



University of Engineering and Management
Institute of Engineering & Management, Salt Lake Campus
Institute of Engineering & Management, New Town Campus
University of Engineering & Management, Jaipur

Syllabus for B.Tech Admission Batch 2026

MINOR: TECHNICAL WRITING AND DOCUMENTATION

Semester-wise Subject Codes	MINOR301TW, MINOR401TW, MINOR501TW, MINOR601TW, MINOR701TW, MINOR801TW
Total Credit	18 (6 courses × 3 credits)
Minor Duration	Semester III to Semester VIII
Pre-requisite	Basic English and computer proficiency

Course Objectives

1. Develop clarity, precision and conciseness in technical writing.
2. Develop skills in researching, organising and documenting technical information.
3. Enable students to prepare technical and professional documents.
4. Develop skills in editing, evaluating and improving technical documentation.

Course Outcomes

CO1: Apply principles of technical writing to produce clear, precise and audience-oriented content.

CO2: Analyse and synthesise technical information using appropriate citation, referencing and ethical practices.

CO3: Create structured technical reports, proposals and engineering documents using appropriate textual and visual elements.

CO4: Evaluate and edit technical documents for clarity, coherence, accuracy and professional standards.

CO-PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	1	2	1	1	2	1	1	2	2	3	1
CO2	1	3	1	3	2	1	1	3	1	3	1
CO3	1	2	2	2	3	1	1	2	2	3	2
CO4	1	3	1	2	2	1	1	3	2	3	1

DETAILED SYLLABUS

MINOR: TECHNICAL WRITING AND DOCUMENTATION

Semester	Subject Code	Course	L–T–P	Credits
III	MINOR301TW	Foundations, Research & Information Documentation	2–0–2	3
IV	MINOR401TW	Technical Reports & Proposal Writing	2–0–2	3
V	MINOR501TW	Engineering & Industrial Documentation	2–0–2	3
VI	MINOR601TW	Advanced Technical Editing & Digital Documentation	2–0–2	3
VII	MINOR701TW	Professional Documentation Practicum & Project Planning	1–0–4	3
VIII	MINOR801TW	Technical Documentation Project & Capstone	0–0–6	3

SEMESTER III

FOUNDATIONS, RESEARCH & INFORMATION DOCUMENTATION

MINOR301TW | 3 Credits | 2-0-2

Module I – Principles of Technical Writing

- Nature, scope and purpose of technical writing
- Technical, academic and general writing
- Audience, purpose and context
- Characteristics of effective technical writing

Module II – Technical Language and Style

- Clarity, precision and conciseness
- Technical vocabulary and terminology
- Formal and objective style
- Sentence construction
- Paragraph organisation
- Coherence and cohesion

Module III – Technical Information Sources and Reading

- Journals and conference papers
- Books and technical reports
- Standards and patents
- Reliable digital sources
- Evaluating source credibility
- Reading technical texts, note-making and summarising

Module IV – Synthesis, Citation and Ethical Documentation

- Paraphrasing and synthesis of information from multiple sources
- Principles of citation
- IEEE and APA referencing
- Reference lists, bibliography and reference-management tools
- Plagiarism, academic integrity, copyright and attribution
- Responsible use of AI-generated content, verification and fact-checking

Practical: Students will analyse technical texts, write concise technical passages, evaluate sources, prepare summaries and paraphrases, synthesise information from multiple sources, and create a short literature-based technical document.

Online Course Link:

Technical Communication for Engineers — NPTEL, IIT Roorkee

Official course:

nptel.ac.in/courses/121107451?utm

SEMESTER IV

TECHNICAL REPORTS & PROPOSAL WRITING

MINOR401TW | 3 Credits | 2-0-2

Module I – Technical Report Development

- Purpose and types of technical reports
- Report planning
- Report structure
- Title, abstract and executive summary
- Introduction
- Objectives and scope

Module II – Report Content

- Methodology
- Results and findings
- Discussion and analysis
- Conclusion
- Recommendations
- References and appendices

Module III – Visual and Data-Based Reporting

- Tables
- Graphs and charts
- Figures and diagrams
- Captions
- Numbering
- Cross-referencing
- Presenting technical data

Module IV – Technical Proposals

- Purpose and types of proposals
- Problem statement
- Objectives
- Methodology
- Resources
- Timeline
- Expected outcomes

Practical: Students will prepare a technical abstract, executive summary, technical report and project proposal incorporating appropriate data presentation and referencing.

Online Course Link:

Effective Writing — NPTEL

Official course:

<https://nptel.ac.in/courses/109107172?utm>

SEMESTER V

ENGINEERING & INDUSTRIAL DOCUMENTATION

MINOR501TW | 3 Credits | 2–0–2

Module I – Engineering Documentation

- Purpose and scope
- Documentation planning
- Information organisation
- Documentation standards
- Templates and formatting

Module II – Operational Documentation

- Standard Operating Procedures (SOPs)
- Work instructions
- Process documentation
- Installation documentation
- Maintenance documentation

Module III – Product and User Documentation

- User manuals
- Technical manuals
- Product specifications
- Requirements documentation
- Troubleshooting guides
- FAQs

Module IV – Project and Software Documentation

- Engineering project documentation
- Software/project documentation
- README documentation
- Version control
- Document management
- Usability and accessibility

Practical: Students will develop an SOP, user/technical manual, troubleshooting guide and project documentation package.

Online Course Link:

Writing Effective Technical Documentation — Coursera

Official course:

<https://www.coursera.org/learn/writing-effective-technical-documentation-course>

SEMESTER VI

ADVANCED TECHNICAL EDITING & DIGITAL DOCUMENTATION

MINOR601TW | 3 Credits | 2–0–2

Module I – Advanced Technical Writing

- Communicating complex technical information
- Writing for specialist and non-specialist audiences
- Audience adaptation
- Concise and effective technical style

Module II – Technical Editing and Review

- Structural editing
- Content editing
- Language editing
- Consistency and style
- Fact-checking
- Quality assurance

Module III – Digital Technical Documentation

- Web-based technical documentation
- Knowledge bases
- Technical FAQs
- Documentation architecture
- Searchable documentation
- Accessible digital content

Module IV – Contemporary Documentation Practices

- Collaborative documentation
- Documentation workflows
- Version management
- AI-assisted technical writing
- Verification and attribution
- Professional and ethical standards

Practical: Students will edit technical documents, adapt content for different audiences, develop digital documentation, and conduct peer-review and quality-assurance exercises.

Online Course Link:

Technical Editing — Coursera

Course:

<https://www.coursera.org/learn/technical-editing>

**Content & Knowledge Management — Coursera
Course:**

[Content & Knowledge Management | Coursera](#)

SEMESTER VII

PROFESSIONAL DOCUMENTATION PRACTICUM & PROJECT PLANNING

MINOR701TW | 3 Credits | 1–0–4

Module I – Documentation Requirement Analysis

- Identify a documentation requirement related to the student's engineering discipline
- Analyse intended audience and purpose
- Select and evaluate relevant technical information
- Identify credible technical sources

Module II – Documentation Planning

- Develop a documentation plan
- Select document type and structure
- Apply appropriate formatting, referencing and visual elements
- Plan review, revision and quality checks

Module III – Professional Document Development

- Engineering SOP
- Product documentation
- Laboratory documentation
- Technical process document
- Software documentation
- Installation/maintenance guide
- Technical knowledge-base article

Module IV – Project Proposal and Preliminary Development

- Identify a technical documentation problem
- Select a project topic
- Define purpose and target audience
- Conduct preliminary research
- Prepare project proposal
- Prepare initial draft
- Progress presentation

Practical: Students will create a professional discipline-specific document and prepare the proposal, literature/source review, documentation plan and preliminary document for the capstone project.

Online Course Link:

Technical Writing for Software Developers — Coursera Course:

<https://www.coursera.org/learn/packt-technical-writing-for-software-developers>

SEMESTER VIII

TECHNICAL DOCUMENTATION PROJECT & CAPSTONE

MINOR801TW | 3 Credits | 0-0-6

Module I – Project Completion

- Develop the complete technical document
- Incorporate relevant technical data and visuals
- Apply citation and referencing conventions
- Edit and proofread the document

Module II – Usability and Quality Assurance

- Conduct usability checks
- Conduct quality checks
- Review and revise the document based on feedback
- Apply professional and ethical documentation standards

Module III – Final Documentation Portfolio

- Prepare the final documentation portfolio
- Organise supporting materials
- Ensure consistency, accessibility and professional presentation

Module IV – Presentation and Defence

- Prepare project presentation
- Present the completed technical documentation
- Defend the project through viva
- Respond to feedback and justify documentation choices

Practical: Students will complete and defend a discipline-specific technical documentation project.

Online Course Link:

NPTEL – Technical Communication for Engineers

nptel.ac.in/courses/121107451

Coursera – Writing Effective Technical Documentation

<https://www.coursera.org/learn/writing-effective-technical-documentation-course>

Coursera – Technical Writing for Software Developers

<https://www.coursera.org/learn/packt-technical-writing-for-software-developers>

Textbooks

1. Markel, M., & Selber, S. A. (2020). *Technical communication* (13th ed.). Bedford/St. Martin's.
2. Lannon, J. M., & Gurak, L. J. (2024). *Technical communication* (16th ed.). Pearson.
3. Finkelstein, L., Aune, J. E., & Potter, L. A. (2023). *Technical writing for engineers & scientists* (4th ed.). McGraw Hill.

Reference Books

1. Gerson, S. J., & Gerson, S. M. (2015). *Technical communication: Process and product* (8th ed.). Pearson.
2. Tebeaux, E., & Dragga, S. (2017). *The essentials of technical communication* (4th ed.). Oxford University Press.
3. Gerson, S. J., & Gerson, S. M. (2007). *Technical writing: Process and product* (5th ed.). Pearson Prentice Hall.

Reference for Research & Academic Documentation

American Psychological Association. (2020). *Publication manual of the American Psychological Association* (7th ed.). American Psychological Association.