NATIONAL INSTITUTE OF TECHNOLOGY SRINAGAR
Hazratbal, Srinagar 190006

SUBJECTS/ BRANCHES/ AREAS OF EXCELLENCE

BRANCHES OF ENGINEERING

a) **Undergraduate Programmes**
   - i) Chemical Engineering
   - ii) Civil Engineering
   - iii) Computer Science & Engineering
   - iv) Electrical Engineering
   - v) Electronics & Communication Engineering
   - vi) Information Technology
   - vii) Mechanical Engineering
   - viii) Metallurgical & Materials Engineering

b) **Postgraduate Programmes**
   - i) Communication & Information Technology
   - ii) Electrical Power and Energy Systems
   - iii) Geotech Engineering
   - iv) Industrial Tribology and Maintenance Management
   - v) Mechanical System Design
   - vi) Structural Engineering
   - vii) Transportation Engineering & Planning
   - viii) Water Resources Engineering

c) **M.Phil Programmes**
   - i) Physics
   - ii) Chemistry
   - iii) Mathematics
   - iv) Social Science & Management

d) **Ph. D Programmes**
   - i) All branches of Engineering
   - ii) Physics
   - iii) Chemistry

iv) **Mathematics**
v) **Social Science & Management**

AREAS OF EXCELLENCE

a) **Chemical Engineering**
   i) **Process Engineering & Design**
   ii) **Membrane synthesis & Characterization**
   iii) **Membrane Separations**
   iv) **Electro dialysis and Reverse Electro dialysis**
   v) **Fuel Cells & Batteries**
   vi) **Biochemical Engineering**
   vii) **Computational Fluid Mechanics**
   viii) **Nanotechnology Energy & Environment**

b) **Civil Engineering**
   i) **Disaster Management which mainly include Floods, Earthquakes, Snow/ Avalanches and Landslides**
   ii) **Sanitation and Waste Management**
   iii) **Low Cost Housing satisfying regional requirements**
   iv) **Water Resources Management**
   v) **Sustainable Transportation which includes land use transport planning, intelligent Transport system & pavement Management**

c) **Computer Science & Engineering**
   i) **System Design & Reconfigurable Computing**
   ii) **Computer Networks**

d) **Electrical Engineering**
   i) **Power system optimization, Energy System Planning & Modelling.**
   ii) **Intelligent Control of Power system, Application of Energy Storage Devices to Power System.**
   iii) **Wind Energy Conversion System.**

iv) **Power Quality, Flexible AC Transmission**
v) **Control System & Automation**

e) **Electronics & Communication Engineering**
i) **Microelectronics & VLSI Design**
ii) **Information Security**
iii) **Image Processing & Forensics**
iv) **Wireless Technologies**
v) **Automatic Testing & Management**

f) **Information Technology**
i) **Wireless Sensor Networks**
ii) **Clod Computing**

g) **Mechanical Engineering**
i) **Nano-Tribology.**
ii) **Diagnostic Maintenance and Condition Monitoring**
iii) **Control of Fracture and Fatigue in Structures.**
iv) **Micro-Electro- Mechanical-System (MEMS) & Ultrasonic – Transducers.**
v) **Computational Fluid Mechanics (CFD) & Thermo-Fluids.**
vi) **Smart Structures.**
vii) **Non-Destructive Testing.**
viii) **Life Cycle Engineering.**
ix) **Manufacturing Strategies.**
x) **Project Management and Quality Control**
xi) **Advanced Manufacturing and Rapid Prototyping and Medical Modelling.**
xii) **Thermo elasticity and Second Sound**

h) **Metallurgical & Materials Engineering**
i) **Process Metallurgy & Materials Engineering**
ii) **Mechanical Metallurgy, NDT and Foundry Engineering**
iii) **Corrosion Engineering & Nano Materials**

i) **Chemistry**
    i) **Natural Product Chemistry**
    ii) **Water / Soil Chemistry in environmental studies**
    iii) **Photoadducts—Synthesis, Kinetics and Characterization**
    iv) **Organic Synthesis & Characterization**

j) **Physics**
    i) **Nanoscience**
    ii) **Nanostructured Coatings**

k) **Mathematics**
    i) **Sequence Spaces, Summability Theory**
    ii) **Wavelet Analysis**
    iii) **Complex Analysis**

IN ADDITION TO THE ABOVE, A CENTRAL RESEARCH FACILITY (CRF) HAS RECENTLY BEEN ESTABLISHED AT N.I.T SRINAGAR, WHICH IS INTERDISCIPLINARY IN NATURE CATERING TO THE LOCAL/REGIONAL/NATIONAL NEEDS.