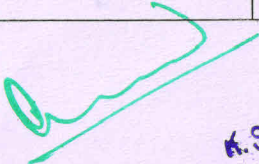


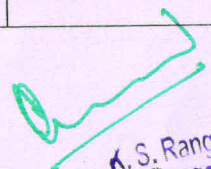
K.S.Rangasamy College of Arts& Science, (Autonomous), Tiruchengode-637 215
Department of Visual Communication
Courses having focus on Employability/ Entrepreneurship/ Skill Development
Department of Physics

Preprogramme: M.Sc., Physics

COURSE CODE	COURSE NAME	Employability/ Entrepreneurship/ Skill Development	Content
18PPHM104	Core VI: Condensed Matter Physics	Employability	Unit I: Crystal physics and its related content Unit IV: Magnetic properties of Materials and its related content
18PPHMP101	Core Practical I: Advanced Physics Practical I	Skill Development	Experiments 1to15 give an exposure for the understanding of various physical phenomena and develop the experimental skills to determine physical parameters and constants.
18PLS102	Career Competency Skills I	Skill Development	Units I and II specifically impart knowledge on Mathematical calculations and problems shortcuts All the units enhances Career Competency Skills
18PPHMP201	Core Practical II: Advanced Physics Practical II	Skill Development	Experiments 1to 6 helps to develop skills on various physical phenomena-absorption, compressibility of liquid-photosensitivity Advanced Physics Practical creates way to develop experimental skills
18PLS202	Career Competency Skills II	Skill Development	Unit I II III are helpful to develop interview skills -body languages in interview-Do's and Don'ts in an interview Unit IV provides speaking skills- guidelines types of reading skills- avoiding errors- Indianisms in India.


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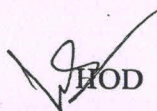
18PCSPHIP201	IDC Practical I: Multimedia Tools	Entrepreneurship	<p>Experiments 1 to 10 : Retouching of images- image optimization-compression-object and motion tweening-video and audio effects</p> <p>Multimedia Tools gives us a practice on various kinds of animations and converting images</p>
18PCSPHI201	IDC I: Computer Graphics and Multimedia	Entrepreneurship	<p>Unit II : 3D concepts –transformations-viewing-color models</p> <p>Unit V: Design of multimedia-multimedia broadcasting-social media sharing-sample multimedia project.</p> <p>Computer Graphics and Multimedia make us to employable in fields of media and modeling designs of various multimedia systems.</p>
18PPHM302	Core VIII: Advanced Electronics	Entrepreneurship	<p>Unit I : Optoelectronic devices: Photovoltaic cells-photoconductive cells-Laser diode</p> <p>Unit II: IC technology- Fabrication Monolithic resistors, capacitors, diodes and transistors.</p> <p>Advanced Electronics helps to design the circuits using IC's, Special semiconductors.</p>


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18PPHM303	Core IX: Microprocessor and Microcontroller	Entrepreneurship	Unit I: 8085 Microprocessor: Generating control signals- Demultiplexing the bus AD7-AD0 Unit III: Crystal growth control- Microprocessor based temperature monitoring system
18PPHMP301	Core Practical III: Advanced Electronics Practical	Entrepreneurship & Skill development	Experiments 1 to 8: semiconductor devices –IC’s- designing shift registers- BCD counter Experiments 9 to 18: Microprocessor and microcontroller 8085-Temperature conversion- DAC interfacing.
18PPHEL301	Elective II: Physics of Nanoscale	Employability	Unit II: Sol-gel synthesis – Hydrothermal growth – Thin film growth: Physical vapor deposition – Chemical vapor deposition – Top-Down approach: Ball milling – Microfabrication – Lithography Unit IV: X-ray diffraction and Scherrer method – Scanning electron microscopy – Transmission electron microscopy – Energy Dispersive X-ray analysis – Scanning probe microscopy – Atomic Force microscopy– X-ray photoelectron spectroscopy – Diffuse reflectance spectra - Photoluminescence spectroscopy
18PPHEL302	Elective II: Crystal Growth and Thin Film Physics	Employability	Unit II: Experimental procedure – Chemical reaction method – Single and double diffusion method – Chemical reduction method Unit III: Sputtering - Reactive Sputtering, Radio-Frequency Sputtering Unit V: Powder and single crystal X-ray diffraction – Fourier transform infrared analysis – EDX analysis - Scanning electron microscopy (SEM)
18PPHEL303	Elective II: Instrumental Methods of Analysis	Employability	Unit I: Stress analysis by strain gauging - high temperature strain gauge techniques – Photo elasticity and holography.

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			Unit II: Thermal analysis and its related content Unit III: X-Ray analysis - Interpretation of diffraction patterns
18PPHM401	Core X: Spectroscopy	Employability	Unit I: Microwave spectrometer – Chemical analysis by microwave spectroscopy, IR spectrometer – FT-IR technique – Chemical analysis by IR spectroscopy Unit II: Raman spectrometer- Sample handling – Applications Unit III: UV-Diffusion reflectance spectroscopy – Applications of UV spectroscopy.
18PPHMP401	Core practical IV: Computation using MATLAB	Skill development	Experiments 1 to 15: Matlab Programming – Runge- Kutta method- Newton – Raphson method- Full wave rectifier – Determination of (a) peak-to-peak value of ripple voltage (b) DC output voltage (c) Discharge Time of the Capacitor (d) period of ripple voltage- Roots of a quadratic equation and solution of a system of linear equations


HOD

Dr. G. SURESH KUMAR, M.Sc., M.Phil., Ph.D.
Assistant Professor and Head,
Department of Physics,
K.S. Rangasamy College of
Arts and Science (Autonomous)
Tiruchengode-637215


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