DAYANANDA SAGAR UNIVERSITY

7 DECADES LEGACY
IN EDUCATION & HEALTHCARE

A+ GRADE ACCREDITED BY NAAC

Master the Intelligence
Shape the Future

M.Tech

CSE AI & DATA SCIENCE

Index

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

Times Engineering — Times All India Engineering Institutes Ranking Survey 2023 — Number One
- Top Emerging Engineering Institutes
- Emerging Engineering Institutes - Placement
- Emerging Engineering Institutes - Research Capability

IIRF -2025 — Education Impact Award — Promising Private University for Academic Excellence & Learning

ICARE Ratings KSURF — Teaching Excellence ★★★★★ Research Excellence ★★★★★

- Emerging engineering institute
- Emerging engineering Institute Placement 2022
- Emerging Engineering Institute Research Capabilities

DSU has Rank No. 1 By Times of India 2022

ET The Economic Times 2023 — Excellence in Academic Facilities & Learning Resources

IIRF -2024 — National Rank–9 — Top Private Universities in India (Overall) — State Rank 3 — South Zone Rank 3

IIRF -2026 — Education Impact Award — Excellence in Employability & Placement Performance

Times Business Awards — Best Emerging University 2021

34th elets World Education Summit 2025 Chennai — Outstanding University with Best Placements

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

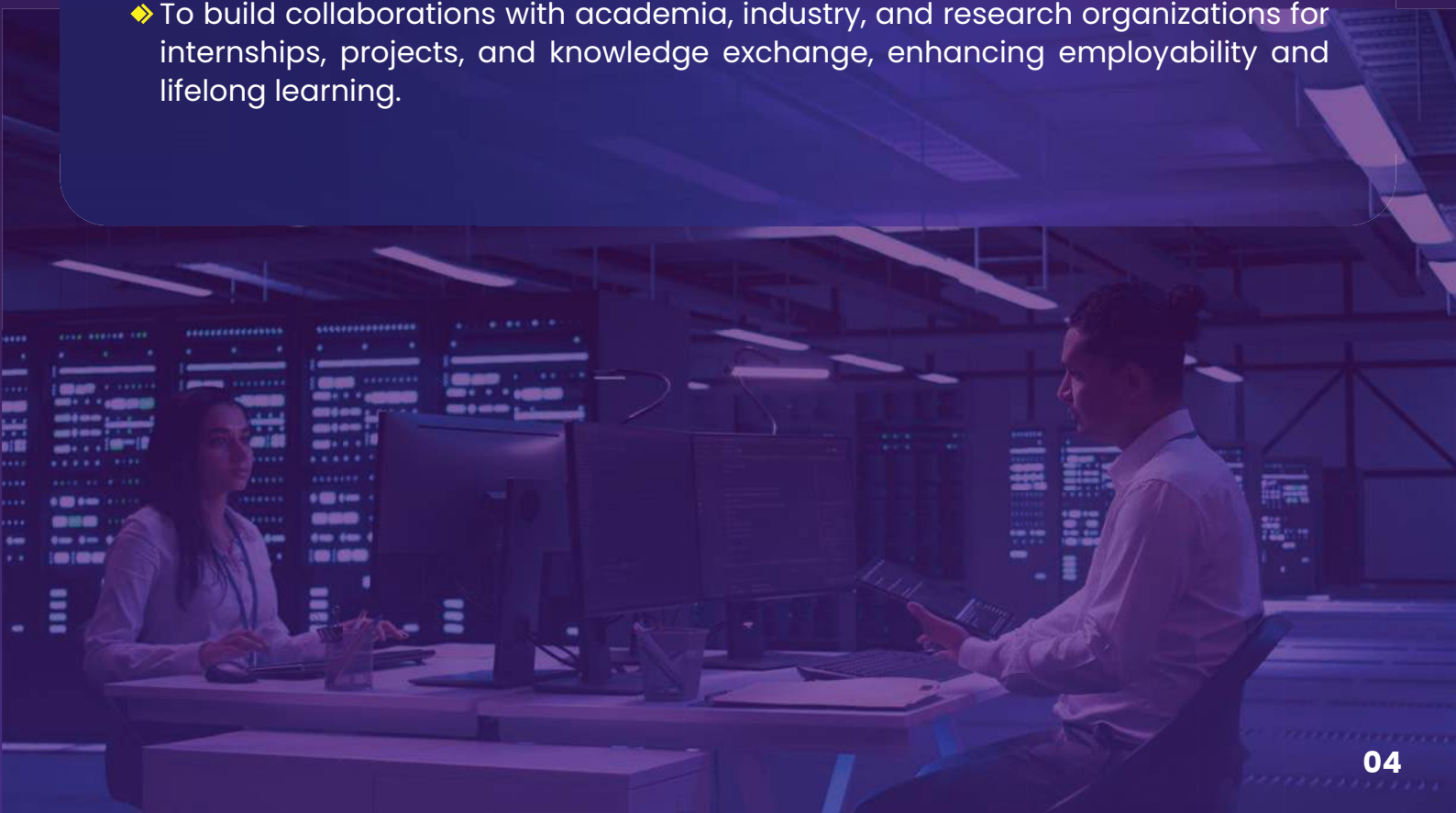
Department of Computer Science & Engineering (AI & Data Science)

Vision

To be a center of excellence in Artificial Intelligence and Data Science education, fostering innovation, ethical values, and societal impact through advanced learning, interdisciplinary research, and industry collaboration.

Mission

- To impart strong foundational knowledge in Computer Science, Artificial Intelligence, Machine Learning, and Data Science through a dynamic and industry-relevant curriculum.
- To develop problem-solving and analytical thinking skills by engaging students in real-world applications, research projects, and hands-on learning.
- To foster innovation and entrepreneurship by creating an ecosystem that encourages creative thinking and the development of AI-driven solutions for societal and industrial challenges.
- To promote ethical, responsible, and inclusive use of AI technologies through awareness of data privacy, security, fairness, and sustainability.
- To build collaborations with academia, industry, and research organizations for internships, projects, and knowledge exchange, enhancing employability and lifelong learning.



Program Overview

The M.Tech in Artificial Intelligence & Data Science (AI & DS) is a specialized postgraduate program that integrates computational intelligence, advanced machine learning, big data technologies, statistics, and domain-driven analytics. The curriculum is industry-aligned, research-driven, and designed to provide students with advanced knowledge and hands-on applications of AI and data science methodologies across diverse sectors.

Department Highlights

- Highly qualified faculty (majority PhDs) with strong research profiles.
- State-of-the-art AI research labs under the Centre for Research and Innovation in AI.
- Exposure to real-world challenges through workshops, hackathons, seminars, and industry projects.
- Interdisciplinary learning and collaborations with leading institutions.

The program ensures that graduates acquire strong analytical thinking, problem-solving ability, research orientation, and domain-specific insights.

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 Duration

2 years (4 semesters)

Program Objectives

Develop advanced theoretical knowledge in machine learning, deep learning, and data science methodologies

Provide hands-on experience with industry-standard tools, frameworks, and platforms

Foster research and innovation skills for solving complex, real-world problems

Build expertise in AI application domains: NLP, Computer Vision, Predictive Analytics, and Data Engineering

Cultivate ethical awareness and responsible AI principles

Prepare graduates for leadership roles in AI & DS careers in academia and industry

Program Outcomes

Knowledge & Understanding

- Understand mathematical foundations: linear algebra, probability, statistics, and optimization
- Grasp fundamentals of data analytics, machine learning, deep learning, and reinforcement learning
- Master advanced data structures, algorithms, and big data analytics techniques

Applications & Analysis

- Apply ML/DL algorithms to real-world datasets and complex problems
- Design and implement end-to-end AI/DS solutions using industry tools
- Analyze large-scale data for insights and predictive modelling

Advanced Skills

- Develop expertise in specialized domains: NLP, Computer Vision, Data Engineering, or Explainable AI
- Deploy models in production environments and manage ML pipelines
- Conduct independent research and contribute to scientific publications

Professional Competencies

- Communicate technical concepts to diverse stakeholders
- Work collaboratively in multidisciplinary teams
- Apply ethical principles and responsible AI practices
- Demonstrate critical thinking and problem-solving abilities

Program Highlights

Comprehensive Curriculum – Combines core AI/ML theory with emerging technologies

Industry Collaboration – Integration with leading IT and AI companies

Hands-On Learning – SOTA laboratories, Virtual labs, simulations, and real-world case studies

Expert Faculty – Experienced researchers and industry professionals

Research Opportunities – Focus on publishable research in AI and Data Science

Internship Program – 6-month industry internship in Semester IV

Capstone Project – Dissertation/thesis on cutting-edge AI &DS topics

Career Support – Placement assistance and alumni network

Course Structure

SEMESTER – I

- Statistics and Probability for Data Science
- Advanced Machine Learning
- Data Engineering
- Advanced Algorithms
- Responsible AI
- Research Methodology
- Seminar I (Emerging Topics in AI & DS)

SEMESTER – II

- Deep Learning
- Image Processing and Computer vision
- Big Data Analytics
- Generative AI
- MLOps
- Professional Elective–I
- Professional Elective–II
- Seminar II

SEMESTER – III

- Professional Elective–III
- Professional Elective–IV
- Capstone Project–I

SEMESTER – IV

- Capstone Project–II
- Industry / Research Internship

Track-Wise Elective Options

AI & Machine Learning Core

- Natural Language Processing (NLP)
- Computer Vision & Image Processing
- Deep Reinforcement Learning
- Generative Adversarial Networks (GANs)
- Explainable AI & Interpretability
- Federated Learning

Data Science & Analytics

- Big Data Analytics & Hadoop
- Advanced Data Mining
- Time Series Forecasting
- Recommendation Systems
- Data Engineering & Pipelines

Emerging Technologies

- Quantum Machine Learning
- Edge AI & IoT
- Blockchain & AI Security
- MLOps & Model Deployment
- Federated Learning & Privacy-Preserving AI

Application Domains

- Healthcare Analytics & Medical Imaging
- Autonomous Systems & Robotics
- Financial AI & Risk Analytics
- Social Media Analytics
- Climate & Environmental AI

Why AI and Data Science?

$ 826.70 B
Global Ai Market by 2030

27.67%
Annual Growth Rate (CAGR)

This program combines rigorous academic training with hands-on industry experience, preparing graduates for leadership roles in a data-driven world.

Market Growth Potential & Opportunities

The global AI and Data Science market is projected to surpass USD 1 trillion by 2030, with high growth in data analytics, automation, cloud AI services, and enterprise intelligence systems. Reports predict that the Data Science and Big Data Analytics market will exceed USD 650 billion by 2030, fuelled by digital transformation.PROGRAM DURATION: 2 YEARS

Career Prospects & Outcomes

Core Roles

- **Data Science:** Senior Data Scientist, Data Science Manager, Analytics Engineer, Chief Data Officer
- **AI/ML Engineering:** AI Architect, Machine Learning Engineer, Deep Learning Specialist, Computer Vision Engineer
- **Emerging Roles:** MLOps Engineer, Data Engineer, AI Ethics Officer, Prompt Engineer

Industry Sectors Looking for Your Expertise

Finance
Risk Analytics, Fraud Detection, Algorithmic Trading

Healthcare
Medical Imaging, Drug Discovery, Diagnostics

E-Commerce
Recommendation Systems, Customer Analytics

Automotive
Autonomous Vehicles, Predictive Maintenance

IT & Software
AI Products, Cloud Solutions, SaaS

Manufacturing
Process Optimization, Quality Control, IoT

Salary Range (India)

Role	Annual Salary	Experience
Data Analyst	₹8-12 LPA	Entry-level
Data Scientist	₹12-18 LPA	2-3 years
Senior Data Scientist	₹18-30 LPA	5+ years
ML Engineer	₹15-25 LPA	2-4 years
AI Architect	₹25-50+ LPA	7+ years

International Opportunities

- Global companies: Google, Microsoft, Amazon, Facebook, IBM, Meta, Apple
- Average salary in US: $120,000 - $180,000 USD annually

Internship

The fourth semester is dedicated to a six-month full-time industry internship, enabling students to work on real-world problems and contribute to the development of AI-powered solutions.

This internship provides:

- Exposure to large-scale data systems
- Hands-on implementation of AI/ML workflows
- Experience with industry-standard tools, platforms, and technologies
- Opportunities to interact with professionals and domain experts

Internships are facilitated through collaborations with leading companies, research labs, and technology organizations, ensuring high-quality experiential learning.

Industry Partnerships & Collaborations

The department maintains strong partnerships with top AI and Data Science companies, national research laboratories, and international universities to enhance academic and professional opportunities for students.

Key Highlights

- Tie-ups with prominent AI & DS organizations for internships, live industry projects, and placements
- Guest lectures, workshops, seminars, and tech talks by industry experts
- Collaborative research initiatives with national laboratories and global academic partners
- Opportunities for students to work on interdisciplinary and application-driven projects

These partnerships strengthen industry readiness and expand career pathways in the AI and data science domain.

Internship Opportunities

The 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 & Data Science 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.

Placement Support

- Mandatory 6-month internship integrated into the curriculum
- Strong industry connections for global placements in AI & Data Science 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

Research Facilities

Computing Infrastructure

- Cloud computing access (AWS, Google Cloud, Azure)
- Big data platforms (Hadoop, Spark)
- AI/ML software licenses (TensorFlow, PyTorch, scikit-learn)

Research Centers

- AI & Data Science Research Lab
- Healthcare AI Innovation Center
- Sustainable AI Research Group
- Computer Vision & Robotics Lab

Research Focus Areas

- Foundational AI: Algorithm design, optimization, theoretical ML
- Applied AI: Industry applications in finance, healthcare, manufacturing
- Responsible AI: Explainability, fairness, privacy-preserving ML
- Emerging Technologies: Quantum ML, Federated Learning, Edge AI
- Interdisciplinary Research: AI for climate, agriculture, social impact, medicine

Industry Collaboration

- Partnership with IT companies for guest lectures, carrier development and workshops
- Industry mentorship for student projects
- Collaborative research initiatives

Why Choose DSU for M.Tech in AI & DS?

Industry-Aligned Curriculum

Designed with industry experts' inputs and latest AI trends. Focus on emerging technologies: LLMs, Generative AI, MLOps, Edge AI. Regular curriculum updates to reflect industry needs.

Hands-On Learning Approach

Virtual labs and simulations for safe experimentation. Real-world case studies and industry datasets. Capstone project on cutting-edge AI/DS applications. Tools: Python, TensorFlow, PyTorch, scikit-learn, Spark, Hadoop.

Research Excellence

Opportunities to publish research papers in peer-reviewed journals. Access to research grants and funding. Collaboration with international research institutes.

Internship Integration

Mandatory 6-month internship in Semester III. Placement in leading tech companies and startups. Real-world problem-solving experience. Opportunity to convert an internship into a full-time offer.

Capstone Project/Dissertation

Independent research on novel AI/DS topics. Mentorship from expert faculty. Exposure to research methodology and scientific writing. Focus on publishable contributions.

Career Development

Career counseling and personality development. Interview preparation and mock interviews. Industry interactions and recruitment drives. Alumni network for mentorship and opportunities.

Modern Facilities & Diverse Community

State-of-the-art computing labs with GPUs. High-speed internet and cloud access. Students from varied backgrounds and international student body. Collaborative project teams and networking opportunities.

Lab Infrastructure

Access comprehensive big data infrastructure with Apache Spark, Hadoop, Kafka, and MongoDB. Cloud-based analytics platforms, R/Python environments, and enterprise data visualization tools like Tableau and Power BI.

Hands-on Experience

Process massive datasets, build predictive analytics models, create data pipelines, and develop business intelligence dashboards. Work with streaming data analytics and implement end-to-end data science projects using industry-standard tools.

Experiential Learning

Practice 24x7 on Virtual & Remote Labs. Learning software tools by working on lab assignments and minor projects remotely in a virtual setting.

Project Based Learning

Final semester project. Students choose projects from their workplace or industry dissertation to apply their learning and suggest improvements.

Self-Learning

Flexible learning with access to digital resources. Students can access recorded sessions, assignments, and e-learning materials at any time and from any location.

Faculty guided hands-on learning

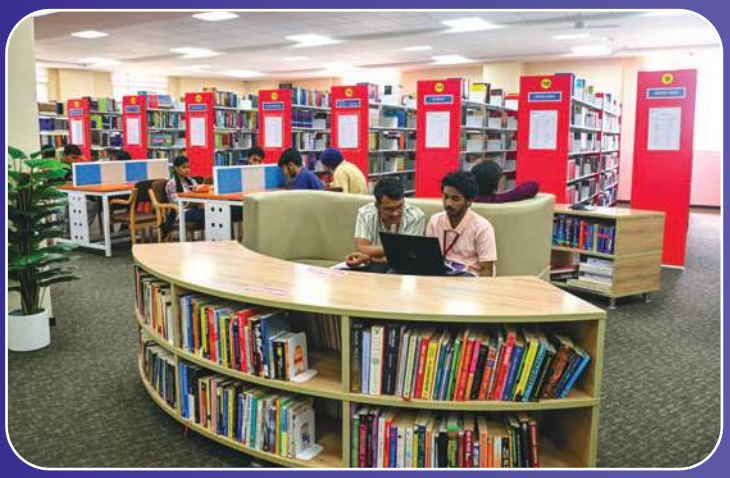
Solve real life case studies, assignments & more seek feedback on the same from the faculty members.

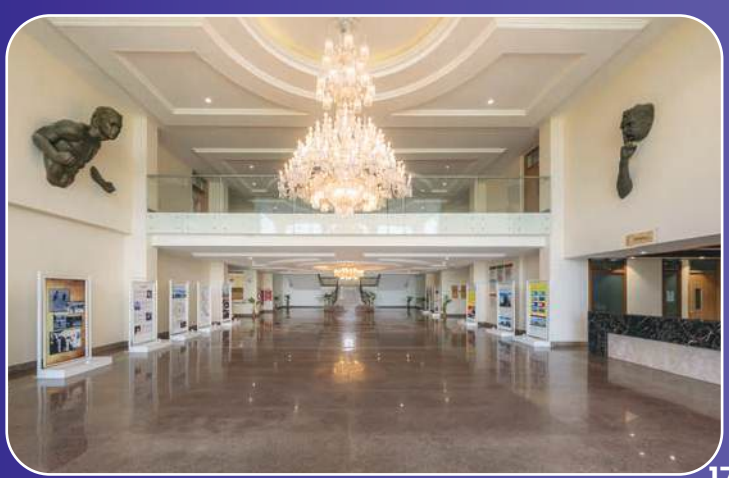
Foreign university collaboration for student exchange and internship opportunities*

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

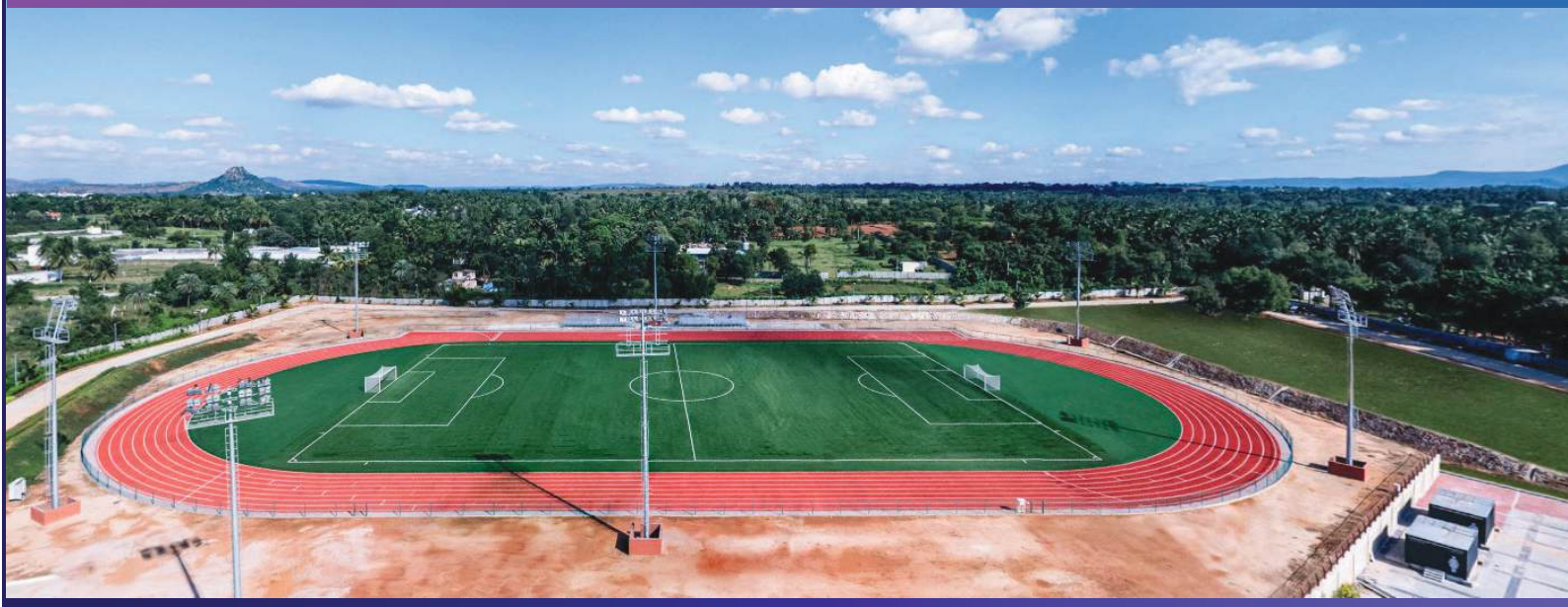
*Applicable as per university terms and conditions

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 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
- Upper/lower bunk bed
- 24/7 Handyman
- 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

2 Tier Rooms

In this tier, 2 students will be living together in an en-suite apartment with an access to all the common facilities.

3 Tier Rooms

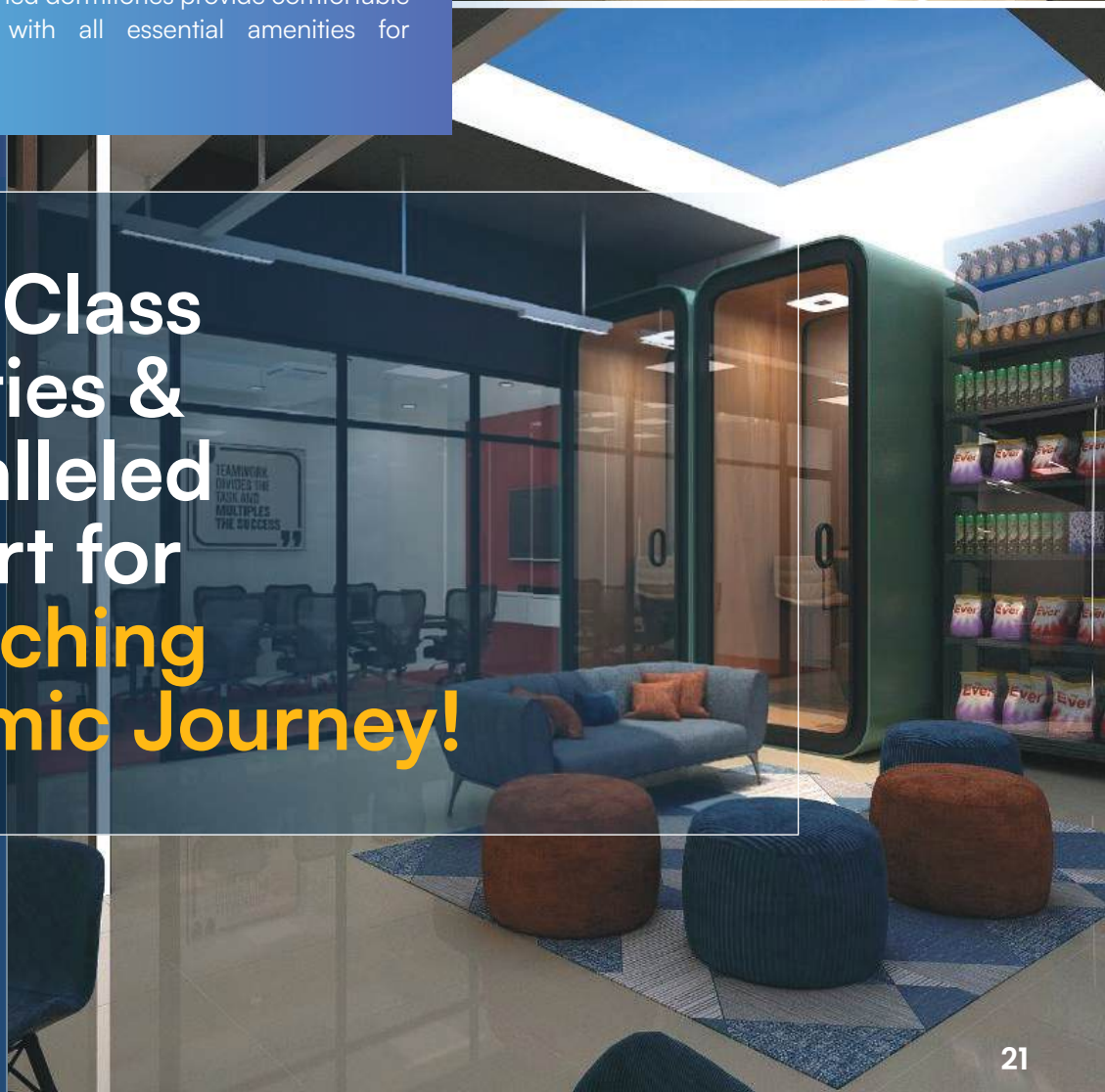
In this tier type, 3 students will be living together in an en-suite apartment with an access to all the common facilities.

4 Tier Rooms

In this tier type, 4 students will be living together in an en-suite apartment with an access to all the common facilities.

Dormitory

Spacious and well-maintained dormitories provide comfortable shared accommodation with all essential amenities for students.



World-Class Amenities & Unparalleled Comfort for an Enriching Academic Journey!

Labs

Digital Circuit Lab

Common Computer Lab

Analog Circuits Lab

Structures Lab

Electronic Lab

Composites Lab

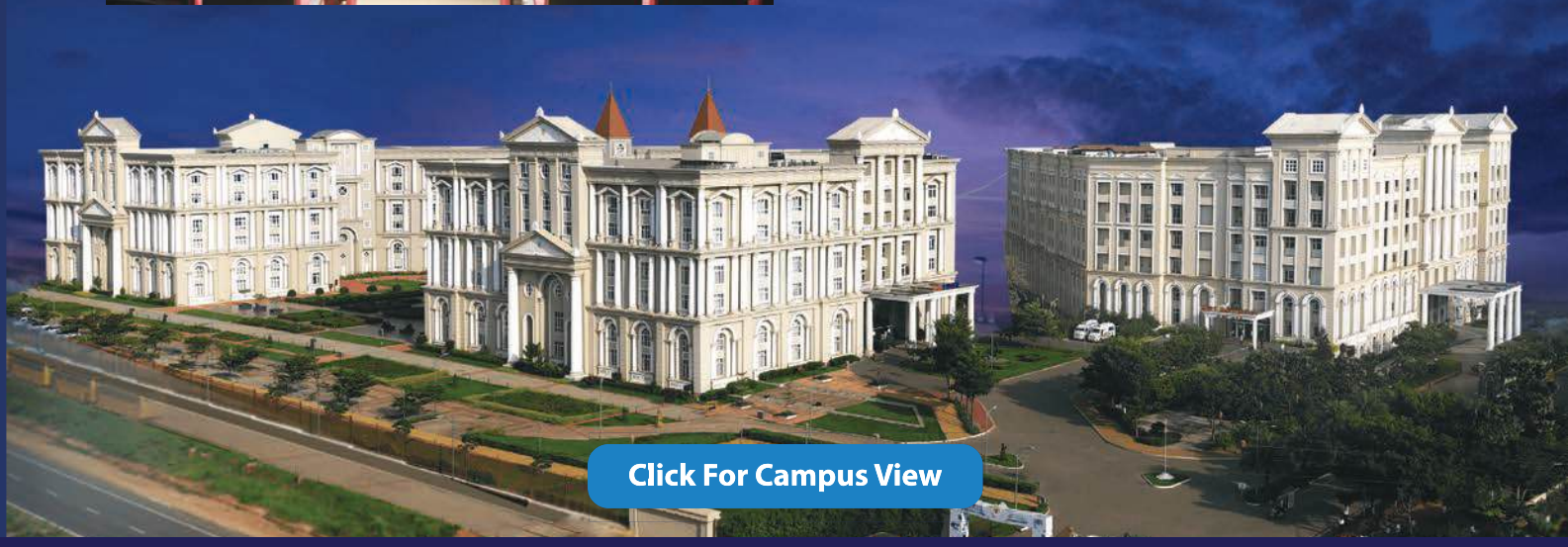
Physics Lab

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 admissions@dsu.edu.in