



THE INSTITUTION OF
ENGINEERS, BANGLADESH



BOARD OF ACCREDITATION FOR
ENGINEERING AND TECHNICAL EDUCATION

TRANSFORMING EDUCATION FOR THE INDUSTRY: ENGINEER'S PERSPECTIVE IN ACHIEVING VISION 2041

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RUPOSHI BANGLA GRAND BALL ROOM, INTERCONTINENTAL HOTEL, DHAKA

PREAMBLE

The educators in engineering programs prepare their graduates for the industry. The industry in Bangladesh is advancing to make up for its grave post-independence deficits. The foreseen national growth per the national visions needs to be visible in the international arena.

Vision 2041 highlights the need for accelerated developments at higher altitudes with the local customization of high-end up-to-date engineering and technological know-how, which must trickle down into the profession as the fruits of Industry 4.0 and the upcoming Industry 5.0.

Engineers from all disciplines will be the prime movers. Our current graduates enhance their knowledge and skills through lifelong learning while the educators prepare our future graduates with up-to-date knowledge. The academic arena and the industry floors need to be under the same roof for the acquisition and delivery of knowledge and skills and their enhancement. A transformation in the teaching and learning process is on the horizon. Engineering graduates will display their learning in the industry at home and abroad consistently over time. In the future, our industry will have to recruit more high-grade professionals from our accredited engineering programs, which are well recognized at home and abroad. The local availability of capable engineers is an attractive ingredient for foreign direct investments (FDIs). The contribution to the national economy from enhanced FDIs is unfathomable. The international job markets will see our graduates as active contributors to the causes of the world. The country can expect to see them as high-income wage earners to enrich our foreign-currency reserves. The visibility in circularity in investment in engineering education is imminent.

All these accomplishments are rooted in an internationally recognized accreditation system for engineering education, which the Board of Accreditation for Engineering and Technical Education (BAETE) of the Institution of Engineers, Bangladesh has been pursuing since 2003 for the entire spectrum of engineering in Bangladesh. BAETE's accreditation criterion, the "Program Outcomes and Assessment," focuses on the industry's needs and describes the industry's most sought attributes in engineering graduates. The "Interaction with Industry" criterion focuses on how the students are exposed to the relevant industries. The "Program Educational Objectives" provide a means to monitor the graduates' development for up to 5 years after graduation.

BAETE's accreditation has led to the formation of industrial advisory panels in many engineering programs to bring the industry closer to academia. Our continuous effort is to bring them even closer together. As BAETE updates its requirements for graduates with the incorporation of sustainable development goals, we must start with the right footing. Our goal is to set a guiding path for the programs to be on the right course, and we need the industry's close collaboration to do that.

With this aim, we are organizing the first national symposium with the theme "Transforming Education for the Industry: Engineer's Perspective in Achieving Vision 2041" to bring faculty members and industry personnel under the same roof.



RISE in BUET –
**Trickling Down of
Advanced Research to
Undergraduate Curriculum**

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Building a Research & Innovation Ecosystem

1

Support & promote research activities

2

Develop partnership, collaboration & linkage

3

Incubate and transfer technology

Undergraduate Research Grants: Template

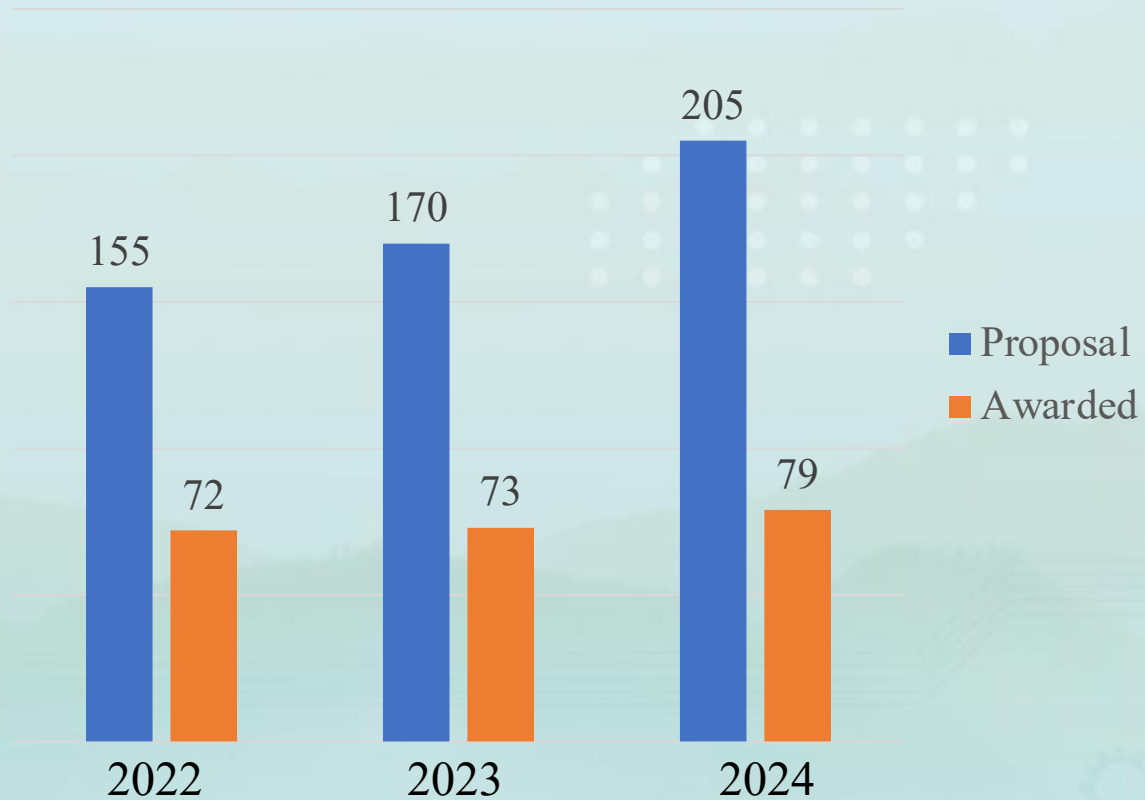
Part A: Project Proposal Summary

A.1 Proposed title	
A.2 Research area	
A.3 Research summary (max. 150 words) <i>A summary is to be prepared which clearly identifies the subject-specific research question(s), how applicants intend to achieve the answer/solution of the problem, and its anticipated implications in the technical/scientific community.</i>	
A.4 Project duration (in months)	
A.5 Total project cost (in BDT)	

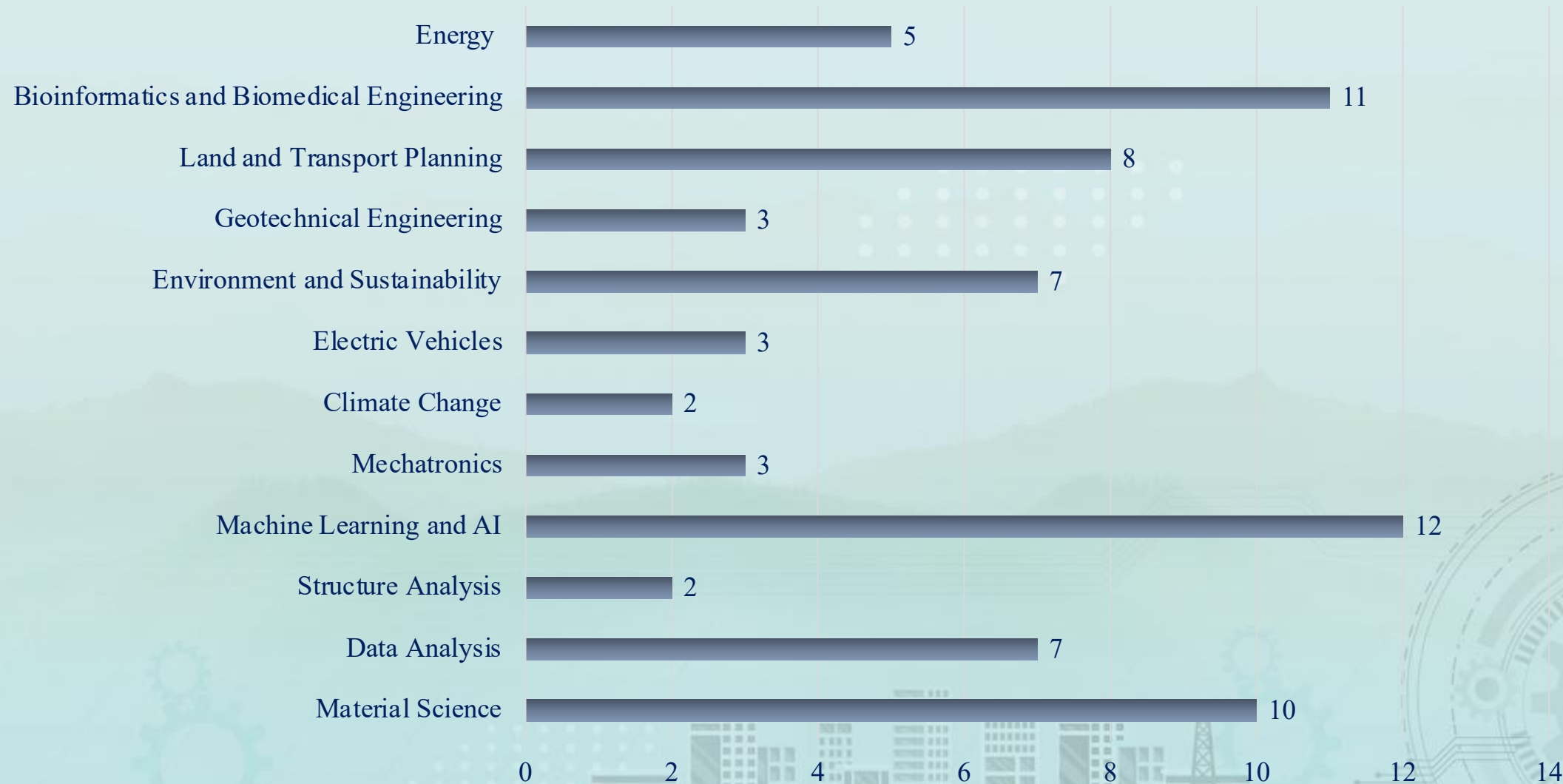
Part B: Research Project Details

B.1 Background and statement of the problem (Word limit: Max. 200) <i>Provide a brief overview of current knowledge and understanding of the proposed research topic based on scholarly resources (literature review). Identify relevant gaps in the existing research. State your broad statement of the problem for which the project is being proposed and its technical significance. Include the relevant scholarly resources at the end of this section or as footnotes.</i>	
B.2 Specific objectives (Word limit: Max. 200) <i>Describe specific objectives for the project, which should be clear, measurable, realistic, and achievable within the duration of the project. Objectives should be consistent with the expected exploitation and impact of the project.</i>	
B.3 Expected outcomes (Word limit: Max. 150) <i>Describe the anticipated outcomes based on specific objectives for the project.</i>	
B.4 Methodology (World limit: Max. 500) <i>Describe and explain the overall methodology, including the concepts, models and assumptions that underpin your work. Explain how this will enable you to deliver your project's objectives. Refer to any important challenges you may have identified in the chosen methodology and how you intend to overcome them.</i>	

Undergraduate research grants: 2022–2024



Area-wise undergraduate research projects

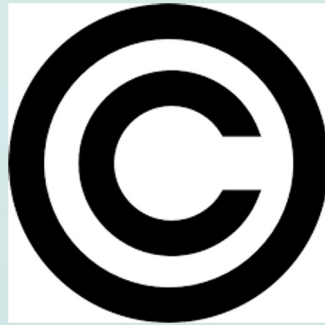


Innovation and Incubation

- Collaborative spaces
- Incubation and acceleration
- Entrepreneurship education
- Networking opportunities



Intellectual property rights



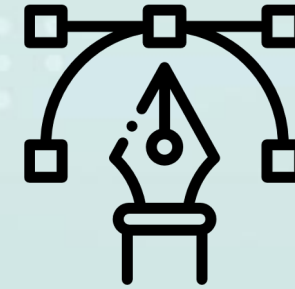
Copyrights



Patent



Trade Mark



A design

Academic Collaboration



Working on industrial problems





unesco

Chair

Industry Integration in Higher Education System

- Promote practical learning and enhance industry experience of students;
- Foster research on circularity, sustainability, and AI-integrated digital technologies to contribute toward sustainable development;
- Encourage and support research activities and open science, and develop an innovation ecosystem;
- Advocate indigenous and novel innovations for the benefit of society and create pathways for laboratory-to-market innovations; and
- Cooperate closely with UNESCO, other UNESCO Chairs and UNITWIN Networks on relevant programmes and activities.

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Thank you ...



SHORT BIO OF PROF. DR. MUHAMMAD ANISUZZAMAN TALUKDER

Dr. Talukder is a Professor at the Department of Electrical and Electronic Engineering and the Founding Director of the Research & Innovation Centre for Science & Engineering of Bangladesh University of Engineering and Technology. He is the Chairholder of the UNESCO Chair on “Industry Integration in Higher Education System,” established at BUET, the first UNESCO Chair in Bangladesh. He was a Visiting Professor at the University of Maryland, USA, for several years from 2011 to 2018, a distinguished Marie-Curie Individual Fellow with the University of Leeds from 2016 to 2018, an Honorary Fellow at the Hong Kong Polytechnic University from 2013 to 2015, and an Honorary Visiting Academic in the City, University of London, UK, in 2023. He is a senior member of IEEE and served as the President of the IEC National Committee, Bangladesh, from 2020 to 2022. He is a member of the “ICT Industry, Digital Commerce, Freelancing, Entrepreneurship and Start-up” sub-committee of the national “Smart Bangladesh Taskforce.” He also serves as a member of the board or executive committee of several national organizations and initiatives, including Bangabandhu Sheikh Mujibur Rahman Novotheatre, a2i Innovation Fund, Grants for Advanced Research in Education (GARE) of the Ministry of Education, and Special Research Grants of the Ministry of Science and Technology. He is an advisor to the FBCCI Innovation and Research Centre. He has published more than 100 articles in highly reputed journals and conferences. He has earned significant research funds in Bangladesh, the USA, and the European Union.

DISCLAIMER

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