



# (Draft Prospectus)

USCUniversity of Southern California

Admissions 2022







# **BACHELOR OF SCIENCE**

(Computer Science and Engineering) **2+2 Dual Degree Programme** 

THE FUTURE IS HERE

Email: ugadmissions.it@nirmauni.ac.in

## **NIRMA UNIVERSITY**

Established in 2003, Nirma University, Ahmedabad is a value-driven, research-oriented, student-centric, multidisciplinary, not-for-profit State Private University. The University is duly recognized by the University Grants Commission (UGC) under Section 2 (f) of the UGC Act. The University is a member of the Association of Indian Universities (AIU) and the Association of Commonwealth Universities (ACU). Within a short period, the University has emerged as a nationally renowned higher education institution. The University received the Centre of Excellence (CoE) status from the Government of Gujarat in January 2022. The University is reaccredited by the National Assessment and Accreditation Council (NAAC) with an 'A+' grade. The University and its constituent institutes have also received high rankings from renowned national ranking agencies such as the National Institutional Ranking Framework (NIRF), and Gujarat State Institutional Rating Framework (GSIRF). Dr Karsanbhai K Patel, Chairman, Nirma Group of Companies and Nirma Education and Research Foundation (NERF), is the President of the University. Under his leadership, the University is progressing and moving from strength to strength.





## THE INSTITUTE

The Institute of Technology, Nirma University, established in 1995, is a leading educational hub, offering multidisciplinary undergraduate, postgraduate and doctoral programmes in Engineering and Technology. It is known for its excellent teaching-learning pedagogy, state-of-the-art infrastructure, progressive curriculum, and discipline.

The Institute is ranked 125 by the National Institute Ranking Framework (NIRF) making its mark among four thousand plus engineering colleges in the country. The Institute is consistently placed at the top by the ranking agencies at the state level; and in Top 15 in the country, among the self-financed colleges.

All the undergraduate programmes are accredited by the National Board of Accreditation (NBA). The Institute is known for its prowess in Artificial Intelligence and Machine Learning and has established a Centre of Excellence in Data Science in collaboration with the State University of New York, Binghamton and another in Robotics and Automation.

The Institute has a Supercomputer facility (Param Shavak designed by C-DAC) awarded by the Gujarat Council of Science and Technology (GUJCOST) for conducting high-end advanced computing studies and research.



## THE DEPARTMENT

The Computer Science and Engineering department is equipped with a talented pool of faculty members, meritorious students, and state-of-the-art infrastructure. The Department offers BTech CSE, MTech CSE, MTech CSE (Cyber Security) and MTech CSE (Data Science), Master of Computer Application (MCA), Integrated BTech CSE MBA, Bachelor of Science (Computer Science and Engineering) 2+2 Dual Degree Programme, and PhD programme. In addition to basic computing facilities, the department has established advanced laboratories housing high-end workstations, NVIDIA Volta and Pascal GPU systems, CISCO networking equipment. IoT devices and specialized software for cyber forensics. The department has strong collaboration with many research organizations and leading industries like ISRO, PRL, IPR, BISAG, NVIDIA, Infosys, and CISCO Network Academy for academic and research purposes. Linkages with top-notch Universities abroad have also facilitated student internships, pre-approved MS programmes, and faculty exchange in the department.

## **ABOUT THE PROGRAMME**

The National Education Policy 2020 (NEP) emphasizes on internationalization of higher education, and it also encourages global exposure. Recently, the University Grants Commission (UGC) has come out with a framework of international higher education with the provision of Dual Degree Programme. This programme is designed in line with NEP 2020 and UGC.

The Department of Computer Science and Engineering is offering an international collaborative four-year Bachelor of Science (Computer Science and Engineering) 2+2 Dual Degree programme with highly ranked prestigious universities from USA and Canada. A student will study for the first two years at Nirma University, and the remaining two years at a partner university in the USA or Canada. The curriculum for the first two years is in line with the requirements of partner universities. The University has already signed an MoU with some of the prestigious universities such as University of Southern California, Los Angeles; Penn State, College Park; Florida Atlantic University, Boca Raton; Arizona State University, Tempe; Rochester Institute of Technology, Rochester; Iowa State University, Ames; and Binghamton University, Binghamton, New York.

# ADVANTAGES OF THE DUAL DEGREE PROGRAMME WITH THE USA AND CANADA UNIVERSITIES

USA and Canada offer state-of-the-art education and professional opportunities in Computer Science and Engineering (CSE). The students who have developed a strong foundation in CSE through two years of undergraduate education at Nirma University can easily transition into the final two years of a bachelor's degree at our partner university in the USA or Canada. They would be exposed to the modern technological infrastructure and global environment in the USA and Canada that will bring the best out of the students. After graduating from the Dual Degree programme, the students will have an impressive career globally.

## **CURRICULA FOR FIRST 2 YEARS AT NIRMA UNIVERSITY**

#### SEMESTER - I

- Linear Algebra
- Physics
- Electrical Science
- · Computer Programming I
- · Digital Electronics
- · General English
- Computer Ethics and Human Values

# **SEMESTER - II**

- Calculus
- Chemistry
- Critical Thinking
- Written Communication
- Introduction to AI and ML
- Statistics
- Computer Programming II

#### SEMESTER - III

- Discrete Mathematics
- Data Structures
- Economics
- Object Oriented Programming
- · Computer Architecture
- Research Methodology
- Internship

#### **SEMESTER - IV**

- · Introduction to Design and Analysis of Algorithms
- Microprocessor and Programming
- Principles of Software Development
- Web Technologies
- **Digital Communications**
- **Technical Writing**









## **INTAKE**

#### **Number of Seats: 30**

#### **ADDITIONAL INFORMATION**

- Hostel facility is available for girl students at the Nirma University campus.
- Nirma University has already entered into understanding with the following universities in the USA (more universities are likely to be included soon).
  - University of Southern California, Los Angeles.
  - Penn State, College Park.
  - Florida Atlantic University, Boca Raton.
  - Arizona State University, Tempe.
  - Rochester Institute of Technology, Rochester.
  - Iowa State University, Ames.
  - Binghamton University, Binghamton, New York.
- The undergraduate degree will be awarded by the partner university in the USA/Canada as well as the Nirma University
- Getting a valid passport and obtaining visa from the concerned embassy are the sole responsibility of the student. In addition, the student is also required to clear the TOEFL examination.





## **ADMISSION PROCESS**

#### **ELIGIBILITY**

The candidate must have passed the qualifying Class-XII (Science) examination with Physics, Chemistry, and Mathematics from a recognized board with the minimum 60 percentage aggregate marks.

#### **SELECTION CRITERIA**

Admission is based on the AIR of the Joint Entrance Examination (JEE – Main). Candidates who have appeared for JEE – Main 2022 can apply for admission to the programme.

#### **PROGRAMME FEES**

US \$6500 per year for first 2 years. For 3rd and 4th Year, fees will be applicable as per the norms defined by the partner institute.

#### **APPLICATION FORM FEE**

Rs 1500/- (non-refundable)

#### **PAYMENT MODE**

Online Payment through Credit Card/Debit Card/Net Banking

Candidates are required to visit the following website for application and further information:

https://technology.nirmauni.ac.in/dualdegree



# **IMPORTANT DATES**

• Online Application starts from

September 20, 2022

• Last date for Online Application

September 30, 2022

### **PROGRAMME COORDINATOR**

#### **Dr Zunnun Narmawala**

Email: zunnun.narmawala@nirmauni.ac.in Mobile No: 8849308894

# HEAD, INTERNATIONAL RELATIONS

#### Dr Mehul Naik

Email: mehul.naik@nirmauni.ac.in Mobile No: 9429453458



#### **The Admission Officer**

#### **UG Admission Committee 2022**

ID-Block, ID-210, Nirma University, Sarkhej-Gandhinagar Highway,

Ahmedabad – 382481, Gujarat- India

#### Phone No. (admission office)

+91-079-71652585, +91-02717-241911/12/13/14/15 (Ext. 585)

**E-mail ID:** ugadmissions.it@nirmauni.ac.in

Website URL: https://technology.nirmauni.ac.in/admission-aid/under-graduate/b-tech/

#### **Admission Office Timings**

11.00 a.m. to 4.00 p.m. (Monday to Friday & Odd - Saturdays)