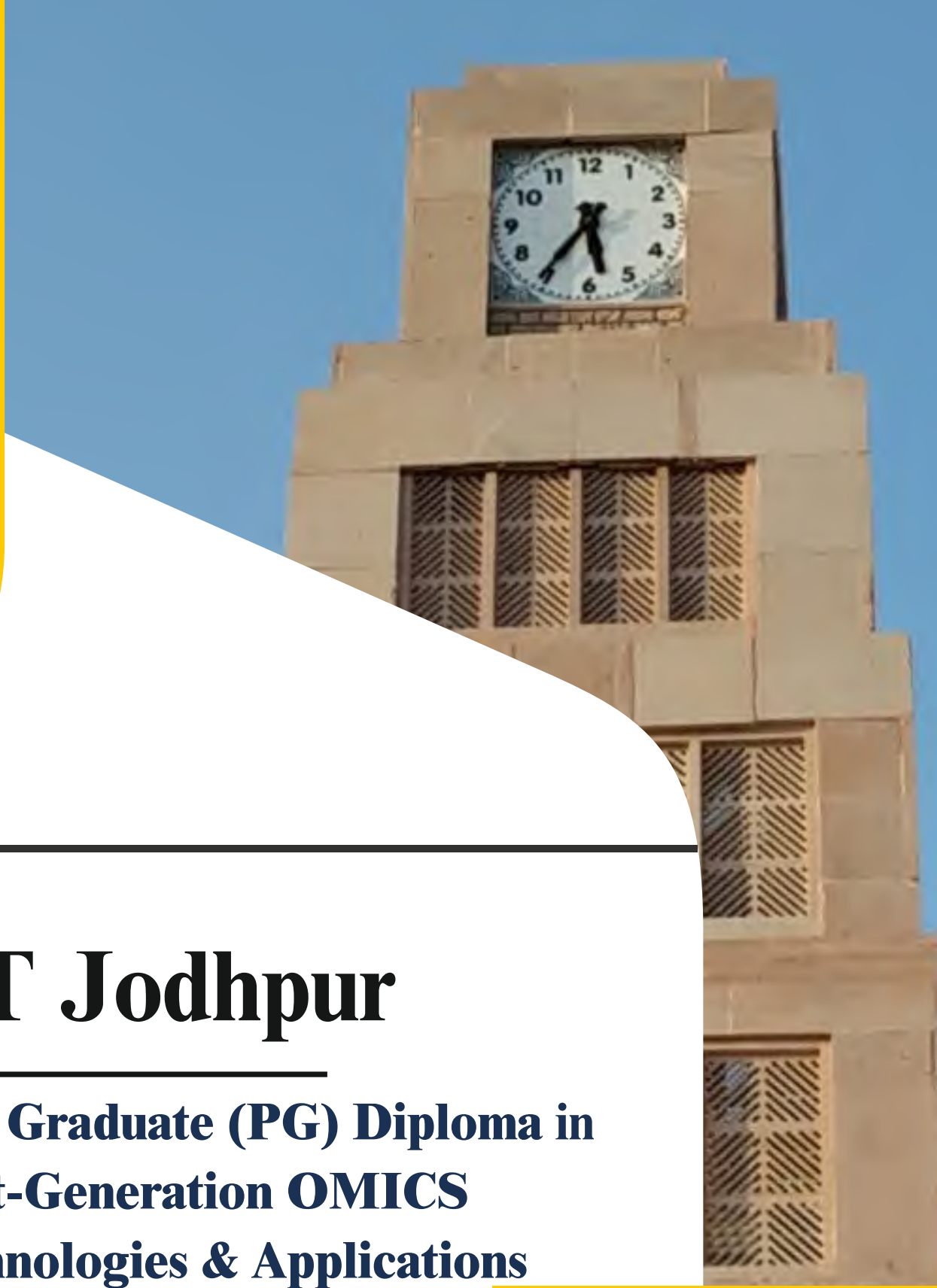
॥ त्वं ज्ञानमयो विज्ञानमयोऽसि ॥

LIVE
Online

Sessions by IIT Jodhpur Faculty Members and OmicsLogic Experts with Campus Immersion



IIT Jodhpur

Post Graduate (PG) Diploma in Next-Generation OMICS Technologies & Applications

12 Months Program | **IIT Alumni Status**

Continuing Education Program Office
Indian Institute of Technology Jodhpur

In collaboration with Industry Partners

premas life sciences

OMICSLOGIC
BIOINFORMATICS & DATA SCIENCE
INDIA (OPC) PRIVATE LIMITED

Apply Now

ABOUT THE PROGRAM

The Next Generation Omics Technologies and Applications PG Diploma Program is a **comprehensive training program** that provides participants with the **industry skills** and knowledge necessary to **design**, **execute**, and **analyze** multi-omics experiments.

The program covers a wide range of topics, including **next-generation sequencing techniques**, **multi-omics technologies**, computational methods, **machine learning algorithms**, and **statistical** approaches. Upon successful completion of the program, participants will be well prepared to tackle the challenges and complexities associated with high-throughput data analysis in biology. The program is offered by IIT Jodhpur & OmicLogic, collaboratively & is designed to bridge the gap between the growing demand for skilled professionals in the field of NGS Omics technologies and the shortage of skilled professionals in the industry.

Through comprehensive training and hands-on experience, participants will be empowered to make significant contributions where omics technologies are revolutionizing the way we understand and approach biological phenomena & processes.

WHO IS THE PROGRAM FOR ?

- Working professionals from pharma, sports, nutrition, health, wellness and diagnostic industries
- Researchers from Academia & Industry
- Clinicians and service providers
- PhD, BTech or Masters students in bioscience, bioengineering or related fields.

Eligibility

The applicant must have a Bachelor's degree in Engineering or Science or Medicine (min. 4-year program) or a Master's degree in Bioengineering or Bioscience or in a related field. A minimum of 60% marks in UG/PG or a minimum CGPA of 6.0 on a scale of 10 with corresponding proportional requirements when the scales are other than 10.

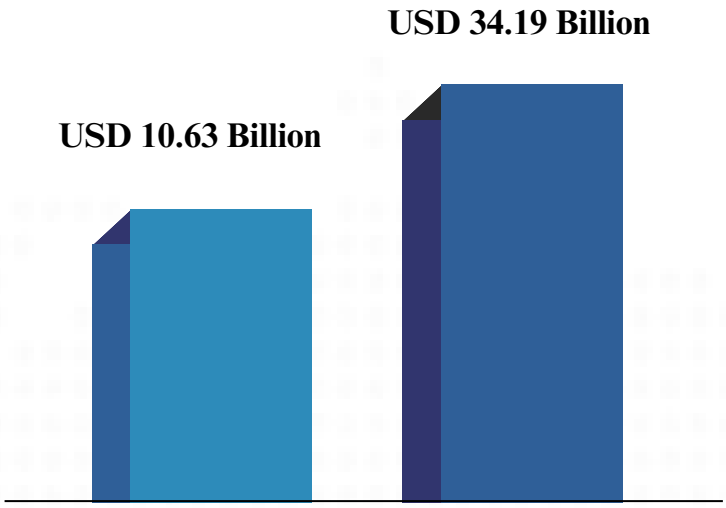
Preference will be given to working professionals in Industry/R&D laboratories/Academic Institutions. IIT Jodhpur may at its discretion conduct a written test and/or interview to select candidates for the program.

WHY NGS OMICS TECHNOLOGIES ?

GLOBAL NEXT GENERATION SEQUENCING MARKET

Next-Generation Sequencing (NGS) is revolutionizing healthcare, driving a projected 18.16% CAGR* from 2024 to 2030.

Its widespread adoption in clinical diagnostics and pivotal role in guiding personalized treatment decisions are propelling global market growth.



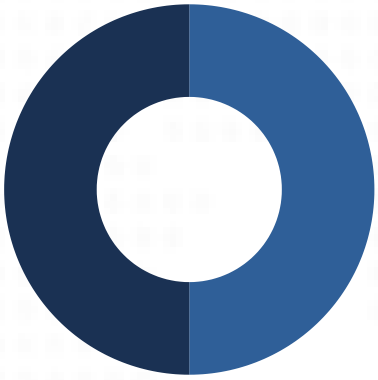
Source: Research And Markets

Global Next Generation Sequencing Market is anticipated to experience a CAGR of 18.16% from 2024 to 2030.

PREVALENCE OF GLOBAL BIOINFORMATICS MARKET BY REGION & APPLICATION

Regional Outlook

- North America
- Europe
- Asia Pacific
- Latin America
- Middle East & Africa



Application Outlook

- Genomics
- Molecular Phylogenetics
- Metabolomics
- Proteomics
- Transcriptomics
- Other

Source: Grand View Research

$ 34.19 Billion MV

Global Next Generation Sequencing MV- Market Value By 2030

18.16% Growth Rate*

Expected Global Next Generation Sequencing Market Growth

**CAGR - Compound annual growth rate*

"Gain Hands-On Experience in both Wet Lab and Dry Lab settings with our NGS Diploma Program."

COMPULSORY MODULES

OMICS EXPERIMENTS & TECHNOLOGIES

- Basics of Experiment Design
- Omics Study Design
- NGS Technologies
- Microarrays & SNP typing
- Single Cell Technologies
- Spatial Transcriptomics

OMICS DATA SCIENCE

- Basic of Data Science
- NGS Data Analysis
- Omics Data Types
- Data Science Methods for Omics
- AI & ML Applications in Omics

OMICS APPLICATIONS

- Modern Approaches of Drug Designing
- Precision Medicine
- Drug Target and Drug Discovery
- Clinical Genomics
- Plant Functional Genomics
- Microbial Genomics & Metagenomics

Click on the Course Booklet for complete list of topics

"From Clinical Interpretation to Precision Medicine, AI-Driven Drug Discovery, and Applications - Discover the Potential of Omics Data"

ELECTIVE MODULES

- Introduction to Non-Clinical NGS Applications and Genomics Analysis Tools
- Statistics for Clinical Interpretation from Omics Data
- Microbial Genomes & Microbiomes
- Principles of Drug Discovery
- Transcriptome Data Analysis
- Proteomics and Metabolomics
- Protocols for Clinical Next Generation Sequencing Applications
- OMICS-Based Precision Medicine
- Computational Personal Genomics
- Artificial Intelligence (AI) in Healthcare
- AI/ML based Rational Drug Discovery
- Computational Structural Bioinformatics
- Applications of OMICS in Plant Science

Click on the Course Booklet for complete list of topics

STUDENT JOURNEY

Submit your Application

Application Review

Receive your Offer Letter

Begin your IIT Jodhpur PG Diploma

Certificate I

Option to exit with Certificate I

***Direct entry at Certificate II**

Certificate II

Option to exit with Certificate II

Become an IIT Jodhpur PG Diploma Graduate & Alumni

Placement Support and Opportunities

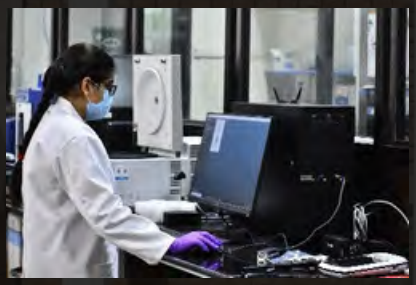
**Participant must have completed similar courses as in Certificate I through prior formal academic trainings. To qualify PG Diploma, the participant will have to complete 13 additional credits as electives.*

PROGRAM DETAILS

Campus immersion at IIT Jodhpur will be an essential component of the PG Diploma program and Certificate II.

Learners will get hands-on lab experience, with the opportunity to meet and learn in person from the Faculty and Mentors at IIT Jodhpur and engage in mini project.

Participants will complete a mini project co-supervised by IIT Jodhpur Faculty and partners.



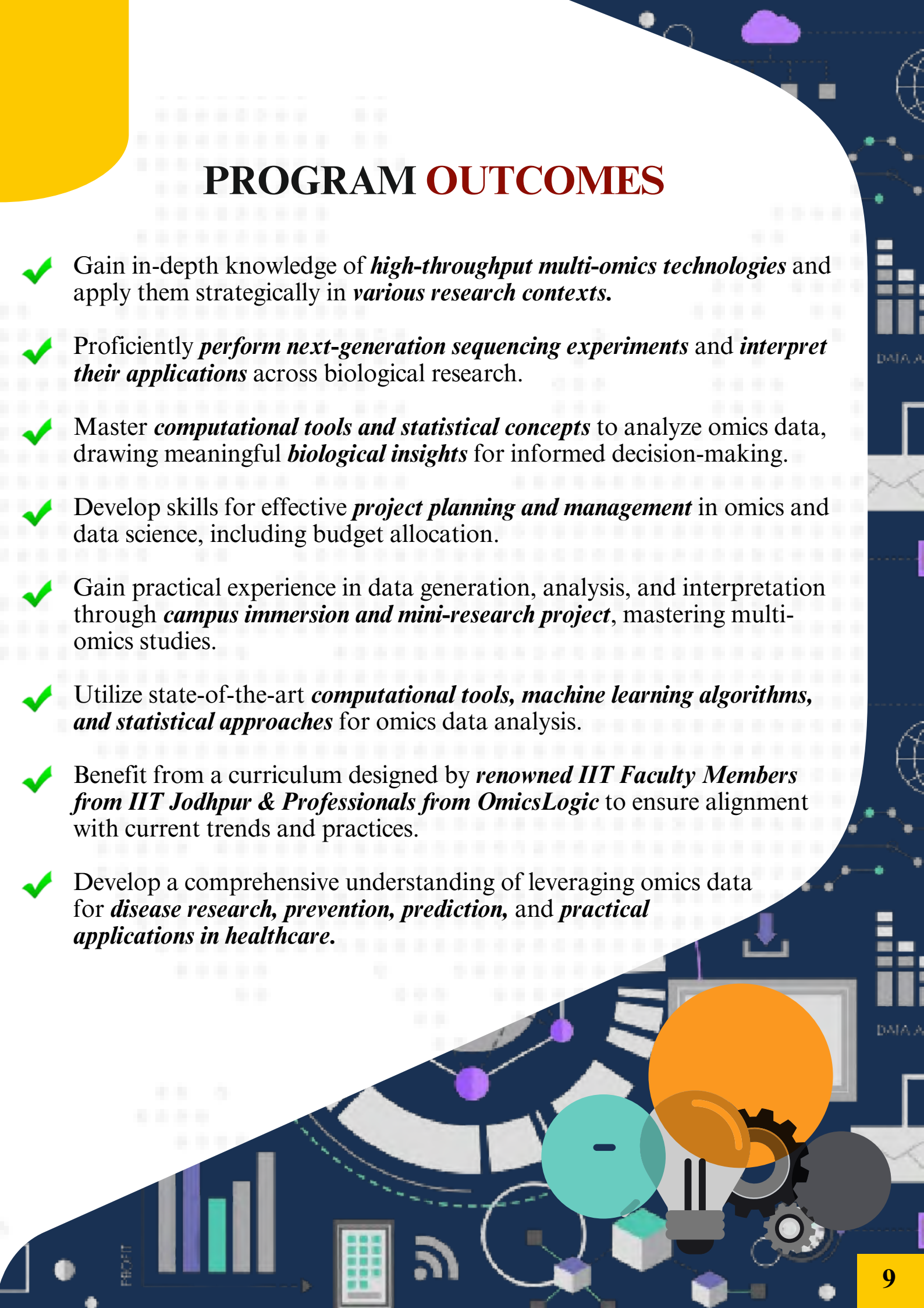
MODULE	CERTIFICATE I	CERTIFICATE II	PG DIPLOMA DEGREE
DURATION	6-Months	6-Months	12-Months
CREDITS	13	15	28
MODE	Online	Online & Immersion	Online & Immersion
LIVE SESSIONS	~196 Hours	~252 Hours	~448 Hours
PROGRAM FEES	₹1.2 Lakhs	₹1.5 Lakhs	₹2.5 Lakhs

**Administrative Fee/Immersion Fee excluding Accomodation & Boarding : ₹10000/- only Campus Immersion is compulsory for Certificate II and PG Diploma but not for Certificate I.*

Click on this link to check the IITJ official advertisement

PROGRAM OUTCOMES

- Gain in-depth knowledge of ***high-throughput multi-omics technologies*** and apply them strategically in ***various research contexts.***
- Proficiently ***perform next-generation sequencing experiments*** and ***interpret their applications*** across biological research.
- Master ***computational tools and statistical concepts*** to analyze omics data, drawing meaningful ***biological insights*** for informed decision-making.
- Develop skills for effective ***project planning and management*** in omics and data science, including budget allocation.
- Gain practical experience in data generation, analysis, and interpretation through ***campus immersion and mini-research project***, mastering multi-omics studies.
- Utilize state-of-the-art ***computational tools, machine learning algorithms, and statistical approaches*** for omics data analysis.
- Benefit from a curriculum designed by ***renowned IIT Faculty Members from IIT Jodhpur & Professionals from OmicsLogic*** to ensure alignment with current trends and practices.
- Develop a comprehensive understanding of leveraging omics data for ***disease research, prevention, prediction,*** and ***practical applications in healthcare.***



WET LAB OPPORTUNITIES

ACADEMIA

PRINCIPAL INVESTIGATOR (PI)

Salary Range:

- USD: $79T - $1L
- INR: ₹9L - ₹20L

POSTDOCTORAL RESEARCHER

Salary Range:

- USD: $69T - $1L
- INR: ₹3.7L - ₹7.4L

RESEARCH ASSISTANT

Salary Range:

- USD: $38T - $66T
- INR: ₹2.4L - ₹4.4L

LABORATORY TECHNICIAN

Salary Range:

- USD: $41T - $64T
- INR: ₹1.8L - ₹3L

INDUSTRY

APPLICATIONS SCIENTIST

Salary Range:

- USD: $88T - $1L
- INR: ₹5L - ₹10L

QUALITY CONTROL SPECIALIST

Salary Range:

- USD: $46T - $72T
- INR: ₹5L - ₹13L

RESEARCH SCIENTIST

Salary Range:

- USD: $99T - $2L
- INR: ₹6L - ₹12L

CLINICAL LAB SCIENTIST

Salary Range:

- USD: $75T - $1L
- INR: ₹2.5L - ₹9.6L

INTERNSHIPS

RESEARCH INTERN

Stipend Range:

- USD: $43T - $78T
- INR: ₹1.2 - ₹2.4L

BIOTECH INTERN

Stipend Range:

- USD: $39T - $73T
- INR: ₹1.2L - ₹1.8L

MOLECULAR BIOLOGY INTERN

Stipend Range:

- USD: $42T - $77T
- INR: ₹3L - ₹3.24L

CLINICAL RESEARCH INTERN

Stipend Range:

- USD: $40T - $73T
- INR: ₹1.2 - ₹2.4L

**Sources: Glassdoor for India & US. Salary and stipends are subject to change and may vary depending on various factors*

COMPUTATIONAL OPPORTUNITIES

ACADEMIA

BIOINFORMATICS SCIENTIST

Salary Range:
- USD: $92T - $1L
- INR: ₹2L - ₹10L

DATA SCIENTIST

Salary Range:
- USD: $92T - $2L
- INR: ₹7L - ₹18L

BIOSTATISTICIAN

Salary Range:
- USD: $86T - $1L
- INR: ₹4L - ₹8L

COMPUTATIONAL BIOLOGIST

Salary Range:
- USD: $69T - $1L
- INR: ₹6L - ₹19L

INDUSTRY

BIOINFORMATICS ENGINEER

Salary Range:
- USD: $96T - $2L
- INR: ₹4L - ₹9L

BIOINFORMATICS PROGRAMMER

Salary Range:
- USD: $83T - $1L
- INR: ₹2L - ₹4L

HEALTHCARE DATA ANALYST

Salary Range:
- USD: $74T - $1L
- INR: ₹5L - ₹8L

PRODUCT MANAGER

Salary Range:
- USD: $92T - $2L
- INR: ₹9L - ₹25L

INTERNSHIPS

DATA SCIENCE INTERN

Stipend Range:
- USD: $58T - $99T
- INR: ₹1.2 - ₹3L

BIOINFORMATICS INTERN

Stipend Range:
- USD: $47T - $86T
- INR: ₹1.3L - ₹1.6L

PROGRAMMING INTERN

Stipend Range:
- USD: $50T - $84T
- INR: ₹0.9L - ₹3.1

SOFTWARE DEV. INTERN

Stipend Range:
- USD: $53T - $95T
- INR: ₹2.8L - ₹6L

**Sources: Glassdoor for India & US. Salary and stipends are subject to change and may vary depending on various factors*

CAREER OPPORTUNITIES
POTENTIAL RECRUITERS

Pharmaceutical and Biotechnology Companies:

Sun Pharmaceutical Industries Ltd.
Dr. Reddy's Laboratories Ltd.
Serum Institute of India Pvt. Ltd.
Glenmark Pharmaceuticals Ltd.
Jubilant Life Sciences Ltd. Cipla Ltd.
Bharat Biotech International Ltd.
Biocon Ltd.
Piramal Enterprises Ltd.
Torrent Pharmaceuticals Ltd.
Cadila Healthcare Ltd.
Cipla Ltd.
Lupin Limited

Research Institutions and Laboratories:

Council of Scientific and Industrial Research Laboratories
Department of Biotechnology Laboratories
Indian Institutes of Technology
National Institutes of Technology
Indian Institutes of Science Education and Research

Healthcare Organizations and Hospitals:

Apollo Hospitals
Max Healthcare
Narayana Health
AIIMS
PGIMER
Fortis Healthcare
Manipal Hospitals
Medanta - The Medicity
Tata Memorial Hospital
Rajiv Gandhi Cancer Institute

Data Analytics and Bioinformatics Companies:

Illumina
Seven Bridges
TCS Bioinformatics Centre
BioAxis DNA Research Centre
Genotypic Technology
Thermo Fisher Scientific
Persistent Systems
Wipro Bioinformatics
Strand Life Sciences
Ocimum Biosolutions

Genomic Diagnostic Laboratories:

MedGenome Labs
Mapmygenome
DNA Labs India
SciGenom Labs
Xcode Life Sciences
CORE Diagnostics
Positive Bioscience
Neuberg Diagnostics

PROGRAM DIRECTORS

Dr. Pankaj Yadav
Assistant Professor
Dept. of Bioscience & Bioengg
(BSBE), IIT Jodhpur

Dr. Sucharita Dey
Assistant Professor
Dept. of Bioscience & Bioengg.
(BSBE), IIT Jodhpur

PROGRAM MENTORS

Dr. Mitali Mukerji
Professor & Head
BSBE, IIT Jodhpur

Dr. Praveen Gupta
Managing Director
Premas Life Sciences

Dr. Gautam Das
Co-founder
miBiome Therapeutics

PROGRAM ADVISORS

Dr. Mohit Mazumder
CEO & Co-founder
OmicsLogic India & US

Dr. Shankar Manoharan
Assistant Professor
BSBE, IIT Jodhpur

PROGRAM INSTRUCTORS

Dr. Dinesh Kumar Ahirwar
Assistant Professor,
BSBE, IIT Jodhpur

Dr. Siddharth Srivastava
Professor of Practice,
BSBE, IIT Jodhpur

Dr. Ayan Sadhukhan
Assistant Professor
BSBE, IIT Jodhpur

Dr. Sudipta Bhattacharyya
Associate Professor,
BSBE, IIT Jodhpur

Dr. Debaraka Sengupta
Associate Professor,
CB, CSE, IIIT-Delhi

Dr. Rintu Kutum
Asst. Prof. Dept of CS,
Ashoka University,

Dr. Rahul Ramekar
NGS Training Specialist,
Premas LifeSciences

Sonalika Ray
Research Scientist,
OmicsLogic India

STUDENT FEEDBACK

4.4 / 5

Overall coursework rating

54.8% Found coursework moderately difficult

92.9% Course recommendation

Batch 2023 - 2024

Mrinal Bamhotra
M.Sc Bioinformatics,
GGSD College, Chandigarh

*"I've acquired skills in **experiment planning** and **biological data analysis** using **Excel and R programming.** These skills would be helpful for me in both experiment preparation and data analysis."*

Harshita Kaur
M.Sc Biochemistry,
Thapar University, Patiala

*"The program **instructors** do more than just explaining the theoretical concepts; they also assign **practical assignments** that are crucial for us in becoming a **well-informed scientific researcher.**"*

REGISTRATION PROCESS

1 COMPLETE YOUR REGISTRATION

Each application undergoes review to ensure fair participant selection. Deadline: **April 20, 2024.** Fill out form to register: Click Here

2 SCREENING PHASE

During this phase, applicants are required to submit a fee of Rs. 300/-, followed by which an eligibility form will be shared with you for uploading documents for verification.

3 RECEIVE OFFER LETTER

Once reviewed and deemed eligible, you'll get an offer letter with program details such as start date, program schedule, and other instructions.

4 COMPLETE FEE PAYMENT

The next step is completing the program fee payment. Payment methods and deadlines will be provided to you. You can reach out to our team for Installment & Loan options to support the program fees.

5 PROGRAM COMMENCEMENT

Following the orientation session to acquaint you with the program structure, faculty, and resources available, regular classes will commence from **July, 2024.**

ABOUT IIT JODHPUR

The **Indian Institute of Technology Jodhpur**, a technological Institute of National importance was founded in **2008.** Today, the Institute has undergone transformational changes since its humble origins.

Dr. Mitali Mukerji,
Head, Dept. of Bioscience & Bioengineering, (BSBE)
IIT Jodhpur, Rajasthan

With a lofty vision of being a future-driven institute for nurturing excellence of thought; creating, preserving, and imparting knowledge; and using transformational technologies/interventions with a multidisciplinary approach for responding to societal challenges and aspirations, IIT Jodhpur is steadily advancing towards its ultimate goal of building technology and competent human resources for India.

The Institute has **over 240 Faculty Members** spread across various academic units including departments, centres, and schools with expertise in diverse thrust areas.

> *At the BSBE we aspire to provide state-of-the-art domain knowledge and training to understand biological systems, provide innovative Bio-Tech solutions for applications in medical and environmental engineering domains that include biofuels, diagnostics, therapeutics, smart healthcare devices. -* ***Dr. Mitali Mukerji***

Apart from imparting world-class education through its unique undergraduate and postgraduate programs, the Faculty Members are also pursuing cutting-edge research across disciplines.

Fully Equipped Basic & Advanced Teaching Laboratories

ABOUT OMICSLOGIC

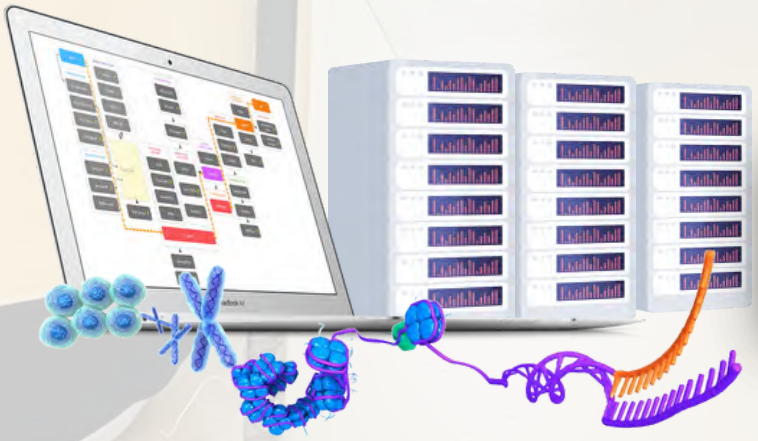
OmicsLogic (Formerly known as Pine Biotech) is a US-based company leading innovator in NGS bioinformatics, specializing in the training programs developed for analyzing high-throughput omics data. Founded with the mission to make advanced computational biology methods accessible to researchers and students, OmicsLogic has developed a range of solutions that simplify complex data analysis tasks and get everyone started, especially those who have no background and exposure to modern biology.

Expertise spans multiple bioinformatics domains including all **NGS Genomics, Bulk, ScRNA and spatial Transcriptomics, Metagenomics, and other Omics analysis** expertise in biological research utilizing data-driven technologies **(Statistics, Machine learning, Generative AI, Cheminformatics & structural Biology)** to address scientific questions.

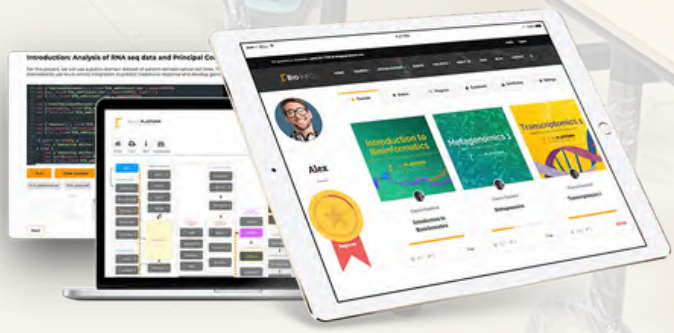
We have developed a range of solutions that simplify complex data analysis tasks and get everyone started, especially those who have no background and exposure to modern biology. With a focus on educational initiatives, we aim to equip the next generation of students and scientists with the skills they need to excel in the rapidly evolving landscape of big data bioinformatics. ***- Dr. Mohit Mazumder***

Dr. Mohit Mazumder
CEO & Co-founder
OmicsLogic India & US

NGS Multi-Omics & Biomedical Data Science



Bioinformatics Cloud Infrastructure



Industry Relevant Training Curriculum

ABOUT PREMAS

premas life sciences

We are
Great Place To Work® Certified™
Recognized by Great Place To Work® India

Great Place To Work. Certified JAN 2023 – JAN 2024 INDIA

Premas Life Sciences (PLS) is a young, dynamic, and focused organization introducing game-changing niche technologies in Genomics, Cell Biology, and Biopharma to boost innovative research and diagnostics in India. We are also the knowledge partners to several reputed research institutes and hospitals, enabling them to set up core genomics facilities with complete support at all fronts.

The biggest motivation behind the inception of PLS was to set up an organization that could contribute significantly to the life science research landscape in India and has the convergence of a committed and highly skilled workforce to catalyze this process.

> *'We are really hoping to create a space where technology can be used to answer important problems in science and how it influences people's lives. We believe in fostering the spirit of science among students and young adults through our scientific outreaches and we would definitely like PLS, in its own unique capacity, to contribute to the India story.* ***- Praveen Gupta***

Praveen Gupta, Managing Director, Premas Life Sciences

Genomics & Cell Biology

illumina · 10X GENOMICS · STANDARD BIOTOOLS · Covaris · CareDx · GENOLUTION · Agilent Technologies · JN MEDSYS · TWIST BIOSCIENCE · CODEX DNA · ASKION

IIT Jodhpur
PG Diploma in

Next Generation Omics Technologies and Applications

Enquire Now

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communication@omicslogic.com

WhatsApp:+91-9814499511

Apply Now

Reach out to us for any query related to the program and registrations.