



PROGRAMME DETAILS

Programme Name	B.Tech Computer Science and Engineering specialisation in Agentic AI
Industry Partner	Powered by ByteXL & Collaborated with Microsoft Azure
School	University School of Engineering and Technology (USET)
Batch	2026 Onwards
Duration	4 Years (8 Semesters)
Admission Year	2026

Semester I — First Year

S.No.	Course Name
1	Programming for Problem Solving using C
2	Programming for Problem Solving using C Lab
3	English Communications I
4	English Communications I Lab
5	Azure Fundamentals (AZ-900)
6	Azure Fundamentals (AZ-900) Lab
7	Engineering Physics
8	Engineering Physics Lab
9	Applied Mathematics
10	Object Oriented Programming with Java
11	Object Oriented Programming with Java Lab
12	Environment Science

Semester II — First Year

S.No.	Course Name
1	Programming in Python
2	Programming in Python Lab
3	English Communications II
4	Data Structures & Algorithms
5	Data Structures & Algorithms Lab
6	Azure AI Fundamentals (AI-900)
7	Azure AI Fundamentals (AI-900) Lab
8	Web Application Development: Frontend Fundamentals



LAMRIN TECH SKILLS UNIVERSITY PUNJAB

University School of Engineering and Technology (USET)

STUDY SCHEME | B.Tech CSE — Agentic AI (ByteXL powered by Microsoft Azure)

9	Web Application Development: Frontend Fundamentals Lab
10	Probability & Statistics for AI
11	Health and Fitness

After Completion of 1st Year — Certificate in Computer Science and Engineering

Semester III — Second Year

S.No.	Course Name
1	Fundamentals of Operating Systems and Networking
2	Fundamentals of Operating Systems and Networking Lab
3	Applied Machine Learning
4	Applied Machine Learning Lab
5	Exploratory Data Analysis
6	Exploratory Data Analysis Lab
7	Azure Data Fundamentals (DP-900)
8	Azure Data Fundamentals (DP-900) Lab
9	Software Engineering
10	Computer Organization and Architecture

Semester IV — Second Year

S.No.	Course Name
1	Database Management Systems
2	Database Management Systems Lab
3	Applied Deep Learning
4	Applied Deep Learning Lab
5	Generative AI: Foundations & Prompt Engineering
6	Generative AI: Foundations & Prompt Engineering Lab
7	Backend Development using FastAPI
8	Backend Development using FastAPI Lab
9	Azure AI App and Agent Developer (AI-103)
10	Azure AI App and Agent Developer (AI-103) Lab
11	Distributed Systems

After Completion of 2nd Year — Diploma in Computer Science and Engineering (Agentic AI)



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STUDY SCHEME | B.Tech CSE — Agentic AI (ByteXL powered by Microsoft Azure)

Semester V — Third Year

S.No.	Course Name
1	System Design for AI Systems
2	Generative AI: Application Engineering
3	Generative AI: Application Engineering Lab
4	Natural Language Processing
5	Natural Language Processing Lab
6	Cloud Computing for AI
7	Cloud Computing for AI Lab
8	Azure AI Cloud Developer (AI-200)
9	Azure AI Cloud Developer (AI-200) Lab
10	Computer Vision
11	Computer Vision Lab

Semester VI — Third Year

S.No.	Course Name
1	Foundations of Agentic Systems & Autonomous AI
2	Foundations of Agentic Systems & Autonomous AI Lab
3	RAG & Vector Databases
4	RAG & Vector Databases Lab
5	LLM Engineering
6	LLM Engineering Lab
7	Azure MLOps Engineer (AI-300)
8	Azure MLOps Engineer (AI-300) Lab
9	ML for Production
10	ML for Production Lab
11	Responsible AI: Bias, Fairness and Safety in Generative AI Applications

□ **After Completion of 3rd Year — B.Sc. in Computer Science and Engineering (Agentic AI)**

Semester VII — Fourth Year

S.No.	Course Name
1	Azure SQL AI Developer Associate (DP-800)
2	Azure SQL AI Developer Associate (DP-800) Lab
3	Capstone Project Development



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STUDY SCHEME | B.Tech CSE — Agentic AI (ByteXL powered by Microsoft Azure)

4	Internship / Industrial Training
5	Seminar

Semester VIII — Fourth Year

S.No.	Course Name
1	Capstone Project Development
2	Industry Internship
3	Seminar

□ **After Completion of 4th Year — B.Tech Degree in Computer Science and Engineering (Agentic AI)**

ELECTIVES — COURSE OPTIONS

Microsoft Azure Certification Pathway

S.No.	Course Name
1	Azure Fundamentals (AZ-900)
2	Azure AI Fundamentals (AI-900)
3	Azure Data Fundamentals (DP-900)
4	Azure AI Engineer Associate (AI-102)
5	Azure Data Scientist Associate (DP-100)
6	Azure Developer Associate (AZ-204)
7	Fabric Analytics Engineer Associate (DP-600)

PROGRAMME EXIT MILESTONES

- ◆ After Year 1 (Semesters I & II) → Certificate in CSE
- ◆ After Year 2 (Semesters III & IV) → Diploma in CSE (Agentic AI)
- ◆ After Year 3 (Semesters V & VI) → B.Sc. in CSE (Agentic AI)
- ◆ After Year 4 (Semesters VII & VIII) → B.Tech Degree in CSE (Agentic AI)

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