AICTE QUALITY INITIATIVES IN TECHNICAL EDUCATION
REVISION OF CURRICULUM
Disciplines covered in Model Curriculum (UG)

Emerging areas
- AI
- IoT
- Robotics
- Quantum Computing
- Block chain

Under Graduate
- Computer Science
- Civil Engineering
- Electrical Engineering
- Mechanical Engineering
- Electronics & Communication Engg.
- Chemical Engineering
- Metallurgical Engineering
- Architecture

Data Science
- Cyber Security
- Design
- AR/VR
- 3d printing
Disciplines covered in Model Curriculum (PG)

Emerging areas

- AI
- IoT
- Robotics
- Quantum Computing
- Block chain
- Data Science
- Cyber Security
- Design
- AR/VR
- 3d printing

Post Graduate

- Computer Science Engineering
- Electrical Engineering
- Mechanical Engineering
- Civil Engineering
- Chemical Engineering
- Electronics & Telecommunication
- MBA & PGDM
Most of the Technical Universities adopted AICTE Model Curriculum.


UG Credits reduced to 160 from 200 to 220 and in line with requirements of Industry 4.0.

- PG Credits reduced to 68 in Engineering & 102 in Management.

UG Model Curriculum
- Eleven Committees
- Experts (33) from IITs
- Experts (8) from industry

PG Model Curriculum
- Experts (22) from National Institutes of Repute
- Experts (12) from Industry
Salient Features of New Model Curriculum

1. Encourages Innovation & Research
2. Better Hands on experience
4. Flexibility in Engineering Disciplines
5. Induction Program
6. Mandatory Summer Internship
7. Virtual Laboratories
8. Courses on Constitution of India, Environment Science & Essence of Indian Traditional Knowledge
MANDATORY INDUCTION PROGRAM
Activities under Induction Program

3 Weeks

- Physical activity
- Creative Arts
- Universal Human Values
- Literary
- Proficiency Modules
- Lectures by Eminent People
- Visits to local Areas
- Familiarization to Department/Branch
Activities under Induction Program (So far...)

**Workshops** conducted So far: **100+**.

**Faculty** members participated: **9,000+**.

Budget of **Rs. 6.00 cr** approved by Council

**Induction Cell** established at AICTE to monitor induction activities

**Feedback** from students, faculty and institutions has been collected to access the impact of Induction program

70,000+ Students, 24,000+ Teachers and 1200+ Institutions submitted feedback.

**Feedback Analysed** to improve the induction program

The target is to involve **100% students** entering in technical education undergo Induction program

EC approved **100 projects** of **Rs 50000** each for faculty members to study impact of induction
EXAM REFORMS
Exam Reforms

18% Analysing

36% Understanding

46% Applying
## Exam Reforms

### Workshops
Nine workshops Conducted on *Exam Reforms for Controller of Examination*, Deans and Senior Faculty members of Universities and Institutions.

<table>
<thead>
<tr>
<th><strong>1600</strong></th>
<th>Number of faculty trained till now</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>25</strong></td>
<td>Number of Workshops planned in next 3 months</td>
</tr>
</tbody>
</table>

### Faculty training
*Train the trainer* workshops to train faculty from NITTTRs and identified faculty from the workshops already conducted.

<table>
<thead>
<tr>
<th><strong>10%</strong></th>
<th>Faculty in next one year targeted to be trained through workshops</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>09</strong></td>
<td>Number of Workshops conducted till now</td>
</tr>
</tbody>
</table>
INTERNSHIP POLICY
Each institute to allocate 1% of their total budget for these activities.

AICTE activity Point Programme

- Recommends **1000 hrs** Activity Programme for each **B.Tech student**.
  - **600-700 hrs** for Internship requirements
  - **300-400 hrs** for Community service & Allied activities.

- Recommends **700 hrs** Activity Programme for each **Diploma student**
  - **450- 500 hrs** for Internship activities
  - **200-250 hrs** for Community service & allied activities.

Budget
Overall Student Performance Analysis

Evaluation by faculty supervisor

Evaluation through Seminar/ Presentation

Evaluation by Industry
AICTE – ICT Academy developed Internship portal. 211 institutions, 8000 students and 142 industries already registered.

4 Internship policy workshop organised for Eastern, Western, Northern, North west and Southern regions

Approx. 500 Industries and 1000 Institutes TPO and Heads participated.

Industries meet scheduled to register 13,000 establishments enrolled with BOATs/ BOPT at AICTE Internship portal during the workshop. Communication to register on portal developed by AICTE & ICT Academy

Two Industry meets organized at Kolkata & Pune. Around 200+ industry representatives participated.

MoUs with various organizations to facilitate students in getting internships.

5 MoU with Industries have been made mandatory for Institutions.
Training Modules During Induction of Teachers

- General Orientation towards Technical Education
- Inculcation of Values and Attitudes
- Communication Skills
- Instructional Planning & Classroom Delivery
- Technology Enabled Learning and Life-long Self-learning
- Effective Modes of Student Evaluation
- Creative Problem Solving, Innovation and Meaningful R & D
- Institutional Management & Administrative Procedures
Online courses
NITTTR developed online courses for four modules and remaining modules will be developed by April 2019.

Faculty Development Programs
Around 300 Faculty Development Programs organized in collaboration with ISTE to train approx. 12,000 faculty members.

Mandatory clearance
For Incumbent teachers clearing eight modules mandatory for upward movement.

Mandatory training
For Inductee teachers, attending one year teachers training program is mandatory.

08 MoUs
Technical Universities to organize Faculty Development Program.

Five Faculty Development Programs
organized in thrust areas as identified by Reddy Committee (Perspective Plan).
Overview

A committee under the Chairmanship of Shri. BVR Mohan Reddy, Chairman, Board of Governors, IIT, Hyderabad and having representatives of FICCI, CII, NASSCOM, ASSOCHAM and PHD Chamber was constituted on 18th October 2018 for preparing short term and medium term perspective plan.

The committee submitted report & Executive Committee (EC) on 27th December 2018 approved
The main recommendations of the committee are:

Courses on following emerging technologies must be included:

- AI
- Data Science
- IoT
- Cyber Security
- Robotics
- Design
- Quantum Computing
- AR/VR
- Block chain
- 3d printing

Greater focus on multi-disciplining courses by reducing seats in conventional disciplines and converting existing seats into these courses.

NITTTR Chandigarh Prepared curriculum of the above 9 (nine) Technologies

Workshops organized to train the faculty based on New Curriculum. So far, 8 workshops have been organized and around 400 faculty members have been trained.
Mandatory Accreditation

Mandatory for all technical institutions to have their 60% programs NBA accredited in next four years, else no extension of approval will be granted.

Approx. 48 Margdarshaks identified and trained to mentor the institutions.

Eleven institutions selected under scheme Margdarshan.
INDUSTRY READINESS - MANDATORY CELL
Attributes that Employers look for

Skills
- Planning skills
- Management skills
- Organisation skills
- Presentation skills
- Entrepreneurial skills
- Listening skills
- Communication skills
- ICT skills

Attributes
- Good appearance
- Manners
- Creative
- Dependable
- Trustworthy
- Understanding
- Team player
- Confident
- Self-motivation
- Good customer service
- Time management
- Positive attitude
- Tolerant
- Hard working
- Friendly
- Qualification
Industry readiness - mandatory cell

Mandatory for all the intuitions to have industry institute cell.

Every institute has to sign 5 MoUs with industry.

Various organisations given presentation on how to impart soft skills to the students.

Proposals of organisations examined by group of Experts.
INNOVATION/START-UPS
Innovation cell

To encourage ideation, creativity amongst school and college students.

Tweaking of Indian education system to make it more suited to foster innovation-based economy.

To facilitate commercialization of celebrated incremental and frugal innovations.

To Create mechanism to harness India’s ability as a services-led economy for building knowledge-based and innovation-driven economy.

To promote ‘Think in India’ philosophy.

Invest and Reward IP creation.

AICTE’s Innovation Mission
Major Programs

- Smart India Hackathon (SIH) 2019
- Atal Ranking of Institutions on Innovation Achievements (ARIIA)
- Institution Innovation Councils (IIC)
- Development of policy framework on Innovation & Start-ups for Indian HEIs.
- MBA/PGDM in Innovation Entrepreneurship & Venture Development
- AICTE Start-up Policy Advocacy Program
- 30
STATISTICS: IMPACT OF INITIATIVES
AICTE Approved Institutions, Intake, Enrolment, Passed, Placed...

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Approved Intake</th>
<th>Total Student Enrolment</th>
<th>Students Passed</th>
<th>Intake reduced due to Closure of Institute</th>
<th>Approved Institutes</th>
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<td>NA</td>
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</table>

NA: Not Available, Yet to be Captured.
AICTE Approved Institutions: Faculty Publications and Patents

Faculty Publications and Patents

- No. of Institutes
- No. of Faculties
- National Publications
- International Publications
- Patents

Yearly Analysis:
- 2014-15:
  - No. of Institutes: 10324
  - No. of Faculties: 3265
  - National Publications: 5927
  - International Publications: 6276
  - Patents: 696

- 2015-16:
  - No. of Institutes: 10328
  - No. of Faculties: 4286
  - National Publications: 6985
  - International Publications: 6895
  - Patents: 56

- 2016-17:
  - No. of Institutes: 10363
  - No. of Faculties: 5064
  - National Publications: 69219
  - International Publications: 69250
  - Patents: 52

- 2017-18:
  - No. of Institutes: 10400
  - No. of Faculties: 6498
  - National Publications: 68221
  - International Publications: 68222
  - Patents: 52

- 2018-19:
  - No. of Institutes: 10413
  - No. of Faculties: 5281
  - National Publications: 68795
  - International Publications: 68795
  - Patents: 1516
Implementation of Start-up Policy in AICTE Approved Institutions

Implementation of Start-up Policy in Technical Institutions

- Total no of Institutes
- Institutes Implementing Startup Policy
- Institutes with Facilities to Support Innovation & Startup
- Nos of Innovation & Startups Nurtured
AICTE Approved Institutes with R & D Centres and Publications

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Institutes</th>
<th>No of Institutes(UG/PG)</th>
<th>Institutes with R &amp; D Centre</th>
<th>No of PhD's Produced</th>
<th>No. of Publications</th>
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</table>
Thank you!