processing                   | 3            | 1 | 0 | 4         | 4           |
| 2            | Professional Core     | 18B11BT612   | Food and Agricultural Biotechnology     | 3            | 0 | 0 | 3         | 3           |
| 3            | Professional Core     | 18B17BT671   | Downstream Processing Lab.              | 0            | 0 | 2 | 1         | 2           |
| 4            | Professional Core     | 18B17BT672   | Food and Agricultural Biotechnology Lab | 0            | 0 | 2 | 1         | 2           |
| 5            | Professional Elective |              | Departmental Elective- II               | 3            | 0 | 0 | 3         | 3           |
| 6            | Professional Elective |              | Departmental Elective-III               | 3            | 0 | 0 | 3         | 3           |
| 7            | Open Elective         |              | Open Elective-I (HSS)                   | 3            | 0 | 0 | 3         | 3           |
| 8            | Open Elective         |              | Open Elective-II                        | 3            | 0 | 0 | 3         | 3           |
| 9            | Project               | 18B19BT691   | Minor Project Part-II                   | 0            | 0 | 4 | 2         | 4           |
| 10           | Mandatory Course      |              | Industrial Training                     |              |   |   | Audit     |             |
| <b>TOTAL</b> |                       |              |   |              |   |   | <b>23</b> | <b>27</b>   |

## Modified & Approved by BoS

### B.Tech Biotechnology Semester VI

#### SEMESTER - VI

| S. No        | Course Category          | New / Revised | Subject Code | Name of the Subjects                  | Course Hours |   |   |           | Credits   | Total Hours |
|--------------|--------------------------|---------------|--------------|---------------------------------------|--------------|---|---|-----------|-----------|-------------|
|              |                          |               |              |                                       | L            | T | P | S         |           |             |
| 1            | Professional Core Course | Revised       |              | Downstream Processing                 | 3            | 0 | 0 |           | 3         | 3           |
| 2            | Professional Core Course | New           |              | Food Technology                       | 3            | 0 | 0 |           | 3         | 3           |
| 3            | Professional Core Course | Revised       |              | Downstream Processing Lab.            | 0            | 0 | 2 |           | 1         | 2           |
| 4            | Professional Core Course | New           |              | Food Technology Lab                   | 0            | 0 | 2 |           | 1         | 2           |
| 5            | professional Elective    |               |              | PE-II                                 | 3            | 0 | 0 |           | 3         | 3           |
| 6            | professional Elective    |               |              | PE-III                                | 3            | 0 | 0 |           | 3         | 3           |
| 7            | Open Elective            |               |              | OE-I (HSS)                            | 3            | 0 | 0 |           | 3         | 3           |
| 8            | Open Elective            |               |              | OE-II                                 | 3            | 0 | 0 |           | 3         | 3           |
| 9            | Project                  |               |              | Project                               | 0            | 0 | 4 | 2         | 2         | 4           |
| 10           | Mandatory Course         |               |              | Soft Skills for Professionals (Audit) | 0            | 1 | 0 |           | 0         | 1           |
| 11           | Mandatory Course         |               |              | Industrial Training                   |              |   |   |           | Audit     |             |
| <b>TOTAL</b> |                          |               |              |                                       |              |   |   | <b>22</b> | <b>27</b> |             |



# JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY

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## Existing Courses in B.Tech Biotechnology Semester VII

| SEMESTER-VII |                       |              |                           |              |   |    |           |             |
|--------------|-----------------------|--------------|---------------------------|--------------|---|----|-----------|-------------|
| Sr. No.      | Course Category       | Subject Code | Name of the Subjects      | Course Hours |   |    | Credits   | Total Hours |
|              |                       |              |                           | L            | T | P  |           |             |
| 1            | Professional Elective |              | Departmental Elective-I V | 3            | 0 | 0  | 3         | 3           |
| 2            | Open Elective         |              | Open Elective - III       | 3            | 0 | 0  | 3         | 3           |
| 3            | Open Elective         |              | Open Elective - IV        | 3            | 0 | 0  | 3         | 3           |
| 4            | Project               | 18B19BT791   | Major Project Part I      | 0            | 0 | 10 | 5         | 10          |
| 5            | HSS                   |              | Indian Constitution       | 1            | 0 | 0  | Audit     | 1           |
| <b>TOTAL</b> |                       |              |                           |              |   |    | <b>14</b> | <b>20</b>   |

Approved by BoS

**B.Tech Biotechnology Semester VII**

## SEMESTER - VII

| S. No        | Course Category       | New / Revised | Subject Code | Name of the Subjects | Course Hours |   |   |           | Credits   | Total Hours |
|--------------|-----------------------|---------------|--------------|----------------------|--------------|---|---|-----------|-----------|-------------|
|              |                       |               |              |                      | L            | T | P | S         |           |             |
| 1            | professional Elective |               |              | PE-IV                | 3            | 0 | 0 |           | 3         | 3           |
| 2            | professional Elective |               |              | PE-V                 | 3            | 0 | 0 |           | 3         | 3           |
| 3            | Open Elective         |               |              | OE-III               | 3            | 0 | 0 |           | 3         | 3           |
| 4            | Open Elective         |               |              | OE-IV                | 3            | 0 | 0 |           | 3         | 3           |
| 5            | Project               |               |              | Project              | 0            | 0 | 8 |           | 4         | 8           |
| 6            | Mandatory Course      |               |              | Indian Constitution  | 1            | 0 | 0 |           | Audit     | 1           |
| <b>TOTAL</b> |                       |               |              |                      |              |   |   | <b>16</b> | <b>21</b> |             |

# JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY

(Established by H.P. State Legislature vide Act No. 14 of 2002)

## Existing Courses in B.Tech Biotechnology Semester VIII

### SEMESTER-VIII

| Sr.No.       | Course Category       | Subject Code | Name of the Subjects      | Course Hours |   |    | Credits   | Total Hours |
|--------------|-----------------------|--------------|---------------------------|--------------|---|----|-----------|-------------|
|              |                       |              |                           | L            | T | P  |           |             |
| 1            | Professional Elective |              | Departmental Elective- V  | 3            | 0 | 0  | 3         | 3           |
| 2            | Professional Elective |              | Departmental Elective- VI | 3            | 0 | 0  | 3         | 3           |
| 3            | Open Elective         |              | Open Elective-V           | 3            | 0 | 0  | 3         | 3           |
| 4            | Project               | 18B19BT891   | Major Project Part II     | 0            | 0 | 14 | 7         | 14          |
| <b>TOTAL</b> |                       |              |                           |              |   |    | <b>16</b> | <b>23</b>   |

## Modified & Approved by BoS

### B.Tech Biotechnology Semester VIII

### SEMESTER - VIII

| S. No | Course Category       | New / Revised | Subject Code | Name of the Subjects         | Course Hours |   |   |   | Credits   | Total Hours |
|-------|-----------------------|---------------|--------------|------------------------------|--------------|---|---|---|-----------|-------------|
|       |                       |               |              |                              | L            | T | P | S |           |             |
| 1     | Professional Elective |               |              | PE-VI                        | 3            | 0 | 0 |   | 3         | 3           |
| 2     | Open Elective         |               |              | OE-V                         | 3            | 0 | 0 |   | 3         | 3           |
| 3     | Open Elective         |               |              | OE-VI                        | 3            | 0 | 0 |   | 3         | 3           |
| 4     | Project               |               |              | Project                      | 0            | 0 | 8 |   | 4         | 8           |
|       |                       |               |              | <b>TOTAL</b>                 |              |   |   |   | <b>13</b> | <b>17</b>   |
|       |                       |               |              | <b>OR</b>                    |              |   |   |   |           |             |
|       |                       |               |              | <b>Industrial Internship</b> |              |   |   |   | <b>13</b> |             |

#### Item 1a.

Two New Electives were proposed and approved by the BoS

1. Omics Technologies & Data Analysis (3-0-0)
2. Biopharmaceutical Technology (3-0-0)

# JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY

(Established by H.P. State Legislature vide Act No. 14 of 2002)

**Agenda Item 2. To consider and approve modification and restructuring of the course curriculum of B.Tech Bioinformatics.**

**Existing Courses in B.Tech Bioinformatics Semester I**

| SEMESTER - 1 |                              |              |  |              |   |   |             |                 |
|--------------|------------------------------|--------------|--|--------------|---|---|-------------|-----------------|
| S. No.       | Course Category              | Subject Code | Name of the Subjects   | Course Hours |   |   | Credits     | Total Hours     |
|              |                              |              |  | L            | T | P |             |                 |
| 1            | Humanities & Social Sciences | 21B11HS111   | English  | 2            | 0 | 0 | 2           | 2               |
|              |                              | 21B17HS171   | English Lab  | 0            | 0 | 2 | 1           | 2               |
| 2            | Basic Science                |              | Basic Mathematics I (3-1-0) - 4 Credits/ Fundamental Biology & Fundamental Biology Lab |              |   |   | 4           | 4 or 5          |
| 3            | Basic Sciences               | 18B11PH112   | Basic Engineering Physics-I  | 3            | 1 | 0 | 4           | 4               |
| 4            | Engg Science                 | 19B11CI111   | Programming for Problem Solving-2  | 2            | 0 | 0 | 2           | 2               |
| 5            | Engg Science                 | 18B17GE173   | Engineering Graphics   | 0            | 0 | 3 | 1.5         | 3               |
| 6            | Basic Sciences               | 18B17PH172   | Basic Engineering Physics Lab-I  | 0            | 0 | 2 | 1           | 2               |
| 7            | Engg Science                 | 19B17CI171   | Programming for Problem Solving Lab-2  | 0            | 0 | 4 | 2           | 4               |
|              |                              |              | <b>TOTAL</b>   |              |   |   | <b>17.5</b> | <b>23 or 24</b> |

**Existing Courses in B.Tech Bioinformatics Semester I**

**Modified & Approved by BoS**

**B.Tech Bioinformatics Semester I**

| S. No | Course Category              | New / Revised | Subject Code | Name of the Subjects                          | Course Hours |   |   |   | Credits     | Total Hours  |
|-------|------------------------------|---------------|--------------|---|--------------|---|---|---|-------------|--------------|
|       |                              |               |              |   | L            | T | P | S |             |              |
| 1     | Humanities & Social Sciences |               |              | English                                       | 2            | 0 | 0 |   | 2           | 2            |
| 2     | Humanities & Social Sciences |               |              | English Lab                                   | 0            | 0 | 2 |   | 1           | 2            |
| 3     | Basic Sciences               | New           |              | Mathematics for Life Sciences I <b>OR</b>     | 3            | 1 | 0 |   | 4           | 4            |
| 4     | Basic Sciences               |               |              | Fundamental Biology                           | 3            | 0 | 0 |   | 3           | 3            |
| 5     | Basic Sciences               |               |              | Fundamental Biology Lab                       | 0            | 0 | 2 |   | 1           | 2            |
| 6     | Basic Sciences               |               |              | Basic Engineering Physics                     | 3            | 1 | 0 |   | 4           | 4            |
| 7     | Engg Science                 | Revised       |              | Problem Solving and Programming               | 3            | 0 | 0 |   | 3           | 3            |
| 8     | Engg Science                 |               |              | Engineering Graphics                          | 0            | 0 | 3 |   | 1.5         | 3            |
| 9     | Basic Sciences               |               |              | Basic Engineering Physics Lab                 | 0            | 0 | 2 |   | 1           | 2            |
| 10    | Engg Science                 | Revised       |              | Problem Solving and Programming Lab           | 0            | 0 | 2 |   | 1           | 2            |
| 11    | Project                      |               |              | Project                                       | 0            | 0 | 2 | 2 | 1           | 2            |
| 12    | Mandatory Course             |               |              | Mandatory Induction Program (including UHV-1) |              |   |   |   |             | 2 Weeks      |
|       |                              |               |              | <b>TOTAL</b>                                  |              |   |   |   | <b>18.5</b> | <b>24/25</b> |

# JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY

(Established by H.P. State Legislature vide Act No. 14 of 2002)

## Existing Semester II

| S. No.       | Course Category              | Subject Code | Name of the Subjects                             | Course Hours |   |   | Credits     | Total Hours |
|--------------|------------------------------|--------------|--|--------------|---|---|-------------|-------------|
|              |                              |              |  | L            | T | P |             |             |
| 1            | Humanities & Social Sciences | 23B11HS211   | Universal Human Values II: Understanding Harmony | 2            | 1 | 0 | 3           | 3           |
| 2            | Humanities & Social Sciences | 23B11HS212   | Professional Communication Practice              | 0            | 0 | 2 | Audit       | 2           |
| 3            | Basic Science                | 18B11MA212   | Basic Mathematics II                             | 3            | 1 | 0 | 4           | 4           |
| 4            | Basic Sciences               | 18B11PH212   | Bioinstrumentation Techniques                    | 3            | 1 | 0 | 4           | 4           |
| 5            | Engg Science                 | 18B11EC212   | Basic Electrical Sciences                        | 3            | 1 | 0 | 4           | 4           |
| 6            | Engg Science                 | 18B17EC272   | Basic Electrical Sciences lab                    | 0            | 0 | 2 | 1           | 2           |
| 7            | Engg Science                 | 18B11CI211   | Data Structure & Algorithms                      | 3            | 1 | 0 | 4           | 4           |
| 8            | Engg Science                 | 18B17CI271   | Data Structure & Algorithms Lab                  | 0            | 0 | 4 | 2           | 4           |
| 9            | Engg Science                 | 18BI7GE171   | Workshop Practices                               | 0            | 0 | 3 | 1.5         | 3           |
| <b>TOTAL</b> |                              |              |  |              |   |   | <b>23.5</b> | <b>30</b>   |

## Approved & Modified by Bos Semester II

### SEMESTER - II

| S. No.       | Course Category              | New / Revised | Subject Code | Name of the Subjects                        | Course Hours |   |   |             | Credits   | Total Hours |
|--------------|------------------------------|---------------|--------------|---|--------------|---|---|-------------|-----------|-------------|
|              |                              |               |              |   | L            | T | P | S           |           |             |
| 1            | Humanities & Social Sciences |               |              | UHV II: Understanding Harmony               | 2            | 1 | 0 |             | 3         | 3           |
| 2            | Humanities & Social Sciences |               |              | Professional Communication Practice (AUDIT) | 0            | 1 | 0 |             | 0         | 1           |
| 3            | Basic Sciences               | New           |              | Mathematics for Life Sciences II            | 3            | 1 | 0 |             | 4         | 4           |
| 4            | Basic Sciences               |               |              | Bioinstrumentation Techniques               | 3            | 1 | 0 |             | 4         | 4           |
| 5            | Engg Science                 |               |              | Basic Electrical Sciences                   | 3            | 1 | 0 |             | 4         | 4           |
| 6            | Engg Science                 |               |              | Basic Electrical Sciences lab               | 0            | 0 | 2 |             | 1         | 2           |
| 7            | Engg Science                 |               |              | Data Structure & Algorithms                 | 3            | 0 | 0 |             | 3         | 3           |
| 8            | Engg Science                 |               |              | Data Structure & Algorithms Lab             | 0            | 0 | 4 |             | 2         | 4           |
| 9            | Engg Science                 |               |              | Workshop Practices                          | 0            | 0 | 3 |             | 1.5       | 3           |
| 10           | Project                      |               |              | Project                                     | 0            | 0 | 2 | 2           | 1         | 2           |
| <b>TOTAL</b> |                              |               |              |   |              |   |   | <b>23.5</b> | <b>30</b> |             |

# JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY

(Established by H.P. State Legislature vide Act No. 14 of 2002)

Existing Semester III

## SEMESTER-III

| S. No.       | Course Category              | Subject Code | Name of the Subjects                   | Course Hours |   |   | Credits   | Total Hours |
|--------------|------------------------------|--------------|--|--------------|---|---|-----------|-------------|
|              |                              |              |  | L            | T | P |           |             |
| 1            | Humanities & Social Sciences | 23B11HS311   | Life Skills and Interpersonal Dynamics | 2            | 1 | 0 | 3         | 3           |
| 2            | Basic Sciences               | 18B11BI311   | Cell and Molecular Biology             | 3            | 0 | 0 | 3         | 3           |
| 3            | Engg Science                 | 20B11BI311   | Bioinformatics Data Management         | 3            | 1 | 0 | 4         | 4           |
| 4            | Professional Core            | 18B11BI312   | Microbiology & Immune System           | 3            | 1 | 0 | 4         | 4           |
| 5            | Professional Core            | 18B11BI313   | Biological Computation                 | 3            | 1 | 0 | 4         | 4           |
| 6            | Engg Science                 | 20B17BI371   | Bioinformatics Data Management Lab     | 0            | 0 | 2 | 1         | 2           |
| 7            | Basic Sciences               | 18B17BI371   | Cell and Molecular Biology Lab         | 0            | 0 | 2 | 1         | 2           |
| 8            | Professional Core            | 18B17BI372   | Microbiology & Immune System Lab       | 0            | 0 | 2 | 1         | 2           |
| 9            | Professional Core            | 18B17BI373   | Biological Computation Lab             | 0            | 0 | 2 | 1         | 2           |
| 10           | Professional Core            | 18B17BI374   | Linux Lab                              | 0            | 0 | 2 | 1         | 2           |
| <b>TOTAL</b> |                              |              |  |              |   |   | <b>23</b> | <b>28</b>   |

Modified & Approved by Bos Semester III

## SEMESTER - 3

| S. No.       | Course Category              | New / Revised | Subject Code | Name of the Subjects                        | Course Hours |   |   |   | Credits   | Total Hours |
|--------------|------------------------------|---------------|--------------|---|--------------|---|---|---|-----------|-------------|
|              |                              |               |              |   | L            | T | P | S |           |             |
| 1            | Humanities & Social Sciences |               |              | Life Skills and Interpersonal Dynamics      | 2            | 1 | 0 |   | 3         | 3           |
| 2            | Basic Sciences               | New           |              | Probability & Statistical Methods           | 2            | 0 | 0 |   | 2         | 2           |
| 3            | Basic Sciences               | New           |              | Probability & Statistical Methods Lab       | 0            | 0 | 2 |   | 1         | 2           |
| 4            | Professional Core Course     | New           |              | Structural Bioinformatics                   | 3            | 0 | 0 |   | 3         | 3           |
| 5            | Engg Science                 |               |              | Object Oriented Systems and Programming     | 3            | 0 | 0 |   | 3         | 3           |
| 6            | Professional Core Course     |               |              | Microbiology & Immune System                | 3            | 0 | 0 |   | 3         | 3           |
| 7            | Professional Core Course     |               |              | Biological Computation                      | 3            | 0 | 0 |   | 3         | 3           |
| 8            | Engg Science                 |               |              | Object Oriented Systems and Programming Lab | 0            | 0 | 2 |   | 1         | 2           |
| 9            | Professional Core Course     | New           |              | Structural Bioinformatics Lab               | 0            | 0 | 2 |   | 1         | 2           |
| 10           | Professional Core Course     |               |              | Biological Computation Lab                  | 0            | 0 | 2 |   | 1         | 2           |
| 11           | Professional Core Course     |               |              | Linux Lab                                   | 0            | 0 | 2 |   | 1         | 2           |
| 12           | Project                      |               |              | Project                                     |              |   | 2 | 2 | 1         | 2           |
| <b>TOTAL</b> |                              |               |              |   |              |   |   |   | <b>23</b> | <b>29</b>   |

# JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY

(Established by H.P. State Legislature vide Act No. 14 of 2002)

| Existing Semester IV |                   |              |  |              |   |   |           |             |
|----------------------|-------------------|--------------|--|--------------|---|---|-----------|-------------|
| <b>SEMESTER-IV</b>   |                   |              |  |              |   |   |           |             |
| Sr.No.               | Course Category   | Subject Code | Name of the Subjects                         | Course Hours |   |   | Credits   | Total Hours |
|                      |                   |              |  | L            | T | P |           |             |
| 1                    | HSS               | 18B11HS411   | Finance and Accounts                         | 3            | 0 | 0 | 3         | 3           |
| 2                    | Basic Sciences    | 18B11MA411   | Bio-Statistics                               | 3            | 0 | 0 | 3         | 3           |
| 3                    | Professional Core | 18B11BI412   | Genetic Engineering and Genomics             | 3            | 0 | 0 | 3         | 3           |
| 4                    | Engg Science      | 18B11CI415   | Object Oriented Programming                  | 3            | 1 | 0 | 4         | 4           |
| 5                    | Professional Core | 18B11BI413   | Structural Biology                           | 3            | 0 | 0 | 3         | 3           |
| 6                    | Professional Core | 18B11BI414   | Programming Languages for Bioinformatics     | 3            | 0 | 0 | 3         | 3           |
| 7                    | Engg Science      | 18B11CI474   | Object Oriented Programming Lab              | 0            | 0 | 2 | 1         | 2           |
| 8                    | Basic Sciences    | 18B11MA412   | Bio-Statistics Lab                           | 0            | 0 | 2 | 1         | 2           |
| 9                    | Professional Core | 18B17BI472   | Genetic Engineering and Genomics Lab         | 0            | 0 | 2 | 1         | 2           |
| 10                   | Professional Core | 18B17BI473   | Structural Biology Lab                       | 0            | 0 | 2 | 1         | 2           |
| 11                   | Professional Core | 18B17BI474   | Programming Languages for Bioinformatics Lab | 0            | 0 | 2 | 1         | 2           |
| 12                   | Mandatory Course  | 23B11GE411   | Environmental Studies                        | 2            | 0 | 0 | Audit     | 2           |
| <b>TOTAL</b>         |                   |              |  |              |   |   | <b>26</b> | <b>31</b>   |

Modified & Approved by Bos Semester IV

| <b>SEMESTER - IV</b> |                              |               |              |  |              |   |   |   |           |             |
|----------------------|------------------------------|---------------|--------------|--|--------------|---|---|---|-----------|-------------|
| S. No.               | Course Category              | New / Revised | Subject Code | Name of the Subjects                   | Course Hours |   |   |   | Credits   | Total Hours |
|                      |                              |               |              |  | L            | T | P | S |           |             |
| 1                    | Humanities & Social Sciences |               |              | Finance and Accounts                   | 3            | 0 | 0 |   | 3         | 3           |
| 2                    | Professional Core Course     | New           |              | Python for Bioinformatics              | 3            | 0 | 0 |   | 3         | 3           |
| 3                    | Professional Core Course     | New           |              | Web development for Bioinformatics     | 3            | 0 | 0 |   | 3         | 3           |
| 4                    | Professional Core Course     |               |              | Design and Analysis of Algorithms      | 3            | 0 | 0 |   | 3         | 3           |
| 5                    | Professional Core Course     |               |              | Cell and Molecular Biology             | 3            | 0 | 0 |   | 3         | 3           |
| 6                    | Professional Core Course     | New           |              | Web Development for Bioinformatics Lab | 0            | 0 | 2 |   | 1         | 2           |
| 7                    | Professional Core Course     |               |              | Design and Analysis of Algorithms Lab  | 0            | 0 | 4 |   | 2         | 4           |
| 8                    | Professional Core Course     | New           |              | Python for Bioinformatics Lab          | 0            | 0 | 2 |   | 1         | 2           |
| 9                    | Professional Core Course     |               |              | Cell and Molecular Biology Lab         | 0            | 0 | 2 |   | 1         | 2           |
| 10                   | Engg Science                 |               |              | Environmental Studies                  | 2            | 0 | 0 |   | 2         | 2           |
| 11                   | Project                      |               |              | Project                                |              |   | 2 | 2 | 1         | 2           |
| <b>TOTAL</b>         |                              |               |              |  |              |   |   |   | <b>23</b> | <b>29</b>   |

# JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY

(Established by H.P. State Legislature vide Act No. 14 of 2002)

Existing Semester V

## SEMESTER-5

| Sr. No.      | Course Category              | Subject Code | Name of the Subjects                       | Course Hours |   |   | Credits   | Total Hours |
|--------------|------------------------------|--------------|--|--------------|---|---|-----------|-------------|
|              |                              |              |  | L            | T | P |           |             |
| 1            | Humanities & Social Sciences | 18B11HS511   | Project Management and Entrepreneurship    | 3            | 0 | 0 | 3         | 3           |
| 2            | Professional Core            | 18B11BI511   | Design and Analysis of Algorithms          | 3            | 0 | 0 | 3         | 3           |
| 3            | Professional Core            | 18B11BT511   | Bioprocess Engineering                     | 3            | 1 | 0 | 4         | 4           |
| 4            | Professional Core            | 18B11BI512   | Scripting Languages for Bioinformatics     | 3            | 0 | 0 | 3         | 3           |
| 5            | Professional Core            | 18B17BI571   | Design and Analysis of Algorithms Lab      | 0            | 0 | 2 | 1         | 2           |
| 6            | Professional Core            | 18B17BT571   | Bioprocess Engineering Lab                 | 0            | 0 | 2 | 1         | 2           |
| 7            | Professional Core            | 18B17BI572   | Scripting Languages for Bioinformatics Lab | 0            | 0 | 2 | 1         | 2           |
| 8            | Professional Core            | 18B17BI573   | Structural Bioinformatics Lab              | 0            | 0 | 2 | 1         | 2           |
| 9            | Professional Elective        |              | Departmental Elective-I                    | 3            | 0 | 0 | 3         | 3           |
| 10           | Open Elective                |              | Open Elective-I                            | 3            | 0 | 0 | 3         | 3           |
| 11           | Project                      | 18B19BI591   | Minor Project Part-I                       | 0            | 0 | 2 | 1         | 2           |
| <b>TOTAL</b> |                              |              |  |              |   |   | <b>24</b> | <b>29</b>   |

Modified & Approved by Bos Semester V

## SEMESTER - V

| S. No.       | Course Category              | New / Revised | Subject Code | Name of the Subjects                    | Course Hours |   |   |           | Credits   | Total Hours |
|--------------|------------------------------|---------------|--------------|---|--------------|---|---|-----------|-----------|-------------|
|              |                              |               |              |   | L            | T | P | S         |           |             |
| 1            | Humanities & Social Sciences |               |              | Project Management and Entrepreneurship | 3            | 0 | 0 |           | 3         | 3           |
| 2            | Professional Core Course     |               |              | Genetic Engineering and Genomics        | 3            | 0 | 0 |           | 4         | 4           |
| 3            | Professional Core Course     | Revised       |              | Bioprocess Engineering                  | 3            | 1 | 0 |           | 4         | 4           |
| 4            | Professional Core Course     |               |              | Bioinformatics Data Management          | 3            | 0 | 0 |           | 3         | 3           |
| 5            | Professional Core Course     |               |              | Genetic Engineering and Genomics Lab    | 0            | 0 | 2 |           | 1         | 2           |
| 6            | Professional Core Course     | Revised       |              | Bioprocess Engineering Lab              | 0            | 0 | 2 |           | 1         | 2           |
| 7            | Professional Core Course     |               |              | Bioinformatics Data Management Lab      | 0            | 0 | 2 |           | 1         | 2           |
| 8            | Professional Core Course     |               |              | R Language Lab                          | 0            | 0 | 2 |           | 1         | 2           |
| 9            | professional Elective        |               |              | PE-I                                    | 3            | 0 | 0 |           | 3         | 3           |
| 11           | Project                      |               |              | Project                                 | 0            | 0 | 4 | 2         | 2         | 4           |
| <b>TOTAL</b> |                              |               |              |   |              |   |   | <b>23</b> | <b>29</b> |             |

# JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY

(Established by H.P. State Legislature vide Act No. 14 of 2002)

Existing Semester VI

| <b>SEMESTER-VI</b> |                       |              |  |                |   |   |           |             |
|--------------------|-----------------------|--------------|--|----------------|---|---|-----------|-------------|
| S. No.             | Course Category       | Subject Code | Name of the Subjects                       | Course Hours   |   |   | Credits   | Total Hours |
|                    |                       |              |  | L              | T | P |           |             |
| 1                  | Professional Core     | 18B11BI611   | Machine Learning for Bioinformatics        | 3              | 0 | 0 | 3         | 3           |
| 2                  | Professional Core     | 18B11BI612   | Computer Aided Drug Design                 | 3              | 0 | 0 | 3         | 3           |
| 3                  | Professional Core     | 18B17BI671   | Machine Learning for Bioinformatics lab    | 0              | 0 | 2 | 1         | 2           |
| 4                  | Professional Core     | 18B17BI672   | Computer Aided Drug Design Lab             | 0              | 0 | 2 | 1         | 2           |
| 5                  | Professional Elective | 18B17BI673   | Advanced Algorithms for Bioinformatics Lab | 0              | 0 | 2 | 1         | 2           |
| 6                  | Professional Elective |              | 18B17BI674                                 | R Language Lab | 0 | 0 | 2         | 1           |
| 7                  | Professional Elective |              | Departmental Elective-II                   | 3              | 0 | 0 | 3         | 3           |
| 8                  | Professional Elective |              | Departmental Elective-III                  | 3              | 0 | 0 | 3         | 3           |
| 9                  | Open Elective         |              | Open Elective-II                           | 3              | 0 | 0 | 3         | 3           |
| 10                 | Project               | 18B19BI691   | Minor Project Part-II                      | 0              | 0 | 4 | 2         | 4           |
| 11                 | Mandatory Course      |              | Industrial Training                        |                |   |   | Audit     |             |
| <b>TOTAL</b>       |                       |              |  |                |   |   | <b>21</b> | <b>27</b>   |

Modified & Approved by Bos Semester VI

| <b>SEMESTER - VI</b> |                          |               |              |  |              |   |   |   |           |             |
|----------------------|--------------------------|---------------|--------------|--|--------------|---|---|---|-----------|-------------|
| S. No.               | Course Category          | New / Revised | Subject Code | Name of the Subjects                       | Course Hours |   |   |   | Credits   | Total Hours |
|                      |                          |               |              |  | L            | T | P | S |           |             |
| 1                    | Professional Core Course | Revised       |              | Machine Learning for Bioinformatics        | 2            | 0 | 0 |   | 2         | 2           |
| 2                    | Professional Core Course | Revised       |              | Computer Aided Drug Design                 | 2            | 0 | 0 |   | 2         | 2           |
| 3                    | Professional Core Course | Revised       |              | Machine Learning for Bioinformatics lab    | 0            | 0 | 2 |   | 1         | 2           |
| 4                    | Professional Core Course | Revised       |              | Computer Aided Drug Design Lab             | 0            | 0 | 2 |   | 1         | 2           |
| 5                    | Professional Core Course | Revised       |              | Advanced Algorithms for Bioinformatics Lab | 0            | 0 | 2 |   | 1         | 2           |
| 6                    | Professional Core Course | New           |              | NGS Data Analysis Lab                      | 0            | 0 | 2 |   | 1         | 2           |
| 7                    | professional Elective    |               |              | PE-II                                      | 3            | 0 | 0 |   | 3         | 3           |
| 8                    | professional Elective    |               |              | PE-III                                     | 3            | 0 | 0 |   | 3         | 3           |
| 9                    | Open Elective            |               |              | OE-I (HSS)                                 | 3            | 0 | 0 |   | 3         | 3           |
| 10                   | Open Elective            |               |              | OE-II                                      | 3            | 0 | 0 |   | 3         | 3           |
| 11                   | Project                  |               |              | Project                                    | 0            | 0 | 4 | 2 | 2         | 4           |
| 12                   | Mandatory Course         |               |              | Soft Skills for Professionals (Audit)      | 0            | 1 | 0 |   | 0         | 1           |
| 13                   | Mandatory Course         |               |              | Industrial Training                        |              |   |   |   | Audit     |             |
| <b>TOTAL</b>         |                          |               |              |  |              |   |   |   | <b>22</b> | <b>29</b>   |



# JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY

(Established by H.P. State Legislature vide Act No. 14 of 2002)

Existing SemesterVII

## SEMESTER-VII

| S. No.       | Course Category       | Subject Code | Name of the Subjects      | Course Hours |   |    | Credits   | Total Hours |
|--------------|-----------------------|--------------|---------------------------|--------------|---|----|-----------|-------------|
|              |                       |              |                           | L            | T | P  |           |             |
| 1            | Professional Elective |              | Departmental Elective-I V | 3            | 0 | 0  | 3         | 3           |
| 2            | Open Elective         |              | Open Elective - III       | 3            | 0 | 0  | 3         | 3           |
| 3            | Open Elective         |              | Open Elective - IV        | 3            | 0 | 0  | 3         | 3           |
| 4            | Project               | 18B19BI791   | Major Project Part I      | 0            | 0 | 10 | 5         | 10          |
| 5            | HSS                   |              | Indian Constitution       | 1            | 0 | 0  | Audit     | 1           |
| <b>TOTAL</b> |                       |              |                           |              |   |    | <b>14</b> | <b>20</b>   |

Modified & Approved by Bos SemesteVII

## SEMESTER -VII

| S. No        | Course Category       | New / Revised | Subject Code | Name of the Subjects | Course Hours |   |   |           | Credits   | Total Hours |
|--------------|-----------------------|---------------|--------------|----------------------|--------------|---|---|-----------|-----------|-------------|
|              |                       |               |              |                      | L            | T | P | S         |           |             |
| 1            | Professional Elective |               |              | PE-IV                | 3            | 0 | 0 |           | 3         | 3           |
| 2            | Professional Elective |               |              | PE-V                 | 3            | 0 | 0 |           | 3         | 3           |
| 3            | Open Elective         |               |              | OE-III               | 3            | 0 | 0 |           | 3         | 3           |
| 4            | Open Elective         |               |              | OE-IV                | 3            | 0 | 0 |           | 3         | 3           |
| 5            | Project               |               |              | Project              | 0            | 0 | 8 |           | 4         | 8           |
| 6            | Mandatory Course      |               |              | Indian Constitution  | 1            | 0 | 0 |           | Audit     | 1           |
| <b>TOTAL</b> |                       |               |              |                      |              |   |   | <b>16</b> | <b>21</b> |             |

# JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY

(Established by H.P. State Legislature vide Act No. 14 of 2002)

Existing Semester VIII

## SEMESTER-VIII

| S. No.       | Course Category       | Subject Code | Name of the Subjects      | Course Hours |   |    | Credits   | Total Hours |
|--------------|-----------------------|--------------|---------------------------|--------------|---|----|-----------|-------------|
|              |                       |              |                           | L            | T | P  |           |             |
| 1            | Professional Elective |              | Departmental Elective- V  | 3            | 0 | 0  | 3         | 3           |
| 2            | Professional Elective |              | Departmental Elective- VI | 3            | 0 | 0  | 3         | 3           |
| 3            | Open Elective         |              | Open Elective-V           | 3            | 0 | 0  | 3         | 3           |
| 4            | Project               | 18B19BI891   | Major Project Part II     | 0            | 0 | 14 | 7         | 14          |
| <b>TOTAL</b> |                       |              |                           |              |   |    | <b>16</b> | <b>23</b>   |

Modified & Approved by Bos SemesterVIII

## SEMESTER - VIII

| S. No | Course Category       | New / Revised | Subject Code | Name of the Subjects         | Course Hours |   |   |   | Credits   | Total Hours |
|-------|-----------------------|---------------|--------------|------------------------------|--------------|---|---|---|-----------|-------------|
|       |                       |               |              |                              | L            | T | P | S |           |             |
| 1     | Professional Elective |               |              | PE-VI                        | 3            | 0 | 0 |   | 3         | 3           |
| 2     | Open Elective         |               |              | OE-V                         | 3            | 0 | 0 |   | 3         | 3           |
| 3     | Open Elective         |               |              | OE-VI                        | 3            | 0 | 0 |   | 3         | 3           |
| 4     | Project               |               |              | Project                      | 0            | 0 | 8 |   | 4         | 8           |
|       |                       |               |              | <b>TOTAL</b>                 |              |   |   |   | <b>13</b> | <b>17</b>   |
|       |                       |               |              | <b>OR</b>                    |              |   |   |   |           |             |
|       |                       |               |              | <b>Industrial Internship</b> |              |   |   |   | <b>13</b> |             |

### Agenda Item 3. To consider and approve modification in M.Sc. Biotechnology Course curriculum.

- Dr Anil Kant presented the proposed changes in M.Sc. Biotechnology Course curriculum, for introduction of new modified course Molecular Diagnostics and Forensic Biology 3-0-0 in second semester and dropping of Course Seminar-I, 0-0-1
- Dr Anil Kant explained the rationale of including some topics of Forensic Biology and remaining of course as “Molecular Diagnostics and Forensic Biology”. He also presented the detailed syllabus of the modified course.
- Dr TC Bhalla suggested adding electives related to Forensic Sciences in future for some interested students.
- Dr Saurabh suggested that name should be “Molecular Diagnostics and Forensic Sciences”. It was clarified by Dr Anil Kant that only few topics of Forensic Biology are being added in the existing course rather than including the topics of forensic science like computational forensics, documentation, application of Physics and Chemistry. So it will be more appropriate to name it “Molecular Diagnostics and Forensic Biology”
- Dr. G.P.S.Raghava enquired about the need of adding content of Forensic Biology. Prof. Sudhir explained that jobs related to Forensic Sciences are on demand and these skills will help in students’ progression.
- Dr. Udayabanu proposed two electives Omics Technologies & Data Analysis and Biopharmaceutical Technology in B.Tech Biotechnology VIII Semester
- Prof Sunil Khah suggested changing the name of Seminar-II in 3rd semester now to Seminar only as Seminar -I is dropped now, which was accepted by all the members.
- All the members including Prof TC Bhalla, Dr. GPS Raghav and Mr Aditya Sahni supported the proposal as well as content of the course and the proposal was approved as presented.

# JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY

(Established by H.P. State Legislature vide Act No. 14 of 2002)

## Existing Courses in M.Sc Biotechnology II semester

### SEMESTER -II

| S.No. | New Code   | Subject  | L-T-P     | Credits   |
|-------|------------|--|-----------|-----------|
| 1     | 20MS1BT211 | Genetic Engineering                                      | 3-0-0     | 3         |
| 2     | 20MS1BT212 | Immunology   | 3-0-0     | 3         |
| 3     | 20MS1BT213 | Bioinformatics   | 2-0-0     | 2         |
| 4     | 20MS1BT214 | Genomics and Proteomics                                  | 2-0-0     | 2         |
| 5     | 20MS1BT215 | Molecular Diagnostics                                    | 2-0-0     | 2         |
| 6     | 20MS1BT216 | Research Methodology and Scientific Communication Skills | 2-0-0     | 2         |
| 7     |            | Elective I   | 2-0-0     | 2         |
| 8     | 20MS9BT211 | Seminar-I  | -         | 1         |
| 9     | 20MS7BT271 | Molecular Biology and Genetic Engineering Lab            | 0-0-8     | 4         |
| 10    | 20MS7BT272 | Immunology Lab   | 0-0-6     | 3         |
|       |            | <b>Total</b>   | <b>30</b> | <b>24</b> |

## Modified & Approved by BoS

### M.Sc Biotechnology II semester

#### SEMESTER -II

| S.No. | New Code   | Subject  | L-T-P     | Credits   |
|-------|------------|--|-----------|-----------|
| 1     | 20MS1BT211 | Genetic Engineering                                      | 3-0-0     | 3         |
| 2     | 20MS1BT212 | Immunology   | 3-0-0     | 3         |
| 3     | 20MS1BT213 | Bioinformatics   | 2-0-0     | 2         |
| 4     | 20MS1BT214 | Genomics and Proteomics                                  | 2-0-0     | 2         |
| 5     | XXXXXXXX   | Molecular Diagnostics and Forensic Biology               | 3-0-0     | 3         |
| 6     | 20MS1BT216 | Research Methodology and Scientific Communication Skills | 2-0-0     | 2         |
| 7     |            | Elective I   | 2-0-0     | 2         |
| 8     | 20MS7BT271 | Molecular Biology and Genetic Engineering Lab            | 0-0-8     | 4         |
| 9     | 20MS7BT272 | Immunology Lab   | 0-0-6     | 3         |
|       |            | <b>Total</b>   | <b>30</b> | <b>24</b> |

**Existing Courses in M.Sc Biotechnology III semester  
SEMESTER -III**

| S.No. | Code       | Subject  | L-T-P     | Credits   |
|-------|------------|--|-----------|-----------|
| 1     | 20MS1BT311 | Bioprocess Engineering and Technology                      | 3-0-0     | 3         |
| 2     | 20MS1BT312 | Emerging Technologies                                      | 2-0-0     | 2         |
| 3     | 20MS9BT313 | Review of Classical papers & Project Proposal Presentation | 2-0-0     | 2         |
| 4     | 20MS1BT314 | Bioentrepreneurship  | 2-0-0     | 2         |
| 5     | 20MS1BT315 | Intellectual Property Rights, Biosafety and Bioethics      | 2-0-0     | 2         |
| 6     | 22MS1BT311 | Food Biotechnology   | 2-0-0     | 2         |
| 7     | 20MS9BT311 | Seminar-II   | -         | 1         |
| 8     | 20MS7BT371 | Bioprocess Engineering and Technology Lab                  | 0-0-8     | 4         |
| 9     | 20MS7BT372 | Bioinformatics Lab   | 0-0-4     | 2         |
| 10    | 20MS9BT391 | Dissertation   | -         | 4         |
|       |            | <b>Total</b>   | <b>21</b> | <b>24</b> |

**Modified & Approved by BoS  
M.Sc Biotechnology III semester  
SEMESTER -III**

| S.No. | Code       | Subject  | L-T-P     | Credits   |
|-------|------------|--|-----------|-----------|
| 1     | 20MS1BT311 | Bioprocess Engineering and Technology                      | 3-0-0     | 3         |
| 2     | 20MS1BT312 | Emerging Technologies                                      | 2-0-0     | 2         |
| 3     | 20MS9BT313 | Review of Classical papers & Project Proposal Presentation | 2-0-0     | 2         |
| 4     | 20MS1BT314 | Bioentrepreneurship  | 2-0-0     | 2         |
| 5     | 20MS1BT315 | Intellectual Property Rights, Biosafety and Bioethics      | 2-0-0     | 2         |
| 6     | 22MS1BT311 | Food Biotechnology   | 2-0-0     | 2         |
| 7     | 20MS9BT311 | Seminar  | 0-0-2     | 1         |
| 8     | 20MS7BT371 | Bioprocess Engineering and Technology Lab                  | 0-0-8     | 4         |
| 9     | 20MS7BT372 | Bioinformatics Lab   | 0-0-4     | 2         |
| 10    | 20MS9BT391 | Dissertation   | -         | 4         |
|       |            | <b>Total</b>   | <b>21</b> | <b>24</b> |

**Agenda Item 4. To consider and approve modification in M.Sc. Microbiology Course curriculum**

- Dr. Rahul Shrivastava presented the proposed changes in M.Sc. Microbiology Course curriculum, for introduction of new course 'Molecular Diagnostics and Forensic Biology' in the Second Semester and dropping of the Course - (21MS1MB312) Diagnostic Microbiology and Vaccines being currently taught in the third semester..
- Dr. Rahul Shrivastava explained the rationale of including some topics of Forensic Biology to the Diagnostics Course, and removal of the Vaccine part which is already covered in the course - (18MS1BT211) Immunology and Immunotechnology.
- Dr. Shrivastava proposed that the new course 'Molecular Diagnostics and Forensic Biology' would be taught to M.Sc. Microbiology and M.Sc. Biotechnology students together in the Second semester of the program, the course (21MS1MB212) Microbial Genetics and Physiology is being shifted to the Third Semester of M.Sc. Microbiology Program to balance the number of credits.
- All the members including Prof TC Bhalla, Dr. GPS Raghav and Mr Aditya Sahni supported the proposal as well as content of the course and the proposal was approved as presented.

# JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY

(Established by H.P. State Legislature vide Act No. 14 of 2002)

## Existing Courses in M.Sc Microbiology - II SEMESTER

| S.No. | New Code   | Subject                               | L-T-P     | Credits   |
|-------|------------|---------------------------------------|-----------|-----------|
| 1     | 18MS1BT211 | Immunology and Immunotechnology       | 3-0-0     | 3         |
| 2     | 21MS1MB211 | Enzymes and Bioprocess Technology     | 3-0-0     | 3         |
| 3     | 21MS1MB212 | Microbial Genetics and Physiology     | 3-0-0     | 3         |
| 4     | 18MS1BT313 | Recombinant DNA Technology            | 3-0-0     | 3         |
| 5     | 20MS1BT213 | Bioinformatics                        | 2-0-0     | 2         |
| 6     | 18MS7BT211 | Immunology and Immunotechnology Lab   | 0-0-2     | 1         |
| 7     | 21MS7MB271 | Enzymes and Bioprocess Technology Lab | 0-0-2     | 1         |
| 8     | 18MS7BI214 | Basic Bioinformatics Lab              | 0-0-2     | 1         |
| 9     | 18MS7BT373 | Recombinant DNA Technology lab        | 0-0-4     | 2         |
| 10    | 18MS9BI211 | Masters Research Review seminar       | 0-0-2     | 1         |
|       |            | <b>Total</b>                          | <b>26</b> | <b>20</b> |

## Existing Courses in M.Sc Microbiology - III SEMESTER

| S.No. | Code       | Subject                               | L-T-P     | Credits   |
|-------|------------|---------------------------------------|-----------|-----------|
| 1     | 21MS1MB311 | Environmental Microbiology            | 3-0-0     | 3         |
| 2     | 21MS1MB312 | Diagnostic Microbiology and vaccines  | 3-0-0     | 3         |
| 3     |            | Elective-I                            | 3-0-0     | 3         |
| 4     | 21MS9MB311 | Master's Dissertation & Thesis Part-I | 0-0-16    | 8         |
|       |            | <b>Total</b>                          | <b>25</b> | <b>17</b> |

## Modified & Approved by BoS

## Modified Courses in M.Sc Microbiology - II SEMESTER

| S.No. | New Code   | Subject                                    | L-T-P     | Credits   |
|-------|------------|--|-----------|-----------|
| 1     | 18MS1BT211 | Immunology and Immunotechnology            | 3-0-0     | 3         |
| 2     | 21MS1MB211 | Enzymes and Bioprocess Technology          | 3-0-0     | 3         |
| 3     | XXXXXXXX   | Molecular Diagnostics and Forensic Biology | 3-0-0     | 3         |
| 4     | 18MS1BT313 | Recombinant DNA Technology                 | 3-0-0     | 3         |
| 5     | 20MS1BT213 | Bioinformatics                             | 2-0-0     | 2         |
| 6     | 18MS7BT211 | Immunology and Immunotechnology Lab        | 0-0-2     | 1         |
| 7     | 21MS7MB271 | Enzymes and Bioprocess Technology Lab      | 0-0-2     | 1         |
| 8     | 18MS7BI214 | Basic Bioinformatics Lab                   | 0-0-2     | 1         |
| 9     | 18MS7BT373 | Recombinant DNA Technology lab             | 0-0-4     | 2         |
| 10    | 18MS9BI211 | Masters Research Review seminar            | 0-0-2     | 1         |
|       |            | <b>Total</b>                               | <b>26</b> | <b>20</b> |

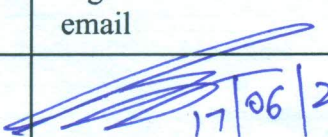
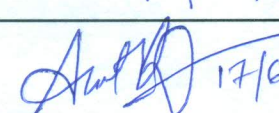
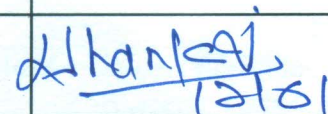
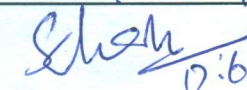
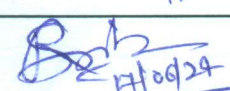
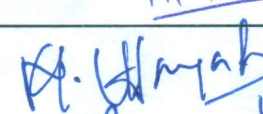
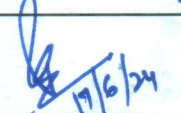
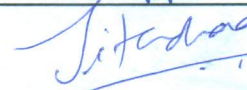
## Modified Courses in M.Sc Microbiology - IIIrd SEMESTER

| S.No. | Code       | Subject                               | L-T-P     | Credits   |
|-------|------------|---------------------------------------|-----------|-----------|
| 1     | 21MS1MB311 | Environmental Microbiology            | 3-0-0     | 3         |
| 2     | 21MS1MB212 | Microbial Genetics and Physiology     | 3-0-0     | 3         |
| 3     |            | Elective-I                            | 3-0-0     | 3         |
| 4     | 21MS9MB311 | Master's Dissertation & Thesis Part-I | 0-0-16    | 8         |
|       |            | <b>Total</b>                          | <b>25</b> | <b>17</b> |

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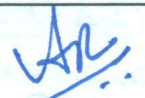
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## ATTENDANCE SHEET: BoS meeting of Deptt of Biotechnology and Bioinformatics held on 17.06.2024

| Name and Designation   |                            | Signature or consent by email  |
|--|----------------------------|--|
| Prof. Sudhir Kumar, HOD, Department of BT and BI   | Chairman                   | <br>17/06/2024  |
| Dr. Anil Kant, Associate Prof, Deptt of BT and BI  | Member Secretary           | <br>17/6/2024   |
| Prof. T.C. Bhalla Ex, Professor Emeritus Department of Biotechnology HPU Shimla                          | External Member BoS        | Consent via Email  |
| Prof. G .P. S. Raghava, Prof and Head, Deptt of Computational Biology, IIIT-Dehli, (External Member BoS) | External Member BoS        | Consent via Email  |
| Dr Jata Shankar, Professor, Deptt of BT and BI   | Member                     | <br>17/6/2024 |
| Prof. Sunil Kunmar Khatri, Incharge IQAC, JUIT   | Member                     | <br>17.6.2024 |
| Dr Tiratha Raj Singh, Professor, Deptt of BT and BI  | Member                     | <br>17/6/24   |
| Dr Udaybanu M, Associate Prof, Deptt of BT and BI  | Member                     | <br>17/6/24   |
| Dr Poonam Sharma, Associate Prof, Deptt of BT and BI   | Member                     | <br>17/6/24   |
| Dr Jiendra Vashisth, Associate Prof, Deptt of BT and BI  | Member                     | <br>17/6/24   |
| Mr. Aditya Sahni, JUIT Alumni, Founder of ELEM, India (JUIT alumni Member BoS)                           | External Member-3 (Alumni) | Consent via Email  |


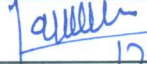


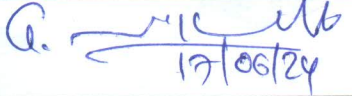
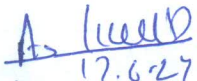
Dr. Rahul Shrivastava  
Dept. of BT & BI

Member  
Page 5 of 6

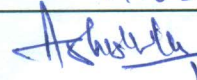
  
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(Established by H.P. State Legislature vide Act No. 14 of 2002)


|   |        |   |
|---|--------|---|
| Dr Hemant, Associate Prof, Deptt of BT and BI         | Member | <br>17/6/24    |
| HOD, Deptt of ECE                                     | Member | <br>17/6/24    |
| HOD, Deptt of Physics and Material Science            | Member | <br>17.6.2024  |
| Dr Saurabh Bansal, Associate Prof, Deptt of BT and BI | Member | <br>17/06/2024 |
| Dr V. Garlapati, Associate Prof, Deptt of BT and BI   | Member | <br>17/06/24   |
| Dr Ashok Nadda, Assistant Prof. Deptt of BT and BI    | Member | <br>17.6.24    |

HOD, Deptt. of Civil Engineering Member

  
17.6.24

  
26/06/2024

Dr. Anil Kant Associate Professor  
Member Secretary, BoS  
Department of Biotechnology  
JUIT Waknaghat

  
21/06/2024

Prof. Sudhir Kumar  
Chairman BoS, HOD Department of  
Biotechnology, JUIT Waknaghat