

GALGOTIAS UNIVERSITY



School of Computer Science and Engineering

Program

Bachelor of Technology in Computer Science and Engineering (Working Professionals)

Curriculum

| | First Semester B. Tech CSE (WP) | | | | | | | | |
|---------------|---------------------------------|---|---|---|----|---|---|--|--|
| Sl.No. | Course Code | Course Title | L | Т | P | S | C | | |
| 1 | 101 | Engineering Mathematics-I | 3 | 0 | 1 | 0 | 4 | | |
| 2 | 102 | Basic Electrical & Electronics Engg. | 3 | 0 | 1 | 0 | 4 | | |
| 3 | 103 | Environmental Impact Analysis | 0 | 0 | 0 | 0 | 0 | | |
| 4 | 104 | Biology for Engineers / Nano Technology / Alternate Energy / Synthetic Chemistry / Bio- Materials and Implants/Chemical and Biological Materials | 3 | 0 | 0 | 0 | 3 | | |
| 5 | 105 | Programming for Problem Solving using C | 3 | 0 | 1 | 0 | 4 | | |
| 6 | 106 | Aptitude Skills | 0 | 0 | 2 | 0 | 2 | | |
| Total Credits | | | | | 17 | | | | |

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|---------------|----------------------------------|--|---|---|----|---|---|--|--|--|
| Sl.No. | Course Code | Course Title | L | Т | P | S | C | | | |
| 1 | 201 | Engineering Design and Prototyping | 3 | 0 | 1 | 0 | 4 | | | |
| 2 | 202 | Introduction of Digital System | 3 | 0 | 0 | 0 | 3 | | | |
| 3 | 203 | Modern Physics / Semiconductor Physics / Condensed matter Physics/Semiconductor and Opto Electro Devices | 3 | 0 | 1 | 0 | 4 | | | |
| 4 | 204 | YOGA | 0 | 0 | 0 | 0 | 0 | | | |
| 5 | 205 | Engineering Mathematics-II | 4 | 0 | 0 | 0 | 4 | | | |
| 6 | 206 | Discrete Mathematics | 3 | 0 | 0 | 0 | 3 | | | |
| 7 | 207 | OOPS Using C++ | 3 | 0 | 1 | 0 | 4 | | | |
| 8 | 208 | Applied Aptitude Skills | 0 | 0 | 2 | 0 | 2 | | | |
| Total Credits | | | | | 24 | | | | | |

| | Third Semester B. Tech CSE (WP) | | | | | | | | |
|---------------|---------------------------------|---|---|---|----|---|---|--|--|
| Sl.No. | Course Code | Course Title | L | Т | P | S | C | | |
| 1 | 301 | Database Management System | 3 | 0 | 1 | 0 | 4 | | |
| 2 | 302 | Data Structures | 3 | 0 | 1 | 0 | 4 | | |
| 3 | 303 | Java Programming | 3 | 0 | 1 | 1 | 5 | | |
| 4 | 304 | Probability and Statistics | 3 | 0 | 0 | 0 | 3 | | |
| 5 | 305 | Computer Organization and Architecture | 3 | 0 | 0 | 0 | 3 | | |
| 6 | 306 | Advanced Aptitude Skills | 0 | 0 | 2 | 0 | 2 | | |
| 7 | 307 | Programming Skills with Computational Maths | 0 | 0 | 2 | 0 | 2 | | |
| 8 | 308 | Design Thinking | 1 | 0 | 0 | 0 | 1 | | |
| Total Credits | | | | | 24 | | | | |

| | Fourth Semester B. Tech CSE (WP) | | | | | | | | |
|----------------------|----------------------------------|--|---|---|----|---|---|--|--|
| Sl.No. | Course Code | Course Title | L | T | P | S | C | | |
| 1 | 401 | Data Communication and Networking | 3 | 0 | 1 | 0 | 4 | | |
| 2 | 402 | Design and Analysis of Algorithm | 3 | 0 | 1 | 1 | 5 | | |
| 3 | 403 | Operating System | 3 | 0 | 1 | 0 | 4 | | |
| 4 | 404 | Theory of Computation | 3 | 0 | 0 | 0 | 3 | | |
| 5 | 405 | Aptitude Proficiency | 0 | 0 | 2 | 0 | 2 | | |
| 6 | 406 | Fundamentals of Cyber Security | 3 | 0 | 0 | 0 | 3 | | |
| 7 | 407 | Python Programing | 1 | 0 | 1 | 0 | 2 | | |
| 8 | 408 | Understanding Harmony and Ethical Human Conduct | 1 | 0 | 0 | 0 | 1 | | |
| 9 | 409 | Programming Skills with Data Structures | 0 | 0 | 2 | 0 | 2 | | |
| Total Credits | | | | | 26 | | | | |

| | Fifth Semester B. Tech CSE (WP) | | | | | | | | |
|---------------|---------------------------------|--|---|---|----|---|---|--|--|
| Sl.No. | Course Code | Course Title | L | Т | P | S | C | | |
| 1 | 501 | Machine Learning | 3 | 0 | 1 | 1 | 5 | | |
| 2 | 502 | Software Engineering & Testing | 3 | 0 | 1 | 0 | 4 | | |
| 3 | 503 | Soft Skills & Aptitude Readiness | 0 | 0 | 2 | 0 | 2 | | |
| 4 | 504 | Programming Skills with Algorithmic Design | 0 | 0 | 2 | 0 | 2 | | |
| 5 | 505 | Compiler Design | 3 | 0 | 1 | 0 | 4 | | |
| 6 | 506 | Summer Internship-I | 0 | 0 | 0 | 1 | 1 | | |
| 7 | 507 | Web Technology | 3 | 0 | 1 | 0 | 4 | | |
| 8 | 508 | Open Elective-1 | 3 | 0 | 0 | 0 | 3 | | |
| Total Credits | | | | | 25 | | | | |

| | | Sixth Semester B. Tech CSE (WP) | | | | | |
|--------|---------------|---|---|---|----|---|---|
| Sl.No. | Course Code | Course Title | L | Т | P | S | С |
| 1 | 601 | Professional Readiness | 0 | 0 | 2 | 0 | 2 |
| 2 | 602 | Programming Skills with Advanced Data Structures | 0 | 0 | 2 | 0 | 2 |
| 3 | 603 | Data Science and its Applications | 3 | 0 | 1 | 0 | 4 |
| 4 | 604 | Deep Learning | 3 | 0 | 1 | 1 | 5 |
| 5 | 605 | Program Specific Elective-1 | 3 | 0 | 1 | 0 | 4 |
| 6 | 606 | Program Specific Elective-2 | 3 | 0 | 1 | 0 | 4 |
| 7 | 607 | Open Elective-2 | 3 | 0 | 0 | 0 | 3 |
| | Total Credits | | | | 24 | | |

| | Seventh Semester B. Tech CSE (WP) | | | | | | | | | |
|---------------|-----------------------------------|----------------------------------|---|-----------|----|---|---|--|--|--|
| Sl.No. | Course Code | Course Title | L | L T P S C | | | | | | |
| 1 | 701 | Research Methodology & IPR | 3 | 0 | 1 | 0 | 4 | | | |
| 2 | 702 | Summer Internship II | 0 | 0 | 0 | 1 | 1 | | | |
| 3 | 703 | Capstone Project Phase I | 0 | 0 | 0 | 4 | 4 | | | |
| 4 | 704 | Program Specific Elective-3 | 3 | 0 | 1 | 0 | 4 | | | |
| | | Total Credits | | | 13 | | | | | |
| | | Eighth Semester B. Tech CSE (WP) | | | | | | | | |
| Sl.No. | Course Code | Course Title | L | T | P | S | C | | | |
| 1 | 801 | Capstone Project Phase II | 0 | 0 | 0 | 8 | 8 | | | |
| 2 | 802 | Industrial Internship | 0 | 0 | 0 | 2 | 2 | | | |
| Total Credits | | | | | 10 | | | | | |

| | Open Elective-1 | | | | | | | | | |
|--------|-----------------------|---|---|---|---|---|--|--|--|--|
| Sl.No. | Course Code | Course Title | L | T | P | C | | | | |
| 1 | 508 | Understanding India | 3 | 0 | 0 | 3 | | | | |
| 2 | 508 | Bio-Safety and Bio-Hazards | 3 | 0 | 0 | 3 | | | | |
| 3 | 508 | Introduction to Construction Technology | 3 | 0 | 0 | 3 | | | | |
| 4 | 508 | Photography | 3 | 0 | 0 | 3 | | | | |
| 5 | 508 | Health and Lifestyle Disorders | 3 | 0 | 0 | 3 | | | | |
| 6 | 508 | Space Science | 3 | 0 | 0 | 3 | | | | |
| 7 | 508 | Food, Nutrition and Health | 3 | 0 | 0 | 3 | | | | |
| 8 | 508 | NGOs and Sustainable Development | 3 | 0 | 0 | 3 | | | | |
| | Open Elective-2 | | | | | | | | | |
| Sl.No. | Course Code | Course Title | L | T | P | С | | | | |
| 1 | 607 | Entrepreneurship | 3 | 0 | 0 | 3 | | | | |
| 2 | 607 | Introductory Agriculture | 3 | 0 | 0 | 3 | | | | |
| 3 | 607 | Introduction to Business Economics | 3 | 0 | 0 | 3 | | | | |
| 4 | 607 | Mathematical Puzzles and Games | 3 | 0 | 0 | 3 | | | | |
| 5 | 607 | Microprocessor & Microcontroller | 3 | 0 | 0 | 3 | | | | |
| 6 | 607 | Digital marketing | 3 | 0 | 0 | 3 | | | | |
| 7 | 607 | Human Resource Management | 3 | 0 | 0 | 3 | | | | |
| 8 | 607 | Electric Vehicle Technology | 3 | 0 | 0 | 3 | | | | |
| | Open Elective Credits | | | | 5 | | | | | |

| | | Program Specific Elective-1 | | | | | | | |
|--------|-----------------------------------|-----------------------------------|---|---|---|---|--|--|--|
| Sl.No. | Course Code | Course Title | L | Т | P | C | | | |
| 1 | 605 | Computer Graphics | 3 | 0 | 1 | 4 | | | |
| 2 | 605 | Cloud Application Development | 3 | 0 | 1 | 4 | | | |
| 3 | 605 | Full Stack Development | 3 | 0 | 1 | 4 | | | |
| 4 | 605 | Unity in C# | 3 | 0 | 1 | 4 | | | |
| | Program Specific Elective-2 | | | | | | | | |
| Sl.No. | Course Code | Course Title | L | T | P | C | | | |
| 1 | 606 | Computer Vision | 3 | 0 | 1 | 4 | | | |
| 2 | 606 | Natural Language Processing | 3 | 0 | 1 | 4 | | | |
| 3 | 606 | UI and UX Design | 3 | 0 | 1 | 4 | | | |
| 4 | 606 | DevOps & Automation | 3 | 0 | 1 | 4 | | | |
| | | Program Specific Elective-3 | | | | | | | |
| Sl.No. | Course Code | Course Title | L | Т | P | C | | | |
| 1 | 704 | Security and Privacy in Cloud | 3 | 0 | 1 | 4 | | | |
| 2 | 704 | Mobile App Development | 3 | 0 | 1 | 4 | | | |
| 3 | 704 | Augmented Reality/Virtual Reality | 3 | 0 | 1 | 4 | | | |
| 4 | 704 | Generative AI | 3 | 0 | 1 | 4 | | | |
| | Program Specific Elective Credits | | | | 2 | | | | |