



EDUFYI TECH SOLUTIONS

UNLOCKING THE POWER OF INNOVATION...!



GENETIC ENGINEERING

MENTORSHIP PROGRAM

60 DAYS

Course Curriculums

Course Title: Genetic Engineering

Course Description: This course explores the principles and applications of genetic engineering, focusing on techniques used to manipulate genetic material. Students will gain a foundational understanding of molecular biology and the ethical, legal, and social implications of genetic modifications.

Course Objectives:

- *Understand the basic concepts of genetics and molecular biology.
- *Learn the techniques used in genetic engineering, such as CRISPR, cloning, and gene therapy.
- *Explore applications of genetic engineering in medicine, agriculture, and biotechnology.
- *Discuss ethical considerations and societal impacts of genetic engineering.
- *Week-by-Week Outline:

Who are we ..?



At Edufyi Tech Solutions, we are dedicated to transforming the educational journey for college students by offering cutting-edge virtual internships and comprehensive training programs. Our approach combines industry mentorship with practical experience, providing each student with six real-time and capstone projects per course or domain. These projects are designed to equip students with the skills and experience needed to secure their dream jobs upon graduation.

Mission:

To equip students with virtual internships and real-world projects for successful career placement through industry mentorship.

Vision:

To transform education by linking academic learning with practical experience, helping students achieve their career goals.

Week-by-Week Outline:

Week 1: Introduction to Genetics

- *Overview of DNA structure and function.**
- *Mendelian genetics.**
- *Introduction to genomics.**

Week 2: Molecular Biology Techniques

- *DNA replication, transcription, and translation.**
- *Basic laboratory techniques: PCR, gel electrophoresis.**

Week 3: Genetic Engineering Techniques

- *Restriction enzymes and cloning vectors.**
- *Transformation and transfection methods.**

Week 4: CRISPR and Genome Editing

- *Mechanism of CRISPR-Cas9.**
- *Applications in research and medicine**

Week 5: Gene Therapy

- *Types of gene therapy: somatic vs. germline.**
- *Case studies and current research.**

Week 6: Applications in Agriculture

- *Genetically modified organisms (GMOs)**
- *Benefits and risks of GM crops.**

Week 7: Ethical, Legal, and Social Implications

- *Ethical considerations in genetic modification.**
- *Regulation and public policy.**

Week 8: Future Trends in Genetic Engineering

- *Advances in synthetic biology.**
- *Potential future applications and concerns.**

Assessment Methods:

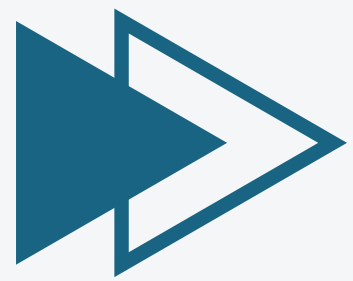
- **Quizzes and exams on theoretical concepts.**
- *Laboratory reports on practical techniques.**
- *Research paper on a selected topic in genetic engineering.**
- *Class participation in discussions on ethical implications.**

Recommended Readings:

- "Molecular Biology of the Cell" by Alberts et al.**
- "Genetics: A Conceptual Approach" by Benjamin A. Pierce**
- Recent journal articles on genetic engineering topics**

Additional Resources:

- *Online databases and journals for up-to-date research.**
- *Lab manuals for practical techniques.**

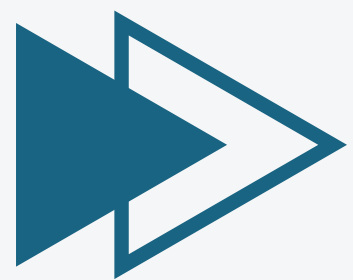


Discussion on Assignments and Projects

Group project: Create a comprehensive digital marketing strategy for a chosen brand

Comprehensive project or exam covering all key topics

Discussion on course insights and future learning opportunities



Support

Tricks & Tips to clear interview questions

Most preferred interview questions

Resume preparation & Cover



Our Process:

>> Schedule a Demo Call

Discover more about our programs and how they can benefit your career.

>> Choose a Program

Select the plan that fits your goals and budget.

>> Enroll

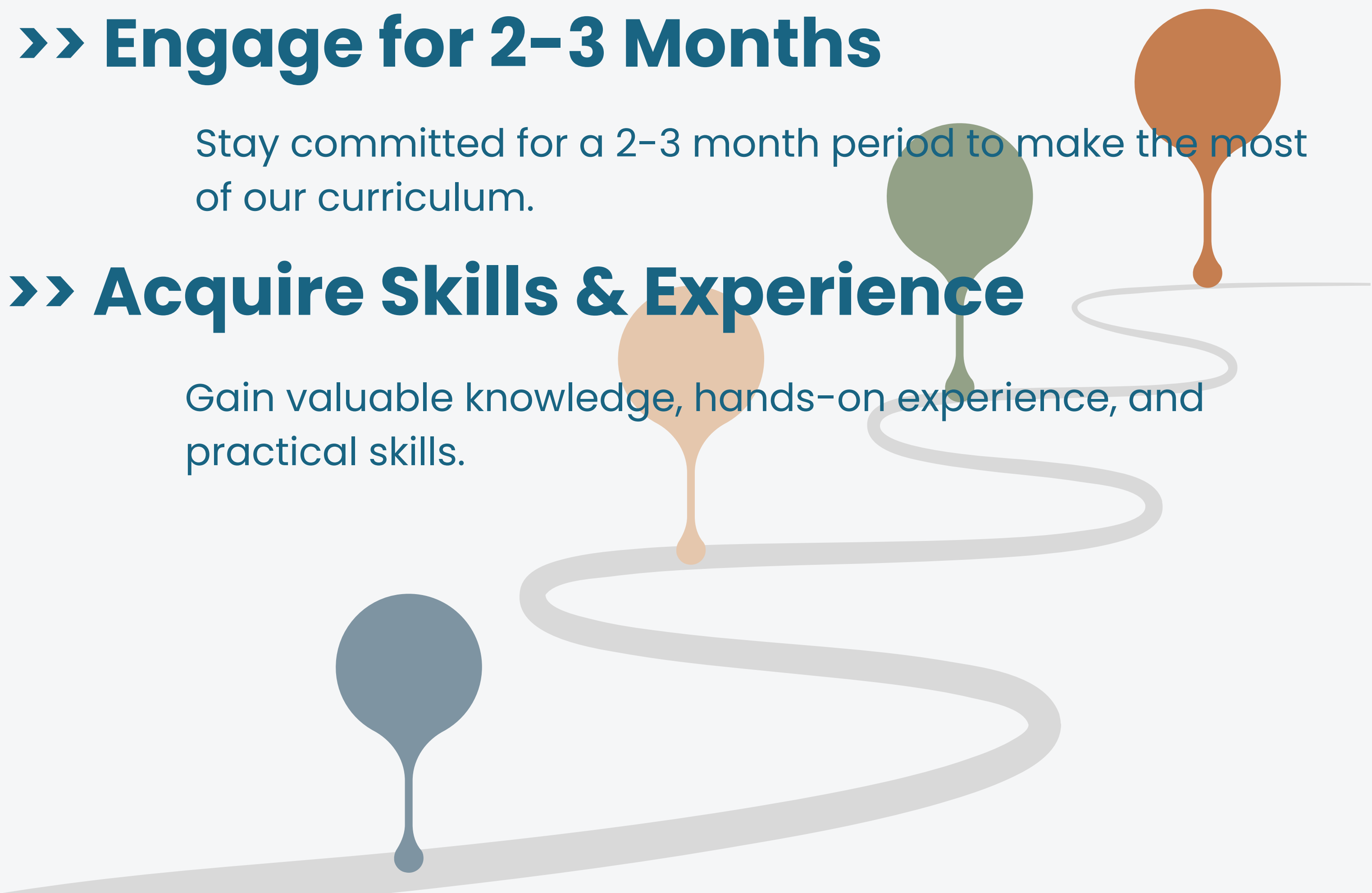
Join our community and start your journey with us.

>> Engage for 2–3 Months

Stay committed for a 2–3 month period to make the most of our curriculum.

>> Acquire Skills & Experience

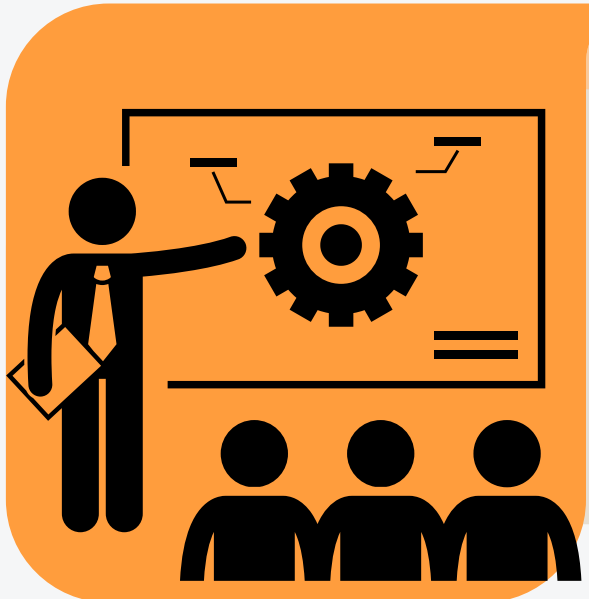
Gain valuable knowledge, hands-on experience, and practical skills.



Certifications



Internship Certificate



Training Certificate



Course Certificate



letter Of Recommendation



EDUFYI TECH

APPROVED FROM



M MINISTRY OF
C CORPORATE
A AFFAIRS
GOVERNMENT OF INDIA



MSME
MICRO, SMALL & MEDIUM ENTERPRISES
सूक्ष्म, लघु एवं मध्यम उद्यम



ISO 9001:2015



Credential Platform Partner





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