## **Mechanical Engineering:**

- Structural Integrity
- Fracture and Fatique
- Analytic methods for Engineering Design
- Hydropower plants and equipment
- Thermal Power Plants
- Green Energy
- Renewable energy

#### **Engineering Materials:**

- Nanomaterials
- Design of Welded Structures
- Materials for strategic application (space, defense, nuclear),
- Composite materials
- Iron and steel extraction and processing
- Biomaterials

# **Chemical and Process Engineering:**

- Chemical Engineering
- Biofuels in Combustion Processes
- Chemical and Biochemical operations and Reactors
- Design, construction and operation of processing systems
- Water treatment
- Organic chemistry and polymers
- Equipment and maintenance
- Sustainable development
- Food Engineering and Biotechnology
- Environmental Engineering

# **Advances in Agricultural & Food Engineering:**

- Agricultural Power And Machinery
- Precision Agriculture Technologies And Farming Systems
- Post-Harvest Technologies, Logistics, And Food Packaging
- Food Production And Processing Equipment and Systems
- Food Preservation Techniques
- Climate-Smart Agriculture
- Reduction Of The Food Waste, Carbon And Water Footprint
- Agricultural Waste Management
- Energy Management In Agricultural & Food Production Systems

## **Experimental Techniques:**

- Experimental Fluid Mechanics and thermodynamics
- Result processing

- Digital Image Correlation method

#### **Numerical Methods:**

- Optimization Techniques Applied to Engineering problems
- Data science
- Fluid dynamics, heat transfer and porous media flow
- Computational chemistry
- Computational biology and medicine

## **New Technologies:**

- New technologies in production engineering
- Intelligent manufacturing systems
- Robotics
- Naval systems
- Production engineering
- New generation of machine tools

## Clear sky:

- Sustainable cities
- Aerodynamics for clearer skies
- Novel materials & structures
- Eco design & manufacturing
- Transport & propulsion

#### **Ship & Maritime Research:**

- Innovative Material Design for Marine Engine and Components
- Sustainability in construction
- Sustainability in operation
- Stability and safety

#### **Dental Materials and Structures:**

- Restorative Materials
- Digital Dentistry
- Dental 3D pinting
- FEM in Dentistry

## **Sustainable Design and New Technologies:**

- Cad/Cam/CAE Technology and Design Tools
- Virtual Reality in Education Class VR
- Sustainable Design and Circular Economy
- Design Management, Innovation and Quality
- Computational Design and Digital Fabrication
- Reusing and Upcycling Materials

#### **Advanced Materials and Technology:**

- Basic Ceramics and Sintering

- Modeling and Simulation
- Glass, Amorphous and Electro Ceramics
- Electrochemistry and Catalysis
  Magnetic and Refractory Materials
- Heritage, Art and Design

# **Artificial intelligence:**

- General artificial intelligence
- Explainable artificial intelligence
- Environmental modeling
- Air pollution and biomatrix modeling