



NANO SCIENTIFIC RESEARCH CENTRE

An ISO: 9001:2008 Certified Company

#604, 601 Siri Estates, Opp. Lane to R.S. Brothers, Ameerpet, Hyderabad-500016. Ph: 040-23754144

E-mail: info@nanocdac.com, www.nsrcnano.com, www.nanocdac.com

****MECHATRONICS SYLLABUS****

Module:A

Introduction to Mechatronics

Basic Mechanical Components

Basic Electronic Components

Basic of Computer Systems

Integration of Mechanical and Electronic Components

Module:B

Essential Components

Actuators

Sensors

CPU

Input and Output Devices

Pragmatic Controllers (MicroControllers)



NANO SCIENTIFIC RESEARCH CENTRE

An ISO: 9001:2008 Certified Company

#604, 601 Siri Estates, Opp. Lane to R.S. Brothers, Ameerpet, Hyderabad-500016. Ph: 040-23754144

E-mail: info@nanocdac.com, www.nsrcnano.com, www.nanocdac.com

Module:C

Fluid Mechanics and Pneumatics

Introduction to Hydraulics

Introduction to Pneumatics

Real Time Hydraulic and Pneumatics Simulation

Module:D

Basic Electronics

Diodes and Resistors

Capacitors and Rectifiers

AC to DC conversion devices

DC to AC conversion devices

Module:E

Analogue and Digital Devices

Basic Analogue Devices

Basic Digital Devices

Analogue to Digital conversion Devices



NANO SCIENTIFIC RESEARCH CENTRE

An ISO: 9001:2008 Certified Company

#604, 601 Siri Estates, Opp. Lane to R.S. Brothers, Ameerpet, Hyderabad-500016. Ph: 040-23754144

E-mail: info@nanocdac.com, www.nsrcnano.com, www.nanocdac.com

Module:F

Interface Electronics for Input and Output

Sensors: Proximity, Ultrasonic, Infrared and others

LCD, LED, Keypad, and Touch Input devices

Module:G

Kinematics and Dynamics

Links and Mechanisms

Drive Mechanism (Chain, Pulley, Gears)

Gyroscopes

Module:H

Fabrication and Design

Realtime Fabrication and Design of Machine Elements

Software 3D Simulation using CATIA

Module:I

Engineering Material Selection

Metals and Non-Metals (selection and application)

Analysis of Material Weakness



NANO SCIENTIFIC RESEARCH CENTRE

An ISO: 9001:2008 Certified Company

#604, 601 Siri Estates, Opp. Lane to R.S. Brothers, Ameerpet, Hyderabad-500016. Ph: 040-23754144

E-mail: info@nanocdac.com, www.nsrcnano.com, www.nanocdac.com

Module:J

Design of Mechatronic System

Layout

Design

Real Time Mechatronic System layout

Module:K

Practical Approach

Real Time Simulation

Includes Kit for Real Time Understanding

Module:L

Robotics

Introduction to Various Robotic models

Laws of Robotics

Includes kit for Real Time Understanding