# UNIVERSITY OF ENGINEERING & MANAGEMENT

(Established by Act XXV of 2014 of Govt. of West Bengal & recognized by UGC, Ministry of HRD, Govt. of India) University Area, Plot No. III-B/5, Main Arterial Road, New Town, Action Area-III, Kolkata - 700 160, W.B., India Admission Office: 'ASHRAM', GN-34/2, Salt Lake Electronics Complex, Kolkata - 700 091, W.B., India

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### **Minor Degree Program Policy**

### University of Engineering & Management (UEM), Kolkata

### 1. Purpose

This policy outlines the framework for the Minor Degree Program at UEM, Kolkata, aimed at augmenting students' academic profiles through interdisciplinary specializations. It standardizes the curriculum, administration, and assessment processes in alignment with All India Council for Technical Education (AICTE) guidelines. The program fosters skill development, innovation, and career readiness by offering flexible, diverse minor degrees starting from the 2025-26 academic session.

### 2. Scope

This policy applies to all undergraduate students enrolled at UEM, Kolkata, who wish to pursue one or more minor degrees. It covers curriculum design, course selection, assessment, and administrative oversight. Faculty, departments, and administrative staff involved in program delivery and tracking are also bound by this policy.

### 3. Eligibility

- **Student Eligibility:** All regular undergraduate students are eligible to enroll in the Minor Degree Program.
- **Multiple Minors:** A single student may pursue multiple minor degrees across the offered specializations, subject to workload and academic performance requirements.
- **Enrollment Process:** Students must select minor specializations from the central repository (hosted on the website) and notify their respective department. No prior departmental involvement is required beyond notification.

### 4. Offered Specializations

The following 41 minor degree specializations will be available from the 2025-26 academic session. This list may be periodically reviewed and updated by the Coordination Committee.

- 1. PEGA
- 2. Cybersecurity
- 3. Data Analytics
- 4. Quantum Computing
- 5. Internet of Things (IoT)
- 6. Entrepreneurship
- 7. VLSI Design & Technology
- 8. Advanced Web Development
- 9. Wireless Sensor Networks



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- 10. Satellite Communication Systems
- 11. Artificial Intelligence and Machine Learning
- 12. Sustainable Energy
- 13. Robotics
- 14. Computational Fluid Dynamics (CFD)
- 15. Additive Manufacturing (3D Printing)
- 16. Astronomy
- 17. Data Science
- 18. Enterprise Resource Planning
- 19. Six Sigma Certification
- 20. Supply Chain and Logistics Analytics
- 21. Universal Human Values
- 22. Engineering & Technology (Flipbook)
- 23. Engineering & Technology
- 24. Space Technology
- 25. Indian Knowledge System
- 26. Defence Technology
- 27. Cloud Computing and Virtualization
- 28. Financial Technology (FinTech)
- 29. Biomedical Instrumentation
- 30. Geographic Information Systems (GIS)
- 31. Cognitive Science and Human-Computer Interaction (HCI)
- 32. Design Thinking and Innovation
- 33. Green Technology and Environmental Engineering
- 34. Game Development and Design
- 35. Image Processing and Computer Vision
- 36. Digital Signal Processing (DSP)
- 37. Nanotechnology and Materials Science
- 38. Technical Writing and Documentation
- 39. Operations Research and Optimization
- 40. Automotive Electronics and E-Mobility
- 41. Project Management (PMP aligned)

#### 5. Curriculum Structure

The curriculum for each minor degree specialization adheres to AICTE guidelines and consists of the following components:

- Total Credits: Equivalent to a minor degree as per AICTE norms (typically 18-20 credits).
- Course Composition:
  - o 3 Theory Courses: Delivered via Coursera or offline mode at UEM.
  - 2 NPTEL Courses: Online courses from the National Programme on Technology Enhanced Learning (NPTEL). These NPTEL courses may also be credited toward an Honours degree, where applicable.



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- Delivery Mode: Primarily online (Coursera/NPTEL) with optional offline support for theory courses. A central repository of course links and curricula will be maintained on the UEM website.
- **No Department-Centric Approach:** Courses are offered through a centralized system, enabling cross-disciplinary access without affiliation to specific departments.

#### 6. Assessment and Evaluation

- Examination Policy: No offline examinations will be conducted by UEM departments. All assessments will follow the platforms' internal evaluation mechanisms (e.g., quizzes, assignments, and proctored online exams on Coursera/NPTEL). (Except for the minor course in Astronomy, offline examination will be conducted).
- Continuation and Minor Degree Eligibility: If a student fails to achieve a pass mark in the final examination, does not appear for the exams, or fails to acquire the necessary course completion certificates, the course will be discontinued, and the student will not be eligible to receive a minor degree.
- **Grading:** Marks obtained from course platforms will be recorded and uploaded by the Departmental Single Point of Contact (SPOC) into the IEMCRP student portal.
- **Certification:** Upon successful completion (minimum passing grade as per platform/AICTE norms), students will receive a Minor Degree certificate from UEM, Kolkata, endorsed by the respective platform providers.

### 7. Administration and Oversight

- Coordination Committee: A dedicated committee will be constituted immediately to:
  - o Develop and finalize course curricula for all specializations.
  - o Curate and maintain the central repository of online course links on the UEM website.
  - o Monitor program implementation and resolve any operational issues.
- **Departmental Responsibilities:** Each department will appoint a SPOC to:
  - o Facilitate student notifications for minor selections.
  - o Track student progress and ensure timely mark uploads to IEMCRP.
- **Student Responsibilities:** Students must self-enroll in selected courses via the provided links and maintain records of completion for SPOC verification.
- **Review Mechanism:** The policy and specializations will be reviewed regularly by the Coordination Committee, with updates communicated via the website and academic notices.

#### 8. Effective Date and Amendments

- **Implementation:** This policy is effective immediately from 2025-26 academic session onward.
- **Amendments:** Any revisions require approval from the Coordination Committee and will be notified through official channels.

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Institute of Engineering & Management

Dr. Malay Gangopadhyay (malay.ganguly@iem.edu.in)

Dean (Academics)