

| Semester I | | | | |
|--------------|-------------|--|-------------|---------|
| S. No | Course Code | Course Title | Course Type | Credits |
| 1 | BMAT1001 | Computational Mathematics – I | BSC | 4 |
| 2 | BPHY1002 | Engineering Physics | BSC | 4 |
| 3 | BPLC1003 | Problem Solving using Programming | ESC | 4 |
| 4 | BESC1004 | Basic Electronics | ESC | 3 |
| 5 | BETC1005B | Front-end Web Development - Fundamentals | ESC | 4 |
| 6 | BAEC1006 | Innovation and Design Thinking | HSMC | 1 |
| 7 | BMNC1007 | Environmental Studies | MC | 0 |
| 8 | BAEC1008 | Communicative English | HSMC | 1 |
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| Semester II | | | | |
| 1 | BMAT2001 | Computational Mathematics - II | BSC | 4 |
| 2 | BCHE2002 | Materials Chemistry for Computer Systems | BSC | 4 |
| 3 | BPLC2003 | Object Oriented Programming | PCC | 3 |
| 4 | BESC2004 | Mechanical Engineering Sciences | ESC | 3 |
| 5 | BETC2005A | Frontend Web Development - Advanced | ESC | 4 |
| 6 | BAEC2006 | UI and UX Design for Developers | ESC | 2 |
| 7 | BMNC2007 | Constitution of India | MC | 0 |
| 8 | BAEC2008 | Professional Writing Skills in English | HSMC | 1 |
| 9 | BPCC2009 | Computer Organisation and Architecture | PCC | 4 |
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| Semester III | | | | |
| 1 | BPCC3001 | Backend Web Development | PCC | 4 |
| 2 | BPCC3002 | NoSQL Databases for Web Development | PCC | 4 |
| 3 | BPCC3003 | Full Stack Web Development | PCC | 4 |
| 4 | BPCC3005 | Operating Systems | PCC | 4 |
| 5 | BMNC3006 | Essence of Indian Knowledge Tradition | MC | 0 |
| 6 | BAEC3007 | Critical Thinking | HSMC | 2 |
| 7 | BPCC3010 | Technologies | PCC | 3 |
| 8 | BPCC3011 | AI Systems Engineering | PCC | 2 |
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| Semester IV | | | | |
| 1 | BPCC4001 | Data Structures and Algorithms - 1 | PCC | 4 |
| 2 | BPCC4003 | Database Management Systems | PCC | 4 |
| 3 | BPCC4004 | Linux Administration | PCC | 4 |
| 4 | BPCC4013 | AI Hardware and Accelerators | PCC | 4 |
| 5 | BPCC4014 | Formal Language and Automata Theory | PCC | 4 |

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| 6 | BPCC4015 | Responsible and Explainable AI | PCC | 4 |
| 7 | BAEC4016 | Professional Skills for the Workplace | HSMC | 3 |
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| Semester V | | | | |
| 1 | BPCC5001 | Data Structures and Algorithms - 2 | PCC | 4 |
| 2 | BPCC5004 | Machine Learning | PCC | 3 |
| 3 | BPCC5016 | Multimodal AI and Sensor Fusion | PCC | 3 |
| 4 | BAEC5003 | Tools and Techniques for Creative Thinking | HSMC | 3 |
| 5 | BPCC5006 | LLM Systems Foundation | PCC | 3 |
| 6 | BPCC5017 | Compiler Design | PCC | 3 |
| 7 | BPCC5018 | AI Product Management & Design Thinking | PCC | 4 |
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| Semester VI | | | | |
| 1 | BPCC6010 | Advanced Machine Learning | PCC | 3 |
| 2 | BPCC6001 | Design and Analysis of Algorithms | PCC | 4 |
| 3 | BPCC6002 | Computer Networks | PCC | 4 |
| 4 | BPCC6006 | Systems Design | PCC | 4 |
| 5 | BPCC6004 | Programming with Prompt Engineering | PCC | 4 |
| 6 | BAEC6011 | Fundamentals of Business Management | HSMC | 3 |
| 7 | BPCC6012 | AI for Human-Machine Interaction | PCC | 3 |
| 8 | BPCC6013 | Techno-Philosophy: AI and Ethics | PCC | 4 |
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| Semester VII | | | | |
| 1 | BPEC7018A/B/C | Professional Elective - 1 (Web3 and Decentralized Intelligence / Federated and Privacy-Preserving Learning / AI and Cybersecurity in a Zero Trust World) | PEC | 4 |
| 2 | BPEC7019A/B/C | Professional Elective - 2 (Cognitive Robotics / Neuromorphic Computing and Spiking Neural Nets / Human-Centered AI) | PEC | 4 |
| 3 | BPEC7020A/B/C | Professional Elective - 3 (AI in Quantum Computing Contexts / Synthetic Data and Simulation-First AI / Generative Design and AI for Creativity) | PEC | 4 |
| 4 | BIINT7021 | Industry Internship | PROJ | 9 |
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| Semester VIII | | | | |
| 1 | BIINT8003 | Industry Internship | PROJ | 15 |
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