MALAVIYA MISSION TEACHER TRAINING PROGRAMME

शिक्षा मंत्रालय
MINISTRY OF EDUCATION
सत्यमेव जयते

ज्ञान-विज्ञान विमुक्तये

NATIONAL INSTITUTE OF TECHNOLOGY WARANGAL

An Institute of National Importance

MALAVIYA MISSION TEACHER TRAINING CENTRE

Established under the Scheme of MMTTP, University Grants Commission (UGC),
Ministry of Education, Government of India

12-Days Refresher Course *on* (Hybrid Mode)

BIOTECHNOLOGY AND PHARMACEUTICAL INDUSTRY: CONTEMPORARY PRACTICES

20 July - 1 August 2026

(20 - 25 July Residential and 27 July - 1 August Online)

Course Description:

A refresher courses on Biotechnology and Pharmaceutical Industry: Contemporary Practices provides an intensive overview of the entire drug discovery and development process. This course is designed to give in-depth knowledge on current practices/updates on the recent trends of modern drug discovery programs across the globe. This course emphasies on Good Manufacturing Practices (GMP), regulatory compliance, novel methods for biologics production, and the integration in drug discovery. Providing affordable medicines is one of the goal of sustainable development. Large amount of population around the globe is far from getting the medical treatment at reasonable price.This may be due to the cost involved in the whole process of drug discovery and development. The total cost of the drug discovery process can be reduced by developing appropriate technologies used as tools in the preclinical and clinical phases of drug discovery process. For this, the in-depth knowledge about the subject and decision-making is very important. These skills can be imparted to the students during the undergraduate and postgraduate programs and very much desirable to include in the curriculum of pharmacy and medicinal chemistry education. The recommendations of New Education Policy-2020 (NEP 2020) also indicate the skills to be developed in the studentshas to be taught in the classroom with emphasis on the practical knowledge on the subject. This is possible only of the teacher is having knowledgein the current practices of the subject in the industry. With this background, this course is planned to give an overall idea of modern methods of drug discovery process to the participants. So that, they can transfer the knowledge to the students effectively. This course will be emphasized the relevance of medicinal chemistry in the pharmacy curriculum, its role in the evolution of pharmacy, and its paradigmshift to pharmaceutical care, as well as its history and intellectual domains. As some educators are already engaged in this endeavor. However, the future research/reviews should address the scope of medicinal chemistry in the pharmacy curriculum with appropriate drug class examples. The components of drug design and discovery contribute to the pharmacy student's foundational knowledge base and will have a tremendous impact in advancing the professional leadership in the pharmaceutical and health care sectors



Scan the QR code to Register

Last date for Registration: 16-07-2026

NO REGISTRATION FEE

Course Content

A) Organic/Medicinal Chemistry:

- ·Target scouting (Identifying the therapeutic area) for the drug discovery programs
- ·Applications of basic conceptsof medicinal chemistry for drug discovery
- ·Importance of Organic Chemistry (for the Lead discovery/optimization)
- ·Importance of Organic Chemistry(Process Development and Impurity Profiling)
- ·Natural products-based drug discovery/Scaffold hopping
- ·Phytochemistry in drug discoveB)

B) Pharmacology/Pharmaceutics:

- ·Approaches of pharmacology for the assay development
- ·Role of pharmaceutics/formulation development in drug discovery
- ·Nanotechnology in drug discovery

C) Regulatory affairs:

- ·Regulatory affairs
- ·Pharmacovigilance and importance
- ·Intellectual property in drug industry

D) Biotechnology in Pharmaceutical/Drug Industry

- ·Biotechnology approaches for API production
- ·Sustainable methods in pharmaceutical industry
- ·Role of biologics

E) AI/Computational methods:

- ·Computational Chemistryand Drug Discovery
- ·AI Tools for Drug Discovery
- ·Omics in drug discovery

F) Spectroscopy/Analytical methods in drug industry

- ·Material characterization (spectroscopic methods)
- ·Advanced separation in pharmaceutical/biotech industry
- ·Database for drug discovery

G) Entrepreneurship and professional ethical practices

Resource Persons for this Program

Faculty members from IITs, IISc, TIFR,NIPERs,IISERs,CUs,CSIR/ICMR Laboratories,autonomus institues funded by DST/DBT and NITs along with the Scientists from the Biotechnology and Pharmaceutical industries will be invited to deliver lectures in the program.

Course Duration

There will be Hybrid 12-days (72 hours) of engagement including live sessions, Hands-on sessions, assignments,exposure to the sophisticated instruments etc.

Certification Criteria

As per the norms of the UGC-MMTTC, the participants must maintain 80% of Attendance. Candidates will be issued certificates on successful completion of the course after going throuh a mandatory test.

Who can Apply ?

Faculty members of Central, State, Deemed to be Universities, Private Universities, Institutions of National Importance, Colleges and other HEIs; Contractual, Ad-hoc, Guest faculty Teachers and Research Scholars (Ph.D. level) in HEIs, and People working in Biotech&Pharmaceutical industries are eligible.

Selection Criteria

Selection will be done based on first-come first-served to a maximum number of 50 Faculty/industry participants. PhD scholars are allowed to participate. The list of selected participants will be intimated through e-mail. There is **No Registration Fee** to attend this program.

Note: This Program shall be considered for regularization/ Career Advancement Scheme (CAS). As per UGC guidelines, attending the Courses under MMTTP, UGC will be treated as on duty/duty leave.

About MMTTC of NIT Warangal

The Malaviya Mission Teacher Training Centre (MMTTC) was established at NIT Warangal in the year 2015 under the scheme "Malaviya Mission on Teacher Training Programme (MMTTP)" sponsored by the University Grants Commission (UGC), Ministry of Education, Government of India. Since its inception, the Centre has successfully organized various programs in the form of NEP Orientation programs, Short-term programs, Refresher Courses, FDP programs and one-month duration Faculty Induction Program (FIP) for Higher Education Faculty in various theme areas of Science and Technology, Humanities and Social Sciences from which more than 8000 participants have benefitted. Other activities of the MMTTC include offering online courses, curriculum design, carrying out research in educational technology and pedagogy and integrating ICT into the Teaching-Learning process. The MMTTC NIT Warangal has been conducting various programs, online and offline following MMTTP Guidelines and UGC Regulations.

How to Apply ?

Interested participants are required to register by using the online form, link provided below, on or before Last Date. There is NO REGISTRATION FEE. It is mandatory to submit the Nomination Form from your organization to consider your application.

Registration link: https://mmc.ugc.ac.in/registration/Index

or through Google Form: https://forms.gle/7MMzrNJmUNvKjASJ9

Accommodation

Accommodation can be provided at the Institute Visitor's Block for a maximum of 20 participants from the programme, on a first-come, first-served basis. Over and above this, accommodation will be provided at the Institute Outreach Centre (NITW). For further details, please contact **0870-2462686.**

Program Coordinators

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Department of Chemistry

Important Dates:

Last Date of Registration: 16 July 2026

Intimation of Selection: 17 July 2026

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NATIONAL INSTITUTE OF TECHNOLOGY WARANGAL

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