



अखिल भारतीय तकनीकी शिक्षा परिषद्  
All India Council for Technical Education

**AICTE-QIP-PG CERTIFICATE PGROGRAMME**  
**in Emerging Areas**

**Scheme Guidelines for AY 2025-26**



## 1. INTRODUCTION:

**“AICTE-QIP-PG Certificate Programme in Emerging Areas”** - A programme for the academic development of Faculty members belonging to Core Engineering disciplines introduced under the existing QIP scheme.

AICTE during its 159<sup>th</sup> Executive Committee meeting took a decision to introduce the programme during AY 2024-25 as many of the institutions have shown interest to start Diploma / UG /PG level courses in the Emerging areas but are facing acute shortage of faculty members possessing ample expertise in such areas. Through **“AICTE-QIP-PG Certificate Programme”** in Emerging Areas, the council aims to make the faculty members from core Engineering disciplines like Mechanical, Civil, Electrical and Electronics, Chemical etc. to get trained in the Emerging Technologies which in turn shall enable them to impart effective teaching to the students enrolled in courses on Emerging areas.

In 2024-25 academic year, 21 programmes were conducted by IITs, IIITs and IISc in which 1040 participants joined under AICTE Sponsored category and 160 under self-finance category. The first batch has completed their programme in December 2024 and got a wide spread appreciation by the academic community.

## 2. ADMISSION PROCESS:

AICTE shall invite the applications under **“AICTE-QIP-PG Certificate Programme”** from the faculty members of AICTE approved institutions. Based on the applications received AICTE shall be allotting the applicants to the respective host institution for the selection process. Further, the PG Certification Programme could be commenced by the concerned host institution, if and only if a minimum of 30 candidates are admitted into a course.

## 3. ELIGIBILITY CRITERIA:

Admission guidelines for AICTE-QIP-PG Certificate Programme are as follows:

- Full time Regular / Permanent faculty members of AICTE approved Degree Level / Diploma level institutes, belonging to CORE Engineering disciplines like Mechanical, Civil, Material/Metallurgical, Electrical and Electronics, Chemical etc.
- Minimum 5 years teaching experience at graduate/diploma level from AICTE approved institution.
- In addition to the above minimum eligibility, criteria of respective host institution shall be applicable.

## 4. DURATION OF THE SCHEME & BATCH SIZE:

- The duration of AICTE-QIP-PG Certificate Programme shall be 6 months (200 Hrs of activities excluding evaluation).
- A batch of 50 candidates at one identified host institution per session.

## **5. MODE OF CONDUCT:**

Will be offered through Hybrid mode. Out of the total SIX (6) months duration, a minimum of four weeks shall be offline.

## **6. PROGRAMME CONTENT:**

- a) Program content shall be divided into three stages:
  - i. Awareness,
  - ii. Expertise, and
  - iii. Application
- b) Courses of 18 credits as per the curriculum of the host institutions, with an equal blend of theory and practical/projects.
- c) A maximum of **six credits** may be taken through NPTEL Course by candidates during the QIP-PG Certification course duration.
- d) On successful completion of the QIP-PG Certification Courses, the host institution shall issue the evaluation report and the QIP-PG Certificate which shall carry the logo of both AICTE and the respective host institution.

## **7. EMERGING AREAS UNDER THE PROGRAMME:-**

- 1) Advanced Materials, Rare-earth & Critical Minerals
- 2) Semiconductors
- 3) Space and Defense
- 4) Blue/Green Economy
- 5) High Performance Computing (HPC)
- 6) Energy, Sustainability & Climate Change
- 7) Advanced Computing
- 8) Next-Gen Communications
- 9) Smart Cities & Mobility
- 10) Agritech & Food Processing
- 11) Healthcare & Med-Tech
- 12) Disaster Management & Resilient Infrastructure
- 13) Manufacturing & Industry 4.0
- 14) Quantum Technologies
- 15) Hydrogen Energy
- 16) Cyber-Physical Systems & Cybersecurity
- 17) Artificial Intelligence (AI)
- 18) Machine Learning (ML)
- 19) Data Science & Data Analytics
- 20) Augmented Reality (AR), Mixed Reality (MR), Virtual Reality (VR)

- 21) Internet of Things (IoT)
- 22) Intelligent Transport Systems (ITS)
- 23) Robotics
- 24) Drone Technology
- 25) 3D Printing
- 26) Any other areas

#### **8. FEES & CAUTION DEPOSIT: -**

No fee will be charged from the candidate for the programme. The host institute will cater for accommodation of the candidates in their hostels. However, the candidates should deposit a caution money of Rs. 5,000/- (Rupees five thousand only) with the Institution (refundable on completion).

#### **9. CANCELLATION OF ADMISSION:**

Admission to the AICTE QIP- PG Certificate Programme is liable for cancellation in case of:

- a) Non-Completion of AICTE-QIP-PG Certificate Programme within the stipulated time frame.
- b) Misconduct.
- c) He/ She is found ineligible later.
- d) Any false information furnished by the applicant or any fraudulent activity by the scholar shall lead to Penal action against him/ her.
- e) Insufficient attendance for the programme.

**Note: In case of cancelation of admissions on the above grounds, the participants have to make a payment of Rs. 40,000/- to the host institute, if the cancellation of admission happens after starting of the programme.**

#### **10. LEAVE & ATTENDANCE:**

Students/ Scholars are eligible for following leaves:

- a) **Casual leave:** 2 days in one session.
- b) **Medical leave:** Maximum of one week (7 days) per session.

**Note:** *Prior approval of the host institution is mandatory for all types of leaves.*

Students should mandatorily have 80 % attendance for lectures (inclusive of off campus and on campus) and 90% attendance for Lab works to appear for final evaluation and certificate.

#### **11. OTHER TERMS AND CONDITIONS:**

- a) During conduct of offline courses, accommodation for the students will be taken care by the respective host institution.
- b) In case of a candidate failing in any of the examinations, he / she need to bear the examination charges for the re-examination as fixed by the host institution.
- c) The students should get minimum prescribed grades as set by host institution and AICTE to get the certificate.
- d) Participants are liable to pay Rs. 40,000/- to host institutions in case of their pre-

mature withdrawal / discontinuation from the programme once they join.

## 12. Credit framework and curriculum

**Note 1:** In the curriculum below, the Content for courses has been deliberately specified at a high level so that host institutions have flexibility in designing these courses, while adhering to the given framework.

**Note 2:** Up to 6 credits may be offered via NPTEL courses (see the suggested Resources), but final exams must be conducted in-person.

Course	Content (high-level)	Credits	Resources
CS Core 1	Problem Solving, Computational Thinking, Programming fundamentals (any programming language), Data representation and manipulation	3	
Domain Core	Core aspects of the Emerging Area of the certificate program	3 (theory) + 1(lab), or 2 (theory) + 2(lab)	
CS Core 2	Data Science for Engineers	3 (theory) + 1(lab), or 2 (theory) + 2(lab)	<a href="https://nptel.ac.in/courses/106106179">https://nptel.ac.in/courses/106106179</a> , <a href="https://nptel.ac.in/courses/106106212">https://nptel.ac.in/courses/106106212</a>
Domain specialised	A second course in the Emerging Area of the certificate program	3	
Project	Hands-on, possibly common, project in the Emerging Area	4	

### Credit hours and hybrid nature

The total of 18 credits corresponds to about 200 hours of learner engagement over a 6 month or 24-week period. This is split in a hybrid manner as follows:

Nature	Program weeks	Total hours	Credit hours	Remarks
In-person at host institution	1, 2 (mandatory)	20 theory + 40 lab	20 + 20 = 40	Morning: 2 hours of theory; Afternoon: 4 hours of lab
Online (some could be in-person)	3 to 22	120	120	6 hours per week;

In-person at host institution	23, 24	10 theory + 20 lab / project + 10 theory evaluation + 20 lab / project evaluation	20 + 20 = 40	Morning: 2 hours of theory / evaluation; Afternoon: 4 hours of lab / project / evaluation
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**Method of evaluation :-**

1. 50% based on minimum 2 quizzes (30-45 min each), assignment and project submissions.
2. The final evaluation at the host institution must constitute at least 50% of the total marks.
3. A maximum of six (6) credits can be transferred through suitable NPTEL courses offered through SWAYAM.

**Proposed timeline**

Event	Date
Announcement of application-	April 22 <sup>nd</sup> 2025
Last date to apply	May 15 <sup>th</sup> 2025
Test / Date of conducting interview by the concerned Institute	May 25 <sup>th</sup> to May 30 <sup>th</sup> 2025
Last date for Institutes to announce the list of selected and wait listed participants and sending call letters	May 31 <sup>st</sup> 2025
Participants confirming their choice of Institute (if got selected in multiple Institutes)	June 1 <sup>st</sup> 2025
Last date for Institutes to send call letters to their wait listed candidates	June 2 <sup>nd</sup> 2025
Participants confirming their Joining	June 3 <sup>rd</sup> 2025
Institute consolidating the final list of participants assured joining for their programme and intimating to AICTE	June 5 <sup>th</sup> 2025
Start of program	June 16 <sup>th</sup> , 2025
On- campus (Mandatory)	June 16 <sup>th</sup> –June 27 <sup>th</sup> , 2025
Online (with possible on- campus also)	July 7 <sup>th</sup> – Dec 1 <sup>st</sup> , 2025
On campus (Mandatory)	Dec 8 <sup>th</sup> – Dec 19 <sup>th</sup> , 2025
Final Evaluation by the Concerned institute	Dec 22 <sup>nd</sup> - Dec 26 <sup>th</sup> , 2025
Announcement of Final Result by the Institute and sending list to AICTE	By December 31 <sup>st</sup> , 2025