



Industry Certified Internship
Centre of Excellence in Macroelectronics
Certification by Hind High Vacuum

Internship Modules for Engineering students

Module	Sub modules	Contact
M1. Polymer Based Thin Film Sensors/Membranes for Functional Applications	<ul style="list-style-type: none"> • Electrospinning process for sensors • Polymer thin films for sensors • Electrospun nanofibers for biomedical applications • Numerical analysis of thin films • Study of Electrical, Piezoelectric & Mechanical Properties of polymer films for wearable electronics • EMI Shielding using Polymer composites • Sensors for Wearable electronics • Fabrication (Spin coating, Electrospinning, Solution Casting) & Characterization of polymer thin films • Stretching effect on thin films • Design and development of sensors for the detection of toxic gasses • Cellulose based bio-polymer for thermal insulation. 	<ul style="list-style-type: none"> • Dr Gangadhar Angadi Assistant Professor Mechanical Dept, RVCE E-mail: gangadharangadi@rvce.edu.in • Dr Roopa T S Assistant Professor Mechanical Dept, RVCE E-mail: roopats@rvce.edu.in • Dr V Mamtha Assistant Professor Mechanical Dept, RVCE E-mail: mamthav@rvce.edu.in • Dr Sham Aan M P Assistant Professor Mechanical Dept, RVCE E-mail: shamaan.mp@rvce.edu.in • Dr Vishnumurthy K A Assistant Professor, Chemistry Dept, RVCE E-mail: vishnumurthyka@rvce.edu.in • Dr. Ramya P Assistant Professor, Physics Dept, RVCE E-mail: ramyap@rvce.edu.in
M2. Laser Surface Texturing of Materials	<ul style="list-style-type: none"> • Live demonstration of Laser Surface Texturing Machine – Operation and parametric study • Live demonstration of Measurement of responses – Optical Microscope, Tally Surf – Surface Roughness, • Measurement of responses using Gwyddion software and Minitab for statistical analysis 	<ul style="list-style-type: none"> • Dr Bharatish A Assistant Professor Mechanical Dept, RVCE E-mail: bharatisha@rvce.edu.in

	<ul style="list-style-type: none"> Simulation of the process using COMSOL Multiphysics Surface texturing of 3D printed substrates 	
M3. Fabrication and Characterization of Coatings	<ul style="list-style-type: none"> Preparation and Characterization of chalcogenide Materials for phase change memory applications Design and implementation of Electronic Biosensor for Physiological variation Design, fabrication, characterization, and applications of metal oxide thin films for sensing and electronics applications. 	<ul style="list-style-type: none"> Dr. Shylashree N Associate Professor ECE Dept, RVCE E-mail: shylashreen@rvce.edu.in Dr Vishnumurthy K A Assistant Professor, Chemistry Dept, RVCE E-mail: vishnumurthyka@rvce.edu.in Dr. Ramavenkateswaran N Assistant Professor ECE Dept, RVCE Email: ramavenkateswarann@rvce.edu.in
M4. Sensor Modelling	<ul style="list-style-type: none"> ML based Sensor Modelling & Data Analytics using python MEMS based sensor and device modelling using COMSOL 	<ul style="list-style-type: none"> Prof. Ravishankar Holla Assistant Professor ECE Dept, RVCE E-mail: ravishankarholla@rvce.edu.in Dr. Rachana. S. Akki Assistant Professor Dept of E & I, RVCE E-mail: rachana.akki@rvce.edu.in
M5. Modelling Of Futuristic Nano Electronics Devices and Sub-10 Nm MOSFET	<ul style="list-style-type: none"> Quantum Wells, Wires and Dots simulation and analysis for emerging quantum computing Stanford 2D Semiconductor Quasi-Ballistic Transistor Compact Model for modern sub-10 nm MOSFET Carbon Nanotube (CNT) and Carbon Nanowire FET for next generation processors TCAD simulation of thin film transistor for flexible electronics display & circuits 	<ul style="list-style-type: none"> Dr. Ramavenkateswaran N Assistant Professor ECE Dept, RVCE Email: ramavenkateswarann@rvce.edu.in
M6. Numerical Simulation to Study Materials	<ul style="list-style-type: none"> Characterization of the porosity of a material Simulating the effect of agglomeration in thin film deposition Correlated interface in multilayer graphene-aa and ab Studying the tunability of the band gap of multilayer graphene 	<ul style="list-style-type: none"> Dr Tribikram Gupta Assistant Professor Physics Dept, RVCE Email: tgupta@rvce.edu.in

	<ul style="list-style-type: none"> • Calculating the optical conductivity in bi-layer graphene • Calculating the transverse conductivity in bi-layer graphene 	
M7. Sensor and Supercapacitor	<ul style="list-style-type: none"> • Graphene based nanocomposite for supercapacitor • Carbon quantum dots-based nanocomposite for sensor application • Graphitic Carbon- ferrite nanocomposite materials for gas sensor applications 	<ul style="list-style-type: none"> • Dr. Hareesh K Assistant Professor Physics Dept, RVCE Email: hareeshk@rvce.edu.in • Dr Divakara S G Assistant Professor Chemistry Dept, RVCE Email: divakarsg@rvce.edu.in
M8. Digital Gamma Spectroscopy Using Python Programming	<ul style="list-style-type: none"> • Positron lifetime and energy resolution studies from annihilation data using python programming 	<ul style="list-style-type: none"> • Dr Karthik Shastry Assistant Professor Physics Dept, RVCE Email: karthikshastry@rvce.edu.in
M9. Wearable Circuit Design	<ul style="list-style-type: none"> • Design of signal acquisition and conditioning circuit for energy harvesting systems and wearable sensors • Design and Simulation of Wearable Antennas 	<ul style="list-style-type: none"> • Dr. Ramavenkateswaran N Assistant Professor ECE Dept, RVCE • Email: ramavenkateswarann@rvce.edu.in

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