



# Rashtreeya Sikshana Samithi Trust R V COLLEGE OF ENGINEERING

(Autonomous Institution Affiliated to VTU, Belagavi)

Bengaluru - 560 059, Karnataka

## Training on Thin Film Devices and Flexible Sensors Course Duration: 1 week Course Fee: ₹6,000.00 + GST

- |   |  |
|---|--|
| <p><b>1 Development of Thin Film Devices (Diode/MOSCap)</b><br/> <b>About:</b> The development of thin film devices based on novel materials playing an important role for the circuit design in flexible electronics<br/> <b>Fabrication:</b> Sputtering &amp; Thermal Evaporation, spin coating, dip coating etc.<br/> <b>Characterization:</b> Semiconductor Device Analyzer, SEM &amp; XRD,<br/> <b>Outcome:</b> Familiarization to develop the thin film devices like diodes, capacitors and transistors in flexible electronics.</p>  | <p><b>Ramavenkateswaran N.</b><br/>ramavenkateswarann@rvce.edu.in</p> <p><b>Dr. Satheesh Babu G.</b><br/>satheeshbabug@rvce.edu.in</p> |
| <p><b>2 Training on Development of Thin Film Sensors</b><br/> <b>About:</b> Thin film Sensors are sophisticated devices that are frequently used to detect and respond to electrical or optical signals.<br/> <b>Fabrication:</b> Sputtering &amp; Thermal Evaporation, spin coating, dip coating.<br/> <b>Characterization:</b> Semiconductor Device Analyzer, SEM &amp; XRD etc.<br/> <b>Outcome:</b> Familiarization to the fabrication and characterization techniques to develop various types sensors like, gas sensors, temperature sensors etc.</p>   | <p><b>Mr. Ravishankar Holla</b><br/>ravishankarholla@rvce.edu.in</p> <p><b>Dr. B.W. ShivRaj</b><br/>shivrajwali@rvce.edu.in</p>        |
| <p><b>3 Development of Thin Film Solar Cells/ Fuel Cells</b><br/> <b>About:</b> Thin film solar cell development is crucial for the renewal energy space with many researches are ongoing to increase the efficiency of cell with novel materials<br/> <b>Fabrication:</b> PECVD, Sputtering &amp; Evaporation<br/> <b>Characterization:</b> Raman Spectrometer &amp; Semiconductor device Analyzer<br/> <b>Outcome:</b> Familiarization to Design and optimization of each layer in Solar Cell (P-i-N) and calculation efficiency of solar cell for various applications such as satellites, remote light systems etc.</p> | <p><b>Prof. T.K. Subramanyam</b><br/>subramanyamtk@rvce.edu.in</p> <p><b>Ujjawal</b><br/>ujwalshreenagm@rvce.edu.in</p>                |
| <p><b>4 Fabrication of Polymer Devices</b><br/> <b>About:</b> Fabrication and characterization of polymer and polymer nanocomposites<br/> <b>Fabrication:</b> Spin Coating, Electro spin coating<br/> <b>Characterization:</b> SEM, XRD, AFM &amp; RAMAN Spectroscopy<br/> <b>Outcome:</b> Familiarization to different types of polymers and polymer nanocomposites for sensor development that can used in various domains such as Agriculture, Healthcare<br/>         * Address challenges in processing of polymer nanocomposites</p>  | <p><b>Sireesha G.</b><br/>shireeshag@rvce.edu.in</p> <p><b>Sham Aan M.P.</b><br/>shaman.mp@rvce.edu.in</p>                             |
| <p><b>5 Biosensors and Medical Devices (Pressure Sensors)</b><br/> <b>About:</b> Bio-potentials, like Electro-encephalogram (EEG), Electro-oculogram (EOG), and Electro-cardiogram (ECG) etc., are the important tools both in research and medical diagnosis.<br/> <b>Fabrication:</b> Spin Coating, Sputtering, Thermal Evaporation<br/> <b>Characterization:</b> X- Ray Diffraction, FTIR, IV Electrical Characterization, SEM<br/> <b>Outcome:</b> Familiarization on development of flexible sensors that can be used for biomedical applications (EEG, EoG), and Energy harvesters etc.</p>                           | <p><b>Roopa J.</b><br/>roopaj@rvce.edu.in</p> <p><b>Dr. Nagashree N. Rao</b><br/>nagashreenrao@rvce.edu.in</p>                         |
| <p><b>6 Functional Materials</b><br/> <b>About:</b> Materials which possess particular native properties and functions like ferroelectricity, piezoelectricity, magnetism or energy storage functions.<br/> <b>Fabrication:</b> Sputtering &amp; Thermal Evaporation, spin coating, dip coating, electro spinning<br/> <b>Characterization:</b> Semiconductor Device Analyzer, SEM, XRD, AFM &amp; RAMAN Spectroscopy.<br/> <b>Outcome:</b> Synthesizing and optimization of various functional materials.</p>  | <p><b>Gangadhar A.</b><br/>gangadharangadi@rvce.edu.in</p> <p><b>Mamtha V.</b><br/>mamthav@rvce.edu.in</p>                             |
| <p><b>7 Software Tools for Flexible Electronics</b><br/> <b>About:</b> The fabrication process and characterization techniques consume more time and money. The high end software tools which are available in RVCE such as Material Studio, COMSOL, Silvaco enables user to design(thin film devices &amp; MEMS) and analysis its performance before get into fabrication.<br/> <b>Software tools:</b> COMSOL Multiphysics, Silvaco, Material Studio.<br/> <b>Outcome:</b> Device modeling and simulation of thin film/ MEMS devices.</p>  | <p><b>Ajay K.M.</b><br/>ajaykm@rvce.edu.in</p> <p><b>Sudha Karbari</b><br/>sudhark@rvce.edu.in</p>                                     |

### Main Co-ordinators

**Dr. Uttara Kumari M.**      **Dr. Krishna M.**  
uttarakumari@rvce.edu.in      krishnam@rvce.edu.in



CISCO – RVCE Centre of excellence

## Training on Internet of Things Course Duration: 1 week Course Fee: ₹10,000.00 + GST

- |   |   |
|---|---|
| <p><b>1 Intelligent Analytics:</b><br/>Aspects of Big Data Analytics, Statistics in Data Analytics, Platforms for Data Analytics and Data Storage</p>   | <p><b>Dr. M.N.Vijayalakshmi</b><br/>vijayalakshmi@rvce.edu.in</p>   |
| <p><b>2 Embedded Systems for IoT:</b><br/>Optimization &amp; Security, Sensors and Actuators, Embedded Processors, Embedded Programming</p>   | <p><b>Dr. K. Uma Rao</b><br/>umaraok@rvce.edu.in</p>                |
| <p><b>3 IoT Application Development:</b><br/>Hardware, Programming languages, Frame Works, Protocols, Standards.</p>  | <p><b>Dr. B. Renuka Prasad</b><br/>renukaprasadb@rvce.edu.in</p>    |
| <p><b>4 Intelligent Transportation Systems:</b><br/>Introduction and ITS Framework, Software Solutions, Specifications &amp; Functionality, Data Processing and Analysis</p>  | <p><b>Dr. K.V.S. Rajeswara Rao</b><br/>rajeswararao@rvce.edu.in</p> |
| <p><b>5 Networking for IoT:</b><br/>Introduction to Networking, Wireless Transmission Technology, IoT Technologies, 6LoWPAN: The Wireless Embedded Internet, Case Studies in IoT Networking</p>   | <p><b>Dr. G.S. Sharvani</b><br/>sharvanigs@rvce.edu.in</p>          |
| <p><b>6 Industrial Internet of Things [IIoT]:</b><br/>Introduction to Industrial Internet of Things [IIoT], Industrial IT, Physical Devices and Industrial Automation, PLC and SCADA Systems, Industry Internet of things, Design and Execution of Projects related to IIoT</p> | <p><b>Dr. Shanmukha Nagaraj</b><br/>shanmukhan@rvce.edu.in</p>      |
| <p><b>7 RF System Design for IoT Networking:</b><br/>RF Spectrum and Radio Propagation, RF System Design, IoE Device Architecture and Interfaces, IoT Device Integration,</p>   | <p><b>Prof. R.K. Manjunath</b><br/>manjunathrk@rvce.edu.in</p>      |
| <p><b>8 Integrated Sensor System:</b><br/>Introduction and Sensors and Actuators, H/W Development, IoE Connectivity &amp; data collection, Sensor Fabrication, Integration of Sensors with IOE, Design &amp; Development. of a Sensor-Prototype.</p>                            | <p><b>Dr. S.C. Prasanna Kumar</b><br/>prasannakumar@rvce.edu.in</p> |

### Main Co-ordinators

**Dr. K.N. Subramanya**      **Dr. N.K. Srinath,** srinathnk@rvce.edu.in

## Other Proficiency Programmes Course Duration: 1 week Course Fee: ₹10,000.00 + GST

- |  |   |
|--|---|
| <p><b>1 "Student Leadership Program"</b>, by University of Commons aims at helping students develop a positive, constructive and practical approach to leadership development via engaging with social issues. The purpose of the program is to explore and enhance leadership capabilities, give shape to ideas while working with marginalized communities.</p>  | <p><b>Dr. Archana M.S.</b><br/>archanams@rvce.edu.in</p>            |
| <p><b>2 "Multi-Modal Logistics Systems – A Practitioners Approach"</b>, Multi-Modal Logistics Systems; including the building blocks, foundation concepts, modeling and practitioners view point.</p> <p><b>Topics Outline:</b><br/>Manufacturing Logistics – Aerospace, Semi-Conductor: Cold Chains – Fruits, Vegetable, Dairy Products: Retail Logistics – e-Commerce: Containerization: 3PL/ 4PL/ CFA/ e-Logistics: Road, Rail, Air &amp; Sea, Transportation: Pipe line &amp; Electronic Mode, Logistics Policy GoI/ GoK: Role of Government Agencies: Import &amp; Export Regulations: Regulations for goods Movement in the Country: Warehousing: Start Opportunities in Logistics: Green Logistics: Reverse Logistics: Digital Logistics.</p> | <p><b>Dr. Nagendra Gupta C.K.</b><br/>nagendragupta@rvce.edu.in</p> |