

Tentative list of courses offered (January - April 2020 semester)

BASIC ENGINEERING COURSES

Introduction To Analog And Digital Electronics

Introduction to Materials

Fluid Mechanics

Discrete Mathematics

Computer Organization And Architecture

Signals, Systems and Networks

Mechanics of Solids

Data Structures And Algorithms

Control Theory

Microprocessors and Embedded Systems

Interface Design

Nanoscale Device Engineering

Nature Inspired Computing

Finite Element Methods

Biomolecular Materials Science

Energy Systems

Multimedia Security

Electronic Instrumentation

Control Of Nonlinear Dynamical Systems

Contaminant Transport And Remediation

Nonlinear Continuum Mechanics

Machine Learning

BIOLOGICAL ENGINEERING

Cellular Signaling

Fluorescence Proteins And Their Applications

Biological Physics

CIVIL ENGINEERING

Sustainability and Environment

Concrete Design

Steel Design

Masonry Design

Geotechnical Engineering

Construction Technology & Management

Analysis and Design of Foundation Systems

Remote Sensing of Land and Water Resources

Earthquake Engineering

Applied Hydraulic Transient

Geosynthetics

Advanced Concrete Design

COGNITIVE SCIENCE

Experimental Techniques in Cognitive Science

Evolutionary Neuropsychology

Perception and Attention

Classics in Brain Science

Phenomenology, Embodiment, And Consciousness

Learning And Memory

CHEMISTRY

Organometallic And Bioinorganic Chemistry

Reactions and Mechanisms in Organic Chemistry

Bioinorganic Chemistry

Statistical Thermodynamics and its Applications in Chemistry

Chemistry of Natural Products

Interpretative Organic Spectroscopy

Medicinal Chemistry for Life

Solid State Chemistry And Applications

CHEMICAL ENGINEERING

Separation Processes

Introduction to Polymer Science and Engineering

Process Control

Process Analysis and Simulation

Advanced Thermodynamics

Advanced Reaction Engineering

Chemical Microscopy

COMPUTER SCIENCE

Compilers

Introduction to Data Science

Databases

ELECTRICAL ENGINEERING

Electrical Machines

Power Electronics

Communication Systems

Advanced Signal Processing

Restructured Power Systems: Operation and Management

3D Computer Vision

CMOS Analog IC Design

EARTH SCIENCE

River Morphology and Ecology

Quantitative Geomorphology

Biodiversity Conservation And Sustainable Development

HUMANITIES AND SOCIAL SCIENCES

French Studies

Foundational Sanskrit

Urdu Script and Poetry

Urdu Poetry Interpretation

Economics

World Civilizations and Cultures

Sanskrit Literature

Introduction to Linguistics

Introduction to Indian Knowledge Systems

Perspectives In History

Tropes of Time and Topography: Select Fiction from South-Asia

Digital Cultures and New Media

India Through the Writers Eye

Theories of social epidemiology

Structures and Hydrology in Ancient India

MATHEMATICS

Calculus of several variables and Complex Analysis

Probability, Statistics and Numerical Methods

Basic Algebra

Complex Analysis

Topology

Advanced Numerical Methods in Engineering

Commutative Algebra

Measure Theory

Number Theory

Partial Differential Equations

Stochastic Differential Equations

Introduction To Differential Geometry

MECHANICAL ENGINEERING

Synthesis and Analysis of Mechanisms

Industrial Engineering and Operations Research

Industrial Hydraulics & Pneumatics

Advanced Fluid Mechanics

Aerodynamics

Aircraft and Rocket Propulsion

MATERIALS SCIENCE AND ENGINEERING

Phase Transformation And Phase Equilibrium

Corrosion and degradation of materials

Materials Processing

Material Thermodynamics And Kinetics

Materials Characterization Techniques

Process Plant Design - How to Set Up a Process Industry

Light Metal Alloys for Automotive Industry

PHYSICS

Quantum Mechanics II

Classical Electrodynamics

Methods of Experimental Physics

Statistical Mechanics

Topics in Quantum and Statistical Mechanics

Modern Particle Physics

Atomic and Molecular Physics

Physics of two-dimensional materials

Quantum Optics

Opportunities are available to carry out research projects in addition to the above-mentioned courses