



## Course Outline

### FOUR YEARS B.TECH BIOTECHNOLOGY PURBANCHAL UNIVERSITY

#### SEMESTER ONE (YEAR ONE)

1. Physics-I
2. Chemistry (Physical & Inorganic)
3. Mathematics-I
4. Computer Foundation
5. Communicative English
6. Electrical Engineering

#### SEMESTER TWO (YEAR ONE)

1. Physics-II
2. Organic Chemistry-I
3. Mathematics-II
4. Computer Programming
5. Statistics & Probability
6. Chemical Engineering

#### SEMESTER THREE (YEAR TWO)

1. Organic Chemistry-II
2. Cyto - Genetics
3. Microbiology
4. Biochemistry-I
5. Animal & Plant Physiology

#### SEMESTER FOUR (YEAR TWO)

1. Molecular Biology
2. Immunotechnology
3. Biochemistry-II
4. Developmental Biology
5. Biophysics & Bioinstrumentation

#### SEMESTER FIVE (YEAR THREE)

1. Genetic Engineering
2. Cell & Tissue Culture
3. Microbial Processing Engineering
4. Biochemical Engineering
5. Enzymology & Enzyme Technology

#### SEMESTER SIX (YEAR THREE)

1. Bioinformatics
2. Bioprocess
3. Downstream Processing
4. Plant Biotechnology
5. Animal Biotechnology

#### SEMESTER SEVEN (YEAR FOUR)

1. Food & Industrial Biotechnology
2. Environmental Biotechnology
3. Agriculture Biotechnology
4. Marketing & Management
5. Intellectual Property Right, Biosafety & Bioethics

#### SEMESTER EIGHT (YEAR FOUR)

1. Elective-I
2. Project
3. Seminar

#### ELECTIVE SUBJECTS

##### Elective I :

1. Cancer Biology
2. Toxicology

TOTAL CREDIT HOURS: 152

## Who are at NEF-CCN AITM?

### Board of Directors

- **Prof. Dr. Sriram Bhagut Mathe**  
Former Dean, IOE, TU  
Chairperson
- **Mr. Umesh Shrestha,**  
Founder, LA College of Higher Studies  
Vice Chairperson
- **Mr. Pramod Pradhan**
- **Mr. Yadab Pradhan**
- **Mr. Gunaraj Niraula**

### Academic Council

- **Prof. Dr. Ram Manohar Shrestha**  
Professor Emeritus, AIT, Bangkok  
Chairperson
- **Prof. Dr. Sudarshan Raj Tiwari**  
Former Dean, IOE, TU  
Co-Chairperson
- **Prof. Dr. Pramod Bahadur Shrestha**
- **Prof. Dr. Prem Nath Maskey**

### IST Academic Committee

- **Dr. Madhav Narayan Shrestha**  
Coordinator, AIT UG Program
- **Mr. Pramod Pradhan**  
Director, AITM
- **Mr. Bhupa Das Rajbhandari**  
Executive Director
- **Mr. Rajeeb Kumar Singh**  
Head, Department of Biotechnology
- **Dr. Bal B. Parajuli**  
Head, Department of Civil Engineering
- **Mr. Gyani Ray**  
Head, Department of ICT

Faculty Interaction program



Celebrating Environment Day



Excursion for Mushroom Collection



**NEF-CCN**

**NEPAL EDUCATION FOUNDATION -  
CONSORTIUM OF COLLEGES, NEPAL**

**AITM**

ASIAN INSTITUTE OF TECHNOLOGY & MANAGEMENT

Under the aegis of NEF - CCN

Contact: Knowledge Village, Khumaltar, Satdobato, Lalitpur, Nepal  
Tel: 5548314, 5552375, Email: biotech@aitm.edu.np,  
Website: [www.aitm.edu.np](http://www.aitm.edu.np)

For **Serious Education.** For **Secured Future.**



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Program is currently offered under WhiteHouse Education Network (WHEN), which is being rebranded as Asian Institute of Technology & Management (AITM)

**B.TECH**  
Bachelor of  
Biotechnology



Seriously  
**अब पढने बेला भयो**

Ad Media/AITM-13



# About AITM

## Vision

To contribute to human resources development in the country by networking with other prestigious and reputable institutions within and outside the country so as to produce skilled and qualified graduates, with analytical skills, creative and innovative thinking, who are morally upright and socially responsible and are able to lead from the front by example.

## Mission

To offer the students an educational environment that enhances their learning, enlightens their minds and mould their personalities in a caring environment so that they are thoughtful, critical, innovative and responsible global citizens, who will be leaders in whatever careers they choose.

## Objective

AITM wishes to be a positive agent of change, within the country, regionally and internationally, by collaborating with reputed international institutions of Asia and beyond, and drawing upon their vast experiences and track record of operating in a multi-national and multi-cultural academic setting.

AITM will strive to become an international university by 2020. In offering the international programs in Nepal, the main aim will be to transform Nepalese institutions of higher education into outstanding seats of learning, equipped to foster high-quality education, scholarship and research, to produce enlightened citizens with strong moral and ethical values.



← MOU signing with Nepal Dairy



→ 2nd International Symposium organised by Department of Biotechnology



← Mr. Yogesh Dhungana receiving medal from Prime Minister

# B.TECH

## Bachelor of Biotechnology

B.Tech Biotechnology, affiliated to Purbanchal University, is a four year program, comprising of 8 semesters. It is a thorough grounding in the foundation subjects that aspiring students need in order to study biotechnology, including biochemistry, cell biology, physiology and genetics.

## Facilities

- Laboratories with power backup
  - Biochemistry Lab
  - Microbiology Lab
  - Genetic Engineering /Molecular Biology Lab
  - Bioprocess Lab
  - Vaccine Production Lab
  - Plant Tissue Culture Lab
  - Animal Cell Culture Lab
  - Bioinformatics Lab
- Well equipped classrooms
- Resourceful Library
- Hygienic Cafeteria
- Wifi-Zone
- Screen House
- Animal House



## Eligibility for Admission

Prospective student must have secured 50% in aggregate in examination of +2 or PCL or intermediate level with science (biology or physical group) from any Board or University recognized by Purbanchal University.

## Scholarship

The Scholarship for the Biotechnology students shall be awarded on the following basis:

- 5% scholarship on the basis of merit of entrance examination conducted by Purbanchal University.
- 5% scholarship on the basis of reservation quota specified by Purbanchal University.

## Awards & Achievements

- Projects grant from University Grant Commission (UGC); Nepal Academy of Science & Technology (NAST); Ministry of Science, Technology and Environment; National Potato Development Program, Department of Agriculture
- Mr. Yogesh Dhungana, 2007 Batch student, Topper "Faculty of Science & Technology", Purbanchal University, 2012.
- Winner of "All Nepal Biotechnology Football Tournament" organized by KUBiC, 2010.
- Winner of "Biotech Winter Cup Basketball" organized by Department of Biotechnology, AITM, 2010.



## Future Opportunities

Our graduates have opportunities for internship and further education in different institutions.

## Laboratories/Industries

- Nepal Biotech Nursery
  - Himalayan Flora Pvt. Ltd.
  - Nepal Dairy Pvt. Ltd.
- And other several laboratories and industries.

## Universities where Former Students have gone for Higher Studies

- Southern Illinois University, Carbondale, USA
- Grand Valley State University, USA
- South East Missouri State University, USA
- University of Ryukyus, Okinawa, Japan
- TU Dresden University, Germany
- University of Queensland, Australia
- University of Tasmania, Australia
- University of East London, UK



- Banaras Hindu University, India
- KTH Royal Institute of Technology, Sweden
- Tsinghua University, Beijing, China

