

CALL FOR TECHNOLOGY DEVELOPMENT (TD) PROJECT PROPOSAL 2025 FOR TEXMiN-IEST SHIBPUR MINING CPS COE

GUIDELINES

Eligibility Criteria:

1. Applicants must be a regular faculty of IEST Shibpur. Proposals should be aligned with the objectives of TEXMiN, IIT (ISM) i.e., enhancement of capacity building for Mineral & Coal sector to achieve Mining 4.0 (4S i.e. Smart, Safe, Sustainable & Sociable) through major interdisciplinary technologies like GIS, AI/ML, advanced mineral processing systems in addition to the technologies prevalent to the mining industry.

Nature and Duration of Support:

1. **Scope of Support:** The TEXMiN- IEST Shibpur Mining CPS Centre of Excellence (CoE) will support individual researchers or research groups working exclusively at IEST Shibpur.
2. **Number of Project:** Two (02) numbers
3. **Project Duration:** One (01) Year.
4. **Maximum Project Budget:** ₹15,00,000 (Indian Rupees Fifteen Lakhs only).
5. **Proposal Limit:** An applicant may submit only one proposal as PI per call.

Selection of Application:

Selection will be based on the recommendations of a Project Advisory and/or Selection Committee constituted by the competent authority.

Plagiarism:

1. Submitted proposals must present original ideas and content.
2. Plagiarism in any form will not be tolerated.
3. All proposals will undergo a similarity check, and anyone found to be plagiarized, will be rejected.

How to Apply:

Applicant should submit all the documents in a sealed envelope

To

Prof. Md. Mirajul Islam

TEXMiN Coordinator, TEXMiN-IEST Shibpur Mining CPS CoE

Assistant Professor, Mining Engineering

IEST Shibpur, Howrah, W.B.- 711103

and

soft copy of all the documents should be emailed to texmin-iest-coe@iests.ac.in

Documents Required:

1. Complete soft copy of the project proposal in the prescribed format provided (Annexure 2PF).
2. Declaration from Principal Investigator (Annexure 3PD).
3. Plagiarism report of the project proposal

Last date for submission of the proposal is 15th November, 2025.

Technology Development (TD) Project Proposal Format for TEXMiN IEST Shibpur Mining CPS CoE

1. Project Title:
2. Project Leader's Name and Contact Information:
3. Co-Principal Investigator(s) Name and Contact Information:
4. Principal Implementing Institution(s):
5. Funding Requested:
6. Industry Collaboration Agreement for Product Commercialization (*Attach Consent Letter*)
7. Primary Focus Area of the Proposal (*please select one or more*):
 - ☐ Critical and Rare-Earth Minerals (*encompassing Exploration to Processing*)
 - ☐ Green Mining Initiatives
 - ☐ 4S Mining (*Safe, Smart, Sustainable, and Social Mining*)
 - ☐ Mineral Exploration, Processing, and Beneficiation (*including innovative approaches integrating Cyber-Physical Systems*)
 - ☐ Circular Economy
 - ☐ Other Advanced Technologies relevant to the Mining and Exploration Sector
8. **Executive Summary:** Provide a detailed overview including Problem Statement, Research Plan, Purpose, and Significance (*500–1000 words*).
9. **Project Objective (Vision Statement):** *Please summarize in approximately 200 words.*
10. **Challenges Addressed by the Proposal:**
11. **Expected Outcomes and Deliverables:**
12. **Product Validation/Testing:** *If applicable, attach Validation/Testing Details.*
13. **Third-Party Intellectual Property (IP):** If IP is owned by an external party, please upload confirmation of freedom to operate or a No Objection Certificate (NOC).
14. **Scope of Cyber-Physical Systems (CPS) Technology Development** (*Please select applicable scope*)
 - ☐ Commercialized Products
 - ☐ Product/Solution Testing and Validation (Field-Scale Testing)
 - ☐ Proof of Concept (PoC) – Laboratory-Scale Testing
15. **Technology Readiness Level (TRL) Index:**
16. **Novelty and Relevance of Proposed Solution/Innovation:** Describe how it advances the current state of knowledge in the mining, exploration, or energy sector, and how it may bridge the gap between national and global capabilities or enhance national advantage (1000 words).
17. **Import Substitution Potential:** If applicable, please explain how the solution aids in import substitution.

- 18. Methodology Outline:** Provide a brief outline of the methodology to achieve each Objective/Deliverable.
- 19. Organization of Work Elements & Individual responsibilities of the PI's**
- 20. Timeline & Milestones:** Provide a time schedule and target milestones to achieve each objective/deliverable, including a bar chart or PERT chart (in months).
- 21. Available Facilities:** Outline facilities available with the Project Proponent (Host Institute/Startup/Other) to execute the project.
- 22. Non-Financial Support Required from TEXMiN (e.g., IT Infrastructure, Mentorship, Marketing).**
- 23. Sustainability Promotion:** Explain how the proposed solution promotes sustainability.
- 24. Regulatory Clearances/Approvals:** Specify if regulatory clearances are in place for project execution.
- 25. Risk Management:** Provide a risk management plan to address potential technical, financial, or operational risks.
- 26. Industry Benefits:** Describe how the proposed project benefits the industry.
- 27. Commercialization Plan for the Proposed Solution:**
- 28. Details of experience with existing Intellectual Property (IP), publications, or proprietary know-how:**
- 29. Detailed Biodata of Investigators.**
 - ☐ Publications, Books, Research Papers, and Patents.
 - ☐ List of Projects Completed (Last 5 Years/Ongoing): Include title, sponsoring agency, duration, and project outcomes.
- 30. Proposed Outlay Details (INR Lakhs): Maximum Funding of 15Lakhs only-Funding Allocation Breakdown**

Sl. No.	Head	Year-wise Outlay	Total Outlay (Rs.)
A	Capital	1 st Year	Total
A1	Equipment		
	Total capital		
B	Revenue expenditure		
B1	Salaries/allowance		
B2	Travel (TA/ DA)		
B3	Other costs		
	(a) Contingency		
	(b) Consumables		
	Total (other costs)		
	Total Revenue		
C	Institute Overhead (@10% of Total Revenue Expenditure)		
D	Total Cost (A+B+C)		

E	Total Outlay		
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- a. Justification for equipment procurement
- b. Justification for Manpower Allocation
- c. Justifications for other associated costs
- d. Justifications for Travel & Transportation Expenses

31. Any other relevant information (*Diagram, Chart & Writeup*)

CERTIFICATE FROM THE PRINCIPAL INVESTIGATOR**Project Title:**

I/We hereby agree to fully comply with the terms and conditions associated with the Grant.

1. I/We confirm that this proposal has not been submitted elsewhere for financial support.
2. I/We have thoroughly ensured that the necessary basic facilities, as outlined in the proposal, will be made available when required for the execution of the project.
3. I/We undertake not to request financial support for the procurement of items that are already available at the host institute.
4. I/We acknowledge that the technology developed and/or intellectual property generated during the project will be owned in accordance with the guidelines set forth by the Department of Science and Technology (DST) for the Technology Innovation Hub, TEXMiN at IIT (ISM) Dhanbad.
5. I/We undertake that any equipment purchased, or facilities created under this project will be the property of the TEXMiN.
6. I/We have enclosed the following Documents as attachments for your reference:

Attachments:	Tick Mark (Yes/No)
Soft copy of the project proposal in the prescribed format	(Yes/No)
Plagiarism report of the project proposal	(Yes/No)
Detailed Biodata of PI & Co-PI	(Yes/No)
Any other supporting document	(Yes/No)

(Name & Signature)

Principal Investigator

Designation/Position

Organization: IEST Shibpur

Date:

Place: