

From

Chennai

The Head

3-06-2021

Department of Industrial Biotechnology

BIHER

To

The Dean

BIHER

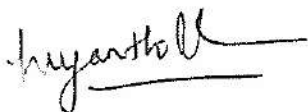
Respected Sir

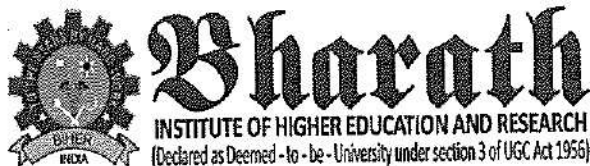
Sub: approval to start a value added course on "Cytogenetics and Molecular Biology Techniques" (Online)-reg

It has been planned by the Department of Industrial Biotechnology to start a Value Added Course on "Cytogenetics and Molecular Biology Techniques" for the benefit of the B. Tech (Industrial Biotechnology), B. Tech (Biomedical Engineering) and B-Tech (Genetic Engineering) students from 21-06-2021. The duration of the course is 30 hrs. I request you to kindly approve of the same.

Thanking you

Yours sincerely





**BHARATH INSTITUTE OF HIGHER EDUCATION AND RESEARCH**

**DEPARTMENT OF INDUSTRIAL BIOTECHNOLOGY**

Date: 16-06-2021

## **CIRCULAR**

### **Notification for Value added courses offered by the Department of Industrial Biotechnology**

The Department of Industrial Biotechnology is scheduled to offer a Value added course on "Cytogenetics and Molecular Biology Techniques" from 21/06/2021 for a period of 3 weeks. Interested students can approach Ms. R. Kamalambigeswari, Department of Industrial Biotechnology, for registration and for further details on or before 19<sup>th</sup> June 2021.

**Eligibility-III B. Tech Genetic Engineering; III B-Tech Biomedical;  
III B-Tech Industrial Biotechnology**

**Course Coordinator**

**HOD**

Copy to:

Vice Chancellor

Pro Vice Chancellor

Additional Registrar

Deans

CoE

Heads of Departments

**BHARATH INSTITUTE OF HIGHER EDUCATION AND RESEARCH**  
**DEPARTMENT OF INDUSTRIAL BIOTECHNOLOGY**  
**VALUE ADDED COURESE ON CYTOGENETICS AND MOLECULAR**  
**BIOLOGY TECHNIQUES**

**2020-2021**

**COURSE CO-ORDINATOR DETAILS**

**Faculty Name:** Ms. R. Kamalambigeswari, Assistant Professor, Department of Industrial Biotechnology

**Email ID:** [kamali1203@gmail.com](mailto:kamali1203@gmail.com)

**Mobile number:** 9894373615.

**BHARATH INSTITUTE OF HIGHER EDUCATION AND RESEARCH  
DEPARTMENT OF INDUSTRIAL BIOTECHNOLOGY  
VALUE ADDED COURSE SYLLABUS  
2020-2021**

**CYTOGENETICS AND MOLECULAR BIOLOGY TECHNIQUES**

**MODULE I: INTRODUCTION**

History and basic principles of Cytogenetics. Mitosis and Meiosis: Crossing over with translocations/inversions, recombination. The results of reproduction. Laboratory safety and general procedures

**MODULE II: MICROSCOPY**

Microscopes, cell counts, staining and banding. Image Capture/Photography DNA: Structure and function

**MODULE III: MOLECULAR TECHNIQUES**

Fluorescence In situ Hybridisation (FISH) – Principle, methods, analysis, interpretation. Polymerase chain reaction (PCR)- Principle, methods, analysis, interpretation

**Total Contact Hours: 30**

**BHARATH INSTITUTE OF HIGHER EDUCATION AND RESEARCH**

Department of Industrial Biotechnology

**VALUE ADDED COURSE****Cytogenetics and Molecular Biology Techniques (2020-2021)**

| Session     | Topic  | Date       | Duration (Hr) | Resource person        |
|-------------|--|------------|---------------|------------------------|
| Session I   | Principles of Cytogenetics   | 21.06.2021 | 3             | Ms. R. Kamalmbigeswari |
| Session II  | Mitosis and Meiosis:   | 25.06.2021 | 7             | Ms. Merina Paul Das    |
| Session III | Crossing over with translocations/inversions, recombination                | 28.06.2021 | 3             | Ms. S. Sharmila        |
| Session IV  | Microscopes, cell counts, staining and banding DNA: Structure and function | 02.07.2021 | 7             | Ms. R. Kamalmbigeswari |
| Session V   | Fluorescence In situ Hybridisation (FISH)                                  | 05.07.2021 | 3             | Ms. S. Sharmila        |
| Session VI  | Polymerase chain reaction (PCR)  | 09.07.2021 | 7             | Ms. Merina Paul Das    |

**BHARATH INSTITUTE OF HIGHER EDUCATION AND RESEARCH  
DEPARTMENT OF INDUSTRIAL BIOTECHNOLOGY  
VALUE ADDED COURSE**

**Cytogenetics and Molecular Biology Techniques (2020-2021)  
Students Name List**

| S.No | Reg No   | Name                        |
|------|----------|-----------------------------|
| 1    | U14BR002 | BANDI MEGHANA               |
| 2    | U14BR003 | BRISHTI NANDI               |
| 3    | U14BR004 | EMMADISHETTY SRI SOWMYA     |
| 4    | U14BR005 | GADDE PRAVALLIKA            |
| 5    | U14BR006 | GAJULA KOUSHIK              |
| 6    | U14BR007 | HANISHA YASMEEN.K           |
| 7    | U14BR010 | MANI.D                      |
| 8    | U14BR011 | MOHAMED ASADULLAH           |
| 9    | U14BR017 | RAHUL.P                     |
| 10   | U14BR018 | RAMKI .S                    |
| 11   | U14BR023 | SENTHIL NATHAN.M            |
| 12   | U14BR024 | SRIBAL.S.                   |
| 13   | U14BR025 | SUGITHA .E                  |
| 14   | U14BR026 | TEJASVINI.M                 |
| 15   | U14BR029 | SHAIK SHABABA               |
| 16   | U14BM007 | ATHINA DAS                  |
| 17   | U14BM008 | BIRRU VIKAS                 |
| 18   | U14BM009 | CHIDUPUDI MANASA            |
| 19   | U14BM015 | JOSHUA SITHARRAJ BHASKAR    |
| 20   | U14BM016 | KAMAKSHI.M                  |
| 21   | U14BM022 | MAHFOOZ AAMIL D.S           |
| 22   | U14BM023 | MALGARI SHANTHI SWAROOP     |
| 23   | U14BM024 | MANIMEGALAI.S.              |
| 24   | U14BM025 | MANISHA.N                   |
| 25   | U14BM026 | MANIVANNAN                  |
| 26   | U14BM027 | MOHAMAD ROUMAN              |
| 27   | U14BM030 | NAGARAJ.V                   |
| 28   | U14BM031 | NANDI.CHARISHMA             |
| 29   | U14BM032 | PADMAVATHY .M               |
| 30   | U14BM033 | PARTHIBAN.R                 |
| 31   | U14BM037 | RAMKUMAR .K                 |
| 32   | U14BM038 | RANI AFROZI                 |
| 33   | U14BM039 | RAVULA SAI NIKHILA          |
| 34   | U14BT001 | ADARASANI PRASHANTH         |
| 35   | U14BT002 | AL AMEEN A                  |
| 36   | U14BT003 | AL AFZAL.S.KHAN             |
| 37   | U14BT004 | ANGHUMAN DAS                |
| 38   | U14BT005 | MATHIKA ANJANI NIKHIL KUMAR |
| 39   | U14BT006 | BALASUBRAMANIAM.M           |
| 40   | U14BT007 | BARNALI SARKAR              |
| 41   | U14BT008 | DARPAN BARIK                |
| 42   | U14BT011 | HARINBE.C                   |
| 43   | U14BT012 | HIMANGSHU DAS               |
| 44   | U14BT013 | INAGANTI ADITYA             |
| 45   | U14BT014 | KAJAL KUMARI                |
| 46   | U14BT015 | KALAIVANIA                  |
| 47   | U14BT016 | KARPURAM PRASAD             |
| 48   | U14BT017 | KAUSHIK BAISHYA             |

|    |          |                             |
|----|----------|-----------------------------|
| 49 | U14BT018 | LAKSHMANAN.V                |
| 50 | U14BT019 | NESHI NELITA MARANDI        |
| 51 | U14BT020 | POLEPALLI REDDY SUGUNA      |
| 52 | U14BT023 | RENUKA.M                    |
| 53 | U14BT024 | SAMPAD SHIL                 |
| 54 | U14BT028 | TANMOY SAHA                 |
| 55 | U14BT030 | JAJAM VENKATA VIJAYALAKSHMI |
| 56 | U14BT034 | M.DINESH                    |
| 57 | U14BT035 | B.SHRIVATSAN                |

**BHARATH INSTITUTE OF HIGHER EDUCATION AND RESEARCH**  
**DEPARTMENT OF INDUSTRIAL BIOTECHNOLOGY**  
**VALUE ADDED COURSE**  
**Cytogenetics and Molecular Biology Techniques (2020-2021)**

**Students Feedback**

| S.No | Reg No   | Name                        | Rating |
|------|----------|-----------------------------|--------|
| 1    | U14BR002 | BANDI MEGHANA               | 3.5    |
| 2    | U14BR003 | BRISHTI NANDI               | 4.5    |
| 3    | U14BR004 | EMMADISHETTY SRI SOWMYA     | 4.5    |
| 4    | U14BR005 | GADDE PRAVALLIKA            | 3      |
| 5    | U14BR006 | GAJULA KOUSHIK              | 4.4    |
| 6    | U14BR007 | HANISHA YASMEEN.K           | 3.5    |
| 7    | U14BR010 | MANI.D                      | 4.5    |
| 8    | U14BR011 | MOHAMED ASADULLAH           | 5      |
| 9    | U14BR017 | RAHUL.P                     | 4.5    |
| 10   | U14BR018 | RAMKI .S                    | 5      |
| 11   | U14BR023 | SENTHIL NATHAN.M            | 4.6    |
| 12   | U14BR024 | SRIBAL.S.                   | 5      |
| 13   | U14BR025 | SUGITHA .E                  | 4.4    |
| 14   | U14BR026 | TEJASVINI.M                 | 3.7    |
| 15   | U14BR029 | SHAIK SHABABA               | 4.5    |
| 16   | U14BM007 | ATHINA DAS                  | 4.5    |
| 17   | U14BM008 | BIRRU VIKAS                 | 5      |
| 18   | U14BM009 | CHIDUPUDI MANASA            | 5      |
| 19   | U14BM015 | JOSHUA SITHARRAJ BHASKAR    | 5      |
| 20   | U14BM016 | KAMAKSHI.M                  | 5      |
| 21   | U14BM022 | MAHFOOZ AAMIL D.S           | 4.5    |
| 22   | U14BM023 | MALGARI SHANTHI SWAROOP     | 5      |
| 23   | U14BM024 | MANIMEGALAI.S.              | 4.5    |
| 24   | U14BM025 | MANISHA.N                   | 5      |
| 25   | U14BM026 | MANIVANNAN                  | 4.5    |
| 26   | U14BM027 | MOHAMAD ROUMAN              | 4      |
| 27   | U14BM030 | NAGARAJ.V                   | 5      |
| 28   | U14BM031 | NANDI.CHARISHMA             | 4.5    |
| 29   | U14BM032 | PADMAVATHY .M               | 5      |
| 30   | U14BM033 | PARTHIBAN.R                 | 4      |
| 31   | U14BM037 | RAMKUMAR .K                 | 4.5    |
| 32   | U14BM038 | RANI AFROZI                 | 5      |
| 33   | U14BM039 | RAVULA SAI NIKHILA          | 5      |
| 34   | U14BT001 | ADARASANI PRASHANTH         | 5      |
| 35   | U14BT002 | AL AMEEN A                  | 4.5    |
| 36   | U14BT003 | AL AFZAL.S.KHAN             | 5      |
| 37   | U14BT004 | ANGHUMAN DAS                | 4.5    |
| 38   | U14BT005 | MATHIKA ANJANI NIKHIL KUMAR | 4.5    |



|    |          |                             |     |
|----|----------|-----------------------------|-----|
| 39 | U14BT006 | BALASUBRAMANIAM.M           | 5   |
| 40 | U14BT007 | BARNALI SARKAR              | 5   |
| 41 | U14BT008 | DARPAN BARIK                | 5   |
| 42 | U14BT011 | HARINEE.C                   | 4.5 |
| 43 | U14BT012 | HIMANGSHU DAS               | 5   |
| 44 | U14BT013 | INAGANTI ADITYA             | 5   |
| 45 | U14BT014 | KAJAL KUMARI                | 4.5 |
| 46 | U14BT015 | KALAIVANLA                  | 4   |
| 47 | U14BT016 | KARPURAM PRASAD             | 5   |
| 48 | U14BT017 | KAUSHIK BAISHYA             | 5   |
| 49 | U14BT018 | LAKSHMANAN.V                | 4.5 |
| 50 | U14BT019 | NESHI NELITA MARANDI        | 4   |
| 51 | U14BT020 | POLEPALLI REDDY SUGUNA      | 4.5 |
| 52 | U14BT023 | RENUKA.M                    | 4.5 |
| 53 | U14BT024 | SAMPAD SHIL                 | 5   |
| 54 | U14BT028 | TANMOY SAHA                 | 4   |
| 55 | U14BT030 | JAJAM VENKATA VIJAYALAKSHMI | 5   |
| 56 | U14BT034 | M.DINESH                    | 4   |
| 57 | U14BT035 | B.SHRIVATSAN                | 4.5 |



# Bharath

INSTITUTE OF HIGHER EDUCATION AND RESEARCH

(Declared as Deemed-to-be-University under section 3 of UGC Act 1956)



Department of Industrial Biotechnology

VALUE ADDED COURSE ON CYTOGENETICS AND MOLECULAR BIOLOGY TECHNIQUES

*Certificate of Participation*

This is to certify that Mr /Ms BANDI MEGHANA U14BR002 has attended three weeks value added course on “Cytogenetics and Molecular Biology Techniques” conducted by Department of Industrial Biotechnology at Bharath Institute of Higher Education and Research, Chennai (TN), India from 21-06-2021 to 09-07-21.

  
Coordinator

  
HOD