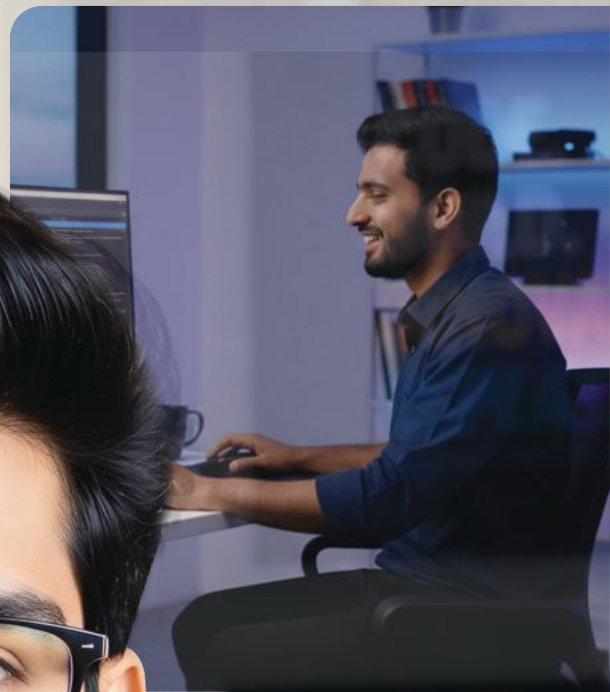




**NIRWAN
UNIVERSITY
— JAIPUR —**
शिक्षा संस्कार सामर्थ्य

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 COMPUTER SCIENCE & APPLICATIONS

CODING IS NOT JUST A SKILL; IT IS THE LANGUAGE OF TOMORROW'S INNOVATION.



www.nirwanuniversity.ac.in



+91 73570 31271

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 Sciences
- ▶ 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 Computer Science & Applications (SCSA) at Nirwan University Jaipur (NUJ) is a premier center of academic excellence, dedicated to shaping the next generation of technological leaders, software architects, and digital innovators. Our comprehensive academic ecosystem offers a diverse range of programs spanning Postgraduate Diploma (PGDCA), Undergraduate (BCA), and Postgraduate (MCA) levels across core and emerging computing disciplines.

At SCSA, we believe that impactful technical education balances academic rigor with real-world application. Our meticulously structured curricula ensure that students master fundamental computational principles while gaining vital practical programming skills and immersive, hands-on experience in state-of-the-art computer laboratories.

Beyond traditional classroom boundaries, SCSA stands out for its robust research footprint. Our faculty and scholars actively spearhead breakthrough investigations in critical, future-facing domains that directly impact global digital society:

- ▶ **Artificial Intelligence & Machine Learning:** Developing advanced algorithms for predictive modeling, deep learning architectures, and intelligent automation systems.
- ▶ **Cloud Computing & Cyber Security:** Engineering secure, scalable cloud infrastructure and robust cryptographic defenses to mitigate enterprise-level digital vulnerabilities.
- ▶ **Data Science & Big Data Analytics:** Innovating in large-scale data processing, predictive analytics frameworks, and smart data-driven business intelligence.
- ▶ **Full-Stack Development & Software Automation:** Designing modern, agile software architectures, cross-platform applications, and DevOps deployment pipelines.



OBJECTIVE

The core objectives of the School of Computer Science & Applications (SCSA) are strategically aligned to foster academic rigor, cutting-edge software development, and robust industry readiness among our students:

- ▶ **Academic Excellence Across Tiers:** To deliver high-quality, systematically structured computing education across PGDCA, BCA, and MCA programs that seamlessly blends foundational theoretical coding principles with rigorous software application development.
- ▶ **Fostering Holistic Innovation & Research:** To cultivate an active computing research ecosystem that encourages faculty and scholars to spearhead high-impact innovations in critical global tech sectors such as machine learning models, cloud security, big data processing, and automation algorithms.
- ▶ **Interdisciplinary Problem Solving:** To break traditional technical silos by integrating analytical logic with real-world applications, thereby producing software professionals who possess strong critical thinking, digital ethics, and versatile professional communication skills.
- ▶ **Driving Sustainable Digital Solutions:** To instill a deep-rooted commitment toward green computing, resource-efficient algorithms, and optimization practices, preparing students to actively solve the world's complex data-management challenges.

VISION

Empowering students to become innovative leaders, problem solver, critical thinker, and equipped with professional skill in the ever-evolving field of computer science and technology.

MISSION

- ▶ Foster a culture of innovation and inquiry, encouraging students to explore evolving technologies.
- ▶ Enrich the educational experience of students to cooperate effectively in a globalized world.
- ▶ Empower students' lifelong learners and ethical leaders who drive positive change in their societies.
- ▶ Create an inclusive learning environment where students from diverse backgrounds feel valued, respected, and supported.
- ▶ Develop deep knowledge in management, problem solving ability, leadership, communication, and interpersonal skills.

COURSE OFFERED

S.N.	PROGRAMME	ELIGIBILITY	DURATION
1	Bachelor of Computer Application (BCA)	10+2 or an equivalent (Any stream) exam with minimum 45% marks from a recognized board (5% relaxation in case of SC/ST category /Non Crimiliar OBC/EWS of Rajasthan/PWD category) admission through CET.	6 Semester (3 Years)
2	Master of Computer Application (MCA)	UG from any UGC recognized University with BCA/ Bachelor Degree in Computer Science Engineering or B. Tech. in any stream OR Passed B.Sc./ B.Com./ B.A. with Mathematics at 10+2 Level or Graduation Level (with additional bridge Courses as per the norms of the concerned University) with at least 50% marks (5% relaxation in case of SC/ST category and Non Crimiliar OBC/EWS of Rajasthan/PWD category) admission through CET	4 Semester (2 Years)
3	Post Graduation Diploma in Computer Application (PGDCA)	Bachelor's Degree from UGC recognized University with at least 50% marks (5% relaxation in case of SC/ST/OBC and Non Crimiliar OBC/EWS of Rajasthan/PWD category) admission through CET.	1 Year

LAB DETAILS

At the School of Computer Science & Applications (SCSA), our state-of-the-art computer laboratories serve as the vital link between theoretical programming concepts and real-world execution. Designed to meet global academic standards and modern software industry specifications, our labs are fully equipped with high-speed computing servers, advanced development networks, data-acquisition terminals, and specialized licensed software. Students engage in immersive, hands-on experimentation, application prototyping, and advanced computational research. Supervised by experienced faculty and dedicated technical staff, these facilities provide a safe, collaborative environment that fosters analytical thinking, debugging accuracy, and breakthrough software innovation, ensuring that our PGDCA, BCA, and MCA students graduate with true operational and architectural mastery.



FUTURE SCOPE & EMPLOYMENT OPPORTUNITIES

Practical IT Foundation: Focuses on foundational technology roles like Network Administration, Database Management, System Troubleshooting, and Tech Support. Graduates can secure Associate posts in the public sector (Railways, State IT Departments) or system monitoring profiles in private IT services.

Next-Gen Tech Leadership & Academia: Elevates careers into cutting-edge domains like Data Science leadership, Deep Reinforcement Learning models, automated cloud infrastructure (DevOps), and security consultancy. It also serves as a direct gateway to premium academic research, university teaching, and global tech research labs.

Core Software Engineering: Opens developer and graduate trainee roles through campus selection and national qualifiers in premium tech corporate groups like TCS, Infosys, Wipro, and HCL. In the private sector, graduates work as core Full-Stack Developers, Database Administrators, and Project Managers.

Advanced R&D and Analytics: Shifts toward high-end Research & Development, advanced data analytics, systems architecture, and specialized predictive model tuning. Postgraduates lead breakthrough innovations at global IT engineering hubs, multinational cloud networks, and fintech enterprises.



The School of Computer Science & Applications (SCSA) aims to produce highly skilled professionals, disruptive software innovators, meticulous researchers, and visionary tech entrepreneurs capable of steering the technological landscape of the future and driving sustainable digital and national growth

LEARNING OUTCOMES / WHAT STUDENTS LEARN FROM THE PROGRAMME

The technical education spectrum across PGDCA, BCA, and MCA programs is designed to progressively transform students from skilled coders into innovative engineering leaders. At the foundational level, the curriculum emphasizes hands-on operational competence, software maintenance, syntax debugging, and industry-standard database scripting. As students advance into graduate and postgraduate studies, the focus shifts toward complex algorithm design, cloud integration, and the assimilation of multidisciplinary technologies like artificial intelligence, neural networks, and automated software workflows. Ultimately, the higher tiers of these programs cultivate advanced research capabilities, mastery over sophisticated system modeling, and the strategic vision necessary to lead cutting-edge IT projects, drive scientific software innovation, and implement secure data-driven solutions globally.

Foundational Operational Competence: Ability to write, compile, and debug core programming structures, handle relational databases, and configure standard operating systems and network settings.

Software Design & Logic Mastery: Proficiency in generating precise algorithm architectures, system flowcharts, and object-oriented software models using modern developmental languages.

Complex Computational Analysis: Capability to apply advanced computing logic, discrete mathematics, structural data management, and data communication theories to diagnose and fix systemic software issues.

Modern Development Tool Usage: Mastery of advanced IDEs, deployment frameworks, and cloud orchestration tools, including GitHub, Docker, Kubernetes, AWS/Azure frameworks, and automated CI/CD pipelines.

Next-Generation Tech Integration: Skills to design, build, and deploy emerging technologies, such as responsive web apps, predictive machine learning models, and smart IoT device networks.

Project Management & Agile Delivery: Expertise in managing full software engineering lifecycles (SDLC) using Agile/Scrum methodologies, optimizing data pipelines, and conducting rigorous technical scalability studies.

Cyber Security & Data Compliance: Strict adherence to international and national cybersecurity laws, data privacy compliance protocols, data-encryption standards, and software quality auditing.

Leadership & Professional Ethics: Cultivation of strong technical communication, collaborative git-based team collaboration, strict digital professionalism ethics, and a commitment to lifelong adaptive tech learning.

KEY HIGHLIGHTS:

The educational and career pathways across PGDCA, BCA, and MCA levels offer a structured journey from technical logic execution to global IT and software leadership. These programs uniquely bridge the gap between abstract computer science theory and the upcoming digital future, making graduates highly resilient to shifting market technology trends. By offering clear pathways into secure government technical wings via competitive technical examinations and rapid corporate growth in high-tech application domains, this academic continuum guarantees versatile career trajectories. Ultimately, these programs act as the bedrock for modern digital infrastructure, transforming students into highly employable technical experts, full-stack design innovators, and computational research pioneers capable of engineering global soft-tech solutions.

IMMEDIATE VS. LONG-TERM VALUE

Delivers immediate, high-employability software skills at the foundational diploma level, while undergraduate and postgraduate tiers unlock lifetime growth as enterprise solutions consultants and technical directors (CTOs).

MULTIDISCIPLINARY CROSS-POLLINATION

Breaks traditional silos, training students at the intersection of business logic, database architectures, algorithmic engineering, and software user-experience design.

STRONG ENTREPRENEURIAL FOUNDATION

Equips students with the full-stack technical knowledge, agile system scaling strategies, and software project cost-estimation skills required to launch software startups and tech consultancies.

PROGRESSIVE SKILL TIERING

Seamlessly transitions student capabilities from foundational IT office systems and web scripting (PGDCA) to full-scale enterprise software programming (BCA), and finally to high-end data modeling and AI engineering (MCA).

DUAL-SECTOR TECHNICAL PILLARS

Provides robust entry pathways into both secure public sector technical departments (NIC, Nationalized Banks, Indian Railways IT divisions) and highly lucrative private software multinational corporations.

GATEWAY TO FRONTIER TECHNOLOGIES

Seamlessly transitions student capabilities from foundational IT office systems and web scripting (PGDCA) to full-scale enterprise software programming (BCA), and finally to high-end data modeling and AI engineering (MCA).

INDUSTRY 4.0 READINESS

Blends heavy traditional algorithmic logic with modern cloud virtualization, container automation (DevOps), and deep neural network applications.

ADVANCED SYSTEMS & SIMULATION EDGE

Heavy curriculum focus on high-demand, specialized computational tools and environments such as SQL/NoSQL databases, Linux server distributions, and Python-based predictive analytical engines.

GLOBAL MOBILITY & CAREER SCOPE

Programming frameworks and developer standards taught across these programs are globally aligned, allowing graduates to seamlessly transition into lucrative remote developer profiles and software research roles abroad.



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.)



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

Near Bassi- Rajadhok Toll, Agra Road, Jaipur - 303305



+91 73570 31271



info@nirwanuniversity.ac.in



www.nirwanuniversity.ac.in