NPTEL Video Course - Electrical Engineering - NOC:Sensors and Actuators

Subject Co-ordinator - Prof. Hardik Jeetendra Pandya

Co-ordinating Institute - IISc - Bangalore

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

Lecture 30 - Signal Conditioning Circuit for Temperature Sensors
Lecture 31 - Demonstration of Microheaters in COMSOL Multiphysics
Lecture 32 - Introduction to Cleanroom facilities for biomedical applications
Lecture 33 - Physical Deposition Techniques
Lecture 34 - Demonstration on peristaltic pump in cleanroom
Lecture 35 - Installation of Oxygen Plasma System
Lecture 36 - Demonstration of IR Based Sensor using Arduino
Lecture 37 - Illustration of fabricated Microfluidic Device for biochips with PDMS moulding
Lecture 38 - Photolithography - Part 2
Lecture 39 - Photolithography - Part 3
Lecture 40 - Introduction and Demonstration of Shape Memory Alloy
Lecture 41 - Applications of Shape Memory Alloy as a light weight actuators
Lecture 42 - Discussion on Fabricated Sensor with Silicon as Substrate
Lecture 43 - Discussion and Microscopic Inspection of Fabricated Sensor with Silicon as a Substrate
Lecture 44 - Tissue Deparaffinization for Biosensors
Lecture 45 - Clean room guidelines and Cancer Dianostic tool
Lecture 46 - Basics of Pressure Sensor and Demonstration using Arduino Microcontroller
Lecture 47 - Basics of Stepper Motor and Demonstration using Arduino Microcontroller
Lecture 48 - Microscopic Inspection of Diced wafers and CNT Sensing Layer for fabricated sensor
Lecture 49 - Process flow for Microcantilever for Mechanical Phenotyping of breast cancer tissues
Lecture 50 - Applications of microcantilever for Mechanical Phenotyping of breast cancer tissues
Lecture 51 - Installation and Introduction to Physical Vapour Deposition System
Lecture 52 - Human Machine Interface for Controlling Deposition System
Lecture 53 - Flexible MEMS for phenotyping tissue properties - I
Lecture 54 - Flexible MEMS for phenotyping tissue properties - II
Lecture 55 - System Demonstration for Physical Vapor Deposition
Lecture 56 - Introduction to CAD Modelling - I
Lecture 57 - Introduction to CAD Modelling - II
Lecture 58 - Biosensors for ETM Phenotyping of breast cancer tissues for better prognosis
Lecture 59 - Biosensors for Electrothermal sensor
Lecture 60 - MEMS based sensor for catheter contact force measurement
Lecture 61 - Microfluidics based Drug Screening
Lecture 62 - Basic aspects of 3D Printing
Lecture 63 - 3D Printing Materials and Demonstration of Remote 3D Printing