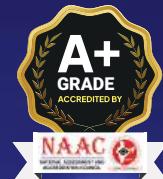




DAYANANDA SAGAR  
UNIVERSITY



# DSU AI Factory

## The Backbone of Smart Innovation



**M.Tech**  
**CSE (AI & ML)**

# Index

<b>About DSU.....</b>	<b>01</b>
<b>About School of Engineering (SoE).....</b>	<b>02</b>
<b>Message from the Dean.....</b>	<b>03</b>
<b>Program overview.....</b>	<b>05</b>
<b>Salient Features of the curriculum.....</b>	<b>07</b>
<b>Core Courses.....</b>	<b>08</b>
<b>Electives.....</b>	<b>09</b>
<b>Program Industry Insights.....</b>	<b>10</b>
<b>Emerging Job Opportunities.....</b>	<b>11</b>
<b>Project / Thesis Components.....</b>	<b>12</b>
<b>Department Highlights.....</b>	<b>13</b>
<b>Placements.....</b>	<b>14</b>
<b>Department Clubs.....</b>	<b>15</b>
<b>Foreign university collaboration.....</b>	<b>17</b>
<b>Infrastructure and Facilities.....</b>	<b>18</b>
<b>Library.....</b>	<b>20</b>
<b>DSU Main Campus Hostel.....</b>	<b>21</b>
<b>Labs.....</b>	<b>22</b>

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

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.



## University Accreditation and Rankings



# About School of Engineering (SoE)

Welcome to the cutting-edge realm of engineering excellence at the School of Engineering (SoE), Dayananda Sagar University (DSU). The School of Engineering (SoE) at Dayananda Sagar University (DSU) provides world-class education and experiential training in engineering, with a strong focus on innovation across various disciplines such as Computer Science, Artificial Intelligence, Robotics, and more. The unique and multidisciplinary learning environment is supported by state-of-the-art infrastructure, job-role-based emerging specialisations, innovative pedagogy, a contemporary curriculum, multifaceted faculty, strong industry collaborations, and impeccable placements.

It has emerged as the top choice for students who aspire to become next-generation technocrats, innovators, developers, and creators. Our advanced and exceptional M.Tech programs are meticulously designed to propel students to the forefront of evolving technologies. These programs offer specialised majors that allow learners to explore their areas of interest and expertise in depth—whether in computer science, electronics, or other engineering disciplines. Students are also exposed to knowledge beyond their chosen specialisation, helping them broaden their perspectives and enhance their intellectual horizons.

## 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.



## Message from the Dean

# BE YOU BE THE DIFFERENCE!!!

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.

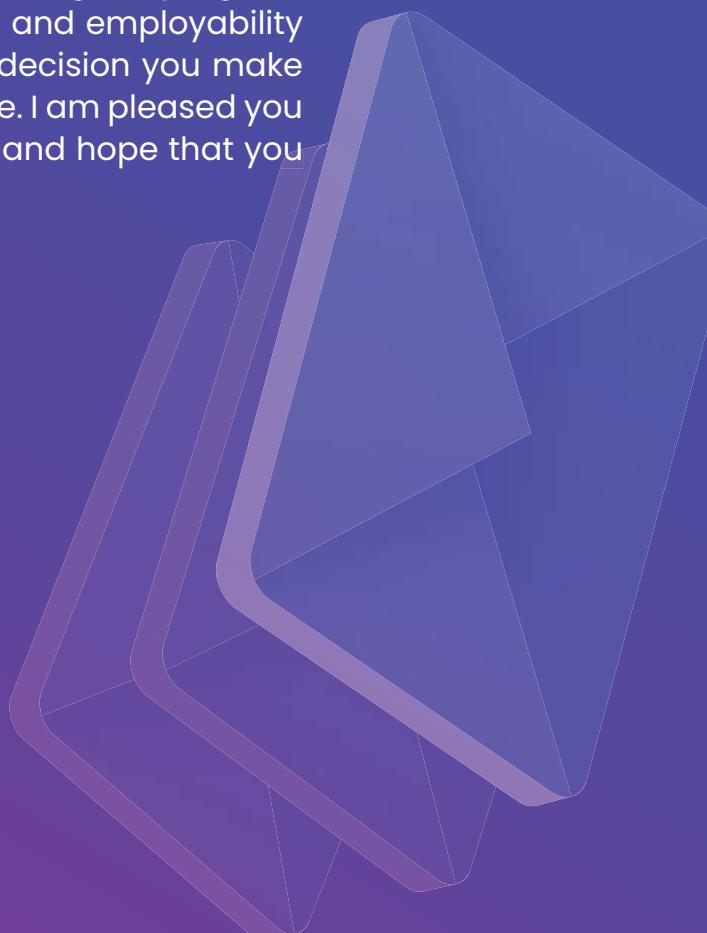
We value ability, not background, and we support all of our students to achieve their potential. We want you to enjoy your time here, confident that, upon completion of Engineering degree program under SoE, you will have the knowledge, expertise, and employability skills to set you on your chosen career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



# Department of Computer Science & Engineering (AI & ML)

## Vision

To produce post-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

The Department of Computer Science and Engineering (Artificial Intelligence and Machine Learning) is offering M. 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.

**CRIA:** The AIML Dept, SOE has a dedicated AI Makers Space (Centre of Excellence) in the area of AI and ML, which is named as the **Centre for Research and Innovation in AI (CRIA)**. CRIA is intended to provide a platform for advanced research, collaboration and innovation in technology and societal space.

The faculty members of the department possess expertise across diverse interdisciplinary areas such as Artificial Intelligence, Machine Learning, Natural Language Processing, Deep Learning, Computer Vision, Gen AI, Agentic AI, MLOps, Fintech, Cloud Computing, Internet of Things, Data Analytics, and Robotics. With a team of more than 40 dedicated faculty members, the department strives to provide a state-of-the-art academic environment and research exposure, preparing students to become industry-ready professionals and innovative researchers in the field of Artificial Intelligence and Machine Learning.

## Program Duration: 2 Years (4 Semesters)

### Admission Eligibility

Pass in B.Tech in ECE, CSE, ISE, Biomedical, Medical Electronics, Electronics & instrumentation, EEE, Telecommunications, Mechatronics and other circuit Branches with a minimum of 50% marks in aggregate(45% in case of candidate belonging to SC/ST & OBC).

\* **Note:** Upon successful completion of the M.Tech programs (CSE/AI & ML/ AI & Robotics/ AI/ AI & DS), candidates are offered a job with a starting salary of INR 65,000 per month for a year which will be extended after evaluating his/her performance deliverables as per the Organization.

# Program Objectives

**The M.Tech CSE (AI & ML) Program will enable students to:**

- ◆ Utilize their knowledge in the domain of Artificial Intelligence, Machine Learning, Data Analytics, and related computational technologies to lead a successful career as experts in Industry or other fields.
- ◆ Engage in research and innovation to identify, analyze, and solve complex engineering and societal problems using AI/ML methodologies and interdisciplinary approaches.
- ◆ Pursue continuous learning, professional growth, and adaptability through research, higher education, certifications, or entrepreneurial ventures in the evolving AI/ML landscape.

## Program Highlights

- ◆ Integrated Liberal education program to gain insights into subjects like Psychology, Design Thinking, critical thinking & creative writing
- ◆ Student-centered pedagogy
- ◆ Curriculum focused on recent trends
- ◆ Blended & Hybrid Learning
- ◆ Provides opportunities for hands-on and experiential learning
- ◆ Promoting deep learning through project-based learning
- ◆ Preparing students for evolving job roles in the chosen area of specialization
- ◆ Emphasis on design-oriented thinking, Communication, Collaboration and Creativity from 1st year
- ◆ Offers flexibility in choosing elective courses for widening the understanding of emerging technologies
- ◆ Offers major, minor and specialization as part of 4 year programme
- ◆ Startup ecosystem to translate idea into business models
- ◆ Encourage Entrepreneurship
- ◆ Targeted towards equipping students for future skill sets

# Salient Features of the Curriculum

*AI job postings and GenAI adoption have surged globally; national roadmaps predict millions of AI-enabled jobs in India by 2030 (NITI Aayog)*

- ◆ Industry-aligned AI & ML core from semester I onward – Advanced Networking & Security, Advanced Machine Learning, Advanced Algorithms, Responsible AI, Image Processing and Computer Vision, Deep Learning.
- ◆ Production & deployment focus (MLOps + Enterprise Design) – standalone course Designing MLOps for Enterprises prepares students for model lifecycle, CI/CD, monitoring and productionization.
- ◆ Generative AI & Prompt Engineering as a core subject (2nd sem) – modern, in-demand skill built into the program.
- ◆ Strong practical project pathway – Capstone Project-I (3rd), Capstone Project-II (4th) & credit-based semester long Industry/Research Internship – ensures substantial hands-on and industry exposure.
- ◆ Domain-wise professional electives – vast choices across various domains such as Language Perception, Agentic AI, AI applications, Speech/Audio and Vision enables domain specialization.
- ◆ Skill enhancement across semesters – Seminar I and II enhance the presentation skills to build communication, technical information, and develop research mindset.

# Core Courses

SEM-I	SEM-II
MATHEMATICS FOR MACHINE LEARNING ADVANCED NETWORKING & SECURITY ADVANCED MACHINE LEARNING ADVANCED ALGORITHMS RESPONSIBLE AI RESEARCH METHODOLOGY SEMINAR-I (RECENT TRENDS IN AI & ML)	IMAGE PROCESSING AND COMPUTER VISION DEEP LEARNING GENERATIVE-AI MLOPS PROFESSIONAL ELECTIVE-I PROFESSIONAL ELECTIVE-II SEMINAR-II
SEM-III	SEM-IV
PROFESSIONAL ELECTIVE-III PROFESSIONAL ELECTIVE-IV CAPSTONE PROJECT-I	CAPSTONE PROJECT-II INDUSTRY/RESEARCH INTERNSHIP



# Electives

Domain Clusters	Language Perception	Agentic AI	AI applications	Speech / Audio and Vision
PEC-I to PEC-IV	Course Name	Course Name	Course Name	Course Name
	NLM	Intelligent Agents & Multi-Agent Systems	AI in Robotics & Autonomous Systems	Computational Imaging
	Large Language Models	Agentic AI Architectures (LLM Agents, Tool Use, Memory & Planning)	AI in Finance & FinTech Applications	Contemporary Computer Graphics
	Spoken Language Understanding	Automated Planning & Sequential Decision Making	AI for Agriculture	Speech Recognition Systems
	Text and Speech Generation using Advanced Models	Cognitive Architectures for AI Agents (SOAR, ACT-R, Hybrid)	Cognitive Science and Human–AI Interaction	Video Analysis and Surveillance
	Social Media Analytics	Human–AI Collaboration & Trustworthy Agents	Blockchain for Cybersecurity and Data Privacy	Multimodal Speech Interfaces
	Optimisation in NLP	Ethics, Safety & Governance of Agentic AI	AI for Healthcare	
	Cognitive Linguistics		Green AI and Sustainable Edge Computing	
	Computational Models		Quantum Machine Learning	
	Multimodal and Multilingual Language Perception			
	Conversational AI			

# Program Industry Insights

AI job postings continue to surge — postings requiring AI skills grew sharply (one industry tracker reported ~61% YoY growth in 2024 for AI-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 AI hiring hub — domestic reports (NASSCOM/industry press) show AI/ML and analytics remain top hiring priorities in India's tech sector — justify local placement opportunities.

# Emerging Job Opportunities

A Post Graduate Degree in Computer Science & Engineering (AI & ML) can open up career opportunities in a variety of industries such as Healthcare, Finance, Aviation, Manufacturing, and Logistics and would offer wider career opportunities, such as:

- 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, retrieval augmented generation, chatbots (Natural Language Models course).
- Computer Vision Engineer – image/video model development and deployment (Image Processing & Computer Vision).
- AI Product Manager / Solutions Architect – bridge business and AI development (supported via Innovation & Entrepreneurship + Full Stack Development).
- AI Ethics & Responsible AI Officer – governance, explainability and policy roles (AI Ethics & Explainable AI electives available).
- Domain-specific applied roles – AI in Healthcare, FinTech analytics, IoT & edge AI – thanks to the open and professional electives (e.g., ML for Healthcare, FinTech, IoT).

# Project / Thesis Components

## Hands-on projects at every stage

- ◆ Seminar-I (Sem-I) and Seminar-II (Sem-II) – Research based assessment and presentation to identify real world problems.
- ◆ Capstone Project-I (Sem-III) – problem statement, literature review, data procurement, baseline model and project plan (6 credits). Seek industry co-supervisor where possible.
- ◆ Capstone Project-II (Sem-IV) – full productionization, performance optimization, deployment demo, documentation and evaluation (14 credits). Emphasize MLOps pipelines, model monitoring, and ethical assessment.
- ◆ Internship (Sem-IV) – credited industry internship (4 credits) to expose students to corporate workflows, real datasets, and deployment environments.

## Project theme recommendations tied to electives / industry demand

GenAI Applications: Retrieval-augmented LLM agents, domain-specific assistants (healthcare, education, legal).

MLOps/Productionization: CI/CD for ML, monitoring, drift detection, model explainability dashboards.

Responsible AI & Ethics: building explainable models and governance frameworks (Explainable AI, AI Ethics electives).



# Department Highlights

## MoU Collaborations of the Department of CSE (AI & ML)

Industry Partner / Organization	Department	Focus Areas / Objectives
	CSE (AI & ML)	Curriculum integration, certifications, workshops, global recognition.
	CSE (AI & ML)	Promoting innovation & entrepreneurship for students and faculty.
	CSE (AI & ML)	Joint research, cloud & AI lab access, workshops, training, innovation.
	CSE (AI & ML)	Internships, AI/ML PoCs, live projects, sustainability, guest lectures.

## Internship

The M.Tech program offers robust support for professional development through internship placements and career guidance.

### Key Features

- ❖ Mandatory 6-month internship integrated into the curriculum
- ❖ Strong industry connections for global placements in AI related companies
- ❖ High potential for Pre-Placement Offers (PPOs) based on internship performance
- ❖ Placement support through resume building, technical training, mock interviews, and expert mentoring.
- ❖ Hands-on training through labs, capstone projects, and internships

Graduates emerge with strong portfolios, real-world project experience, and enhanced employability.

# Placements

## Pre-Placement Training

Pre-Placement Training is provided by various industry and academic experts on topics such as - Preparation to Placement: Strategies for Professional Success, Navigating the future: Tips for Interviews, Higher Studies, and Entrepreneurship, Hands-on Placement Training Workshop, Unlocking Tomorrow: Interviews Tips to Secure your Dream Job, Cracking the EY GDS Campus Drive: Preparation Tips for Success, webinar on Navigating the Future with NLP: Unraveling the Magic of Natural Language Processing, Five Days Hands on workshop on Manuscript, Writing using Open Source Software.

## Placement Support



**counselling and personality development**



**Resume building and interview preparation**



**Recruitment drives with 50-60 companies**



**Alumni network with 3000+ M.Tech alumni**



**Support for Ph.D and international master's programs**

# Department Clubs



## IEEE Robotics and Automation Society (RAS)

IEEE Robotics and Automation Society (RAS) chapters serve as dynamic hubs for innovation and professional growth, connecting members to a global network of researchers and technologists. They offer hands-on exposure through workshops, hackathons, and industry visits, along with access to IEEE digital resources and journals. Students benefit from competitions like IROS and ICRA, gaining practical and research skills. Professionals enjoy leadership, collaboration, and continuous learning opportunities. Overall, RAS chapters bridge academia and industry, fostering innovation, ethics, and sustainable advancements in robotics and automation.



## IEEE Computational Intelligence Society (CIS)

IEEE Computational Intelligence Society (CIS) chapters provide a global platform for students and professionals to explore AI, machine learning, neural networks, and related fields. They foster collaboration through workshops, webinars, hackathons, and conferences like IEEE WCCI and CEC, offering hands-on exposure to real-world applications. Members gain access to IEEE Xplore, enabling them to stay updated with cutting-edge research and global innovations. CIS chapters promote mentorship, leadership, and interdisciplinary collaboration, bridging academia and industry. Overall, they cultivate innovation, ethics, and sustainable technological growth in computational intelligence worldwide.

## DSU X TEMPETE CLUB

The DSU X Tempete Club is a vibrant departmental club under the Computer Science & Engineering (Artificial Intelligence & Machine Learning) stream at Dayananda Sagar University (DSU), Bengaluru. It's designed as a platform for students to explore AI/ML concepts through hands-on events and competitions.

## **Yantrove Club**

The Yantrove Club is under the Computer Science & Engineering (Artificial Intelligence & Machine Learning) stream at Dayananda Sagar University (DSU), Bengaluru, is a dynamic platform that bridges the world of hardware and software. It is designed to inspire students to innovate at the intersection of electronics, embedded systems, IoT, robotics, and intelligent software solutions. Through hands-on projects, workshops, and collaborative events, the club nurtures technical creativity, problem-solving skills, and multidisciplinary learning. Yantrove empowers students to design, build, and deploy solutions that integrate hardware and software seamlessly, preparing them for real-world engineering challenges.

## **AI WORKS @ DSU**

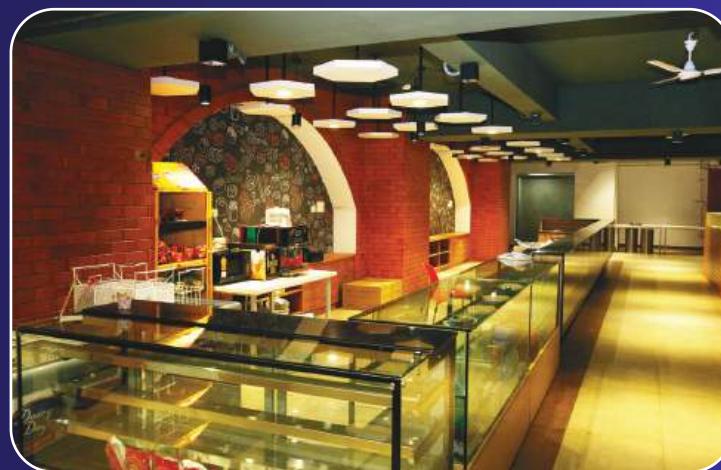
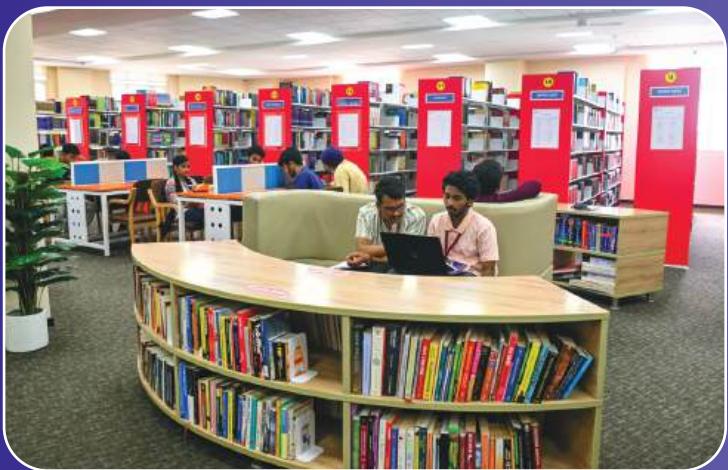
AIWORKS@DSU is an innovative departmental club under the Computer Science & Engineering (Artificial Intelligence & Machine Learning) stream at Dayananda Sagar University (DSU), Bengaluru. The club serves as a hub for curious minds to collaborate, learn, and innovate in the field of Artificial Intelligence. Through workshops, hackathons, projects, and knowledge-sharing sessions. AIWORKS@DSU empowers students to apply AI/ML concepts in real-world scenarios and nurture a culture of research, creativity, and problem-solving.

# 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
Dniprovsy State Technical University	Ukraine
Visayas State University	Philippines
Nelson Marlborough Institute of Technology	New Zealand
New Jersey Institute of Technology	New Jersey
INTI International University	Malaysia
Relaince College	Malaysia
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	<b>6385</b>
Volumes	<b>21305</b>
Book Bank	<b>433</b>
Bound Volumes	<b>139</b>
Book CD's	<b>643</b>
Periodical CD's	<b>17</b>
Educational Video's	<b>47</b>
National & International Print Journals	<b>60</b>
News Papers	<b>10</b>
Magazines	<b>15</b>
E-Books	<b>12579</b>



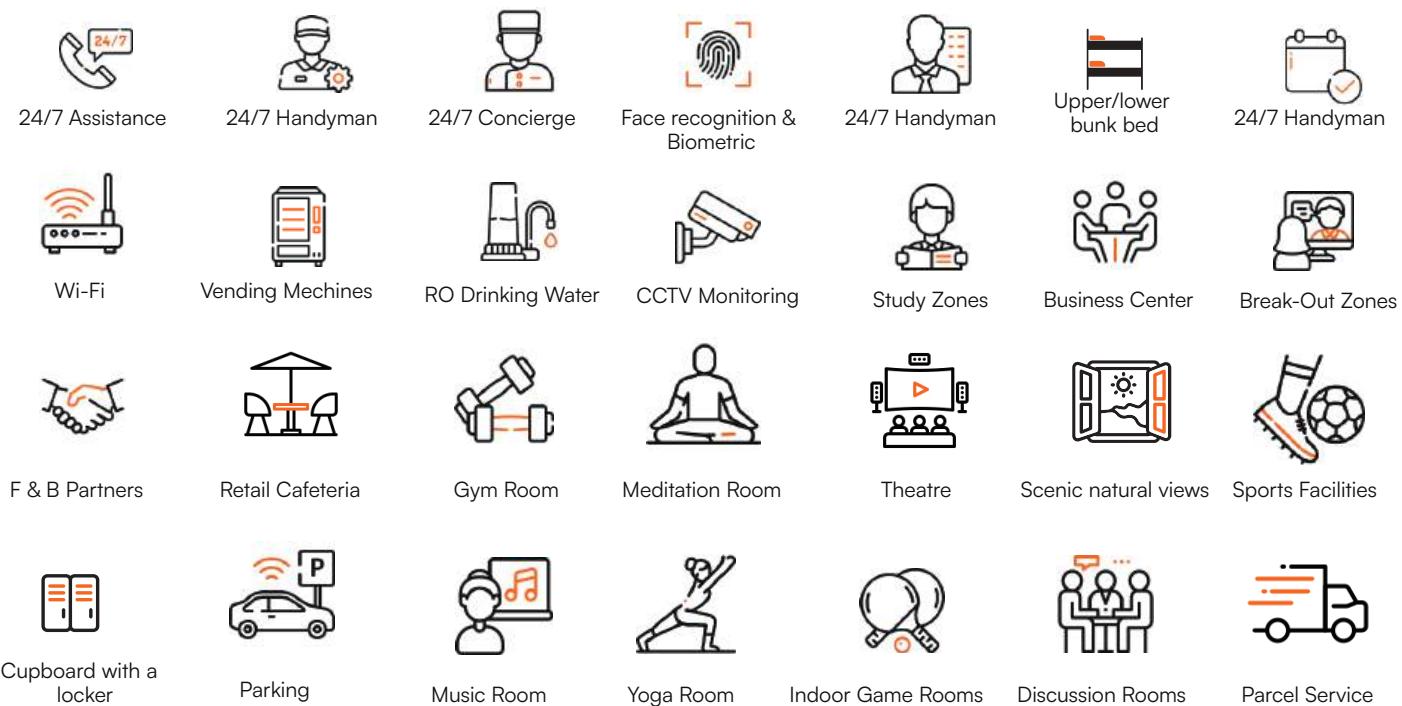
# DSU Main Campus Hostel



## 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



7+

BUILDINGS

5000+

STUDENTS  
ACCOMMODATION

100%

SATISFACTION

# Labs



Digital Circuit Lab



Common Computer Lab



Analog Circuits Lab



Structures Lab



Electronic Lab



Composites Lab

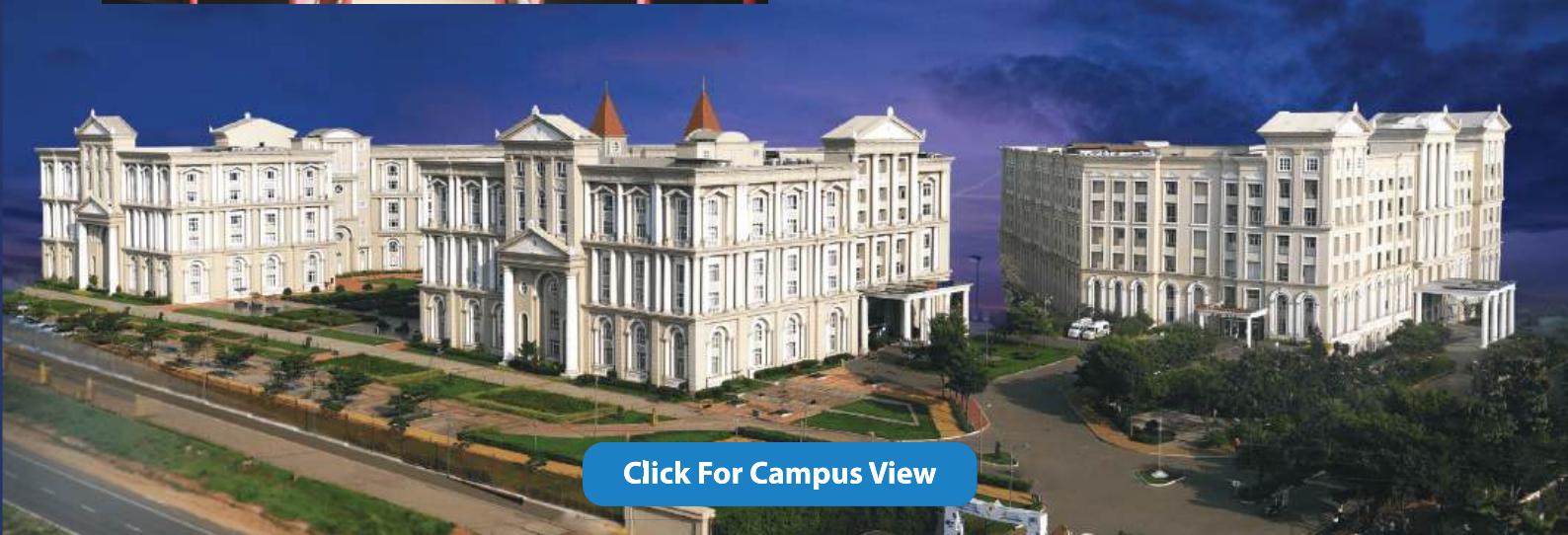


Physics Lab



Tutorial Room

## Glimpse of DSU Main Campus at Harohalli



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

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

 [www.dsu.edu.in](http://www.dsu.edu.in)

 [admissions@dsu.edu.in](mailto:admissions@dsu.edu.in)