

CONSULTANCY SERVICES

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National Forensic Sciences University

Knowledge | Wisdom | Fulfilmen

An Institution of National Importance (Ministry of Home Affairs, Government of India



ABOUT NATIONAL FORENSIC SCIENCES UNIVERSITY

The National Forensic Sciences University (NFSU) with the status of an Institution of National Importance (INI) is the world's first and only University dedicated to forensic, behavioural, cyber security, digital forensics and allied sciences. It was established by the Government of India through Act, 2020 (32 of 2020) with the objective of fulfilling the acute shortage against the increasing demand for forensic experts in the country and around the world. The University has eight campuses across the country: Gujarat, Delhi, Goa, Tripura, Bhopal, Pune, Guwahati and Manipur. The headquarter of all campuses continues to be at its ultra-modern and lush green campus at Gandhinagar, the capital city of Gujarat-a vibrant and dynamic state.

The University comprises of various schools & centers/cells/institutes spread across wide-ranging academic disciplines of Forensic Science, Cyber Security and Digital Forensics, Behavioural Sciences, Forensic Psychology, Engineering & Technology, Pharmacy, Management Studies, Police Science & Security Studies, Medico Legal Studies and Law, Forensic Justice and Policy Studies, Doctoral Studies and Research, Interdisciplinary Research-Writing Clinic; and Open Learning. Presently, the University offers a wide range of under-graduate, post-graduate and integrated courses. Besides this, it offers various short-term training programs for the officers from diverse fields such as the police, judiciary, prosecution, armed forces, academics, finance, banking, etc. To harness the latest knowledge, advanced technologies, and best practices, NFSU has also entered into academic and consulting collaborations worldwide with more than 130 multi-disciplined institutions.

One of its unique features is that it offers expert consultancy in setting up or upgrading various investigative and security-related capabilities in the country and abroad. The University boasts state-of-the-art facilities, which includes Cyber Defense Center (CDC), Ballistics Research Centre & Testing Range (BRCTR), Centre of Happiness & Wellbeing, Centre of Excellence for Narcotics Drugs and Psychotropic Substance (NDPS), Food Testing Laboratory, Center of Excellence in DNA Forensics, Centre for Futuristic Defence Studies, Centre of Excellence of Investigative and Forensic Psycology, the first-ever International Centre for Humanitarian Forensics (ICHF) in collaboration with the ICRC, Forensic Innovation Centre, etc.

MESSAGE FROM THE VICE-CHANCELLOR

I am pleased to present this brochure on consultancy services that encapsulate our objective to achieve and improve human-resource skilling across academic, industrial, individual, public, and private organizations. Since its inception, our University has constantly strived to improve the quality of learning via specialized courses and training imparted by faculty with research, academic, and industry experience.

To enhance capacity-building, innovation, and technological advancement and to meet industry requirements; we offer high-quality, wide-ranging research and consultancy services in the domains of Cyber Security, Narcotics Drug & Psychotropic Substances, Finger Prints and Document Examination, Digital Forensics, Ballistic Testing, Forensic Biology and Biotechnology, Forensic Chemistry and Toxicology, Nano Technology, Food-Technology, Forensic Structural Engineering, Pharmacy, Management, Behavioural Science and Technical evaluation of Newly Developed Technology.

We practice and impart the latest cutting-edge technologies that add value to existing knowledge by providing professional methods and skills. Towards this end, we have undertaken a large number of research and consultancy projects that have been innovative and relevant. The objective is to accomplish skill-building and improve employment opportunities. Our training programs, workshops, and lectures stem from experience, creativity, and innovative technologies.

 $Iam \, sure \, that \, you \, will \, find \, our \, programs \, and \, initiatives \, helpful \, in \, the \, context \, of \, industry-relevant \, niche \, skills \, requirements.$

We look forward to your continued encouragement, support, and association at NFSU!

Dr. J. M. VyasVice-Chancellor
National Forensic Sciences University



MESSAGE FROM THE DIRECTOR

I am proud to share this brochure that will open a wealth of opportunities for everybody wanting to gain specialized skills!

With a vision to empower people with quality education, intensive training and hands-on practical experience, we offer relevant research and consultancy services reflecting contemporary trends. Through applied tool-based training programs for people from different sectors, we aim to transform the learning experience.

The aim is to increase opportunities for employment in the job market, improve critical thinking and problem-solving skills in a practical manner, and align to industry needs. We have state-of-the-art infrastructure and experienced faculty who have consistently engaged in research and consultancy. By using hybrid forensic and technological frames, we envision providing solutions worldwide. We have specialized centers like the Cyber Defense Center, Narcotics Drugs and Psychotropic Substances, Center of Ballistics Research Center and Testing Range, and Center for Multimedia Forensics.

Our consultancy services included customized training programs, open enrollment programs, consultancy services, HR assessments, outbound training programs, academic and certificate training, and government and social sector programs.

I am confident that our attempts to build bridges between theory, academics, and practicality will be beneficial to everybody.

I wish you all success!

Prof. (Dr.) Purvi Pokhariyal

Director - Academics, Research & Consultancy Campus Director - Gujarat Campus National Forensic Sciences University



Consultancy Services

NFSU consulting services brings a unique forensic investigations workplace to understand the perceived current and potential future issues using a hybrid forensic science and technological models. It provides solutions to contemporary forensic issues for organizations across the globe in achieving sustained competitive advantages by adding values to human through cutting edge, applicative tool-based training programs to different sectors. The objectives of consultancy services are:

- Creating value by translating state of the art ideas into unique and distinctive solutions which will direct and guide academic, industrial, individual, public and private organizations beyond problem solving.
- To provide a wide range of available university expertise, professional methods and technologies as consultancy services for the benefit of society.
- Converting the university mission and visions into reality through transformational learning and practice.

CONSULTANCY SERVICES OFFERED BY VARIOUS SCHOOLS AND CENTRES





SCHOOL OF FORENSIC SCIENCE



FORENSIC BIOLOGY AND BIOTECHNOLOGY

Services Offered:

- DNA Profiling from Biological Specimens
- Body Fluid and Biological Specimen Identification
- COVID and Anti-Viral Testing
- Molecular Identification (Wildlife species, Microbes)
- Forensic Proteomics
- Industrial Consultancy (Coatings, Disinfectants, Instruments, Pharmaceutical Samples)
- Validation of Equipment and Tools used in Forensics and Biological Sciences

Contact Details

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FORENSIC CHEMISTRY AND TOXICOLOGY

Services Offered:

- Identification and Quantification of Narcotic Drugs and Psychotropic Substances
- Identification of Explosives in Post Blast Residues
- Identification of Petroleum Hydrocarbon in Fire and Arson Cases
- Identification and Quantification of Poisons (i.e, Drugs, Pesticides, Metals, etc.) from Various Matrices
- Detection of Food Adulterants in Different Food Substances.
- Identification and Quantification of Ethanol in Biological Fluids
- Validation of Kits for Testing of Explosives and NDPS
- Consultancy for Narcotic Drugs and Fire/Arson Investigation

Contact Details

Dr. Astha Pandey
Associate Professor, SFS
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FINGER PRINT & QUESTIONED DOCUMENT EXAMINATION

Services Offered:

- Personal Identification of Fingerprints
- Impersonations / Fraud Examination
- Document Examination and Tampering Analysis
- Hard Tissue Examination for Personal Identification
- Crime Scene Assistance for Lifting of Latent Fingerprints
- Investigation of Fraud, Forgery and Tampering Detection in Documents Analysis

Contact Details

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SCHOOL OF FORENSIC SCIENCE)



FORENSIC PHYSICAL SCIENCES

Services Offered:

- Investigation of Short Circuit Incidences in Fire Cases
- Tool Marks Examination
- Shoe Print and Foot Print Examination
- Non-Destructive Examination of Unknown Substances
- Trace Elemental Analysis of Substances
- 3D Scanning of Crime Scene
- Forensic Examination of Firearm Evidences

Contact Details

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MULTIMEDIA FORENSICS

Services Offered:

- Aunthenticity Analysis of Audio Files
- Forensic Speaker Identification and Verification (Speaker Profiling)
- Tampering Analysis in Image and Video Files
- CCTV Footage Examination and Enhancement
- Enhancement of CCTV/Video/Audio/Image Files
- Facial Analysis and Recognition
- Gait Pattern Analysis from CCTV Footages
- Photogrammetrical Analysis from CCTV Footages
- Behavioral Pattern Analysis from CCTV Footages
- Crime Scene Reconstruction

Contact Details

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SCHOOL OF MEDICO LEGAL SERVICE



Services Offered:

- Forensic Human Identification
- Age Estimation and Sex Determination from Biological Samples
- Forensic Radiological and Pathological Services
- Medico-Legal Litigation in Malpractices and Negligence
- Forensic Facial Reconstruction Manual and Digital
- 3D Forensics 3D Scanning, 3D Analysis and 3D Printing of Specimens

Contact Details

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SCHOOL OF ENGINEERING & TECHNOLOGY

FORENSIC STRUCTURAL ENGINEERING

Services Offered:

- Material Testing Consultancy for Construction Materials: Cement, Concrete, Steel, Bitumen, Aggregate, Masonary and Soil
- Non-Destructive Testing of Structural Members
- Investigation of Fire, Earthquake and Wind Damaged Structures
- Detecting and Estimating Damages in Insurance Claims
- Structural Audit of Heritage, Industrial, Residential and Commercial Structures
- Concrete Mix Design



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FORENSIC NANO TECHNOLOGY

Services Offered:

- On Demand Functionalization of Smart Nanomaterials
- Synthesis of Size and Shape Specific Nanostructures
- Semiconductor, Metal, Metal Oxide, Carbon and Magnetic Based Nanostructures
- Formulations of Nanocarriers (Micelles, Liposomes)
- Sensors for Detection of Forensic Tracers
- Size and Morphology Characterization Facilities
- Spectroscopy (UV-Vis-NIR, Spectrofluorometer, Raman, FTIR, TCSPC, ICP-OES) and Chromatography Analysis (GC-MS, LC-MS)
- Microscopy (FE-SEM with EDS, AFM, Image Microscope, Stereo Microscope) Forensic Sample Analysis

Contact Details

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SCHOOL OF LAW, FORENSIC JUSTICE & POLICY STUDIES

Services Offered:

- Drafting of Policy Briefs
- Drafting of Grievence Redressal Mechanism
- Privacy and Data Protection
- Drafting of Sentencing Guidelines
- Legal Challenges by Startup
- How to Use Utilities (Energy, Water, Essentials Goods)
- Al & Legal Implications
- Law Impact Assessment

- Centre for Law & Emerging Technologies
- Global Studies & Research Centre (Coming Up)
- Arbitration Centre (Coming Up)

Contact Details

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SCHOOL OF PHARMACY



Services Offered:

- Formulation Development of All Types of Dosage Forms like Solid, Liquid, Semisolid, Emulsion Suspension
- Impurity Profiling
 Drug Product Purity Check
- Detecting the Cause of Sample Rejection
- Development of Nano-Formulations (Polymer, Lipid and Metal-Based)
- Pre-Clinical Studies as per CPCSEA Guidelines: Pharmacokinetic and Pharmacodynamic Profile of Drugs/Chemicals
- Pre Formulation Studies
 Phytochemical Studies
- Pharmacological and Toxicological Studies
- Analytical and Bio-Analytical Method Development and Validation
- Biological, Biochemical or Chemical Methods for the Detection, Identification or Enumeration of Microorganisms in Food, Drinks and Environmental Samples
- Insilico Molecular Modeling & QSAR Studies

Contact Details

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SCHOOL OF BEHAVIOURAL SCIENCE)

Services Offered:

Centre of Happiness & Wellbeing

- Psychological Assessment
 Cognitive Behaviour Therapy (CBT)
- Neuro Cognitive Assesment
 Memory Re-training
- Individual Psychotherapy/Counselling
 Play Therapy
- Marital and Couple Therapy/Counselling
- Family Therapy/Counselling
- Group Therapy Rehabilitation
- Clinical Forensic Services
- Library and Software Services

Contact Details

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SCHOOL OF MANAGEMENT STUDIES



Services Offered:

- Forensic Accounting and Auditing
- Financial Fraud Analysis
- Financial Modeling and Data Analytics
- Forensic Evidence Management in Hospitals

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CENTRE OF EXCELLENCE FOR RESEARCH & ANALYSIS OF NARCOTIC DRUGS AND PSYCHOTROPIC SUBSTANCES

Sports Supplement Testing Laboratory (Coming Up)

Services Offered:

- Seized Drug Testing (Qualitative and Quantitative)
- Targeted and Non-Targeted Drug Screening
- Purity and Impurity Testing and Profiling
- Expert Opinion

Contact Details

Dr. Astha Pandey

Head COE-NDPS

Email: consultancy_ndps@nfsu.ac.in





CENTRE OF BALLISTICS RESEARCH AND TESTING RANGE

Services Offered:

- Armored Material Testing
- Armored Vehicle Testing
- Ballistic Resistant Helmet Testing
- Ballistic Resistant Patka Testing
- Ballistic Resistant Steel, Panel & Glass Testing
- Composite Cylinder Testing
- Tyre and Jacket Testing

Contact Details

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INTERNATIONAL CENTRE OF HUMANITARIAN FORENSICS

Services Offered:

- Dignified Management of the Dead
- Scientific Identification of Victims in Mass Fatalities
- Exhumation
- Body Preservation

Contact Details

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CENTRE OF EXCELLENCE IN CYBER SECURITY

Cyber Security

Services Offered:

- Security Operation Center (SOC) as a Service
- Operation Technology (OT) Audit & Assessment
- Operation Technology (OT) Security Operation Center (SOC)
- Application Security Vulnerability Assessment and Penetration Testing (Web and Mobile)
- Application Security SDLC Assurance
- Application Security Review & Threat Modelling
- Cyber Security Governance and Compliance
- Infrastructure and System Hardening
- Network Vulnerability Assessment
- End-Point Security
- Secure Coding and Configuration Review
- Secure Software Engineering
- Security Design Review & Threat Modelling

Digital Forensics

Services Offered:

- Forensic Data Collection and Data Recovery
- Recovery of Digital Evidence/Data From Mobile Devices and Digital Storage
- Monitoring and Analysis of Computer Network Traffic
- Forensic Imaging
- Computer Forensics
- Network Forensics
- Mobile Forensics
- Malware Forensics
- Drone Forensics
- Malware Detection and Analysis

Contact Details

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CENTRE FOR FUTURISTIC DEFENCE STUDIES

Services Offered:

- Drone Forensics Technology
- Unmanned System Design, Development and Modelling & Simulation
- Unmanned System Testing & Certification
- Anti-Drone Command & Control System
- Drone Detection System
- Drone Mitigation (Jammer) System

- Integrated Intelligence System
- Weaponeering Software
- War Gaming Software
- Aviation Risk Management System
- Air Defence Optimization System
- Customized Geospatial Data
- Signature Management & Analysis
- Weather Prediction Software

Contact Details

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CENTRE FOR CRIMINOLOGICAL RESEARCH

Services Offered:

- Crime Prevention
- Awareness Generation Program
- Training of Criminal Justice Professionals

Contact Details

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CENTRE OF EXCELLENCE IN DNA FORENSICS

Services Offered:

- DNA Fingerprinting
- Mitochondrial DNA Analysis
- Paternity Testing
- DNA Phenotyping
- Molecular Autopsy
- Ancient DNA Analysis
- Non-Human DNA Analysis

Contact Details

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CENTRE OF EXCELLENCE IN INVESTIGATIVE AND FORENSIC PSYCHOLOGY

Services Offered:

- Evaluation-based Certificate (Hands-on Training) in Forensic Psychological Investigation Techniques
- Psychological Profiling
- Interrogation of Suspect
- Cyber Psychological Profiling
- Forensic Interview-based Recruitment Services
- Behavioral Assisted Tools
- Investigative Methods & Techniques
- > Polygraph > Layered Voice Analysis > Suspect Detection System
- > Brain Electrical Oscillation Signature Profiling > Eye Detect System
- > Dynamic Handwriting System > Polygraph with Eye Tracker
- Clinical, Neuro & Forensic Rehabilitation of Juvenile & Victim and Correctional Program

Contact Details

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FOOD TESTING LABORATORY

Services Offered:

- On-Spot Food Quality Testing Tool Development
- Commercial Food Testing to FMCG Companies and Citizens
- "Food safety Certification" Support to Other Universities and Organizations
- Support to Government Agencies in Food Poisoning and Toxicity Cases
- Contamination Investigation for Pharma and Food Products
- New Products Development Support
- Adulterated and Sub-Stranded Drug/Food Testing
- Drug Characterization Support
- Analytical Testing Support to Other Government Organizations and Universities
- Executions of Multiple Government Assignments Related to Food Supply Chain Authentication and Impact Assessment

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