

LAMRIN TECH SKILLS UNIVERSITY PUNJAB
University School of Engineering and Technology (USET)
STUDY SCHEME | Revised B.Tech Computer Science and Engineering

| PROGRAMME DETAILS | | | |
|---|--|--------------|---|
| Programme Name | B.Tech Computer Science and Engineering | | |
| Industry Partner | Powered by L&T (Larsen & Toubro) | | |
| School | University School of Engineering and Technology (USET) | | |
| Batch | 2024 Onwards | | |
| Duration | 4 Years (8 Semesters) | | |
| Admission Year | 2024 | | |
| Framework | UGC-CBCS (Choice Based Credit System) | | |
| Semester I — First Year | | | |
| S.No. | UGC Code | Subject Code | Course Name |
| 1 | MD | UGAM-101 | Applied Mathematics-I |
| 2 | MD | UGAP-101 | Applied Physics |
| 3 | MD | UGAP-102 | Applied Physics Lab |
| 4 | DC | UGCC-101 | Computational Thinking |
| 5 | DC | UGCC-101A | Computational Thinking Lab |
| 6 | DC | UGCC-102 | Object-Oriented Programming in C++ |
| 7 | DC | UGCC-102A | Object-Oriented Programming in C++ Lab |
| 8 | AEC | UGEC-201 | English Communication Skills-I |
| 9 | AEC | UGEC-202 | English Communication Skills-I Lab |
| | | | Total: 28 Hrs |
| Semester II — First Year | | | |
| S.No. | UGC Code | Subject Code | Course Name |
| 1 | MD | UGAM-102 | Discrete Mathematical Structures |
| 2 | DC | UGCC-111 | Data Structures & Algorithms with C++ |
| 3 | DC | UGCC-111A | Data Structures & Algorithms with C++ Lab |
| 4 | DC | UGCC-114 | Full Stack Foundation (Java) |
| 5 | DC | UGCC-114A | Full Stack Foundation (Java) Lab |
| 6 | DM | UGEE-101 | Electrical & Electronics Engineering |
| 7 | DM | UGEE-102 | Electrical & Electronics Engineering Lab |
| 8 | VAC | UGES-201 | Environmental Science |
| 9 | AEC | UGEC-203 | English Communication Skills-II |
| 10 | AEC | UGEC-204 | English Communication Skills-II Lab |
| | | | Total: 28 Hrs |
| Note: Workshop Training will be imparted in the Institution at the end of 2nd Semester for Four (04) weeks duration (Minimum 30 hours per week). Industrial tour will also form part of this training. | | | |
| After Completion of 1st Year — Certificate in Computer Science and Engineering | | | |

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| Semester III — Second Year | | | |
|-----------------------------------|-----------------|---------------------|--|
| S.No. | UGC Code | Subject Code | Course Name |
| 1 | DC | UGCC-202 | Computer System Organization and Architecture |
| 2 | DC | UGCC-203 | Operating Systems |
| 3 | DM | UGCC-XXX | Elective-I |
| 4 | DC | UGCC-204 | Principle of Modern Software Engineering |
| 5 | DC | UGCC-209 | Front-End UI/UX Development |
| 6 | DC | UGCC-209A | Front-End UI/UX Development Lab |
| 7 | SEC | UGPD-101 | Personality Development Workshop-I |
| 8 | SI | UGST-201 | Summer Training (With Project) |
| 9 | SEC | UGOE-XXX | Open Elective-III (Online Certification Course through MOOC, SWAYAM, EDX etc.) |
| | | | Total: 27 Hrs |

| Semester IV — Second Year | | | |
|----------------------------------|-----------------|---------------------|--|
| S.No. | UGC Code | Subject Code | Course Name |
| 1 | DC | UGCC-201 | System Programming |
| 2 | DC | UGCC-201A | System Programming Lab |
| 3 | DC | UGCC-231 | Server-Side Development & Database |
| 4 | DC | UGCC-231A | Server-Side Development & Database Lab |
| 5 | DM | UGCC-304 | Design Thinking |
| 6 | DM | UGCC-304A | Design Thinking Lab |
| 7 | DM | UGCS-XXX | Elective-II |
| 8 | DM | UGCC-224 | Automata Theory & Computability |
| 9 | SEC | UGOE-XXX | Certification with Minor Project (45 Hrs.) |
| 10 | VAC | UGHF-101 | Health & Fitness |
| | | | Total: 34 Hrs |

🏠 After Completion of 2nd Year — Diploma in Computer Science and Engineering

| Semester V — Third Year | | | |
|--------------------------------|-----------------|---------------------|--|
| S.No. | UGC Code | Subject Code | Course Name |
| 1 | DC | UGCC-310 | Backend Frameworks and API |
| 2 | DC | UGCC-310A | Backend Frameworks and API Lab |
| 3 | DC | UGCC-303 | Data Communication and Computer Networks |
| 4 | DC | UGCC-303A | Data Communication and Computer Networks Lab |
| 5 | DC | UGCC-321 | Compiler Design |

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|----------------------|-----|-----------|---|
| 6 | DC | UGCC-321A | Compiler Design Lab |
| 7 | DM | UGCC-XXX | Elective-III |
| 8 | SEC | UGPD-102 | Personality Development Workshop-II |
| 9 | SI | UGIT-301 | Institutional Training with Project |
| 10 | SEC | UGOE-XXX | Open Elective-IV (Online Certification Course through MOOC, SWAYAM, EDX etc.) |
| Total: 33 Hrs | | | |

| Semester VI — Third Year | | | |
|---|----------|--------------|---|
| S.No. | UGC Code | Subject Code | Course Name |
| 1 | DC | UGCC-322 | Cloud Computing Technology |
| 2 | DC | UGCC-322A | Cloud Computing Lab |
| 3 | DC | UGCC-325 | Advanced JavaScript Frameworks |
| 4 | DC | UGCC-325A | Advanced JavaScript Frameworks Lab |
| 5 | DM | UGCC-324 | Open Source Software and Open Standards |
| 6 | DC | UGCC-326 | Testing and Deployment |
| 7 | DC | UGCC-326A | Testing and Deployment Lab |
| 8 | DM | UGCC-XXX | Elective-IV |
| 9 | SEC | UGOE-XXX | Certification with Major Project |
| Total: 34 Hrs | | | |
| 🎓 After Completion of 3rd Year — B.Sc. in Computer Science and Engineering | | | |

| Semester VII — Fourth Year | | | |
|-----------------------------------|----------|--------------|-------------------|
| S.No. | UGC Code | Subject Code | Course Name |
| 1 | RP | UGOJD-401 | On Job Deployment |

| Semester VIII — Fourth Year | | | |
|---|----------|--------------|-------------------|
| S.No. | UGC Code | Subject Code | Course Name |
| 1 | RP | UGOJD-402 | On Job Deployment |
| 🎓 After Completion of 4th Year — B.Tech Degree in Computer Science and Engineering | | | |

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ELECTIVES — COURSE OPTIONS

Elective-I (Semester III)

| S.No. | Subject Code | Course Name |
|-------|--------------|--------------------------------------|
| 1 | UGCC-206 | IT Infrastructure Landscape Overview |
| 2 | UGCC-207 | Machine Learning |
| 3 | UGCC-208 | Computer Graphics |
| 4 | UGCC-113 | Introduction to AI |
| 5 | UGCC-225 | Linux Administration |

Elective-II (Semester IV)

| S.No. | Subject Code | Course Name |
|-------|--------------|-------------------------------------|
| 1 | UGCC-227 | Predictive Analytics |
| 2 | UGCC-228 | Descriptive Analytics |
| 3 | UGCC-229 | Data Wrangling & Data Visualisation |
| 4 | UGCC-230 | Software Project Management |
| 5 | UGCC-205 | Introduction to Data Analytics |

Elective-III (Semester V)

| S.No. | Subject Code | Course Name |
|-------|--------------|---|
| 1 | UGCC-305 | Importance of Cyber Security in Industries |
| 2 | UGCC-306 | Social & Web Analytics |
| 3 | UGCC-307 | Advanced Computer Graphics, Computer Animation Algorithm and Techniques |
| 4 | UGCC-308 | Digital Image Processing |
| 5 | UGCC-309 | Big Data Analytics |

Elective-IV (Semester VI)

| S.No. | Subject Code | Course Name |
|-------|--------------|---------------------------------------|
| 1 | UGCC-330 | Introduction to IoT |
| 2 | UGCC-331 | Introduction to Blockchain Technology |
| 3 | UGCC-332 | Machine Learning |
| 4 | UGCC-333 | Ethical Hacking & Penetration Testing |
| 5 | UGCC-334 | Introduction to IT Security |

PROGRAMME EXIT MILESTONES

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

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