

MAR BASELIOS CHRISTIAN COLLEGE OF ENGINEERING & TECHNOLOGY



Future Milestone Setting:

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Current State Overview



2

Strategic Goals for 2035

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Milestones 2025-2035

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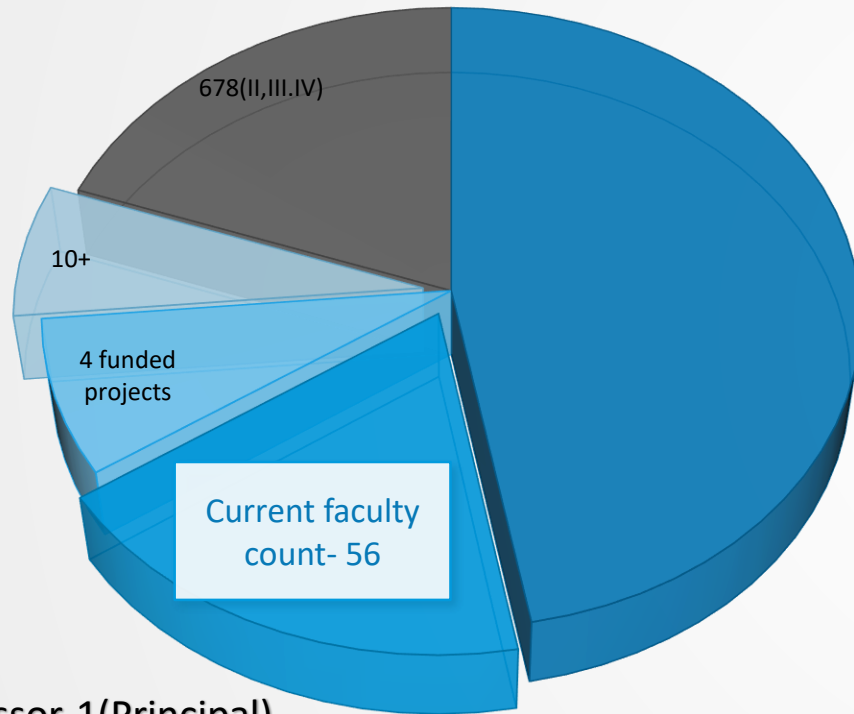
SWOT Analysis

5

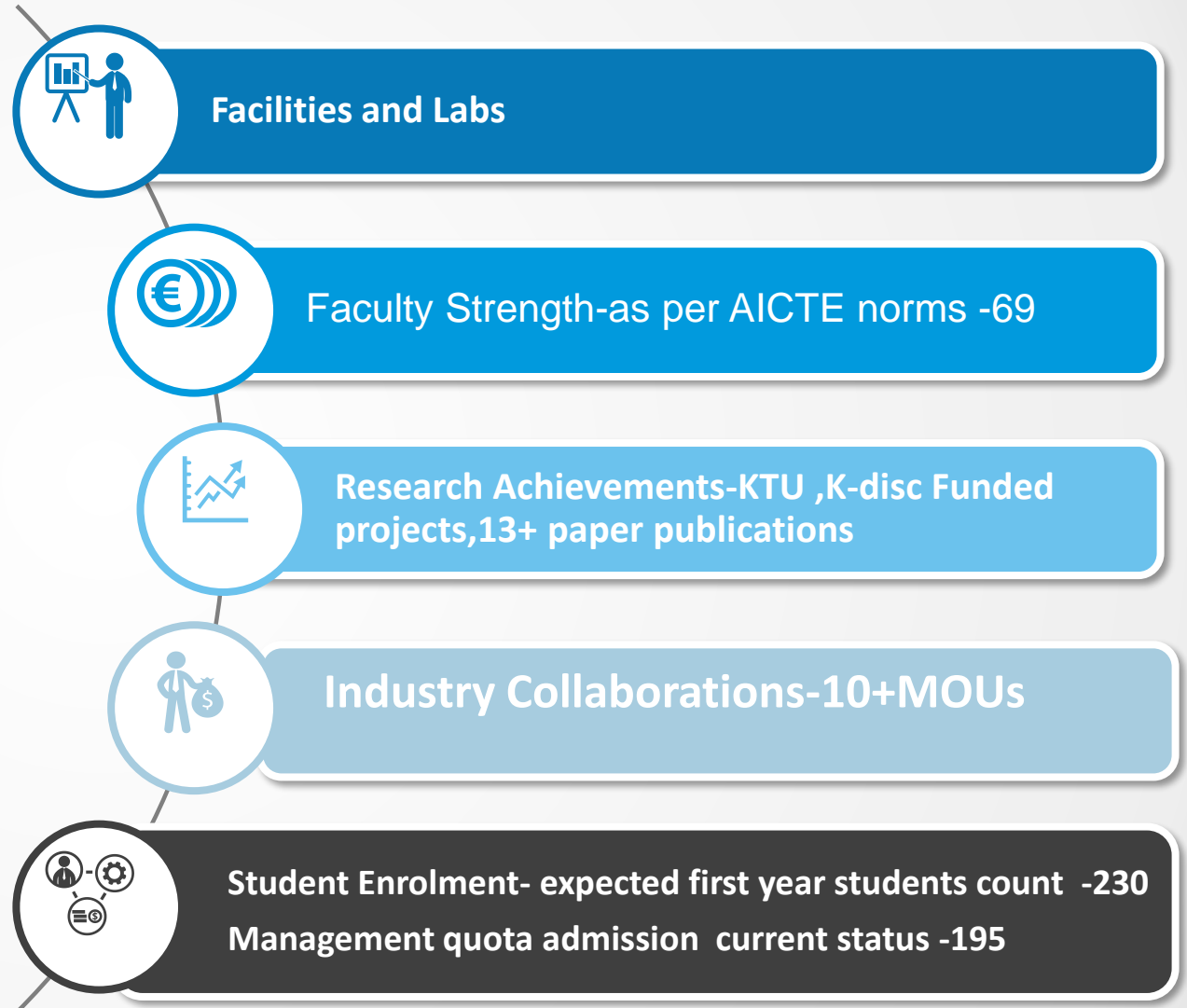
Perspective Plan

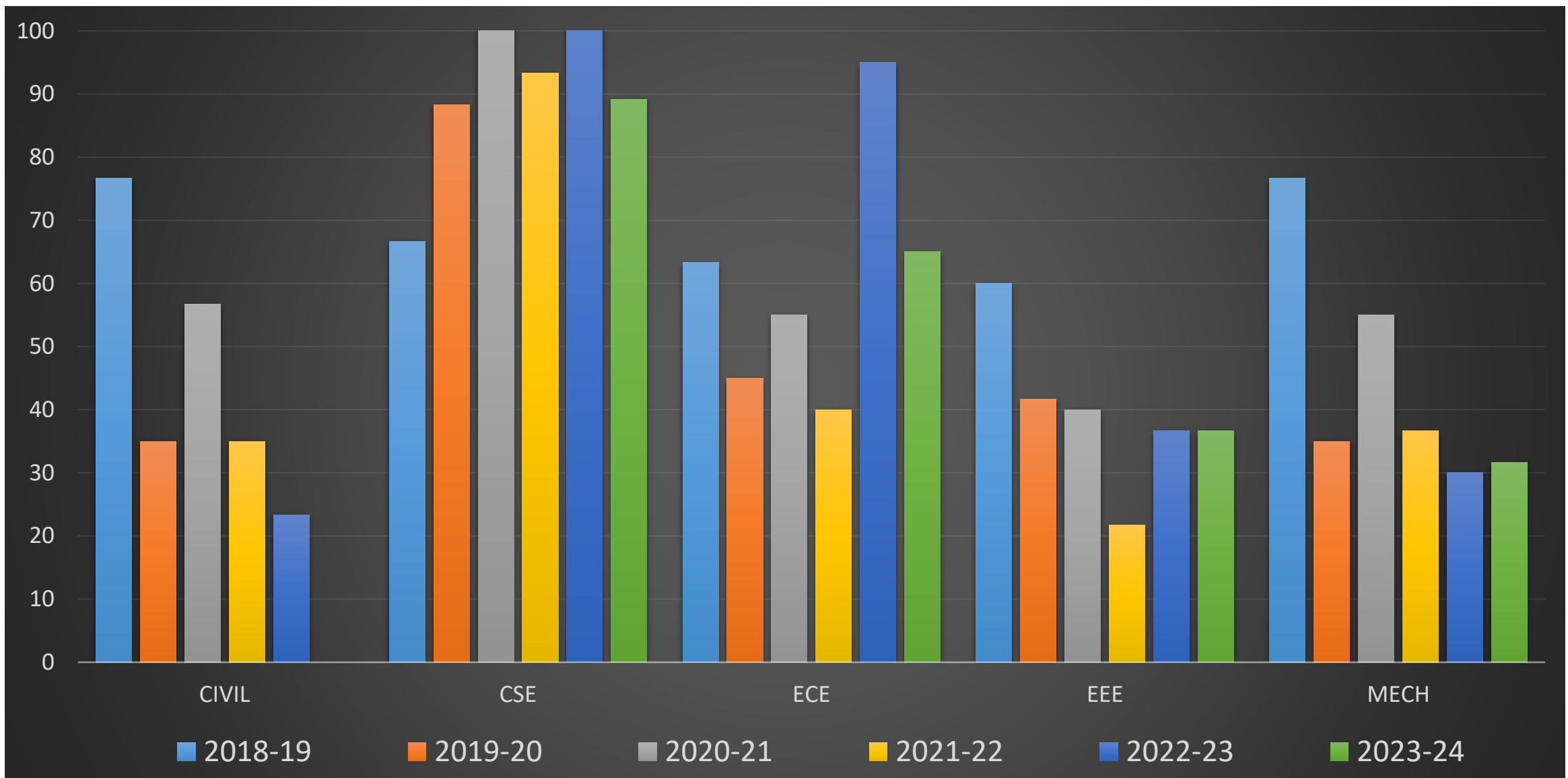


Current State Overview



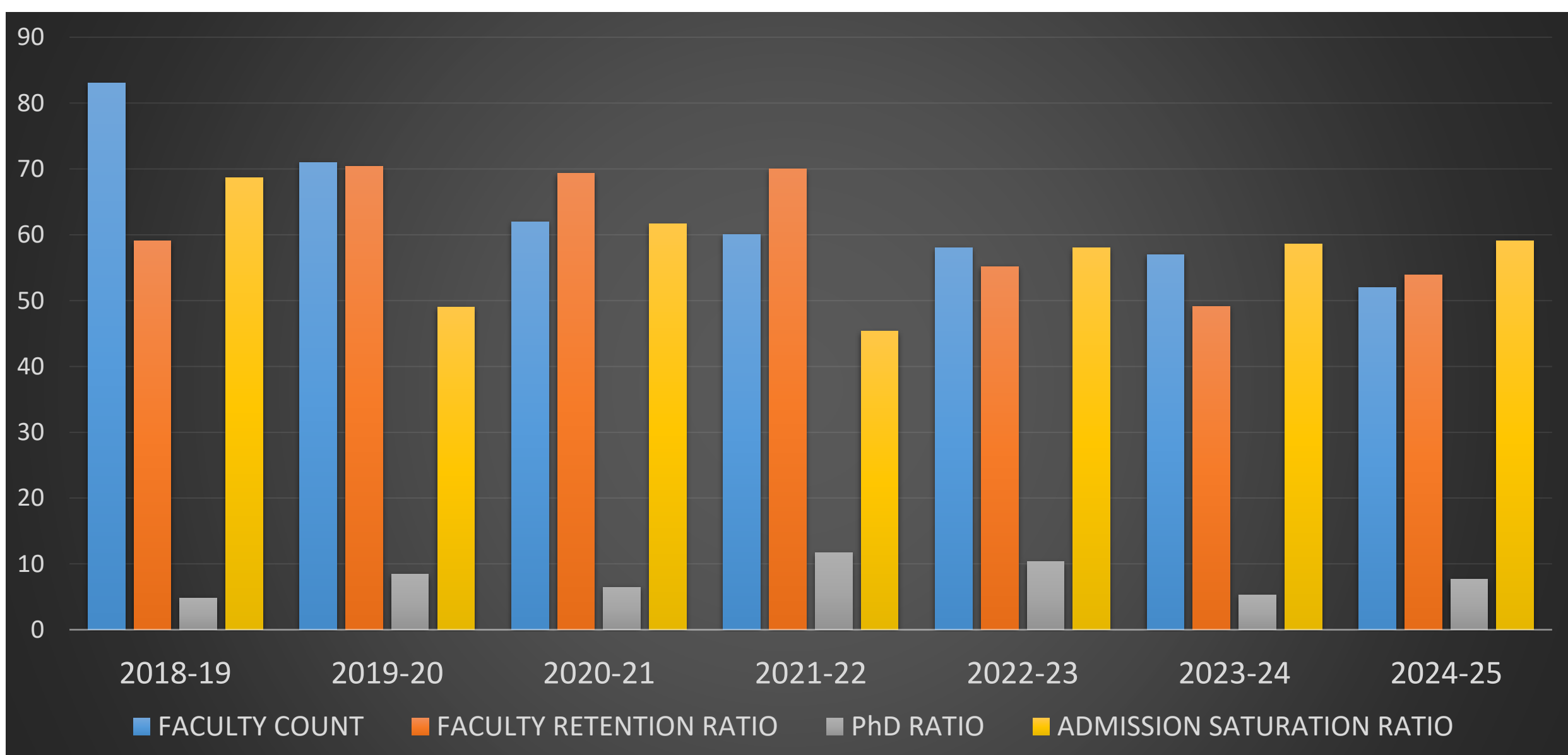
Professor-1(Principal)
Associate professor (non cadre) -15
Ph.D. Holders -4
Assistant Professor -36





DEPARTMENT WISE ADMISSION (PAST 6 ACADEMIC YEARS)

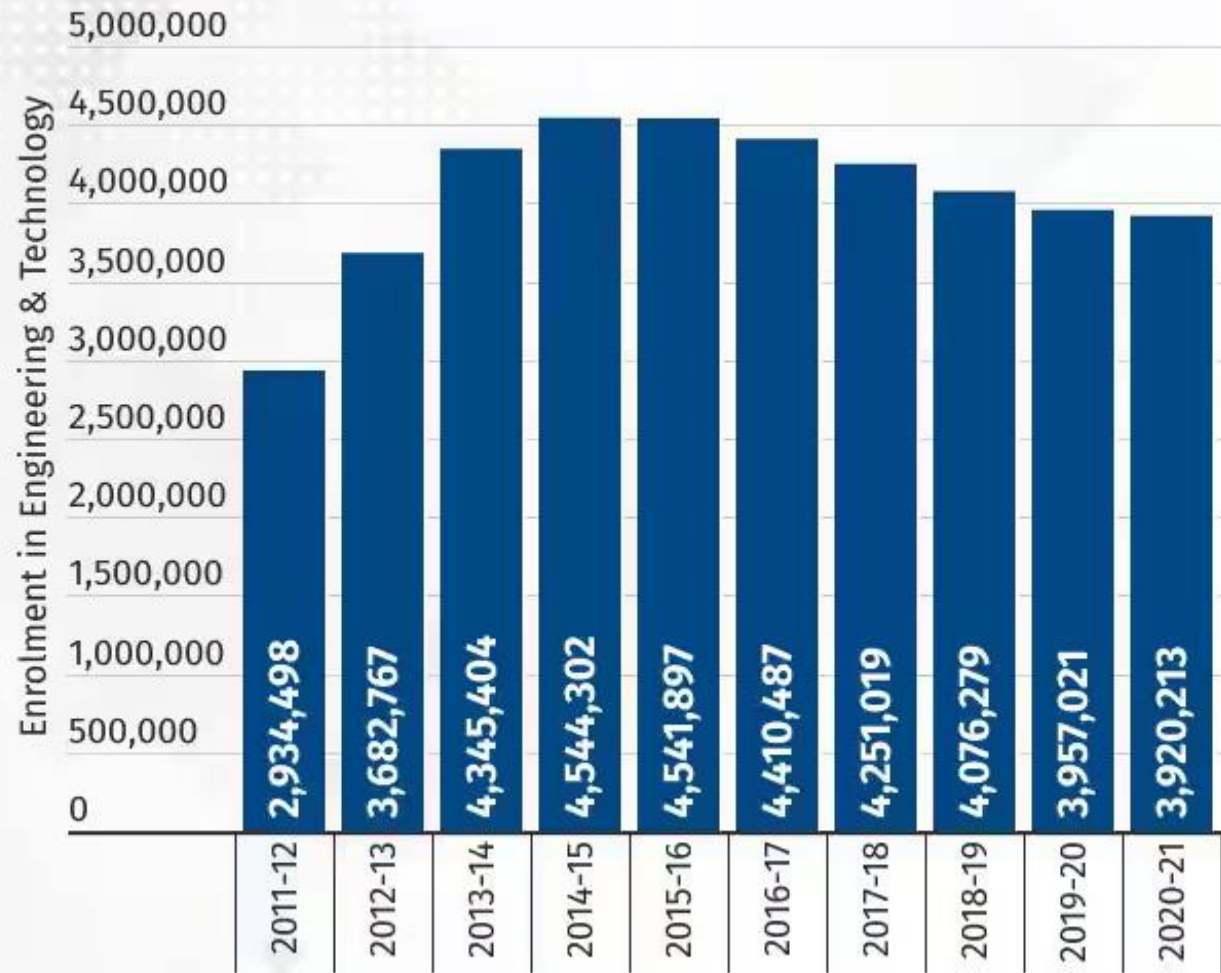




OVERALL ANALYSIS (PAST 6 YEARS)

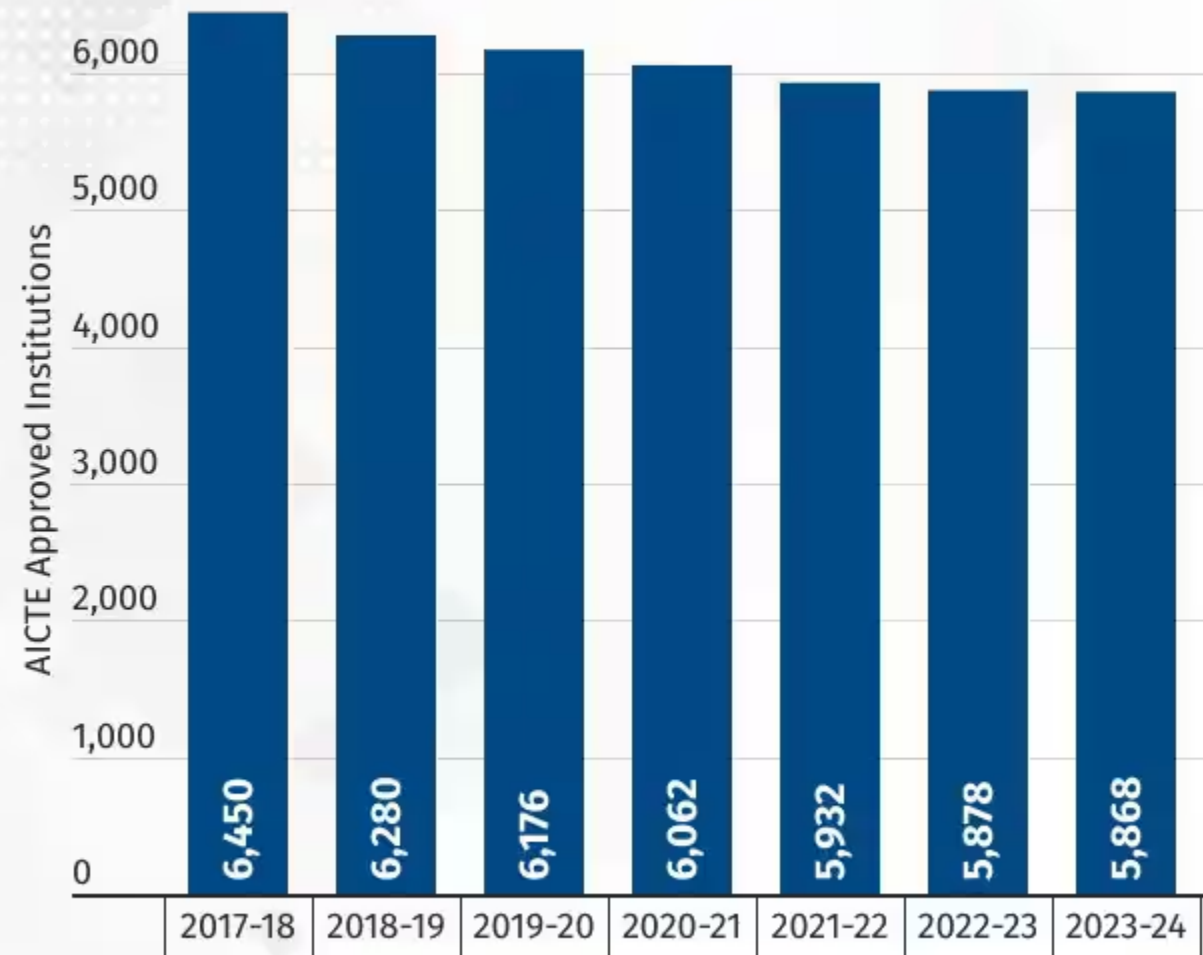


DECLINING ENROLMENT IN ENGINEERING COLLEGES



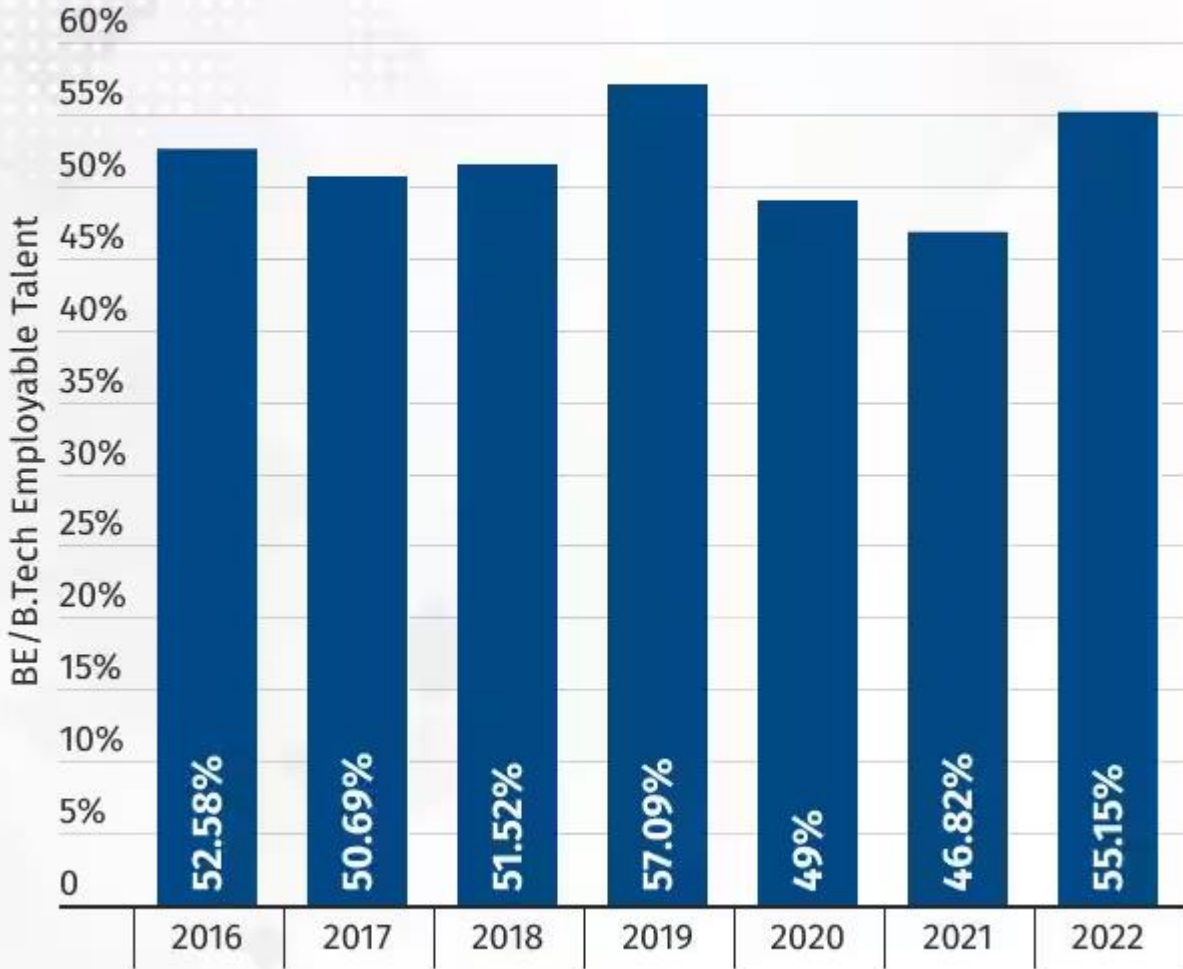
Source: All India Survey on
Higher Education

DECLINING NUMBER OF ENGINEERING INSTITUTIONS



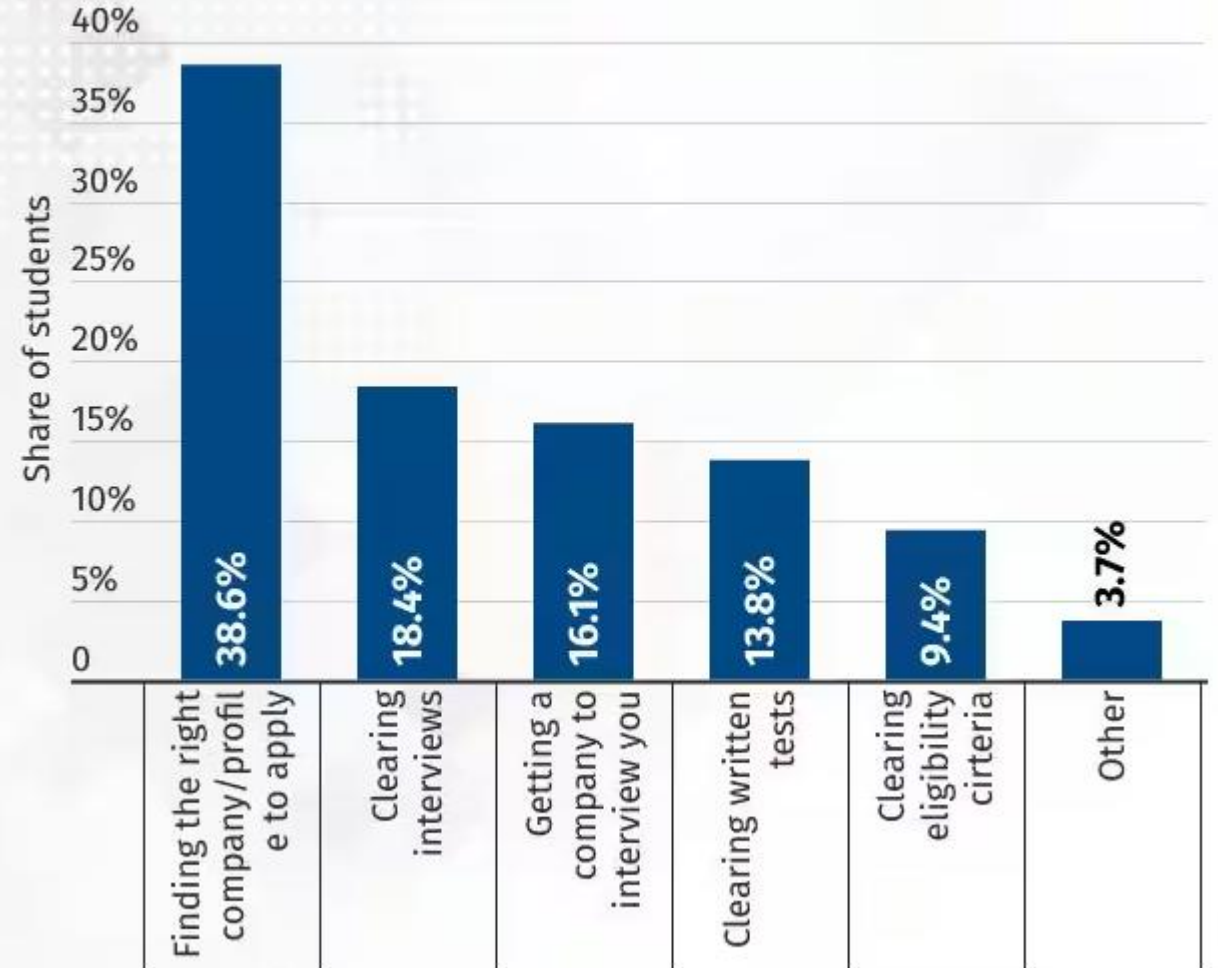
Source: All India Survey on
Higher Education

EMPLOYABLE TALENT AMONG ENGINEERING GRADUATES



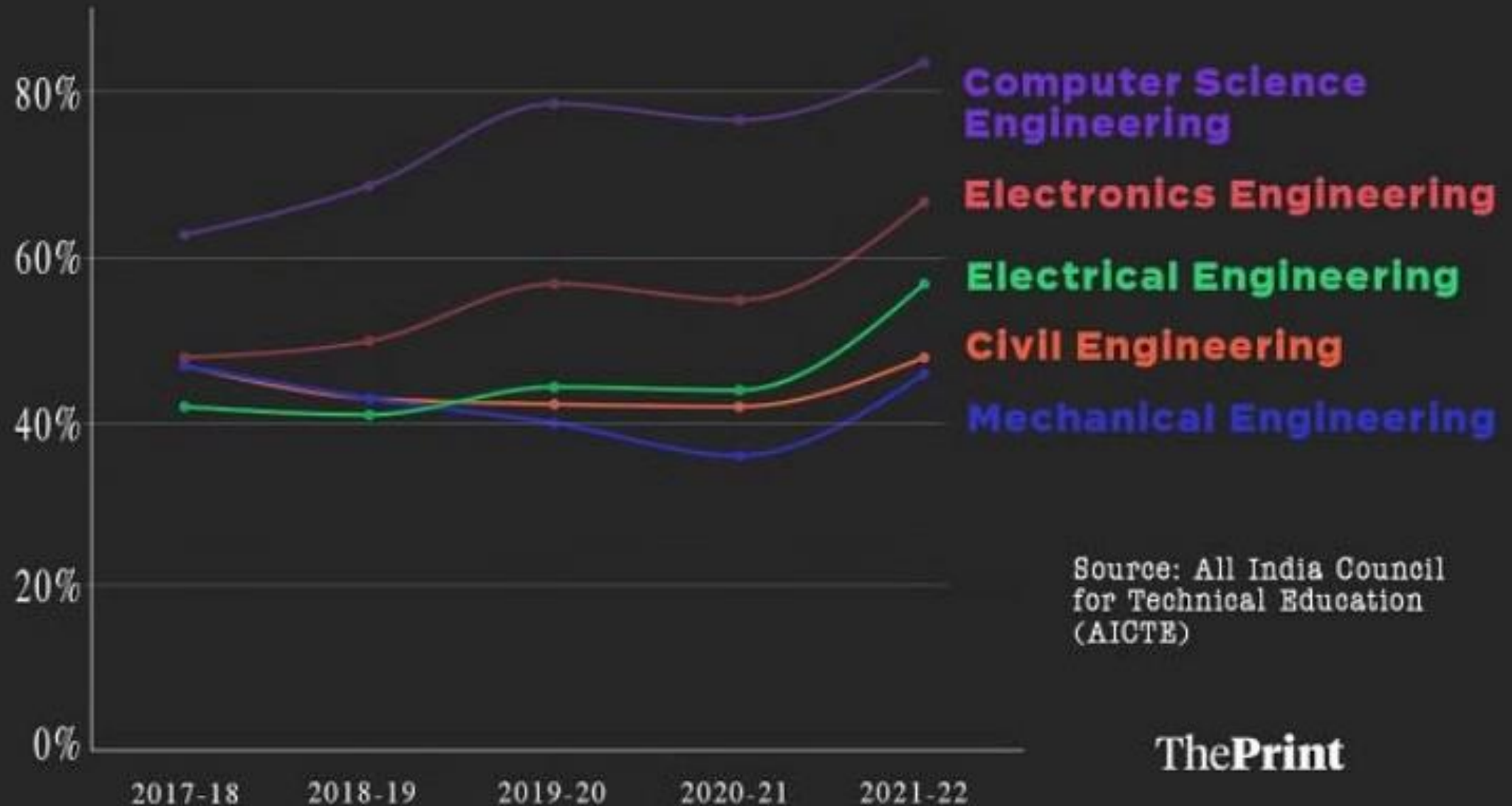
Source: All India Survey on Higher Education

ISSUES FACED BY ENGINEERING GRADUATES IN FINDING JOBS



Source: National Employability Report - Engineers, Aspiring Minds (Now called SHL)

Admission percentage in core branches of engineering over the years



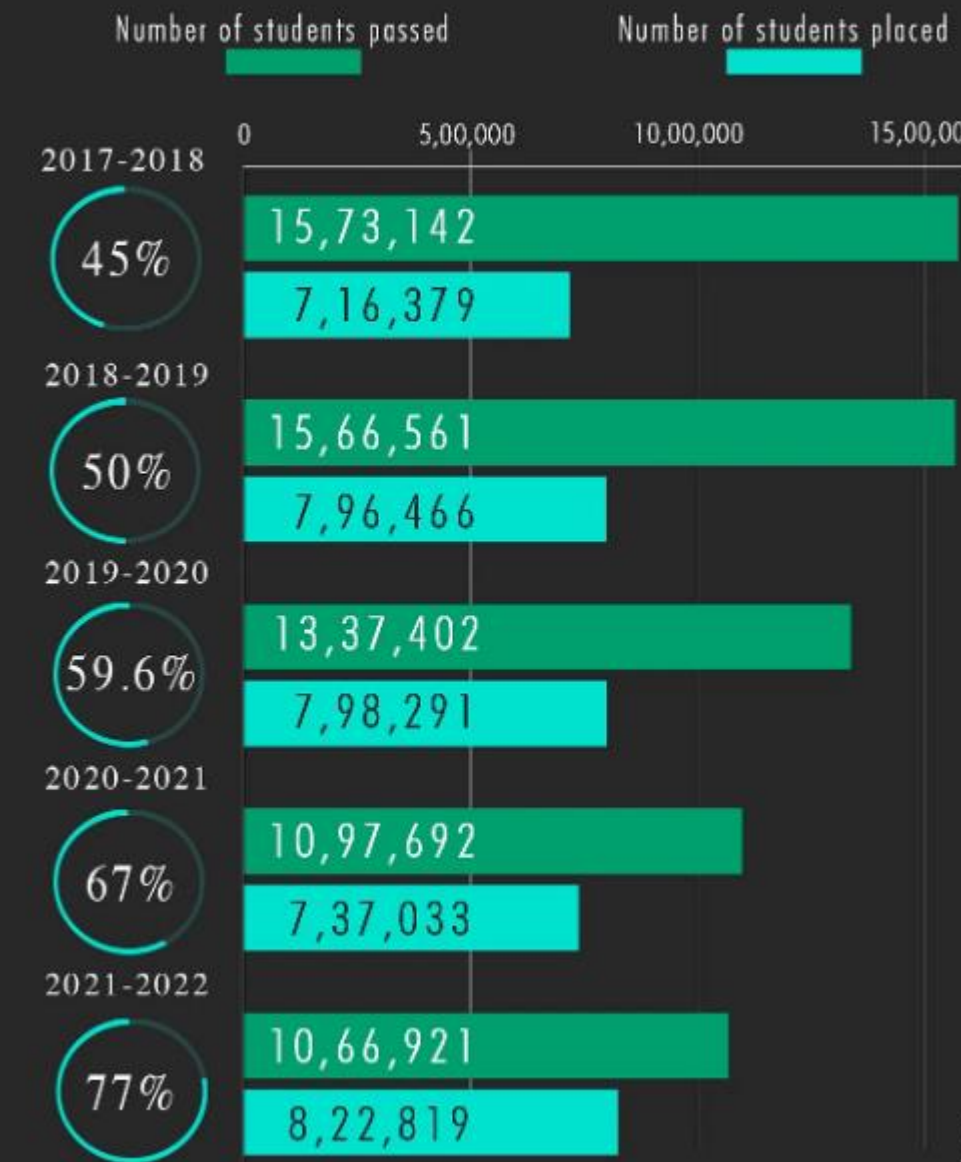
Source: All India Council for Technical Education (AICTE)

ThePrint



- ❑ AICTE council had conducted an internal survey last year and found that the demand for core branches of engineering was going up..
- ❑ According to the AICTE data, the admission percentage in computer science was 63 per cent in 2017-18, which went up to 69 per cent in 2018-19 and 79 per cent in 2019-20. The percentage dipped to 77 in 2020-21 and then jumped again to 84 in 2021-22.
- ❑ Similarly, in mechanical engineering, the admission percentage was 47 in 2017-18 that went down to 43 in 2018-19. It further went down to 40 and 36 per cent in 2019-20 and 2020-21, respectively. The percentage has now bounced back up to 45.9 in 2021-22.
- ❑ For electronics engineering, the admission percentage was 47.6 per cent in 2017-18, 50 per cent in 2018-19 and then shot up again to 56.6 per cent in 2019-20, before going down to 55.3 in 2020-21. At 67.3, the admission percentage was at a five-year high in 2021-22.
- ❑ The data shows a similar trend of admission percentage declining and then picking up in other branches like civil and electrical engineering as well.

Placement percentage in all engineering courses over last five years:



Target Focus for MBC



AUTONOMOUS

- ❖ Curriculum Innovation and Flexibility
- ❖ Enhanced Academic Standards
- ❖ Industry Collaboration and Partnerships
- ❖ Global Recognition and Accreditation –NAAC B++



DEEMED UNIVERSITY

- ❖ High Academic Standards
- ❖ Strong Research and Development Culture
- ❖ State-of-the-Art Infrastructure
- ❖ Financial Stability
- ❖ Strengthening Governance and Quality Assurance



NBA / NAAC

- ❖ Civil and EEE Department up to 2025
- ❖ ME Department planning to submit the pre qualifier -2026
- ❖ CSE and ECE Department planning to submit the prequalified for -2027
- ❖ NAAC accreditation has to renew in 2026 Jan



Plan to Achieve Autonomous Status

Objective: Achieve autonomous status by the end of 2027 or early 2028.

Key Steps:

- **Obtain Section 2(f) recognition**
- **Accreditation Renewal:**
 - ❑ **EEE: NBA Renewal** in January **2026** (with a six-month extension).
 - ❑ **Mechanical: NBA pre-qualifier** and **NAAC renewal** in January **2026**.
 - ❑ **Computer Science & Electronics and communication: NBA pre-qualifier** in December **2026**.
- **Faculty and Infrastructure Development:**
 - ❑ Recruit **new faculty** members, particularly **Associate Professors** and **Visiting Professors**, to meet AICTE norms and strengthen academic leadership.
 - ❑ Lab facility upgrades.
 - ❑ Maintain the required faculty ratio to ensure compliance and enhance academic quality.
- **Strategic Focus Areas:**
 - ❑ Enhancing faculty count and quality. ❑ Improving admission rates.
 - ❑ Strengthening research and development capabilities.



Budget:
Approximately
60 -70 lakhs.



UGC Norms for Autonomous Status (2023 Regulations)

Eligibility Criteria:



Affiliation:

- The college must be affiliated or a constituent of a recognized university and be under Section 2(f) of the UGC Act.



Minimum Existence:

- The college should have a minimum of 10 years of existence.



Accreditation Requirements:

- Must be accredited by either:**



NAAC (National Assessment and Accreditation Council).

- NBA (National Board of Accreditation) for at least three programs.

- If fewer than three programs are offered, each must be accredited as per NBA norms.



Accreditation must be valid for at least one year at the time of application.



Challenges in Achieving Autonomous Status

❑ Faculty Shortage:

Issue: Current faculty count is 56, below the required 66 as per AICTE norms.

Impact: Non-compliance with AICTE norms and faculty-student ratio requirements.

❑ Shortage of Professors and Associate Professors:

Issue: Lack of sufficient senior faculty impacts academic leadership.

Impact: Challenges in meeting accreditation standards and academic quality.

❑ Declining Admission Rates:

Issue: Admission rates have dropped from 67% to 53% (average of the last 5 years).

Impact: Financial strain and reduced student intake affecting growth.

❑ Lack of Section 2(f) Recognition:

Current Situation: College does not have Section 2(f) recognition of the UGC Act.

Impact: Ineligible to apply for autonomous status without this recognition.



Strengths and Weaknesses Analysis

□ Strengths:

✓ Accreditation History:

- Existing NBA accreditation for EEE and Civil (until June 2025).
- NAAC accreditation valid until December 2025.

✓ Infrastructure: Well-established facilities with potential for further development.

✓ Academic Reputation: Strong foundational programs and experienced faculty in key departments.

□ Weaknesses:

✓ Faculty Retention and Recruitment: Significant reduction in faculty numbers from 107 in 2021 to 56 currently.

✓ Admission Trends: Ongoing decline in admission rates, impacting financial stability and student diversity.

✓ Section 2(f) Recognition: Lack of Section 2(f) recognition is a prerequisite for applying for autonomous status.

✓ Faculty Ratio Issues: Current faculty-student ratio is not compliant with AICTE norms.



Strategic Pathways for Achieving Autonomous Status

Deferred Application (2027)

- 1. Eligibility:** Apply after securing Section 2(f) recognition and completing NAAC and NBA accreditation renewals.
- 2. Approach:**
 - Follow the standard procedure post-2025 accreditations.
 - Strengthen faculty ratios and infrastructure.
 - Allow time for comprehensive development and preparation.
- 3. Budget:** 60 - 70 Lakhs (subject to future variations)
- 4. Considerations:** Provides a more thorough approach with extended preparation time, enhancing long-term sustainability.

Immediate Application (2024)

- 1. Eligibility:** Obtain Section 2(f) recognition first; then proceed with the application for autonomous status.
 - We can apply for autonomous status while the Section 2(f) UGC recognition is under process.
- 2. Approach:**
 - Apply within 2025 with minimum requirements.
 - Engage external agency support.
 - Utilize political influence to facilitate the process.
- 3. Budget:** 40 - 50 Lakhs
- 4. Considerations:** Requires prompt mobilization of resources and political backing.



Strategic Goals for 2035

1

Enhance Educational Programs

- ❖ Update curriculum, introduce new interdisciplinary courses such as Robotics and Automation, and Artificial Intelligence with Mechanical Applications, and incorporate modern teaching methods.

2

Student Development

- ❖ Focus on soft skills training, entrepreneurship programs, and career guidance services, with a special emphasis on robotics, automation, and AI.

3

Industry Collaboration

- ❖ create new collaborations in the fields of robotics, automation, and AI, and establish industry-driven projects and internships.

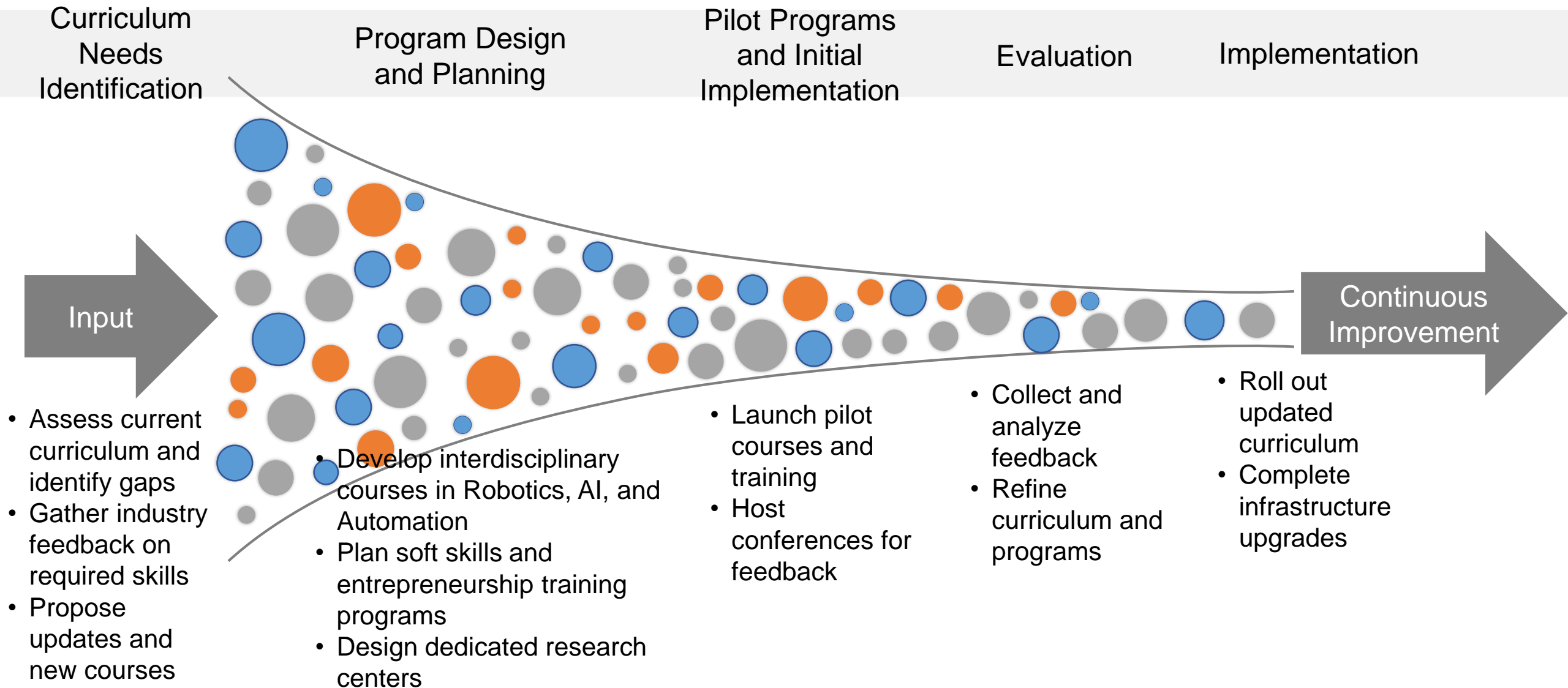
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Infrastructure Development

- ❖ Upgrade laboratory facilities with robotics and AI equipment, enhance digital infrastructure, and expand campus facilities.



PERSPECTIVE PLAN –VISION 2035



Road Map Year 2035 –Computer Science and Engineering

2026

- Strengthen the alumni network to provide mentorship and industry connections for the students.
- All faculties will register for PHD
- Introduction of B. Tech courses in the variants of AI and CSE.
- Achieve NBA Accreditation.

2029

- Establishment of an industry-academia innovation lab and AICTE idea lab.
- Launch of online certification programs.
- Increase funded research projects and publications

2032

- All faculty members are required to pursue and register for a PhD program.
- Collaborations from a foreign university to start a new program.
- Enhanced partnerships with global technical companies for internships and job placements.

2034

- Upgrade facilities to include super computer labs, AI-driven research labs



Road Map Year 2035 –Electronics & Communication Engineering

2026

- Achieve NBA Accreditation..
- Strengthen the alumni network to provide mentorship and industry connections for the students.
- Introduction of B. Tech course in Artificial Intelligence and Robotics Engineering.

2029

- Establishment of an industry-academia innovation lab.
- Launch of online certification programs.
- Increase funded research projects and publications, provide GATE coaching for students

2032

- M.Tech in Semiconductor Technology.
- Collaborations from a foreign university to start a new program.
- Enhanced partnerships with global technical companies for internships and job placements.

2034

- Upgrade facilities to include quantum labs, AI-driven research environments.
- B.Tech in Quantum Computing / Semiconductor Technology



Road Map Year 2035 – Electrical and Electronics Engineering Department

2025

- Starting of New B Tech in Electric Vehicle Technology, 30 seats
- Renewal of NBA program of the Department

2026

- Starting a M Tech Program on Control systems
- Improvements are planning in Research Achievements and Industrial Collaborations with latest AI tools
- Autonomous status need to achieve
- New B Tech course - Energy Engineering, 30 seats

2030

- Starting of M Tech and Research facility on Electrical Vehicle Technology and Renewable Energy Systems
- Collaborations from a foreign university to start a new program

2034

- Starting of the School of Electrical Engineering
- New B Tech course - Alternate Energy Engineering, 30 seats
- Updations in the infrastructure and lab facilities



Road Map Year 2035 – Mechanical Engineering

2024-2025

- ❖ Curriculum revision and introduction of new courses in Robotics and Automation, and AI with Mechanical Applications
- ❖ NBA accreditation –Prequalifier ,phase 1
- ❖ Funded FDPS
- ❖ National conference

2026-27

- ❖ 100% placement in core field
- ❖ NAAC CYCLE 2-upgrade from B++ to A
- ❖ IDEA Lab
- ❖ International conference

2028-29

- ❖ Increase in industry partnerships and MoUs in the fields of mechanical , robotics and AI
- ❖ Funded FDPS
- ❖ International conference

2030-31

- ❖ Infrastructure Development - Upgrade laboratory facilities with robotics and AI equipment.
- ❖ enhance digital infrastructure, and expand campus facilities.
- ❖ Apply for grants, encourage faculty research, and provide student research opportunities





- ❖ Significant increase in research output and publications in robotics and AI.
- ❖ Curriculum Innovation: Continuously update the curriculum to include the latest technological advancements and industry requirements.

- ❖ Major infrastructure upgrades completed, including robotics and AI labs.



- ❖ Industry Leadership: Position the department as a leader in industry collaborations, research, and innovation in Mechanical Engineering.



- ❖ Global Partnerships: Establish strategic global partnerships for research, faculty exchange, and student mobility.
- ❖ Sustainable Development: Integrate sustainable engineering practices across all programs and projects
- ❖ Achieve top national and international rankings in robotics and AI with mechanical engineering programs

SWOT Analysis

Strengths

- High Demand and Versatility
- Technological Advancements
- Global Opportunities
- Strong Theoretical and Practical Foundation
- Can attract more students to the departments
- Experienced and qualified faculty
- Diverse research areas
- High employability rate of graduates

Weaknesses

- Strong Industrial Collaborations are required.
- Rapid Technological Changes
- Updating Academic curriculum can be challenging.
- Strong advertisement and publicity required.

SWOT Analysis

Opportunities

- Growth in emerging technologies
- Interdisciplinary Collaboration
- Fostering a culture of entrepreneurship through incubation centers and startup .
- Growth in emerging technologies; 5G/6G communications, quantum electronics, AI, autonomous systems.
- Technological advancements in AI and automation
- Government initiatives and funding for research
- Expansion of online and remote learning

Threats

- Increased competition from other universities.
- Rapid Technological Change.
- May affect the core branch admission
- Fees sometimes need to reduce in order to overcome the competitions
- Economic fluctuations affecting funding
- Changes in industry requirements
- Regulatory changes



THANK YOU