School of Computing and Intelligent Systems

PROJECT-BASED LEARNING (PBL) POLICY

Building Innovators, One Semester at a Time

1 **PBL is Mandatory — Every Semester**
Unlike a final-year-only project, PBL runs from Semester I to Semester VIII, growing in complexity each year.

2 **Year 1: Build the Foundation**
Programming logic and web technologies. Focus: algorithms, flowcharts, problem decomposition → mini console/web projects.

3 **Year 2: Think Intelligent**
AI fundamentals and applied AI using Python, ML, Deep Learning, CV and NLP → intelligent, data-driven applications.

4 **Year 3: Scale to the Cloud**
Cloud-native development and DevOps — AWS/Azure/GCP, Docker, Kubernetes, CI/CD → cloud-deployed, industry-grade solutions.

5 **Final Year: Deliver Real Impact**
Choose Product Development (deployable product) or Research (paper, validation, patent) — a true capstone experience.

6 **Every PBL Follows One Lifecycle**
Problem Identification → Literature Survey → Requirement Analysis → Design → Implementation → Testing → Presentation → Reflection.

Progressive Roadmap — Year Wise

Year	Focus	Nature of Projects	Expected Outcome
First Year	Programming & Web Technologies	Mini Projects	Logic Building
Second Year	Artificial Intelligence & Data	Domain Projects	Intelligent Applications
Third Year	Cloud Computing & Scalable Systems	Industry Projects	Cloud-based Solutions
Final Year	Product Development / Research	Capstone Project	Deployable Product / Publication

The 8-Phase PBL Lifecycle (Every Semester)

Problem Identification	Literature Survey	Requirement Analysis	Design	Implementation	Testing	Presentation	Reflection & Documentation

Semester-Wise Technology Progression

Sem	Theme	Key Technologies
I	Programming Logic	C / Python, Git, HTML
II	Web Technology	HTML, CSS, JavaScript, SQL
III	AI Fundamentals	Python, Pandas, Machine Learning
IV	Applied AI	Deep Learning, Computer Vision, NLP
V	Cloud Native Dev	AWS/Azure/GCP, Docker, REST APIs
VI	Cloud + DevOps	Kubernetes, CI/CD, Microservices
VII	Product Development	UX, Agile, Business Model Canvas
VIII	Product / Research	Deployment, Research, Patent, Startup

Deliverables & Evaluation Snapshot

Every Semester, Submit

- Project Proposal & Problem Statement
- Literature Survey & Requirement Spec
- Design Documents + Source Code (Git)
- Demo Video (5–10 min) + Final Presentation
- Project Report & Reflection Report

Evaluation Based on

- Problem Identification
- Innovation & Creativity
- Technical Design
- Implementation Quality
- Testing, Documentation & Presentation
- Teamwork, Ethics & Professionalism

Remember

- One PBL project every semester — Semester I through Semester VIII, with increasing complexity.
- Every PBL must map to at least 2 core courses (COs & POs) of that semester.
- Same 8-phase lifecycle applies every semester: Identify → Survey → Analyze → Design → Build → Test → Present → Reflect.
- No Documentation + No Demonstration = No PBL Credit.
- Novel, industry-linked or research-grade projects are eligible for patents, publications and startup incubation.

One Project • Every Semester • Progressively Industry & Research Ready