DAYANANDA SAGAR UNIVERSITY

7 DECADES LEGACY
IN EDUCATION & HEALTHCARE

A+ GRADE ACCREDITED BY NAAC

Lead the **Next Big Breakthrough** in **Advancing Medical Innovation**

B.Tech

Computer Science and Medical Engineering

Index

A Place to Grow, Excel, Invent & Innovate!

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.

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
01st November 2025
OUTSTANDING UNIVERSITY WITH BEST PLACEMENTS

About School of Engineering

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

It has emerged as the top choice for students who want to become the next- generation technocrats, innovators, developers, and creators. Our advanced and exceptional M.Tech programs are meticulously designed to propel you into the forefront of evolving technologies. It offers specialised majors, allowing students to delve deep into their areas of interest and expertise, whether it's in computer science, electronics, or other engineering disciplines. The students are exposed to knowledge beyond their specialisation, which helps broaden their horizons of thought.

B.Tech Programme in Computer Science and Medical Engineering (CSME)

The B.Tech in Computer Science and Medical Engineering (CSME) is an innovative interdisciplinary programme that seamlessly bridges the principles of engineering and the realm of medicine. It offers a unique curriculum where courses are taught by both engineering and medical faculty, providing students with a robust research-oriented foundation. The programme emphasizes cutting-edge areas such as Artificial Intelligence in Medicine, Medical Imaging, and more, fostering the development of transformative healthcare technologies.

Vision

To become a center of excellence in Computer Science and Medical Engineering by empowering students to develop cutting-edge technological solutions that transform healthcare and improve lives globally.

Mission

- To provide a robust interdisciplinary education that integrates core principles of computer science and medical engineering to prepare students for innovative careers in health technology.
- To foster research and innovation in areas such as AI in healthcare, wearable devices, medical imaging, bioinformatics, and digital health systems.
- To cultivate ethical, socially responsible professionals who understand the medical impact of technology and are committed to improving patient care and public health.
- To build industry and academic partnerships that offer real-world exposure, internships, and collaborative projects to bridge the gap between theory and practice.
- To encourage lifelong learning and entrepreneurship through continuous skill development and support for start-ups and translational research in MedTech.

Tracks

Advanced Data Science

Pattern Recognition, Feature Engineering and Selection, Medical Trends in Data Science, Data Warehouse & Data Mining, Cloud Computing for Data Science

Advanced Artificial Intelligence & Machine Learning

Edge AI and IoT, Optimization Techniques In Machine Learning, Expert Systems and Applications In Healthcare, AI In Tissue Engineering and Culturing, AI For Medical Robotics

Electives Offered

Domain Clusters	PROFESSIONAL ELECTIVE COURSES				
	PEC-I	PEC-II	PEC-III	PEC-IV	PEC-V
	5th Semester	6th Semester		7th Semester	
ADVANCED DATA SCIENCE	PATTERN RECOGNITION	FEATURE ENGINEERING & SELECTION	MEDICAL TRENDS IN DATA SCIENCE	DATA WAREHOUSE & DATA MINING	CLOUD COMPUTING FOR DATA SCIENCE
ADVANCED ARTIFICIAL INTELLIGENCE & MACHINE LEARNING	EDGE AI AND IOT	OPTIMIZATION TECHNIQUES IN MACHINE LEARNING	EXPERT SYSTEMS AND APPLICATIONS IN HEALTHCARE	AI IN TISSUE ENGINEERING AND CULTURING	AI FOR MEDICAL ROBOTICS

OPEN ELECTIVE COURSES	
OE-I	OE-II
6th Semester	7th Semester
MEDICAL IMAGE PROCESSING	AI APPLICATIONS FOR HEALTHCARE

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 50% marks (45% 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.

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

Program Duration: 4 years (8 Semesters)

KEY FOCUS AREAS

Neural Engineering:

Brain-machine interfaces, neural prosthetics, and deep brain stimulation revolutionizing treatment for neurological disorders.

Non-Invasive Innovations:

Advanced imaging, wearable diagnostics, and therapies like focused ultrasound and magnetic fields..

Reverse Aging & Longevity:

Targeting aging mechanisms through gene therapy, epigenetic reprogramming, and regenerative medicine.

Personalized Medicine:

Nanotechnology for targeted drug delivery and CRISPR-based gene-editing for tailored treatments.

By bridging science and technology, Medical Engineering aims to redefine medical practice and elevate global healthcare standards.

Tissue Engineering:

Bio-printing and bio-artificial organs addressing organ shortages and enhancing transplantation outcomes.

AI in Medicine:

Using machine learning to predict disease, optimize treatments, and support clinical decisions.

Healthcare Mechanics:

Micro-robotics and energy-efficient implants for minimally invasive procedures.

Interdisciplinary Collaboration:

Computer Science & Medical Engineering thrive at the nexus of biophysics, nanotechnology, systems biology, and computational science, promising transformative solutions for aging, global health, and space medicine.

Await for more exciting outcomes from the DSU stable !

Program Unique Features

The Unique Features of our CSME program lies in interdisciplinary and multidisciplinary nature, targeting both core competencies and future-forward innovation. This holistic curriculum prepares students to tackle complex challenges by providing them with a comprehensive understanding of the field.

India's First-of-its-kind Program
The program is a powerful blend of Computer Science and Medicine.

Interdisciplinary Curriculum

- Combines computer science and healthcare technologies.
- Courses might include AI in healthcare, medical imaging, bio-signal processing, health informatics, and robotic surgery systems.

Focus on Emerging Technologies in Healthcare

- Emphasis on AI/ML, IoT, big data, AR/VR, and blockchain in medical diagnostics and treatment.
- Prepares students for the digital transformation of healthcare.

Industry-Oriented Training

- Collaboration with hospitals, medical device companies, and tech start-ups.
- Internships, live projects, and industry certifications relevant to health tech.

Program Delivered by Experts

Learn from both Engineering & Medical Faculties.

Research-Oriented Pedagogy

With real-world case studies from CDSIMER, NIMHANS, GE Healthcare and Philips etc.

Opportunities

for internships, industry projects, and global exposure.

Strong Research & Higher Study Pathways

- Ideal foundation for M.S. / Ph.D. in Biomedical Informatics, AI in Medicine, or Health Data Science.
- Encourages student involvement in research publications, conferences, and patents.

CASE STUDIES:

The case studies mentioned here and examples of successes in each focus area can lead to a better understating of the subject under discussion which is followed by noteworthy interdisciplinary collaborations:

Neural Engineering

- Brain-Machine Interfaces (BMI):
  - Case Study: Researchers at Stanford University successfully enabled a paralyzed man to type at 90 characters per minute using a brain-computer interface (2021). Electrodes implanted in the motor cortex translated neural activity into digital text.
  - Collaboration Example: A joint effort between neurologists, engineers, and AI experts to optimize BMI algorithms for real-time performance.
- Deep Brain Stimulation (DBS):
  - Case Study: DBS has shown remarkable success in treating Parkinson's disease, improving motor function by 70% in many patients. The Cleveland Clinic developed adaptive DBS, which adjusts stimulation based on brain activity.

Reverse Aging and Longevity

- Cellular Reprogramming:
  - Case Study: The Yamanaka factors demonstrated cellular rejuvenation in mice, reversing signs of aging and extending lifespan by 30%.
  - Collaboration Example: Biotechnology firms like Altos Labs bring together cell biologists, computational scientists, and ethicists to explore safe applications of cellular reprogramming.
- Senescence Therapy:
  - Case Study: Unity Biotechnology's senolytic drugs reduced senescent cells in animal models, improving joint function and health span.

Targeted and Personalized Medicine

- Nanotechnology in Drug Delivery:
  - Case Study: A clinical trial at MIT used lipid nanoparticles to deliver mRNA vaccines for COVID-19, an innovation that contributed to the global vaccination effort.
  - Collaboration Example: Moderna worked with nanotechnologists, immunologists, and public health experts to deploy mRNA vaccines rapidly.
- CRISPR Gene Editing:
  - Case Study: In 2020, researchers used CRISPR to treat a genetic blood disorder (sickle cell anemia) in a patient, demonstrating promising long-term results.

Non-Invasive Technologies

- Focused Ultrasound:
  - Case Study: Insightec developed focused ultrasound technology to treat essential tremors without surgery. Approved by the FDA, it has successfully reduced tremors in thousands of patients.
- Wearable Devices:
  - Case Study: The Apple Watch's atrial fibrillation detection feature identified early heart issues in users, leading to life-saving medical interventions.

Tissue Engineering

- Bioprinting Organs:
  - Case Study: Wake Forest Institute for Regenerative Medicine bio-printed functional kidney tissue, demonstrating the feasibility of creating transplantable organs.
- Vascularized Tissue Models:
  - Case Study: Harvard's Wyss Institute developed organ-on-a-chip technology, mimicking human organs for drug testing and disease modeling.

Artificial Intelligence in Medicine

- Disease Prediction:
  - Case Study: Google's DeepMind AI accurately predicted protein folding structures, solving a 50-year challenge in molecular biology and paving the way for drug discovery.
- Decision-Support Systems:
  - Case Study: IBM Watson for Oncology provided tailored cancer treatment plans by analyzing vast datasets, used in clinics worldwide.

Energy and Mechanics in Healthcare

- Micro-Robotics:
  - Case Study: ETH Zurich developed microrobots that navigate through blood vessels to deliver drugs or remove clots, tested successfully in animal models.
- Biocompatible Implants:
  - Case Study: Cochlear implants, integrating advanced mechanics and energy-efficient technology, restored hearing in thousands of patients worldwide.

GREAT EXAMPLES OF INTERDISCIPLINARY COLLABORATIONS

Human Brain Project (EU):

Collaboration among neuroscientists, engineers, and AI researchers to map the brain and create advanced neural models.

NASA and Mayo Clinic:

Joint research on space medicine, studying bone density loss in astronauts, combining aerospace engineering with medical science.

Harvard-Wyss Institute:

Brought together biologists, engineers, and computer scientists to develop organ-on-a-chip technology, revolutionizing drug testing.

DARPA's Neural Engineering System Design (NESD):

Collaborated with universities and private firms to create high-bandwidth brain-computer interfaces, integrating computational neuroscience and hardware engineering.

These examples highlight the impact of interdisciplinary efforts driving transformative breakthroughs in Computer Science &Medical Engineering. Strong reasons for the young population to embrace this emerging field of study at Dayananda Sagar University which holds exciting career prospects.

Emerging Job Opportunities/Careers

- AI-in-Healthcare Engineer
- MedTech Entrepreneur
- Medical Image processing Expert
- Medical Engineering Data Scientist
- ARVR Engineer
- Clinical Data Analyst
- Healthcare Software Developer

Department Club: MedTech

The MedTech Students Club of the Department of CSME is a vibrant student-driven forum that promotes innovation at the intersection of healthcare and technology. The club's primary goal is to enhance interdisciplinary learning by integrating principles of computer science with medical engineering to develop advanced healthcare solutions. It serves as a platform for students to explore areas such as medical imaging, biomedical instrumentation, AI in healthcare, wearable devices, and IoT-based medical systems.

Club Activities

Technical Workshops & Seminars
Interactive sessions on medical device design, biomedical signal analysis, healthcare data processing, and embedded systems.

Expert Talks & Industry Collaborations
Lectures and panel discussions with healthcare professionals, researchers, and technology experts.

Innovative Projects & Hackathons
Opportunities for students to design prototypes and research solutions addressing real-world medical challenges.

Health Awareness & Community Programs
Organizing medical check-up camps, awareness campaigns, and outreach programs in collaboration with hospitals and NGOs.

Competitions & Technical Fests
Encouraging participation in project expos, paper presentations, and inter-college competitions.

Skill Development Sessions
Training on tools and technologies like MATLAB, LabVIEW, Python, and biomedical sensors for healthcare applications.

The MedTech Students Club empowers students to combine creativity, technology, and compassion to build a healthier and smarter world through medical engineering innovation.

Internship Opportunities

Students admitted to III year may undergo a mandatory internship of 4 weeks during intervening vacations of VI and VII semesters and /or VII and VIII semesters or VIII semester.

A university examination shall be conducted during VIII semester and the prescribed credit shall be included in VIII semester.

Internship shall be considered as a head of passing and shall be considered for the award of degree.

Those, who do not take-up/complete the internship shall be declared fail and shall have to complete during subsequent University examination after satisfying the internship requirements.

Industry Tie-Ups

The School of Engineering, DSU is working with five leading institutes and industries to lead the CSME program:

Chandramma Dayananda Sagar Institute of Medical Education and Research (CDSIMER)

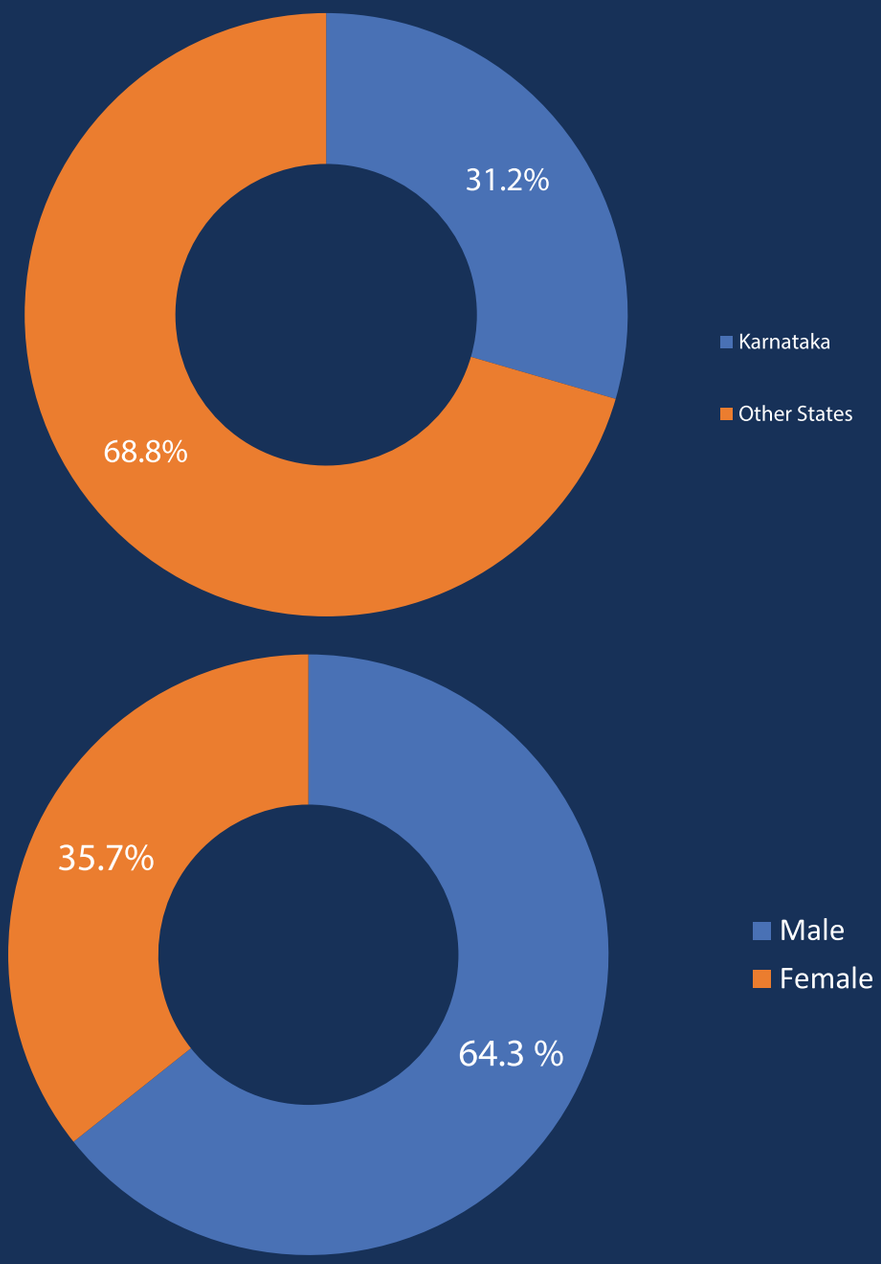
GE Healthcare

Philips

Indian Institute of Science (IISc),

National Institute of Mental Health and Neuro-Sciences (NIMHANS)

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

B.Tech Placement Record (2024-25)

450+	10L	56L
COMPANIES VISITED	AVERAGE PACKAGE (LPA)	HIGHEST PACKAGE (LPA)

Top Recruiters (National & International)

Some of the top recruiters for ECE operate on both 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.

National & International Recruiters

CDSIMER Dr. Chandramma Dayananda Sagar Institute of Medical Education and Research
SAMSUNG
Nokia Siemens Networks
wipro
TCS TATA CONSULTANCY SERVICES
PHILIPS
भारतीय विज्ञान संस्थान
GE HealthCare
Google
intel
amazon
NASA
ABB
NVIDIA
SIEMENS
Microsoft
Meta
Capgemini
BCG
SAMSUNG Research
TESLA
accenture
MEINHARDT
Infosys
EY
solaredge
TheMathCompany

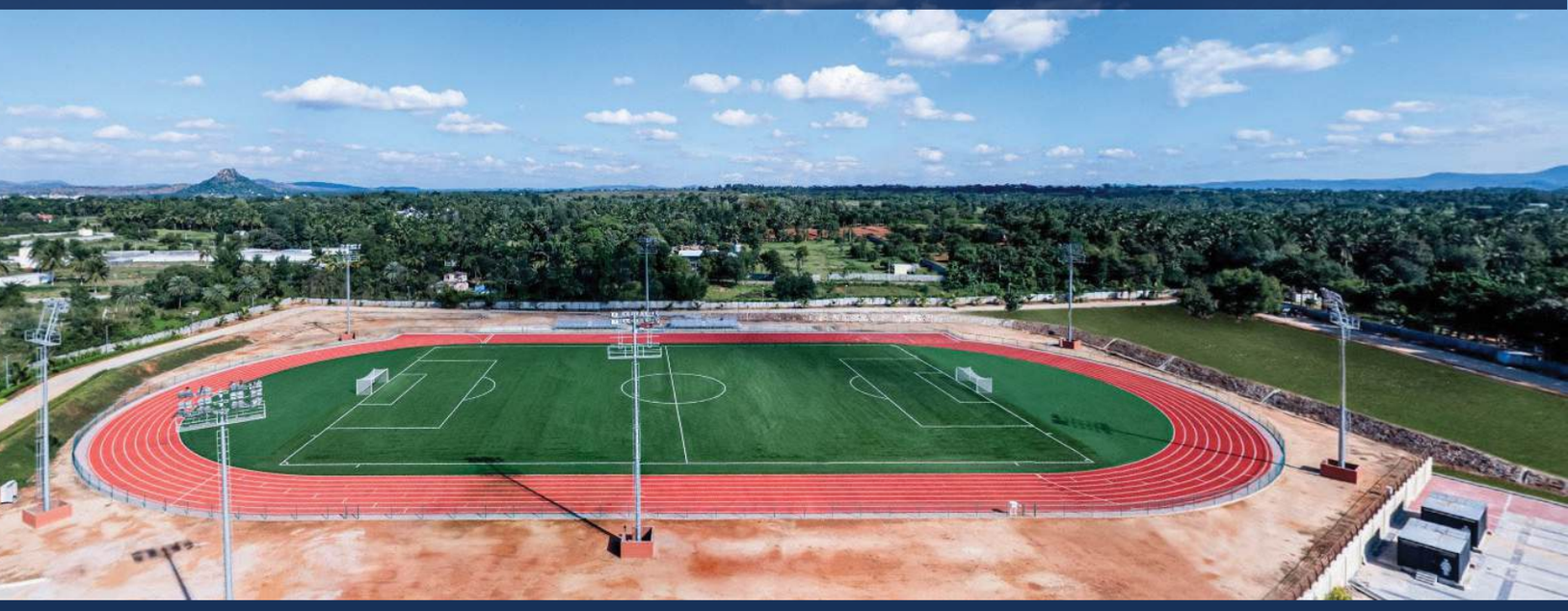
Foreign university collaboration for student exchange and internship opportunities*

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

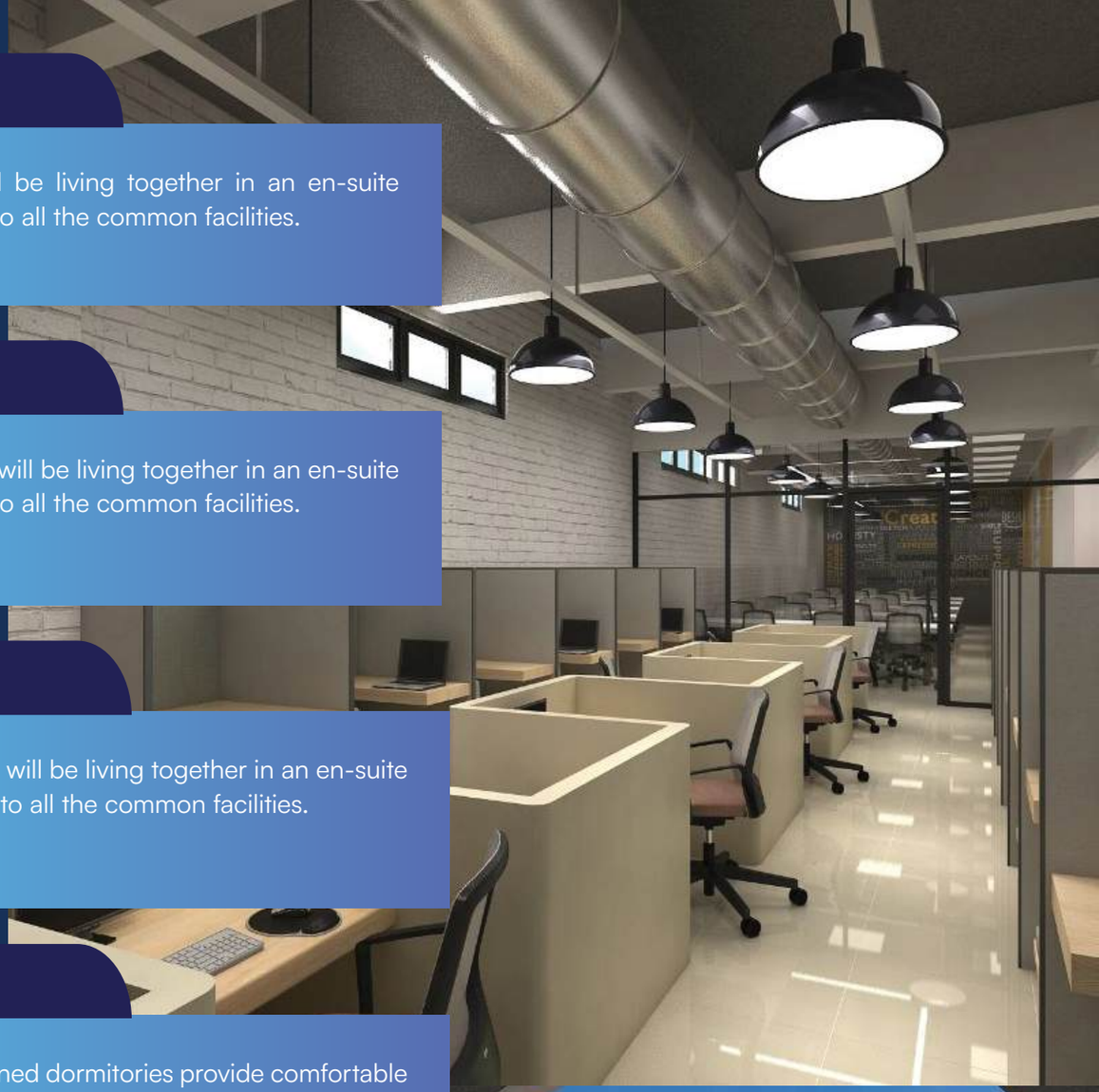
In this tier type, 3 students will be living together in an en-suite apartment with an access to all the common facilities.

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 – 562112

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

www.dsu.edu.in admissions@dsu.edu.in