



# Powered Campus Built for the Age of Intelligence



B.Tech CSE (AI & ML)

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#### **About DSU**

Dayananda Sagar Institutions founded in the 60's by a visionary, Late Sri. R. Dayananda Sagar (Barrister-at-Law) committed to take knowledge to the people, transforms today's students into responsible citizens and professional leaders of tomorrow. Dayananda Sagar University created by an Act of the Karnataka State in 2014, built on this adorable legacy and inspired by its own milestones, meeting the needs of quality higher education in this part of the world.

This main campus is thoughtfully planned on 130 acres, with a picturesque site and a blossoming green environment, making it free from city crowds and pollution. Being a completely self-contained campus adjacent to Harohalli Kanakapura Road, Bengaluru South District., it is equipped with all the modern state-of-the-art infrastructure, creating a conducive environment for progressive experiential learning and transforming you into next-generation innovators, explorers, leaders, and researchers.

# A Place to Grow, Excel, Invent & Innovate!



#### **University Accreditation and Rankings**





















EDUCATION OUTSTANDING UNIVERSITY WITH BEST PLACEMENTS

### Message from the Dean

### BE YOU <u>BE THE DIFFE</u>RENCE!!!

Welcome to the new way of learning at School of Engineering (SoE) of Dayananda Sagar University (DSU). At SoE, we are committed to helping you to make a positive difference in the world.

We at SoE are immensely proud to provide all of our students with an outstanding education that equips them with the skills, experience, and confidence required to stand out from the crowd. The School promotes Culture of Excellence including the culture of Interdisciplinary, Research, Creativity, Innovations, and Entrepreneurship on various Cutting-Edge Technologies.

We at SoE, provide the World-Class Education that is Student-centric, Research-centric, and educational space where all of our students will have a transformative education, learn to be independent critical thinkers, be societally and ethically responsible, and to have a broad understanding of the world.

We value ability, not background, and we support all of our students to achieve their potential. We want you to enjoy your time here, confident that, upon completion of Engineering degree program under SoE, you will have the knowledge, expertise, and employability skills to set you on your chosen career path.

The decision you make about where to study is an extremely important one. I am pleased you are considering the School of Engineering at DSU, and hope that you choose to continue your education with us.

**BEST WISHES!** 



**Dr. Udaya Kumar Reddy K R**Dean, School of Engineering

## **About School of Engineering (SoE)**

The School of Engineering (SoE) was established in the year 2015 offering B.Tech, M.Tech and research programmes in various disciplines including Computer Science and Engineering (CSE), CSE(Artificial Intelligence & Machine Learning), CSE(Data Science), CSE(Cyber Security), Computer Science and Technology, Electronics and Communication Engineering, Aerospace Engineering and Mechanical Engineering. The Artificial Intelligence and Robotics branch was established in 2023. At SoE, your studies in each of these disciplines will focus on innovation.

### **School Vision**

Transform lives through excellence in engineering education, research, and innovation with an emphasis on sustainability, inclusive technologies, and global needs.

### **School Mission**

- 1. Design and deliver contemporary engineering curricula to address regional and global needs while emphasizing ethics, values, integrity, and regional relevance.
- 2. Carry out high-impact academic research, industry projects, and innovation activities with active student engagement to advance science and engineering knowledge and state-of-the-art industry practices.
- 3. Develop regional and national leaders to advance the society and economy.



# About Department of CSE (AI & ML)

The Department of Computer Science and Engineering (Artificial Intelligence and Machine Learning) is offering B. Tech in Computer Science and Engineering (AI & ML), a specialized program that blends the core foundations of Computer Science with focused expertise in Artificial Intelligence and Machine Learning. The programs in the Department of CSE (AI & ML) are carefully designed by considering industrial requirements and the rapidly evolving trends in AI technologies, ensuring that students gain multidisciplinary skills with strong application-oriented knowledge.

### VISION

To produce graduates in Computer Science and Engineering (Artificial Intelligence & Machine Learning) through excellence in education and research with an emphasis on sustainable eco-system that contributes significantly to the society.

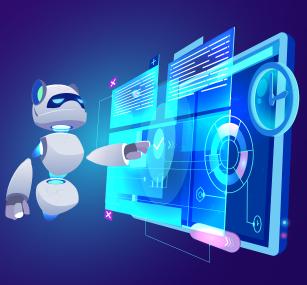
### **MISSION**

The Department Computer Science and Engineering (Artificial Intelligence & Machine Learning) is committed to:

- Impart quality education through the state-of-the-art curriculum, infrastructure facilities, cutting edge technologies, sustainable learning practices, and lifelong learning.
- Collaborate with industry-academia and inculcate interdisciplinary research to transform professionals into technically competent.
- > Produce engineers and techno-entrepreneurs for global needs.

### **Program Overview**

B.Tech in Computer Science (Artificial Intelligence and Machine Learning) is a four-year undergraduate program that provides the core concepts of Computer Science along with focussed courses on Artificial Intelligence. This specialised programme is students who want to acquire the ability to design intelligent solutions to problems in a variety of domains and business applications and fields such as Natural Language Processing, Text Mining, Robotics, Reasoning and Problem Solving. Curriculum prepares Basic Sciences, students Foundations, Statistical Foundations, Machine Learning and Artificial Intelligence In addition to classroom learning, the department also ensures holistic students by organizing seminars, exposure for webinars, workshops, symposiums, hackathons, and other co-curricular activities in collaboration with industry experts and academic leaders.



## **Program Eligibility**

Pass in PUC / 10+2 examination with Physics and Mathematics as compulsory subjects along with one of the Chemistry / Biotechnology / Biology / Computer Science / Electronics/ Technical Vocational subjects and obtained at least 45% marks (40% in case of candidate belonging to SC/ST & OBC category) in the above subjects taken together, of any Board recognized by the respective State Governments / Central Government / Union Territories or any other qualification recognized as equivalent there to.

Program Duration: 4 YEARS (8 Semesters)

University offers prestigious merit scholarships based on your IIT-JEE Scores as per university cut off

# Why CSE (AI & ML) Stands Out?



Integrated Liberal education program to gain insights into subjects like Psychology, Design Thinking, critical thinking & creative writing



**Curriculum focused on recent trends** 



Provides opportunities for hands-on and experiential learning



Preparing students for evolving job roles in the chosen area of specialization



Offers flexibility in choosing elective courses for widening the understanding of emerging technologies



Startup ecosystem to translate idea into business models



Targeted towards equipping students for future skill sets



Student-centered pedagogy



**Blended & Hybrid Learning** 



Promoting deep learning through project-based learning



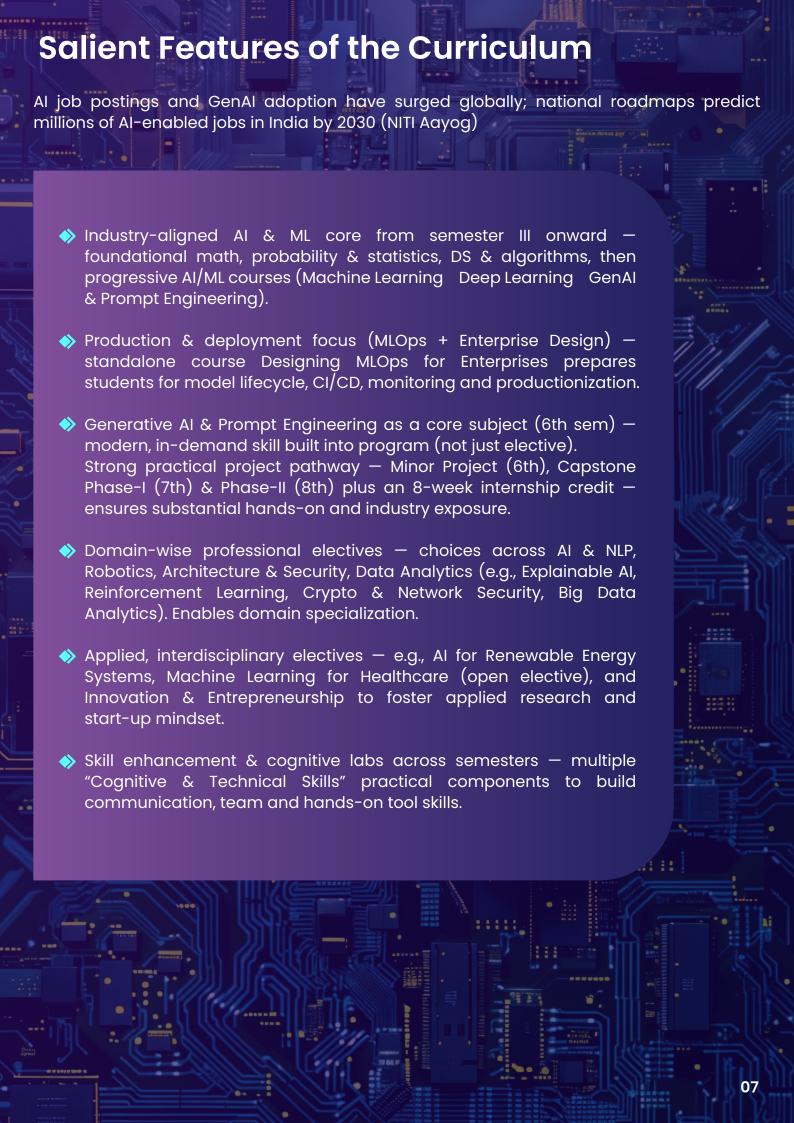
Emphasis on design-oriented thinking, Communication, Collaboration and Creativity from 1st year



Offers major, minor and specialization as part of 4 year programme



**Encourage Entrepreneurship** 



# Project / Thesis Components Hands-on Projects at Every Stage



#### Al for Renewable Energy Systems (Sem-III) - Team Project

- Minor Project (Sem-VI) team project (2 credits): implement an end-to-end prototype (modeling + evaluation) using course toolchain (ML/DL). Ideal for early industry mentorship.
- Capstone Phase-I (Sem-VII) problem scoping, literature review, data procurement, baseline model and project plan (4 credits). Seek industry co-supervisor where possible.
- Capstone Phase-II (Sem-VIII) full productionization, performance optimization, deployment demo, documentation and evaluation (12 credits). Emphasize MLOps pipelines, model monitoring, and ethical assessment.
- Internship (Sem-VIII) credited industry internship (3 credits) to expose students to corporate workflows, real datasets, and deployment environments.

# Project Theme Recommendations Tied to Electives / Industry Demand

- GenAl Applications: Retrieval-augmented LLM agents, domain-specific assistants (healthcare, education, legal).
- MLOps/Productionization: CI/CD for ML, monitoring, drift detection, model explainability dashboards.
- Edge & IoT Al: TinyML for energy & sensor data (links to Al for Renewable Energy Systems & IoT electives).
- Responsible AI & Explainability: building explainable models and governance frameworks (Explainable AI, AI Ethics electives).

Robotics & Automation: ROS-based projects integrating perception and control (Robotics electives).

# **Elective Options**

Apart from the core courses, students have the option to choose from the electives mentioned below.

|                                | PROFESSIONAL ELECTIVE COURSES |                            |              |                                    |             |   |             |                  |             |  |
|--------------------------------|-------------------------------|----------------------------|--------------|------------------------------------|-------------|---|-------------|------------------|-------------|--|
| Domain - Clusters              | PEC-I                         |                            | PEC-II       |                                    | PEC-III     |   | PEC-IV      |                  | PEC-V       |  |
|                                | 5th Semester                  |                            | 6th Semester |                                    |             | 7th Semester                                    |             |                  |             |  |
|                                | Course Code                   | Course Name                | Course Code  | Course Name                        | Course Code | Course Name                                     | Course Code | Course Name      | Course Code | Course Name                            |
| Al and Language<br>Perceptions | 24AM3507                      | Optimization<br>Techniques | 24AM3605     | Explainable Al                     | 24AM3609    | Quantum Machine<br>Learning<br>(Newly added)    | 24AM4702    | Al Ethics        | 24AM4706    | Human Computer<br>Interface            |
| Robotics and<br>Automation     | 24AM3508                      | Fundamentals of Robotics   | 24AM3606     | Reinforcement<br>Learning          | 24AM3610    | Robot Operating<br>System (ROS)                 | 24AM4703    | Industry 5.0     | 24AM4707    | Robotics and<br>Automation Application |
| Architecture and Security      | 24AM3509                      | Fundamentals of IoT        | 24AM3607     | Cryptography &<br>Network Security | 24AM3611    | Advanced Computer<br>Architecture (Newly added) | 24AM4704    | GPU Architecture | 24AM4708    | Blockchain Technology                  |

# Program Industry Insights (Market Demand)

Al job postings continue to surge — postings requiring Al skills grew sharply (one industry tracker reported ~61% YoY growth in 2024 for Al-skill postings, outperforming average job-ad growth)

- ◆ Generative AI is mainstream at work surveys show a large fraction of knowledge workers now use generative AI; LinkedIn/Work reports indicate ~55% of members will see job changes from generative AI and ~75% of knowledge workers adopt GenAI tools. Use this to highlight GenAI course relevance.
- National policy & job projections for India NITI Aayog projects that AI could create millions of new jobs in India by 2030 (reporting estimates and a national roadmap for AI job creation). This supports positioning grads for national demand.
- Employer demand for production-ready ML talent (MLOps) industry reports and job boards highlight surging demand & premium salaries for MLOps engineers and ML engineers; Glassdoor shows MLOps median/average compensation in developed markets (useful for aspirational positioning).
- India remains a major Al hiring hub domestic reports (NASSCOM/industry press) show Al/ML and analytics remain top hiring priorities in India's tech sector — justify local placement opportunities.



# What are the Emerging Career Paths that you can Expect?

Graduates are industry-ready for roles in ML engineering, MLOps, GenAl product teams, NLP, computer vision, robotics, Al governance and domain-specific Al roles in healthcare, finance and energy

Machine Learning Engineer / Researcher — model design, training, validation. (Core program prepares via ML, DL courses)

MLOps / ML Platform Engineer — deploy, monitor and scale ML in production (course: Designing MLOps for Enterprises).

**Generative AI / Prompt Engineer** — develop high-quality prompts, tune LLMs, build GenAI apps (GenAI & Prompt Engineering course included).

**NLP / LLM Specialist** — build language models, retrieve augmented generation, chatbots (Natural Language Models course).

**Computer Vision Engineer** — image/video model development and deployment (Image Processing & Computer Vision).

Al Product Manager / Solutions Architect — bridge business and Al development (supported via Innovation & Entrepreneurship + Full Stack Development).

Al Ethics & Responsible Al Officer — governance, explainability and policy roles (Al Ethics & Explainable Al electives available).

Robotics / Automation Engineer (Industry 5.0) — robot programming, ROS and automation solutions (Robotics domain electives).

**Data Scientist / Analytics Specialist** — feature engineering, predictive analytics, business insights (Data Science & Analytics elective).

**Data Scientist / Analytics Specialist** — feature engineering, predictive analytics, business insights (Data Science & Analytics elective).

# Industries Looking for CSE (AI & ML) Graduates

A Degree in CSE (AI & ML) can open up career opportunities in a variety of industries such as:



**Information Technology & Software Services** 



**Healthcare and Bioinformatics** 



Finance and FinTech



**Robotics and Automation** 



**Smart Manufacturing (Industry 4.0)** 



**Cybersecurity and Blockchain** 



**Data Centers and Cloud Infrastructure** 



**Research Labs and Academia** 



# Internship Opportunities

The internships are conducted as a part of the experiential learning component. All the internships were industry-linked or research-oriented, ensuring that students applied classroom learning to real-world environments. The engagements included collaborations with established firms, startups, and R&D institutions, fostering multidisciplinary and practical exposure.

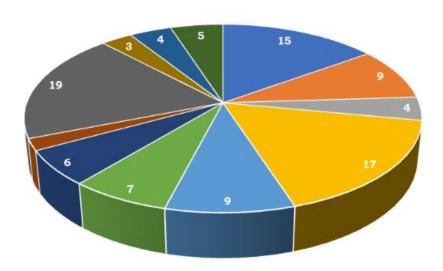
### Internship 2024-25

| Parameter                       | Observation   |
|---------------------------------|---|
| Total Internships               | 144   |
| Average Duration                | 119 days  |
| Mode of Delivery                | 99% Offline (Hands-on/Onsite), 1% Remote                |
| Research / Academic Internships | 18 (CRIA, IISc, ISRO, Indian Institute of Science Labs) |
| Typical Duration Range          | 60 – 365 days   |

### **Internship Pay-out Statistics**

| Category         | Typical Stipend Range      | Avg. Monthly Pay-out |
|------------------|----------------------------|----------------------|
| Paid Internships | ₹5,000 – ₹40,000 per month | ₹17,500/month        |

# Internship Organizations As Per The Domain Specific Taken By The Students



- Data Scientist
- Robotics
- Software Development
- Cloud Computing
- AI&ML Releated Internships
- Software Engineering
- Web Development
- NLP & LLM
- Full Stack Development
- Networking
- Software Testing
- System & Software Architect

# Top Organizations who Offered Internships (AY2024-2025)























# Industry Tie-Ups and Industry Projects Executed by Students

Primary Industry Collaborations (AY2024-2025)

| <b>edge</b> verve     | (Infosys Group) – Al analytics & automation projects.   |
|-----------------------|---|
| Slash Mark            | Cloud and data intelligence solutions.                  |
| Unisys                | Data security and software systems.                     |
| wipro)                | Process automation and cloud migration.                 |
| TITAN<br>COMPANY      | IoT-enabled predictive maintenance analytics.           |
| TriSpace Technologies | AR/VR-based learning prototypes.                        |
| ZIDIO<br>BEVELOPMENT  | Product design and web application development.         |
| CRIA 🗑                | Research-based AI/ML model experimentation.             |
| इससे डिन्च            | Satellite data processing and image recognition tasks.  |
| <del>Cusc</del>       | Al-assisted robotics and computational vision research. |

### **Projects Executed**

- Image classification and real-time detection models.
- Predictive analytics for retail and manufacturing datasets.
- Natural Language Processing-based text summarization tools.
- Cloud migration automation for enterprise data.
- Smart device analytics and prototype testing (IoT).

### **Placement**

### **Pre-Placement Training**

- Aptitude, coding, resume building, mock interviews
- Domain-specific bootcamps
- Training Sessions for Career and Higher Education Success

### **B.Tech Placement Record (2024-25)**

450+

COMPANIES VISITED 10 L

AVERAGE PACKAGE (LPA) 56 L

HIGHEST PACKAGE (LPA)

#### **Top Recruiters**

Some of the top recruiters for engineering graduates operate on both a national and international scale, with a strong presence in countries leading the tech industry. They range from major tech giants to specialized startups and staffing agencies.

#### **Top Recruiters**



### Department Clubs and its Activities

The student clubs at DSU, SOE, CSE(AI&ML) are of three kinds: Academic club, Special Interest club & Firmware clubs. Each Club is anchored to a faculty member or a group of faculty members who acts as the faculty coordinator, mentoring the students associated with each club.



### **DSU X TEMPETE CLUB**

The DSU X Tempete Club is a vibrant departmental club under the CSE(AI & ML) at SoE, DSU, Bengaluru. It's designed as a platform for students to explore AI/ML concepts through hands-on events and competitions.

### **YANTROVE CLUB**

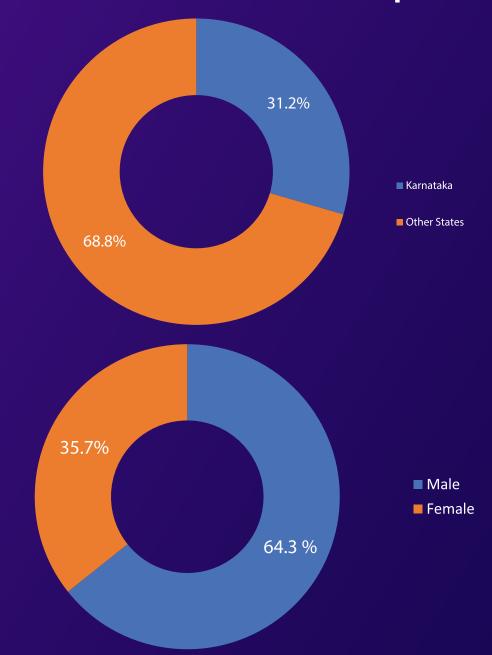
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### AI WORKS @ DSU

The club serves as a hub for curious minds to collaborate, learn, and innovate in the field of Artificial Intelligence. Through workshops, hackathons, projects, and knowledge-sharing sessions. AI WORKS@DSU empowers students to apply AI/ML concepts in real-world scenarios and nurture a culture of research, creativity, and problem-solving.



# DSU B.Tech 2025 – A Glimpse into Our Diverse Student Landscape



University offers prestigious merit scholarships based on your IIT-JEE Scores

### **Scholarship Highlights**

2025- INR **6.24 Cr.** awarded to **780** Students

2024- INR 6.79 Cr. awarded to 905 Students

2023- INR 5.80 Cr. awarded to 806 Students

# Foreign university collaboration for student exchange and internship opportunities\*

| UNIVERSITY  | COUNTRY      |
|---|--------------|
| University of South Carolina Aiken                        | USA          |
| The University of Wisconsin–Madison                       | USA          |
| Northeastern University                                   | USA          |
| German Varisty, Aachen                                    | Germany      |
| Steinbeis University                                      | Germany      |
| RWTH Aachen University                                    | Germany      |
| Indo Eurosynchronisation Pvt Ltd                          | Germany      |
| Samara National Research University                       | Russia       |
| The University of Brescia                                 | Italy        |
| Limkokwing University of Creative Technology              | Malaysia     |
| James Cook University                                     | Australia    |
| Ming Chi University of Technology                         | Taiwan       |
| Amazon College International                              | Srilanka     |
| Worcester Polytechnic Institute                           | USA          |
| Western Connecticut State University                      | USA          |
| The University of Huddersfield                            | England      |
| TUM Asia Pte Ltd  | Singapore    |
| THE UNIVERSITY OF WOLVERHAMPTON                           | UK           |
| Southern Connecticut State University                     | USA          |
| DSTI - School of Engineering                              | France       |
| The University of Liverpool                               | UK           |
| The University of Worcester                               | UK           |
| Illinois Tech   | USA          |
| Dniprovsky State Technical University                     | Ukraine      |
| Visayas State University                                  | Philippines  |
| Nelson Marlborough Institute of Technology                | New Zealand  |
| New Jersey Institute of Technology                        | New Jercy    |
| INTI International University                             | Malayasia    |
| Relaince College  | Malayasia    |
| Hasanuddin University                                     | Indonesia    |
| LeTourneau University                                     | USA          |
| MIET, Moscow  | Russia       |
| Daffodil University                                       | Bangladesh   |
| University of Liberal Arts ULAB                           | Bangladesh   |
| Multimedia University (MMU)                               | Malaysia     |
| Mangosuthu University of Technology MUT                   | South Africa |
| University of Lay Adventists of Kigali (UNILAK)           | Rwanda       |
| Atyrau University   | Kazakhstan   |
| MENDEL UNIVERSITY IN BRNO                                 | Czechia      |
| Ernst Abbe University of Applied Sciences Jena            | Germany      |
| King Ceasor University                                    | Uganda       |
| Algebra University  | Crotia       |
| University of Evansville                                  | USA          |
| Nizhyn Mykola Gogol University                            | Ukraine      |
| Dmytro Motornyi Tavria State Agrotechnological University | Ukraine      |
| Széchenyi István University                               | Hungary      |
| Southern Federal University                               | Russia       |
| Uni La Salle Polytechnic Institute                        | France       |



# Infrastructure and Facilities

















# **Sports Facilities**















## Library







#### **About Library**

The Library, established alongside DSI and expanded with Dayananda Sagar Institutions (1969), Dayananda Sagar College of Engineering (1979), and Dayananda Sagar University (2014), was envisioned by the founder, Late Sri R. Dayananda Sagar, as a world-class knowledge hub. Built systematically, it accommodates 560 users and houses an extensive collection of books, CDs, DVDs, periodicals, and digital resources. Serving undergraduates, postgraduates, research scholars, and faculty, the Library reflects the University's academic excellence and is managed by a team of skilled and dedicated professionals.

#### **School of Engineering Collections**

| Titles                                     | 6385  |
|--|-------|
| Volumes                                    | 21305 |
| Book Bank                                  | 433   |
| Bound Volumes                              | 139   |
| Book CD's                                  | 643   |
| Periodical CD's                            | 17    |
| Educational Video's                        | 47    |
| National & International<br>Print Journals | 60    |
| News Papers                                | 10    |
| Magazines                                  | 15    |
| E-Books                                    | 12579 |
|  |       |

## **DSU Main Campus Hostel**







#### **About Hostel**

Our hostel, located within the heart of the DSU main campus, offers a perfect blend of comfort, safety, and convenience. Designed to meet the needs of today's students, our state-of-the-art facilities ensure that you have everything you need for a successful and fulfilling college experience. With a secure environment and a focus on student well-being, our hostel provides the ideal space for both academic focus and relaxation. Whether it's modern amenities, dedicated support for your studies, or a community that fosters growth, our hostel is your home away from home—helping you thrive every step of the way!

#### **Facilities**



24/7 Assistance



24/7 Handyman



24/7 Concierge



Face recognition & Biometric



24/7 Handyman



r/lower k bed 24/





Wi-Fi



Vending Mechines



**RO Drinking Water** 



**CCTV** Monitoring



Study Zones



**Business Center** 



Break-Out Zones



F & B Partners



Retail Cafeteria



Gym Room



Meditation Room



Theatre



Scenic natural views



Sports Facilities



Cupboard with a locker



Parking



Music Room



Yoga Room



Indoor Game Rooms



Discussion Rooms



Parcel Service

7+

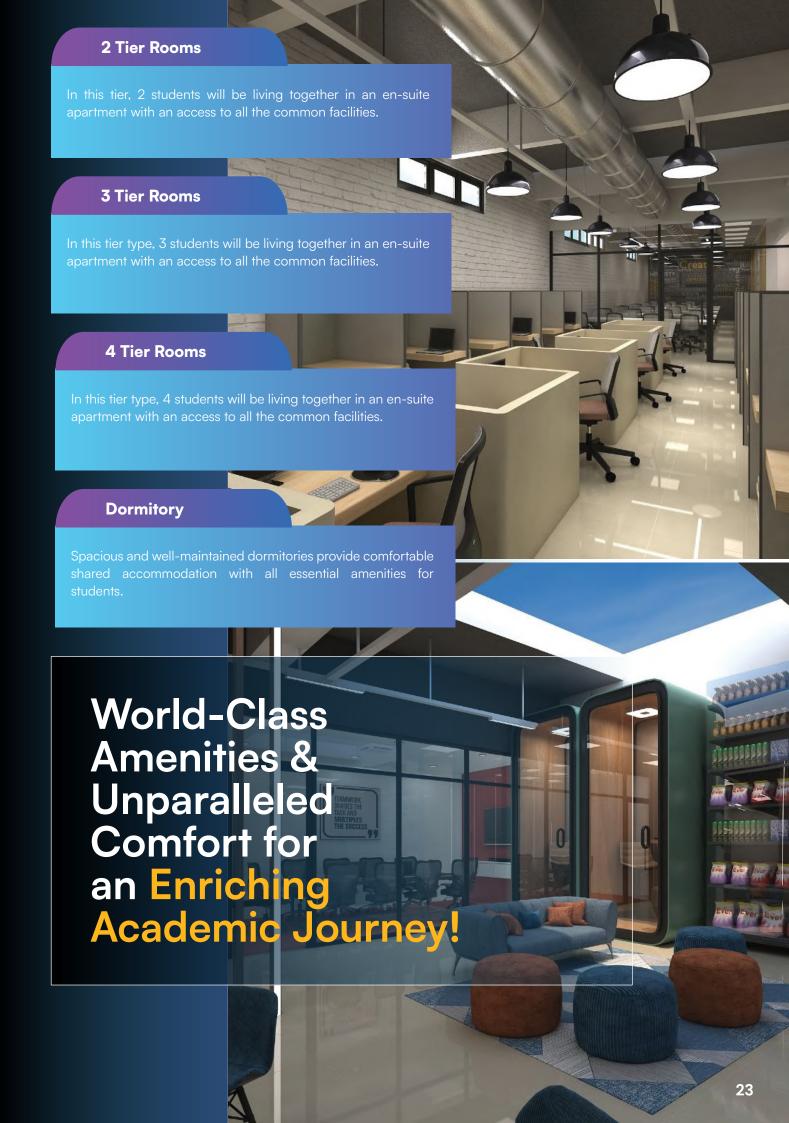
BUILDINGS

5000+

STUDENTS ACCOMMODATION

100%

SATISFACTION



## Labs





Digital Circuit Lab











**Electronic Lab** 



**Composites Lab** 



Physics Lab



**Tutorial Room** 

### Glimpse of DSU Main Campus at Harohalli



DSU Main Campus: Devarakaggalahalli, Harohalli, Kanakapura Road, Bengaluru South – 562 112

Admissions Helpline Nos: **Q** 080 4646 1800 **Q** +91 636 688 5507