DR. A.P.J. ABDUL KALAM TECHNICAL UNIVERSITY

UTTAR PRADESH, LUCKNOW

SYLLABUS
FOR

B.TECH. FINAL YEAR

CIVIL ENGINEERING

BASED ON

AICTE MODEL CURRICULUM & NEP2020

[Effective from the Session: 2025-26]

B.TECH. CIVIL ENGINEERING, FINAL YEAR (VIIth SEMESTER)

COURSE STRUCTURE

[Effective from Session: 2025-26]

S. No.	Code	Subject	Learning Mode	L	T	P	CT	TA	Total	PS	TE	PE	Total	Credit
1	BCE701	Advanced Structural Design	Offline	3	0	0	20	10	30	70	-	-	100	3
2		Departmental Elective-IV	Offline	3	0	0	20	10	30	70	-	-	100	3
	BCE070	Railway, Airway, and Waterway Infrastructure Systems												
	BCE071	Artificial Intelligence and Machine Learning in Civil Engineering												
	BCE072	Disaster Mitigation & Climate Resilient Infrastructure												
	BCE073	Geosynthetics & Ground Improvement Techniques												
3	BOEM**	Open Elective-II	MOOCs	3	0	0	20	10	30	70	-	-	100	3
4	BCE751	Integrated Civil Engineering Lab	Offline	0	0	2	-	-	-	50	-	50	100	1
5	BCE752	Mini Project or Internship Assessment		0	0	4	-	-	-	-	100	-	100	2
6	BCE753	Project-I		0	0	4	-	-	-	-	150	-	150	5
7	BCE754	Startup and Entrepreneurial Activity Assessment		0	0	2	-	-	-	-	100	-	100	2
		Total		9	0	20							750	19

Note:

- The Mini Project or Internship (5–6 weeks) conducted during the summer break after the VI semester will be assessed in the VII semester.
- The Startup and Entrepreneurial Activity Assessment will be carried out in the VII semester for students who have completed at least 60 hours of startup/entrepreneurship engagement by the end of the VI semester. This requirement may be fulfilled in the VII semester for the 2025–26 session.
- In addition to the core syllabus, students are encouraged to attend expert lectures and workshops on advanced topics such as shear walls, flat slab systems, shell and folded roof structures, RCC culverts, and the design of slabs and beams with openings. Emerging areas such as AI/ML in predictive maintenance and structural health monitoring, disaster-resilient design, geosynthetic applications in slope and landfill engineering, climate-adaptive infrastructure systems, multimodal transport connectivity, and startup innovation in civil engineering are also recommended.
- This list is indicative, not exhaustive students are encouraged to explore additional interdisciplinary and advanced topics aligned with their interests and aspirations.
- Active participation in industrial/site visits, relevant webinars, symposiums, and departmental activities—such as model making, poster presentations, mock interviews, GATE preparatory tests, objective quizzes, and technical paper writing—is strongly encouraged to enhance applied learning, research exposure, and professional preparedness.

BCE 701: Advanced Structural Design

(L-T-P: 3-0-0) Credits: 3

Total Contact Hours: 40

Course Objectives:

- To introduce the basic design principles of structural steel and prestressed concrete structures.
- To explain the behavior and design of tension, compression members, and beam elements in steel.
- To familiarize students with bolted and welded connections used in steel structures.
- To introduce the concepts of plastic analysis in structural members.
- To provide an understanding of design and detailing of liquid-retaining RCC structures like water tanks.

Course Outcomes (COs), After completing this course, students will be able to:

CO	Course Outcome	Knowledge Level
CO1	Describe structural steel design philosophy and differentiate types of loads and steel connections.	*K1, K2*
CO2	Apply codal provisions to design tension and compression members, including built-up sections.	*K2*
CO3	Analyze plastic behavior in steel beams and frames using plastic moment theory.	*K3, K4*
CO4	Explain prestressing techniques and compute stress and losses in simple PSC members.	*K2, K3*
CO5	Interpret IS code provisions and apply them to design RCC circular and rectangular water tanks.	*K2, K3*

K1- Remember, K2- Understand, K3- Apply, K4- Analyze, K5- Evaluate, K6- Create

UNIT I: Basics of Structural Steel Design & Connections (8 Hours)

- Overview of structural steel and IS 800:2007 – design methods and code philosophy
- Types of loads: dead, live, wind, seismic, and their effect on steel structures
- Bolted & riveted connections – types, failure modes, bearing vs shear, efficiency
- Welded connections – types (butt, fillet), design strength, failure, and inspection

UNIT II: Structural Steel Design for Tension & Compression Members (8 Hours)

- Design of tension members – gross/net area, rupture and yielding strength
- Details of splicing, lug angles, and gusset plates
- Design of compression members – slenderness ratio, effective length, buckling
- Introduction of Built-up columns – lacing, battens, column splices; eccentric loading

UNIT III: Plastic Analysis & Design (8 Hours)

- Introduction to plastic behavior of steel sections
- Plastic moment capacity, shape factor, plastic hinge concept
- Collapse mechanisms: beam and frame
- Static and kinematic methods of analysis
- Principle of virtual work, load factor, comparison with elastic design

UNIT IV: Introduction to Prestressed Concrete (8 Hours)

- Introduction, Advantages & disadvantages of PSC over RCC
- Methods of prestressing
- Losses in prestress.
- Analysis of simple prestressed rectangular section

UNIT V: Limit State Design of Water Tanks (8 Hours)

- Basics of water tanks and Introduction to IS 3370:2021, Limit State Method for liquid-retaining structures
- Types of tanks – circular and rectangular, underground and overhead.
- Design rules using limit state method – loads, safety, and crack control.
- Step-by-step design of underground circular and rectangular tanks.
- Reinforcement layout and drawing as per the code.

Suggested Reading Materials:

1. Indian Standard Codes: IS 456:2000; IS 800:2007; IS 3370; IS 1343; IS 13920
2. N. Krishna Raju – Prestressed Concrete
3. S.K. Duggal – Limit State Design of Steel Structures
4. Ramamrutham – Prestressed Concrete
5. Punmia – RCC & Steel Design

BCE070: Railway, Airway, and Waterway Infrastructure Systems

(L-T-P: 3-0-0) Credits: 3

Total Contact Hours: 40

Course Objectives:

- To impart knowledge of multimodal transport systems including rail, air, and water.
- To understand alignment, infrastructure design, and safety standards.

Course Outcomes (COs), After completing this course, students will be able to:

CO	Course Outcome	Knowledge Level
CO1	Identify the key components and classification of railway, airway, and waterway transport systems.	*K1, K2*
CO2	Explain the principles of alignment, geometric design, and construction methods in railway systems.	*K2*
CO3	Describe the planning and layout considerations for airports and seaports.	*K2, K3*
CO4	Analyze the structure and function of railway tracks, signalling systems, and safety measures.	*K4*
CO5	Apply basic design principles for waterway alignments, port structures, and coastal protection works.	*K3*

K1- Remember, K2- Understand, K3- Apply, K4- Analyze, K5- Evaluate, K6- Create

Unit 1: Introduction and Railway Infrastructure (8 Hours)

- Railway gauge, alignment, track components
- Geometric design of track, points, and crossings
- Track construction and maintenance methods

Unit 2: Signalling and Railway Safety (8 Hours)

- Types of signals and interlocking
- Railway safety standards and disaster prevention
- Railway electrification and level crossings

Unit 3: Airway Infrastructure (8 Hours)

- Airport layout and planning
- Runway orientation and taxiway design
- Airport capacity and terminal planning

Unit 4: Harbor and Waterway Engineering (8 Hours)

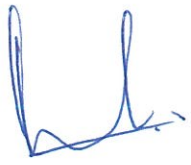
- Introduction to Waterway transportation
- Types of ports, natural vs artificial harbours
- Coastal structures: breakwaters, groynes, seawalls
- Navigational aids and ship berthing

Unit 5: Design and Maintenance (8 Hours)

- Channel alignment and dredging
- Waterway connectivity and inland navigation
- Maintenance and rehabilitation of transport infrastructure

suggested Reading Materials:

1. Saxena and Arora – Railway Engineering
2. Rangwala – Airport Engineering
3. Bindra – Principles of Waterway Engineering
4. IS and IRC Manuals for Rail and Waterways



BCE071: Artificial Intelligence and Machine Learning in Civil Engineering

(L-T-P: 3-0-0) Credits: 3

Total Contact Hours: 40

Course Objectives:

- To introduce AI and ML concepts and tools for analysing and solving civil engineering problems.
- To apply ML techniques on real-world data in areas like construction, SHM, and traffic.

Course Outcomes (COs), After completing this course, students will be able to:

CO	Course Outcome	Knowledge Level
CO1	Define basic AI and ML concepts in civil engineering.	*K1, K2*
CO2	Understand ML models and learn to apply on civil engineering datasets.	*K2, K3*
CO3	Analyze model performance using standard evaluation metrics.	*K3, K4*
CO4	Interpret results for engineering decision-making in real world scenario.	*K3, K4*
CO5	Use AI/ML tools to solve simple civil engineering problems.	*K3*

Unit 1: Foundations of AI and ML in Civil Engineering (8 Hours)

- Introduction to Artificial Intelligence and Machine Learning
- Differences and relationships: AI, ML, Deep Learning
- Supervised, Unsupervised, and Reinforcement Learning
- Applications of AI/ML in Civil Engineering: planning, risk prediction, BIM
- Tools Overview: Python, Jupyter, Pandas, Scikit-learn

Unit 2: Regression and Classification Models (8 Hours)

- Regression: Linear, Polynomial, Ridge, Lasso
- Classification: Decision Tree, Random Forest, SVM
- Evaluation Metrics: MAE, RMSE, R^2, Accuracy, Precision, Recall
- Overfitting, Cross-validation, Regularization

Unit 3: AI-Based Optimization Tools in Civil Engineering (8 Hours)

- Optimization in design: problem formulation and motivation
- Basics of Neural Networks (NN): input-output structure, practical use
- Basics of Genetic Algorithms (GA): natural selection and evolution in design
- Case studies: concrete strength prediction, foundation cost optimization
- Visual tools: Teachable Machine, Excel GA demos, Python examples

Unit 4: Construction and Infrastructure Applications (8 Hours)

- ML for project delay and cost prediction
- AI for construction planning and resource optimization
- Sensor-based infrastructure health monitoring
- Case Studies: traffic flow forecasting, bridge safety prediction

Unit 5: Interpretation, Deployment & Ethics (8 Hours)

- SHAP, LIME, and PDP: Model interpretation and visualization
- Simple deployment with Streamlit/Flask (conceptual overview only)
- Ethics in AI/ML: bias, transparency, fairness, and privacy
- Emerging trends: AI + FEM integration, Digital Twins in infrastructure

Suggested Reading & Resources:

1. Machine Learning Applications in Civil Engineering – R. Mohan & V. Ravi, Notion Press
2. Internet of Things and Machine Learning – Dr. A. Suganthi, Charulatha Publications
3. Neural Networks, Fuzzy Logic, and Genetic Algorithms – S. Rajasekaran & G.A. Vijayalakshmi Pai, PHI
4. Big Data and AI in Smart Construction – John Soldatos, Edward Curry & Manfred Hauswirth, River Publishers
5. AI in Construction Management – Jay Yang & Simaan AbouRizk, Springer
6. Artificial Intelligence in Structural Engineering – Feng Chen & Baoming Sun, Springer
7. IIT Bombay – FOSSEE Project (Free Python ML tutorials and case studies); https://fossee.in

BCE072: Disaster Mitigation & Climate Resilient Infrastructure

(L-T-P: 3-0-0) Credits: 3

Total Contact Hours: 40

Course Objectives:

- To equip students with knowledge of disaster risk and climate resilience.
- To understand air pollution, MSW, sludge management, and EIA basics.
- To align civil practices with national disaster policies and climate mandates.

Course Outcomes (COs), After completing this course, students will be able to:

CO	Course Outcome	Knowledge Level
CO1	Identify disaster types and national management frameworks.	*K1, K2*
CO2	Apply tools for resilient infrastructure and climate adaptation.	*K2, K3*
CO3	Design basic air pollution control systems.	*K3, K4*
CO4	Analyze MSW and sludge treatment systems.	*K4*
CO5	Interpret EIA process and emergency planning in civil projects.	*K3, K4*

K1- Remember, K2- Understand, K3- Apply, K4- Analyze, K5- Evaluate, K6- Create

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Unit 1: Disasters and Frameworks (8 Hours)

- Earthquakes, floods, landslides, cyclones, droughts
- Concepts: hazard, risk, resilience, capacity
- NDMA, SDMA, Indian frameworks

Unit 2: Resilient Infrastructure (8 Hours)

- Climate change impacts on infra (heat, sea rise)
- Urban heat islands, resilient buildings/bridges
- Tools: CRiSTAL, PRECIS, adaptation strategies

Unit 3: Air Pollution Control (8 Hours)

- Particulate/gaseous sources and effects
- Control: ESP, scrubbers, filters, converters
- AQI, CPCB norms, indoor air pollution

Unit 4: Waste Management (8 Hours)

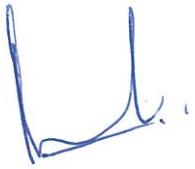
- MSW Rules 2016, treatment systems
- RDF, incineration, composting, landfill design
- Sludge thickening, drying, co-treatment

Unit 5: EIA & Disaster Preparedness (8 Hours)

- EIA: TOR, screening, scoping, hearing
- Emergency response, GIS/RS, planning
- Rapid and comprehensive EIA process

Suggested Reading:

1. NDMA Guidelines, MoEF&CC Reports
2. CPCB & CPHEEO Manuals
3. Rao & Sultana – Solid Waste
4. R.K. Bhandari – Disaster Education
5. IPCC, UNEP EIA Manuals



BCE073: Geosynthetics & Ground Improvement Techniques

(L-T-P: 3-0-0) Credits: 3

Total Contact Hours: 40

Course Objectives:

- To understand geosynthetics and their engineering applications.
- To explore mechanical and chemical soil improvement methods.
- To integrate advanced techniques in civil design like soil reinforcement.

Course Outcomes (COs), After completing this course, students will be able to:

CO	Course Outcome	Knowledge Level
CO1	Identify types of disasters and national frameworks.	*K1, K2*
CO2	Apply tools for climate-resilient infrastructure.	*K2, K3*
CO3	Design basic air pollution control systems.	*K3, K4*
CO4	Analyze waste and sludge treatment systems.	*K4*
CO5	Interpret EIA process and emergency planning steps in projects.	*K3, K4*

K1- Remember, K2- Understand, K3- Apply, K4- Analyze, K5- Evaluate, K6- Create

Unit 1: Basics of Geosynthetics (8 Hours)

- Types: Geotextiles, Geogrids, Geomembranes, Geocells (simple identification)
- Basic functions: Separation, Filtration, Drainage, Reinforcement, Protection
- Simple testing standards (IS, ASTM basics)
- Durability and simple examples (roads, canals, slopes)

Unit 2: Applications of Geosynthetics (8 Hours)

- Geosynthetics in roads (subgrade stabilization, drainage layers)
- Retaining walls and embankments (basic reinforced earth walls)
- Landfill liners and leachate collection systems
- Simple introduction to Indian standards: IS 15284, IS 2720

Unit 3: Simple Mechanical Ground Improvement Methods (8 Hours)

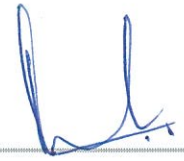
- Basic soil compaction methods (field and lab)
- Preloading and Surcharge (simple explanations)
- Vertical drains: Sand drains and Prefabricated Vertical Drains (PVDs)
- Simple field instrumentation (settlement plates, piezometers)

Unit 4: Reinforcement and Grouting Techniques (8 Hours)

- Soil Nailing and Simple Reinforced Foundations (concepts only)
- Grouting methods (permeation, compaction, jet—only working principles)
- Stone columns and lime columns (simple design idea, when to use them)
- Overview of ground anchors and GRS-IBS (conceptual level only)

Unit 5: Case Studies and Design Considerations (8 Hours)

- Simple Design of Reinforced Slopes and Walls (charts/tables from IS codes)
- Practical Case Studies: Road projects, embankments, landfills in India
- Smart geosynthetics (conceptual introduction only)
- Use of monitoring and instrumentation in simple projects



Suggested Reading:

1. R.M. Koerner – Designing with Geosynthetics (Simple, easy explanations, widely cited)
2. G.V. Rao & G.V.S.S. Raju – Engineering with Geosynthetics (Indian perspective, Tata McGraw Hill)
3. B.M. Das – Principles of Foundation Engineering (Includes Ground Improvement Methods)
4. IS Codes: IS 15284 (Reinforced Soil Walls), IS 2720 (Soil Testing), IS 8408 (Geotextile Testing)

BCE751: Integrated Civil Engineering Lab

(L-T-P: 0–0–2) Credits: 1

Total Contact Hours: 20

Course Objectives:

- To provide practical, hands-on exposure across key civil engineering domains.
- To apply IS codes, basic simulations, and digital tools in solving civil engineering problems.
- To develop multidisciplinary problem-solving skills using modern tools like ML, GIS, FEM, and BIM.

Course Outcomes (COs), After completing this course, students will be able to:

CO	Course Outcome	Knowledge Level
CO1	Conduct tests and interpret results from structural, geotechnical, and environmental experiments.	*K1, K2, K3*
CO2	Apply IS codes and numerical models to solve practical design problems.	*K2, K3*
CO3	Use ML and GIS tools for civil engineering problem-solving.	*K3, K4*
CO4	Analyze simulation outputs and derive engineering inferences.	*K4, K5*
CO5	Create integrated engineering reports using software and technical tools.	*K5, K6*

K1- Remember, K2- Understand, K3- Apply, K4- Analyze, K5- Evaluate, K6- Create

List of Practical (Any 8 out of 12 Recommended):

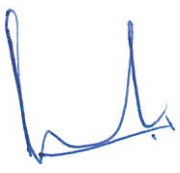
SN	Experiment Title	Mapped Domain
1	Structural Health Monitoring through Rebound Hammer, UPV Meter, Cover Meter, Potentiometer, Strain Gauges, Acoustic Sensors, etc.	Structural, NDT
2	Analysis of simple Soil classification through Index Properties using Python, Excel, or ML-Based Tools	Geotechnical, ML
3	Key Design of Shallow Footings using Terzaghi and Meyerhof Approaches	Foundation Design
4	Efficient Mix Design for M40 Grade Concrete as per IS 10262:2019 with Excel Optimizer	Concrete Technology
5	Testing and Estimation of Water Quality Index (WQI) using Laboratory Data (BOD, COD, pH etc)	Environmental Engineering
6	Road Pavement Design Calculation using IRC 37 & IRC 58 Guidelines based on Traffic Data	Transportation Engineering
7	Urban Rainwater Harvesting Design and Peak Runoff Estimation via Manual/Software Methods	Hydrology, Smart Infra
8	Simulation of Cantilever Beam under Load using Finite Element Method (ABAQUS/ANSYS, etc.)	Structural, FEM
9	Investigating earthquake-resistant behavior through shake table simulation and lateral load testing on a beam-column joint using loading frame/actuator (physical or virtual)	Earthquake Engineering
10	Applied Mini ML Project: Predicting Concrete Strength through Regression Techniques (Excel/Python)	ML, Concrete Technology
11	Acquiring topographic layout and surveying data using Total Station or DGPS equipment or Aerial Survey.	Surveying, Geoinformatics
12	Project Scheduling using MS Project/Primavera for 3-storey RCC Building	Construction Management

Software/Tools Recommended:

AutoCAD, Excel, Python, STAAD Pro, ABAQUS, QGIS, MIDAS, ETABs, MS Project/Primavera or any Relevant BIM Software, Open-source ML Libraries etc.

Suggested References:

1. IS 10262:2019, IS 456:2000, IS 1893:2016, IS 3370, IS 6403, IRC:37, IRC:58
2. CPHEEO Manual for Water Quality Assessment
3. Bhavikatti, S.S. – Structural Design and Detailing
4. Rajan & Jain – AI in Civil Engineering (McGraw Hill)
5. Open-source Platforms: FOSSEE, Kaggle, MIT OCW, NDMA Guidelines



BCE752: Mini Project or Internship Assessment

(L-T-P: 0–0–4) Credits: 2

Total Contact Hours: 4 Hours per Week

Objective:

To systematically assess the student's **industrial internship** or **mini project** conducted after the VI semester by emphasizing technical reporting, practical learning, and presentation skills, aligned with professional and academic expectations.

Course Structure:

Students must have completed: **Internship** (4–6 weeks) in a relevant civil engineering organization **OR Mini Project** (design/analysis-based) under departmental faculty guidance. During the VII semester: 4 Hours/Week to be utilized for: Supervised Report Preparation; PPT Preparation & Mock Presentations; Technical Discussions & Peer Reviews; Individual Assessment of Internship Learning Outcomes or Mini Project Progress

Course Outcomes (COs), After completing this course, students will be able to:

CO	Course Outcome	*Knowledge Level*
CO1	Prepare structured technical reports based on internship or mini project work.	*K1, K2, K3*
CO2	Apply project management and design tools for civil engineering tasks.	*K2, K3*
CO3	Analyze practical problems and implement solutions using civil engineering methods.	*K3, K4*
CO4	Present and communicate project outcomes effectively through presentations.	*K4, K5*
CO5	Integrate interdisciplinary knowledge in project or internship activities.	*K5, K6*

Mini Project Options (for Non-Internship Students):

Students opting for Mini Project must complete **at least 4 technical tasks** from the following:

SN	Technical Task Title	Mapped Domain
1	Preparation of BOQ & Tender Documents for Residential / Infrastructure Project	Construction Management
2	Design & Detailed Drawing of Flat Slab / Cantilever Slab as per IS Code	Structural Design
3	Cost Estimation and Market Rate Survey for Construction Projects	Construction Economics
4	Structural Design & Analysis of a G+5 RCC/Steel Building (Full Design using IS Codes)	Structural Design, FEM
5	Design of Small Sewage Treatment Plant (STP) for Residential Society (Flow, Layout, Detailing)	Environmental Engineering
6	Pavement Design Problem using IIT Pave or Equivalent Software (Flexible/Rigid Pavement)	Transportation Engineering
7	Experimental Study on Effect of Various Admixtures on Concrete Properties (Lab & Literature)	Concrete Technology, Materials
8	Hydraulic Problem / Fluid Dynamics Simulation Using Excel or Software (e.g., Flow through Pipes, Water Hammer)	Hydraulic Engineering
9	Bridge Design Problem (Simple Span RCC/PSC Slab or Box Culvert Design) (As per IRC/IS Codes)	Bridge Engineering
10	Technical Case Study of Real Infrastructure Project (Metro Rail, Dam, Tunnel, Highway, etc.)	Project Planning & Analysis
11	Working Models or Prototypes on Civil Engineering Concepts (e.g., Seismic Base Isolation, Wastewater Treatment, Green Building Models)	Structural, Environmental Models

BCE753: Project-I

(L-T-P: 0-0-10) Credits: 5

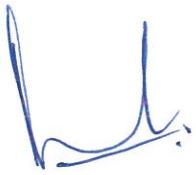
Total Contact Hours: 10 Hours per week

Objective:

- To initiate the student's major project work focused on problem-solving, design, research, and/or experimental investigation in civil engineering.
- To encourage teamwork, critical thinking, project planning, and research-based learning.
- To lay the groundwork for quality research output and/or publications.

Project Guidelines:

- Projects must be identified during the VI semester through consultation with faculty guides.
- Project work begins in the VII semester (BCE753) and must conclude with tangible outcomes.
- Based on this foundation, the work continues as Project-II in the VIII semester.
- Students shall work in groups of not more than four members.
- Each group will be assigned a faculty supervisor for continuous guidance and progress monitoring.
- The final report must include plagiarism and AI similarity certificates, adhering to institutional standards.
- Interdisciplinary projects and those with practical application or research potential are strongly encouraged.
- Students should aim for quality outcomes such as conference papers, journal publications, or patent filings.
- Internal evaluation will be based on novelty, continuous progress, report quality, innovation, research depth, publication effort, and final presentation.
- Periodic review seminars shall be conducted and evaluated by a Project Evaluation Committee comprising the Project Coordinator, Faculty Guide, Co-guide (if any), and subject/domain experts, as per the institute or affiliating university's guidelines.



BCE754: Startup and Entrepreneurial Activity Assessment

L-T-P: 0-0-4) Credits: 2

Total Contact Hours: 4 Hours per week

Objective:

- To assess the student's active engagement and learning in startup/entrepreneurial activities undertaken till the VI semester.
- To promote innovation, entrepreneurship, and problem-solving mindset among civil engineering students.
- To encourage students to pursue entrepreneurial ventures, incubation, or product development.

Expected Learning Outcomes:

- Demonstrate entrepreneurial thinking and problem-solving skills.
- Develop business acumen, market awareness, and innovative approaches.
- Document and reflect on entrepreneurial experiences effectively.
- Gain confidence in presenting startup ideas or business concepts.

Assessment Guidelines:

- Students must have completed **at least 60 hours** of startup or entrepreneurial activities by the end of the VI semester, such as:
    - Startup internships
    - Incubation center activities
    - Entrepreneurship Development Cell (EDC) programs
    - Product or prototype development
    - Business plan preparation or competitions
    - Startup conclaves, hackathons, or similar certified programs.
- Activities must be certified by the organizing agency/incubator/ Faculty mentor.
- No group work allowed; assessment is strictly individual.
- VII semester will be utilized for assessment, report preparation, and presentation.

Notes:

- Activities should be aligned with the **Startup India, AICTE, or Institute's Startup Policy Guidelines**.
- Students may be encouraged to continue their startup projects beyond assessment if feasible.