



NITTE

(Deemed to be University)

**NITTE UNIVERSITY CENTRE FOR
SCIENCE EDUCATION AND RESEARCH
JUSTICE K S HEGDE CHARITABLE HOSPITAL**

Deralakatte, Mangaluru - 575018



Justice K S Hegde

Founder

About the Management

Nitte Education Trust was founded in 1979 by Late Justice K S Hegde, former Judge of the Supreme Court of India and Speaker of the Lok Sabha. Justice Hegde strongly believed that education is pivotal to the overall progress of a community and this vision led to the birth of Nitte Education Trust. His legacy is being continued by his son, Mr. N Vinaya Hegde.

ROLL OF HONOUR

NITTE (Deemed to be University) QS ASIA UNIVERSITY RANKING 2020 451-500 BAND	NITTE (Deemed to be University) QS INDIA UNIVERSITY RANKING 2020 56-60 BAND	NITTE (Deemed to be University) NIRF 2020 UNIVERSITY RANKING 74	NITTE (Deemed to be University) NAAC ACCREDITATION 'A' GRADE
NITTE (Deemed to be University) QS I-GAUGE INDIA UNIVERSITY RATING 2019 DIAMOND	NITTE (Deemed to be University) QS I-GAUGE INDIA E-LEAD CERTIFIED	ABSMIDS NIRF 2020 DENTAL RANKING 5	KSHEMA NIRF 2020 MEDICAL RANKING 36
NGSMIPS NIRF 2020 PHARMACY RANKING 49	NMIT NIRF 2020 ENGINEERING RANKING 128	NMAMIT NIRF 2020 ENGINEERING RANKING 133	NMAMIT QS I-GAUGE INDIA E-LEAD CERTIFIED
NGSMIPS NBA BPHARM ACCREDITED	NMAMIT NMIT NBA BE PROGRAMS ACCREDITED	NMAMIT NMIT AICTE-CII SURVEY 2019 HIGH INDUSTRY LINKAGES PLATINUM	NMAMIT QS I-GAUGE INDIA COLLEGE RATING 2019 DIAMOND

NITTE UNIVERSITY CENTRE FOR SCIENCE EDUCATION & RESEARCH

About the Institution

Nitte University Centre for Science Education & Research was established in 2013 with state-of-the-art resources. The centre offers courses that have great potential for employment in research. The courses are highly interdisciplinary, application-oriented, skill-based and provide a perfect platform for those aspiring to take up a career in advanced research and development. The course curriculum is designed to help students gather not only theoretical knowledge but also gain hands-on practical experience in high-end molecular techniques and tools used in biological research. The institute employs Choice Based Credit System (CBCS), which is a student-centric teaching method that allows students to choose their courses according to their learning needs, interests and aptitude. The impetus is on “One Health” and the various infectious, non-infectious, zoonotic and environmental issues affecting human health. The centre also offers a PhD in Biological Science.

About Biomedical Science

Biomedical Science is an interdisciplinary science that involves the study of human health and diseases. The curriculum for BSc (Honours) Biomedical Science is designed on Choice Based Credit System (CBCS) prescribed by the University Grants Commission (UGC). In CBCS, the major change is a shift from the traditional marking system to a grading system. Nitte is the first University in Karnataka to offer this unique course, designed to provide wider career options and increased employability of the students.

Graduates and postgraduates in biomedical sciences are in great demand in the healthcare industry and play a role in diagnostic services, biomedical instrumentation, drug development, biotech and pharmaceutical industries, contributing to the development of new diagnostics or therapeutic agents and providing regulatory services.

Faculty

Director

Dr Indrani Karunasagar, MSc (Microbiology), PhD, is a renowned scientist, known internationally in the area of biomedical education and research. She has been nominated by UNESCO as Director of the Microbial Resources Centre (MIRCEN) in Biotechnology, which is based in NUCSER. She is the recipient of Sir M Visvesvaraya Award, 2014 for excellence in research and lifetime contribution to Science & Technology, instituted by the Govt. of Karnataka, apart from several national awards and international recognitions bestowed on her.

The complete list of teaching faculty is available at www.nucser.nitte.edu.in



Courses

BSc (HONOURS) BIOMEDICAL SCIENCE

Intake: 50 | **Duration:** 3 years (6 semesters)

Eligibility

Pass in 10+2 examination, with 40% marks in Physics, Chemistry and Biology/ Biotechnology with English as one of the languages of study. The candidate should have completed 17 years of age as on 31st December of the year of admission.

Course Content

Core subjects: These are compulsory subjects spread across six semesters, which include Basics of Human Anatomy & Physiology, General & Clinical Biochemistry, Basic & Medical Microbiology, Fundamental & Medical Genetics, Immunology, Molecular Biology, Pharmacology & Toxicology, Cancer Biology and Biotechnology.

Elective courses: Elective courses are generic or discipline-specific, which the students can choose from a pool of courses and which may be very specific or specialized or advanced or supportive to the discipline/subject of study. For instance, Food & Nutrition Cell & Developmental Biology, Herbal Medicines, Biostatistics, Environmental Pollution and Human Health are some of the examples of generic electives. Biophysics & Instrumentation, Genomics & Precision Medicine, Methods in Forensic Science are some examples of discipline-specific electives offered.

Skill enhancement courses: The course also gives an opportunity to improve skills and enhance knowledge in areas related to biomedical science. In the final semester, there is a provision to carry out a short research project that a student can opt, in lieu of a discipline-specific elective paper. The introduction of a research component at the UG level provides the perfect platform for a career in advanced research and development to further their research skills in postgraduate studies.

Admission Procedure

Students seeking admission to BSc (Honours) Biomedical Science are required to submit the Admission Query form available on the homepage of www.nitte.edu.in

On receipt of the same, the Admission Section will guide the students with the process of registration and admission.

Admission to BSc (Honours) Biomedical Science is based on merit in the qualifying examination.



Documents required for admission to BSc (Honours) Biomedical Science

- 10th standard pass certificate for proof of date of birth (Original + 3 attested copies)
- 12th standard or equivalent marks card (Original + 3 attested copies)
- Transfer certificate from the institution last attended (Original + 3 attested copies)
- Conduct certificate from the institution last attended
- Migration certificate from the Board of the institution last studied
- Physical fitness certificate from a registered medical practitioner
- Blood group certificate
- Photographs: Recent colour photo with white background, of resolution 300-600 dpi & size 35 mm x 45 mm (P.P size 5 Nos.) & size 20 mm x 25 mm (Stamp size 5 Nos.)
- Aadhaar card copy of the student

MSc (BIOMEDICAL SCIENCE)

Intake: 15 | **Duration:** 2 years (4 semesters)

The focus in this program is on gaining advanced knowledge in the field of biomedicine. The program covers all aspects of human diseases including the disorders caused by infectious agents, genetic conditions or environmental pollutants and toxicants.

MSc (FOOD SAFETY & BIOTECHNOLOGY)

Intake: 10 | **Duration:** 2 years (4 semesters)

In Food Safety & Biotechnology, the focus is on food safety and public health. It utilizes a highly integrated approach to gain an understanding of how microorganisms, toxins and other chemicals associated with food can affect human health and the role of biotechnology in today's world and how effectively and efficiently, adulterated or contaminated food can be identified.

MSc (BIOTECHNOLOGY)

Intake: 5 | **Duration:** 2 years (4 semesters)

This course aims to gain in-depth understanding of handling biological systems and biomolecules. It prepares students to conduct research relevant to social needs and to practice bioethics and biosafety in scientific research. It also aims to generate potential career paths in life sciences, which will offer solutions to emerging challenges in food, health and environment sectors.

MSc (MICROBIOLOGY)

Intake: 5 | **Duration:** 2 years (4 semesters)

The course aims to acquire knowledge of complex life processes in microorganisms, to gain in-depth understanding of the significance and applications of microorganisms. It is research-oriented and will mould students to formulate and solve research hypotheses in microbiology. They will be trained to practice and conduct responsible research, relevant to social needs abiding by the bioethics and biosafety regulations. The course focuses on application of knowledge and offers solutions to emerging challenges in one's health.

MSc Program Highlights

The highlights of the CBCS curriculum offered in the Masters program are:

- Emphasis on practicals in curriculum (70%)
- Two semesters entirely devoted to research
- Sophisticated research facilities with state-of-the-art infrastructure
- Credits for extracurricular activities

Eligibility for MSc Programs

Bachelor's degree in Biomedical Science/Applied Biological Sciences/Biotechnology/Biochemistry/Microbiology/Agricultural Sciences/Food & Nutrition/Environmental Science/Veterinary Science/Fisheries Science/Medical Imaging Technology/Operation Theatre Technology/Medical Lab Technology/BE or BTech in Biotechnology/Graduates in Medicine/Dentistry/Pharmacy/Nursing and any other equivalent life science degree, with minimum of 50% marks. The candidate should have completed 20 years of age as on 31st December of the year of admission.

Career Opportunities

- Academicians
- Diagnostic labs (lab technician or resource person)
- Biotech companies dealing with Biomedical instruments/consumables/products
- Drug manufacturing companies as wet lab technicians
- Application specialists in biotech/food industries
- Opportunities in regulatory agencies
- Technical writers/science communicators in publishing houses
- In Government/private health care centres as experts in molecular techniques
- Entrepreneurs

Admission Procedure

Students seeking admission to MSc programs are required to submit the Admission Query form available on the homepage of www.nitte.edu.in

On receipt of the same, the Admission Section will guide the students with the process of registration and admission.

Admission to MSc program is based on merit in the qualifying examination.

Documents required for admission to MSc programs

- 10th standard pass certificate for proof of date of birth (Original + 3 copies)
- Degree marks cards (Original + 3 copies)
- Degree certificate issued by a recognized University (Original + 3 copies)
- Transfer certificate from the institution last attended (Original + 3 copies)
- Conduct certificate from the institution last attended
- Migration certificate from the board of the institution last studied
- Physical fitness certificate from a registered medical practitioner
- Blood group certificate
- Photographs: Recent colour photo with white background, of resolution 300-600 dpi & size 35 mm x 45 mm (P.P size 5 Nos.) & size 20 mm x 25 mm (Stamp size 5 Nos.)
- Aadhaar card copy of the student

Commencement of Course

The BSc/MSc courses commence on the date prescribed by the University, generally in August.

Facilities

Library

An extensive library is in place with a large stock of text and reference books, subscriptions to national and international journals and a direct link with Helinet and Delnet Consortia, with access to online journals. E-library facility with high-speed internet connectivity is also available.

Laboratory

State-of-the-art laboratories for cutting edge research in the field of biomedicine, food safety & environmental health and dedicated labs for student practicals and research projects fitted with modern amenities and equipped with advanced and high-end instruments that enable basic, applied and translational research, are available.

Cafeteria

A cafeteria serving a wide range of vegetarian and non-vegetarian food is available within the campus.

Activities beyond classrooms:

Besides academics, activities that promote holistic development of students are encouraged at NUCSER. The institute has a proactive student union which allows young minds to build leadership qualities. Several student centric events are planned, organized and executed by the student union that include collage, cooking, painting, fashion shows and the annual cultural extravaganza, "GOONJ". Festivals are celebrated across communities, race and creed - a vivid evidence of harmony on campus. In NUCSER, attention is also paid towards generating skilled professionals who have social concern with a strong commitment towards maintaining a green and clean environment. A vibrant NSS and a Green Wing take active part in cleaning the campus, creating awareness on health and hygiene in the community, in addition to planting, geo-tagging and bar coding of trees in line with the university motto, "Nurture Nature".

Sports

An air-conditioned gymnasium, multi-purpose playground with a running track, basketball, volleyball and badminton courts are available in the campus. A full-time physical education teacher is available in the institute to train the students in sports activities.

Hostel

The college provides safe, secure, clean and well-furnished hostels with hygienic vegetarian and non-vegetarian food. The hostel mess is maintained by an app "Paaka-shale" which gives students the freedom to pre-book their favorite dishes apart from their regular vegetarian menu. Recreation facilities include indoor & outdoor games and television. A resident warden is available to ensure safety and healthcare requirements like doctor-on-call facility and to handle medical emergencies. The hostel has zero tolerance towards ragging, use of tobacco and drug abuse. Security personnel are placed round-the-clock in all the hostels.

Medicare

Students can avail medical and dental treatment at the 1000-bed multispecialty Justice K S Hegde Charitable Hospital and the A B Shetty Dental College Hospital.

Conveyance

Free transport facilities are provided to students through a fleet of buses plying regularly from various points in the city to the college and back. The campus also provides bicycles to commute within the campus. This is an initiative taken to maintain a healthy lifestyle and a green campus.



JUSTICE K S HEGDE CHARITABLE HOSPITAL

About the Hospital

Justice K S Hegde Charitable Hospital, a 1000-bed multispecialty teaching hospital for K S Hegde Medical Academy, is one of the leading NABH Safe-I certified superspecialty hospitals in Mangaluru, equipped with all modern diagnostic and therapeutic facilities.

Situated about 14 kms from the heart of the city of Mangaluru, it is a calm and ideal place for treatment. The hospital has a motto of providing quality treatment and healthcare at affordable cost.

Broad Specialties

- General Medicine
- General Surgery
- Anaesthesiology
- Respiratory Medicine
- Orthopaedics
- Obstetrics & Gynecology
- Pediatrics
- Psychiatry
- Dermatology & Venereology and Leprosy
- Ophthalmology
- Radio-Diagnosis
- Otorhinolaryngology
- Radiotherapy

Superspecialties

- Cardiology
- Cardio-thoracic Surgery
- Neurology
- Neurosurgery
- Nephrology
- Urology
- Pediatric Surgery
- Oncology
- Endocrinology
- Gastroenterology and GI Surgery
- Plastic Surgery
- Onco Surgery
- Craniofacial Surgery

Other Clinical Facilities

- Audiology
- Speech Therapy
- Physiotherapy
- Pharmacy Practice
- Nutrition & Dietetics





Features

- Regular and air-conditioned rooms and suites
- Special consultation on prior appointments
- Special clinic - 9 am to 6 pm
- Patient care and counselling cell
- Sleep study and day care facilities
- 18 modern operation theatres with advanced life-saving facilities
- Fully-equipped 67 bed Intensive/Critical Care facility that include closed ICU, ICCU, MICU, NICU, PICU, RICU, NRICU and HDU
- 24-hour Emergency and Trauma Centre with attached OT, diagnostic and life-support systems like ultrasound, X-ray, ventilators and monitors
- 24-hour diagnostic laboratory and radio diagnosis, blood bank, pharmacy and ambulance services
- Laparoscopic surgery
- Arthroscopic surgery
- Joint replacement and micro vascular surgeries
- Complex spine and brain surgeries
- Micro-laryngeal surgery
- Endoscopic sinus surgery
- Corneal transplant
- Renal transplant
- 1.5 Tesla MRI unit, MD CT, 600 MA DR System, 800 mA X-ray machine with IITV and fluoroscopy, 4D Ultrasound with Colour Doppler
- Mammography
- Centre for Cancer Treatment and Research
- IVF Centre for assisted reproductive therapy
- Centre for Craniofacial Surgery
- Centre for Neurosciences
- Tissue Bank to meet the demands of different types of bone grafts, tendon grafts, amnion and skin grafts

Superspecialty Departments

Cardiac Sciences

- Cardio-thoracic and vascular surgery
- Cardiology
- Bypass surgery
- Valve replacement and repair of cardiac defects
- Pacemaker implantations
- Echo, TMT and Holter for entire non-invasive interventions
- State-of-the-art flat panel Cath Lab with Fractional Flow Reserve (FFR) facilities for Angiogram, Angioplasty and Valvuloplasty

Nephro Urology

- Modern hemodialysis unit and a renal ICU
- Renal transplants
- Laser Prostatectomy
- Laser Lithotripsy
- URS (UrethroRenoscopy) and endoscopic surgery to remove ureteric stones
- Transurethral surgeries to remove prostate and bladder tumors and A-V fistula surgery for dialysis patients

Pediatric Surgery

- Neonatal surgeries
- Pediatric urology
- Specialized laparoscopic set up for Pediatric abdominal and thoracic surgery
- State-of-the-art Neonatal Intensive Care Unit (NICU) and Pediatric Intensive Care Unit (PICU)

Neurology

- Epilepsy Clinic
- Movement Disorder Clinic
- EEG machine and electro-physiology equipment
- Multiple Sclerosis Research Unit
- Advanced Neurological Research Centre

Neurosurgery

- Neuro OT with C-arm, microscope, neuro endoscope and state-of-the-art equipment for minimal invasive and stereotactic surgeries supported by a full-fledged Neuro-ICU (NRICU)
- Surgeries to treat brain tumours, aneurysms, complex spine surgeries, endoscopic brain and spinal disorders

Oncology and Radiotherapy

- Comprehensive Oncology Centre with medical oncology, surgical oncology and radiation oncology
- State of the art LINAC
- Two Dimensional Radiotherapy (2DRT)
- Three Dimensional Radiotherapy (3DRT)
- Intensity Modulated Radiotherapy (IMRT)
- Image Guided Radiotherapy (IGRT)
- Pain and palliative care services

Endocrinology

- Diabetes care program for retinopathy, nephropathy, neuropathy, ischemic heart disease, management of gestational diabetes
- Pediatric diabetes clinic
- Treatment for obesity and lipid disorders, metabolic bone disease, disorders of the ovaries and testes, endocrine disorders of infertility, hirsutism, parathyroid and adrenal disorders.

Craniofacial Surgery

- Treatment of cleft and craniofacial anomalies and rhinoplasty
- Cleft and craniofacial care through treatment related to pediatrics, pedodontics, orthodontics and speech therapy

Plastic Surgery

- Repair and reconstructive surgeries
- Microvascular surgery
- Cosmetic surgery
- Burn management
- Diabetic foot management
- Congenital deformities correction

Medical Gastroenterology & Hepatology

- ERCP: Pancreatic and Biliary Disease - detection and treatment
- EUS (Endoscopic Ultrasonography): Pancreatic and Biliary cancer detection and surveillance
- Upper GI Endoscopy: Esophageal and Gastric cancer detection and surveillance
- Colonoscopy: Colon cancer detection and surveillance
- Therapeutic Endoscopy - Endoscopic removal of polyps in stomach, colon and rectum, PEG, Cystogastrostomy for pancreatic pseudocyst
- Stenting for Advanced Esophageal, Gastro-duodenal, Biliary, Pancreatic and Colonic cancers
- Argon plasma coagulation for hemostasis and fulguration of unresectable tumors
- Esophageal and ano-rectal manometry
- 24-hour Impedance pH studies

Surgical Gastroenterology & Hepato-Pancreato-Biliary Surgery

- Liver resections for tumors/cancers
- Liver transplantation
- Pancreatic surgeries for cancer/tumors and chronic pancreatitis
- Laparoscopic surgeries for cancerous and non-cancerous diseases of esophagus, stomach, small and large intestine and rectum
- Advanced laparoscopic surgeries for GERD, hiatal hernia, achalasia cardia
- Laparoscopic surgeries for gall stones, spleen, pancreas
- Laparoscopic weight loss/bariatric surgeries

Specialty Departments

General Medicine

- Modern diagnostic equipment and facilities like ICU and ICCU with monitors, ventilators and defibrillators
- Specialty clinics for diabetes, hypertension, geriatrics

General Surgery

- Well-equipped modern operating theatres
- Latest instruments and equipment such as laparoscopes and endoscopes
- Routine procedures as well as advanced laparoscopic, thoracoscopic, gastrointestinal, hepatobiliary and pancreatic surgeries

Orthopaedics

- Tissue Bank to meet the demands of different types of bone grafts, tendon grafts, amnion and skin grafts
- Trauma care
- Complete arthroscopy instruments for keyhole surgeries
- Hip and knee replacement surgeries

Ophthalmology

- Equipped with Slit Lamps, A-scan, Humphrey Field Analyser
- 24-hour eye bank
- Specialty clinics for cataract surgery and retinal defects
- Corneal transplant

Otorhinolaryngology

- Treatment of tumors and cancers of the head and neck area, skull base surgery
- Micro-ear surgery, cochlear implant, micro-laryngeal surgery, endoscopic sinus surgery, video laryngoscopy, rigid and flexible bronchoscopy and esophagoscopy equipped with stroboscopy for diagnosing voice disorders, electronystagmography

Obstetrics & Gynecology

- Fertility clinic - IVF clinic for assisted reproductive therapy
- Cancer screening
- High-risk pregnancy management
- Menopause clinic

Pediatrics

- Fully-equipped Neonatal Intensive Care Unit (NICU)
- Pediatric-Intensive Care Unit (PICU)
- Epilepsy clinic, high-risk new-born clinic, development clinic, asthma clinic, well-baby and immunization clinic
- Special nephrology and nephro-urology clinic
- Genetic counselling, Genetics lab

Respiratory Medicine

- Anti-tubercular treatment (DOTS)
- Treatment of naso bronchial allergy and asthma
- Pulmonary function test and arterial blood gas analysis
- Bronchoscopy
- Sleep lab
- Endoscopic - Bronchial ultrasonography

Dermatology

- Diode Laser for permanent hair reduction
- CO2 Laser for acne scar treatment, skin resurfacing and keloid treatment
- Spectra XT Laser for melasma treatment, tattoo, birth mark and mole removal
- Phototherapy unit
- Dermato-surgical procedures - biopsies, surgeries for vitiligo and cryosurgery

Radio-diagnosis

- 1.5 Tesla MRI unit
- MD CT scan with CT angiogram and 3D reconstruction facilities
- C - arm with image intensifier
- 4D Ultra-sound with colour doppler unit
- Mammography unit
- 6 X-ray machines
- 800 mA unit with IITV and fluoroscopy
- Digital Radiography

PROGRAMS AT NITTE

COLLEGES	COURSES OFFERED
NMAM Institute of Technology (Nitte)	BE: Artificial Intelligence & Machine Learning Biotechnology Civil Computer & Communication Computer Science Electronics & Communication Electrical & Electronics Information Science Mechanical MTech MCA MBA PhD
Nitte Meenakshi Institute of Technology (Bengaluru)	BE: Aeronautical Civil Computer Science Electrical & Electronics Electronics & Communication Information Science Mechanical MTech MCA MBA PhD
K S Hegde Medical Academy (Mangaluru)	MBBS MD.MS MCh PhD MPH (Public Health) MHAHSM (Hospital Administration & Health Systems Management) BSc & MSc: Anaesthesia & Operation Theatre Technology Medical Imaging Technology Medical Lab Technology Respiratory Therapy
A B Shetty Memorial Institute of Dental Sciences (Mangaluru)	BDS MDS PhD Certificate Course in Oral Implantology
NGSM Institute of Pharmaceutical Sciences (Mangaluru)	DPharm BPharm PharmD PharmD (Post Baccalaureate) MPharm PhD
Nitte College of Pharmaceutical Sciences (Bengaluru)	DPharm BPharm
Nitte Usha Institute of Nursing Sciences (Mangaluru)	GNM PB BSc Nursing BSc Nursing MSc Nursing PhD Post Basic Diploma in Dialysis Nursing
Nitte Institute of Physiotherapy (Mangaluru)	BPT MPT PhD
Nitte Institute of Speech & Hearing (Mangaluru)	B.ASLP
Nitte University Centre for Science Education & Research (Mangaluru)	BSc (Honors) Biomedical Science MSc: Biomedical Science Food Safety & Biotechnology Microbiology Biotechnology PhD
Nitte Institute of Architecture (Mangaluru)	BArch
Nitte School of Architecture (Bengaluru)	BArch BPlanning
Nitte Institute of Communication (Mangaluru)	BA & MA (Journalism & Mass Communication)
Sarosh Institute of Hotel Administration (Mangaluru)	BHM
Nitte Institute of Tourism & Hospitality Studies (Mangaluru)	BSc (HS)
Justice K S Hegde Institute of Management (Nitte)	MBA PhD
Nitte School of Management (Bengaluru)	PGDM Executive PGDM
Nitte School of Fashion Technology & Interior Design (Bengaluru)	BSc: Fashion & Apparel Design Interior Design & Decoration Diploma: Fashion Design Interior Design
Dr NSAM First Grade College (Nitte)	BSc BCom BBA
Dr NSAM First Grade College (Bengaluru)	BBA BCom
Nitte Rukmini Adyanthaya Memorial Polytechnic (Nitte)	Diploma in Engineering: Civil Computer Science Electrical & Electronics Electronics & Communications Mechanical Apparel Design & Fabrication Technology



For further details, you may contact:

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