



**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 BASIC AND APPLIED SCIENCES



www.nirwanuniversity.ac.in



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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.

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| ▶ Rajasthan Dental College and Hospital | ▶ School of Commerce and Management |
| ▶ S.N. Institute of Nursing Sciences | ▶ School of Engineering and Technology |
| ▶ S.N. College of Law | ▶ School of Basic and Applied Sciences |
| ▶ School of Allied Health Sciences | ▶ School of Library and Information Science |
| ▶ School of Ayurveda, Naturopathy & Yogic Sciences | ▶ School of Computer Science and Applications |
| ▶ School of Pharmaceutical Science | ▶ School of Art's Humanities and Social Sciences |
| ▶ School of Agricultural 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 Basic and Applied Sciences is dedicated to promoting academic excellence, scientific research, innovation, and skill development in the fields of basic and applied sciences. The school offers a wide range of undergraduate, postgraduate and Ph.D. programmes that aim to nurture scientific temperament, analytical abilities, critical thinking, and practical knowledge among students. Through a balanced combination of theoretical learning and hands-on training, students are prepared to meet the challenges of modern science and technology.

The institution emphasizes quality education through experienced faculty members, modern laboratories, research-oriented teaching methodologies, industrial exposure, internships, and skill-based learning practices. Students are actively encouraged to participate in seminars, workshops, conferences, educational tours, cultural activities, and community outreach programmes to enhance their overall personality and professional competence.

The School continuously strives to create a vibrant academic environment that supports innovation, creativity, and lifelong learning. Its primary objective is to prepare students for higher education, advanced research, entrepreneurship, competitive examinations, and rewarding careers in industry, research organizations, and academia, thereby contributing effectively to society and national development.

OBJECTIVE

- ▶ To impart conceptual and practical knowledge in science disciplines.
- ▶ To promote research and innovation culture among students.
- ▶ To strengthen laboratory and technical skills.
- ▶ To provide industrial exposure and internship opportunities.
- ▶ To prepare students for competitive examinations and higher studies.
- ▶ To encourage environmental awareness and social responsibility.
- ▶ To support entrepreneurship and professional development.

VISION

The vision of the school is to develop scientific aptitude among the students, and to explore new horizons of knowledge in the areas hitherto unknown, exploring new scientific frontiers and to transgress the threshold of ignorance and obscurantism. Also, to create an ecosystem for finding solutions to the problems faced by mankind in different spheres of life.

MISSION

Building human resources to deal with challenges posed by technology and to enable the learners to understand fundamentals of science and technology, conduct research and find applications towards sustainable development

LABORATORY FACILITIES

The School of Basic and Applied Sciences provides modern and well-equipped laboratories for practical learning and research activities.



Chemistry Laboratory

- ▶ Advanced analytical instruments.
- ▶ Organic and inorganic chemistry practical setup.
- ▶ Physical chemistry experimental facilities.
- ▶ Research-oriented laboratory environment.

Physics Laboratory

- ▶ Electronics and optics laboratory.
- ▶ Modern experimental instruments.
- ▶ Computational and measurement systems.
- ▶ Practical learning with scientific equipment.



Botany Laboratory

- ▶ Plant tissue culture facilities.
- ▶ Herbarium and botanical specimen collections.
- ▶ Microscopy and plant analysis equipment.
- ▶ Environmental and ecological study tools.

Zoology Laboratory

- ▶ Animal physiology instruments.
- ▶ Histology and microscopy facilities.
- ▶ Entomology and genetics practical setup.
- ▶ Research support equipment



Environmental Science Laboratory

- ▶ Environmental monitoring instruments.
- ▶ Water and soil testing facilities.
- ▶ Pollution analysis equipment.
- ▶ Field study and research support.

COURSE OFFERED

S.N.	PROGRAMME	ELIGIBILITY	DURATION
1	Bachelor of Science (B.Sc.)- (CBZ)	10+2 (PCB) with minimum 50% marks (5% relaxation for SC/ST)	6 Semester (3 Years)
2	Bachelor of Science (B.Sc.)- (PCM)	10+2 (PCM) with minimum 50% marks (5% relaxation for SC/ST)	6 Semester (3 Years)
3	Master of Science (M.Sc.) ■ Chemistry ■ Botany ■ Zoology ■ Physics ■ Mathematics	B.Sc. (CBZ, PCM) with minimum 55% marks (5% relaxation for SC/ST)	4 Semester (2 Years)
4	M.Sc. Environmental Sciences	Bachelor's degree in Environmental Science or related fields (e.g., Biology, Chemistry, Geography) with minimum 55% marks (5% relaxation for SC/ST)	4 Semester (2 Years)
5	Ph.D.	P.G. with minimum 55% marks (5% relaxation for SC/ST)	Minimum 3 years and maximum 6 years from the date of commencement of the session

FUTURE SCOPE OF COURSES

► B.Sc. BCZ

- Opportunities in biotechnology companies, agriculture departments, healthcare industries, and environmental organizations.
- Careers in government laboratories, food industries, and pharmaceutical sectors.
- Employment in research laboratories and diagnostic centers.
- Scope for higher education such as M.Sc., B.Ed., and competitive examinations.
- Opportunities in teaching, scientific assistance, and public sector organizations.

► B.Sc. PCM

- Careers in engineering, information technology, data science, and technical industries.
- Opportunities in government sectors such as railways, defence, ISRO, DRDO, and public sector units.
- Employment in research laboratories, banking, and software industries.
- Strong foundation for higher studies, research, and competitive examinations.
- Scope for higher education such as M.Sc., B.Ed., and competitive examinations.

► M.Sc. Chemistry

- Careers in pharmaceutical industries, chemical manufacturing industries, and quality control laboratories.
- Opportunities in forensic science, petrochemical industries, and environmental agencies.
- Employment in government research organizations and academic institutions.
- Scope for industrial research, teaching, and scientific consultancy.

► M.Sc. Botany

- Careers in forestry departments, agriculture sectors, biotechnology industries, and environmental organizations.

- Opportunities in plant conservation, herbal industries, and ecological research.
- Employment in government agricultural research centers and academia.

► M.Sc. Zoology

- Careers in wildlife conservation, fisheries, medical laboratories, and biotechnology industries.
- Opportunities in zoological parks, environmental organizations, and research institutions.
- Employment in government departments related to animal health and biodiversity.

► M.Sc. Physics

- Careers in electronics industries, research organizations, teaching institutions, and technical sectors.
- Opportunities in space research, defence services, and scientific laboratories.
- Employment in government and private research institutions.

► M.Sc. Mathematics

- Careers in banking, actuarial science, data analysis, statistics, and IT industries.
- Opportunities in government services, research organizations, and competitive examinations.
- Employment in teaching, finance, software industries, and analytics sectors.

► M.Sc. Environmental Sciences

- Careers in pollution control boards, environmental consultancy firms, NGOs, and sustainability projects.
- Opportunities in environmental management, waste management, and climate research.
- Employment in government environmental agencies and industrial safety sectors.



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
- ◆ 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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