



**NIRWAN
UNIVERSITY
— JAIPUR —**
शिक्षा संस्कार सामर्थ्य

Established by the Rajasthan State
Legislature vide Act No. 2 of 2017 and
recognized U/s 2(f) of the UGC Act 1956

SCHOOL OF ENGINEERING & TECHNOLOGY

Engineering is the closest thing to magic that exists in the world.



ABOUT NIRWAN UNIVERSITY

Nirwan University Jaipur (NUJ) was established by the Government of Rajasthan vide Act No. 2 of 2017 and recognized u/s 2 (f) of the UGC Act, 1956 for the award of degrees u/s 22 of the UGC Act. Nirwan University Jaipur has twelve different schools with multiple programmes making it one of the most sought after options for higher education among students. It is promoted by "NIRWAN CHARITABLE TRUST", which also runs health care institutions, viz., S.N. Super Specialty Hospital, Sihag Hospital and Swastik Blood Bank at Sri Ganganagar, Rajasthan.

- ▶ Rajasthan Dental College and Hospital
- ▶ S.N. Institute of Nursing Sciences
- ▶ S.N. College of Law
- ▶ School of Allied Health Science
- ▶ School of Ayurveda, Naturopathy & Yogic Sciences
- ▶ School of Pharmaceutical Science
- ▶ School of Agricultural Sciences
- ▶ School of Commerce and Management
- ▶ School of Engineering and Technology
- ▶ School of Basic and Applied Sciences
- ▶ School of Library and Information Science
- ▶ School of Computer Science and Applications
- ▶ School of Art's Humanities and Social Sciences
- ▶ School of Physical Education and Sports
- ▶ School of Forensic Science and Cyber Forensic



The University pursues distinct teaching-learning methodologies and provides conducive academic environment with state of art facilities. The university encourages students to participate in various co-curricular and extra-curricular activities to ensure comprehensive and holistic development of their personality. University is committed to create conscious global citizens and leaders for tomorrow, thus provides an ecosystem of instilling human values along with quality education. The academic ecosystem includes well equipped infrastructure, Residential Campus, highly qualified, seasoned and research oriented faculty members in a salubrious environment.

INTRODUCTION

The School of Engineering & Technology (SOET) at Nirwan University Jaipur (NUJ) is dedicated to excellence in engineering education, innovation, and research. The School offers Diploma, Undergraduate, Postgraduate, and Ph.D. programmes that combine strong academic foundations with practical, industry-oriented learning through modern laboratories and advanced infrastructure.

SOET promotes research in emerging fields such as renewable energy, smart grids, electric vehicles, robotics, artificial intelligence, industrial automation, and sustainable technologies. Strong collaborations with industries and academic institutions provide students with opportunities for internships, research, and professional training.

With experienced faculty, state-of-the-art facilities, and a vibrant learning environment, SOET nurtures skilled engineers, innovative researchers, and ethical professionals equipped to address global technological challenges and contribute to sustainable development.

OBJECTIVE

- ▶ **Academic Excellence:** To deliver quality technical education through Diploma, B.Tech., M.Tech., and Ph.D. programmes with a balance of theory and practical learning.
- ▶ **Research & Innovation:** To promote research and innovation in emerging technologies, renewable energy, robotics, and sustainable engineering.
- ▶ **Industry Readiness:** To prepare industry-ready graduates through modern curricula, advanced laboratories, and Industry 4.0 practices.
- ▶ **Industry Collaboration:** To strengthen partnerships with industries, government agencies, and academic institutions for research, internships, and placements.
- ▶ **Interdisciplinary Learning:** To foster critical thinking, ethical values, communication, and multidisciplinary problem-solving skills.
- ▶ **Sustainable Development:** To promote green technologies, clean energy, and sustainable engineering solutions for societal development.
- ▶ **Leadership & Entrepreneurship:** To cultivate leadership, innovation, and entrepreneurial skills for successful engineering careers.

VISION

To be a student centric leading center, developing education, research, and innovation. Our aim is to develop students' aptitudes and skills, preparing them for a rapidly evolving society.

MISSION

- ▶ Cultivate a culture of lifelong learning and critical thinking among students and faculty.
- ▶ Establish an innovative research and development environment that adapts to the changing needs of students, industries, and society.
- ▶ Foster strong connections and engagement with local, national, and global communities.
- ▶ Provide learners with the tools and empowerment to explore their vocations and realize their full potential.

LABORATORY FACILITIES

The School of Engineering & Technology (SOET) offers modern, well-equipped laboratories that integrate theoretical knowledge with practical learning. Featuring advanced instruments, testing equipment, and simulation software, the laboratories provide hands-on experience in engineering applications.

Engineering Physics Laboratory

- ▶ Laser and optical experiments
- ▶ Semiconductor device characterization
- ▶ Optical fiber communication setup
- ▶ Hall Effect and energy band gap apparatus
- ▶ Spectrometer and interference experiments
- ▶ Digital measurement instruments



Engineering Chemistry Laboratory

- ▶ Water quality analysis equipment
- ▶ pH meter and conductivity meter
- ▶ Potentiometric and conductometric setups
- ▶ Corrosion testing facilities
- ▶ Polymer and fuel testing experiments
- ▶ Chemical safety equipment and fume hood



Electrical Machine Laboratory

- ▶ DC and AC machine test benches
- ▶ Transformer testing and efficiency measurement
- ▶ Three-phase induction and synchronous motor experiments
- ▶ Electrical drives and speed control systems
- ▶ Digital measuring instruments and protection devices
- ▶ Safety-compliant laboratory environment



Communication Skills Laboratory

- ▶ Fitting and bench work section
- ▶ Arc and gas welding facilities
- ▶ Carpentry and sheet metal workshop
- ▶ Lathe, drilling, milling, and grinding machines
- ▶ Foundry and forging equipment
- ▶ PPE and industrial safety practices



Automobile Engineering Laboratory

- ▶ Petrol and diesel engine models
- ▶ Transmission and differential assemblies
- ▶ Steering and braking system trainers
- ▶ Fuel injection system demonstration units
- ▶ Vehicle diagnostic tools
- ▶ Automotive emission testing equipment



Strength of Materials Laboratory

- ▶ Universal Testing Machine (UTM) for tensile, compression, and bending tests
- ▶ Torsion and impact testing machines
- ▶ Hardness testing equipment (Brinell, Rockwell, and Vickers)
- ▶ Spring testing and deflection apparatus
- ▶ Beam and column testing setups
- ▶ Digital strain measurement and material characterization instruments



COURSE OFFERED

S.N.	PROGRAMME	ELIGIBILITY	DURATION
1	Diploma Engineering - (Polytechnic) • Mechanical Engineering • Electrical Engineering • Computer Science Engineering	Passed 10th examination from any recognize board or equivalent with 45% marks (5% relaxation in case of SC/ST category) admission through CET. In the case of Lateral Entry: Passed 10+2 examination from any recognize board or equivalent with 45% marks (5% relaxation in case of SC/ST category / Non-Creamy layer OBC/EWS of Rajasthan/PWD category) admission through CET	6 Semester (3 Years)
2	Bachelor of Technology - (B.Tech.) • Mechanical Engineering • Electrical Engineering • Computer Science Engineering	10+2 examination with Physics / Mathematics/ Chemistry / Computer Science / Electronics/ Information Technology / Biology / Informatics Practices / Biotechnology / Technical Vocational Subject / Agriculture / Engineering Graphics / Business Studies / Entrepreneurship. (Any of the three) with 50% marks in aggregate (5% relaxation in case of SC/ST category) admission through CET. Lateral Entry: Diploma from BTER approved or equivalent of UGC approved University with at least 45% marks (40% marks in case of candidates belonging to reserved category and Non-Creamy layer OBC/EWS of Rajasthan/PWD category) subject to vacancies in the 2nd Year /III Semester.	8 Semester (4 Years)
3	Master of Technology - (M.Tech.) • Power System Engineering • Production Engineering • Renewable Energy Technology • Computer Science Engineering	UG degree in relevant program with 50% marks (5% relaxation in case of SC/ST category and Non-Creamy layer OBC/EWS of Rajasthan/PWD category) admission through CET.	4 Semester (2 Years)

FUTURE SCOPE & EMPLOYMENT OPPORTUNITIES

Diploma	Prepares students for careers in installation, maintenance, troubleshooting, CAD drafting, and Junior Engineer (JE) positions in public and private sectors.
B.Tech.	Opens opportunities as Graduate Engineer Trainees, Design, Production, and Project Engineers in leading public and private organizations.
M.Tech.	Develops expertise in Research & Development, advanced simulation, computational analysis, product design, and semiconductor technologies.
Ph.D.	Prepares scholars for leadership in advanced research, robotics, Industry 4.0, space technology, academia, and global innovation-driven organizations.

Junior Engineer (JE) & Assistant Engineer (AE)	Electrical Design / Power Systems Engineer	Mechanical Design / CAE Analyst	EV Powertrain & Battery Management Specialist
Robotics & Automation Engineer	STUDENTS CAN BUILD SUCCESSFUL CAREERS AS		Project Manager / Site Coordinator
Computational Fluid Dynamics (CFD) Specialist			Assistant Professor / Academic Lecturer
Procurement & Supply Chain Manager	Quality Control & Safety Certification Officer	Scientific Officer (ISRO / DRDO / BARC)	Industrial Consultant / Technical Auditor

The School of Engineering and Technology (SOET) aims to produce highly skilled professionals, disruptive innovators, meticulous researchers, and visionary entrepreneurs capable of steering the technological landscape of the future and driving sustainable industrial and national growth.

LEARNING OUTCOMES / WHAT STUDENTS LEARN FROM THE PROGRAMME

The programmes at the School of Engineering & Technology equip students with strong technical knowledge, practical skills, research aptitude, and professional competence. Through modern laboratories, industry-oriented learning, and innovation-driven education, graduates are prepared to meet evolving engineering challenges and contribute to sustainable technological development.

Strong foundation in engineering concepts and practical applications.

Proficiency in modern engineering tools, software, and laboratory techniques.

Ability to analyze and solve real-world engineering problems.

Skills in engineering design, innovation, and product development.

Knowledge of emerging technologies and Industry 4.0

Research aptitude and critical thinking for technological advancement.

Understanding of project management, quality, and safety standards.

Commitment to sustainable engineering and environmental responsibility.

Professional ethics, leadership, teamwork, and effective communication.

Lifelong learning and adaptability to evolving technologies.



APPROVAL AND AFFILIATION



PROGRAMME OFFERED IN NUJ

RAJASTHAN DENTAL COLLEGE & HOSPITAL

- ◆ Bachelor of Dental Surgery (B.D.S.)
- ◆ Master of Dental Surgery (M.D.S.) -
Conservative Dentistry & Endodontics
Oral & Maxillofacial Surgery
Orthodontics & Dentofacial Orthopaedics
Prosthodontics, Crown & Bridge, Periodontics
Pedodontics, Oral Medicine & Radiology
Oral Pathology & Microbiology
Public Health Dentistry
- ◆ Doctor of Philosophy (Ph.D.)

S.N. INSTITUTE OF NURSING SCIENCES

- ◆ Bachelor of Science (B.Sc.) - Nursing
- ◆ Doctor of Philosophy (Ph.D.)

SCHOOL OF PHARMACEUTICAL SCIENCE

- ◆ Bachelor of Pharmacy (B.Pharm)
- ◆ Diploma in Pharmacy (D.Pharm)
- ◆ Doctor of Philosophy (Ph.D.)

S.N. COLLEGE OF LAW

- ◆ BA LL.B. (Bachelor of Arts and Bachelor of Legislative Law)
- ◆ LL.B. (Bachelor of Laws or Bachelor of Legislative Law)
- ◆ LL.M. (Masters of Laws) - Corporate and Commercial Law
Constitutional Law and Administrative Law
Criminal and Security Law, Intellectual Property Law
Cyber and Security Law
- ◆ Doctor of Philosophy (Ph.D.)

SCHOOL OF FORENSIC SCIENCE AND CYBER FORENSIC

- ◆ Diploma in Forensic Science
- ◆ Bachelor of Science (B.Sc.) in Forensic Science
- ◆ Master of Science (M.Sc.) in Forensic Science

SCHOOL OF COMPUTER SCIENCE AND APPLICATIONS

- ◆ Bachelor of Computer Applications (BCA)
- ◆ Master of Computer Applications (MCA)
- ◆ Post-Graduation Diploma in Computer Applications (PGDCA)
- ◆ Doctor of Philosophy (Ph.D.)

SCHOOL OF ALLIED HEALTH SCIENCES

- ◆ Bachelor of Physiotherapy (BPT)
- ◆ Master of Physiotherapy (MPT) - Cardio-Pulmonary Science,
Neuroscience, Musculoskeletal Science, Sports Science
- ◆ Bachelor of Medical Radiology and Imaging Technology (BMRIT)
- ◆ Bachelor of Medical Laboratory Sciences (BMLS)
- ◆ Bachelor of Anaesthesia & Operation Theatre Technology (BAOTT)
- ◆ Diploma in Medical Laboratory Technology (DMLT)
- ◆ Diploma in Radiation Technology (DRT)

SCHOOL OF COMMERCE AND MANAGEMENT

- ◆ Bachelor of Commerce (B.COM.)
- ◆ Bachelor of Business Administration (BBA)
- ◆ Master of Business Administration (MBA) - HRM,
Finance, Sales & Marketing, Hospital Management
- ◆ Master of Commerce (M.COM.) - ABST, BADM, EAFM
- ◆ Doctor of Philosophy (Ph.D.)

SCHOOL OF ENGINEERING AND TECHNOLOGY

- ◆ Diploma Engineering (Polytechnic) -
Electrical Engineering, Mechanical Engineering
Computer Science Engineering
- ◆ Bachelor of Technology (B.Tech.) -
Electrical Engineering, Mechanical Engineering
Computer Science Engineering
- ◆ Master of Technology (M.Tech.) - Power System
Production Engineering, Renewable Energy Technology
Computer Science Engineering
- ◆ Doctor of Philosophy (Ph.D.)

SCHOOL OF AGRICULTURAL SCIENCES

- ◆ B.Sc. (Bachelor of Science) - Agriculture (Hons.)
- ◆ M.Sc. (Agriculture)- Agronomy,
Soil Science and Agricultural Chemistry
- ◆ M.Sc. (Horticulture)- Fruit Science, Vegetable Science
- ◆ Doctor of Philosophy (Ph.D.)

SCHOOL OF BASIC AND APPLIED SCIENCES

- ◆ Bachelor of Science (B.Sc.) - (CBZ/PCM)
- ◆ Master of Science (M.Sc.) - Chemistry,
Mathematics, Physics, Botany, Zoology, Psychology
- ◆ Doctor of Philosophy (Ph.D.)

SCHOOL OF LIBRARY AND INFORMATION SCIENCE

- ◆ Diploma in Library and Information Science (DLIS)
- ◆ Bachelor of Library and Information Science (BLIS)
- ◆ Master of Library and Information Science (MLIS)
- ◆ Doctor of Philosophy (Ph.D.)

SCHOOL OF PHYSICAL EDUCATION AND SPORTS

- ◆ Bachelor of Physical Education and Sports (BPES)
- ◆ Master of Physical Education and Sports (MPES)
- ◆ Doctor of Philosophy (Ph.D.)

SCHOOL OF AYURVEDA, NATUROPATHY & YOGIC SCIENCES

- ◆ Bachelor of Naturopathy and Yogic Sciences (BNYS)
- ◆ Bachelor of Science (B.Sc.) - Ayurveda Nursing
- ◆ Diploma in Ayush Nursing and Pharmacy (DAN&P)
- ◆ Bachelor of Arts in Yoga (BA-Yoga)
- ◆ Master of Arts in Yoga (MA-Yoga)
- ◆ P.G. Diploma in Yoga
- ◆ Diploma in Yoga
- ◆ Doctor of Philosophy (Ph.D.)

SCHOOL OF ARTS, HUMANITIES AND SOCIAL SCIENCES

- ◆ Bachelor of Arts (BA)
- ◆ Master of Arts (MA) - Hindi, English, Geography,
History, Political Science, Sociology
Social Work (MSW), Psychology
- ◆ Doctor of Philosophy (Ph.D.)



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