

# K.S. RANGASAMY COLLEGE OF ARTS AND SCIENCE

(Autonomous)

Tiruchengode - 637 215

Department of Physics

Courses having focus on Employability/Entrepreneurship/Skill Development

PROGRAMME: BACHELOR OF SCIENCE IN PHYSICS

Course Code	Course Name	Employability/ Entrepreneurship/ Skill Development	Content
18UPHM401	Core VI: Basic Electronics	Employability	<b>Unit IV:</b> Light Emitting Diode (LED) and its applications - Photo diode - Characteristic of photodiode - Applications. <b>Unit V:</b> Inverting amplifier - Noninverting amplifier - Adder - Subtractor - Integrator - Differentiator.
18UPHM504	Core X: Electronics and Communication	Employability	<b>Unit IV:</b> Antenna fundamentals - Wave propagation - Satellites - Orbits - Satellite communication systems, <b>Unit V:</b> Satellite TV, Cable TV, TV Channels, DTH Technology
18UPHM202	Core IV: Optics	Entrepreneurship	<b>Unit II:</b> Determination of diameter of a thin wire by air wedge - Michelson's Interferometer
18UPHM501	Core VII: Electricity and Electromagnetism	Entrepreneurship	<b>Unit IV:</b> Power in an AC circuit - Wattless current - Choke coil - Construction and working of transformers (step up & down) - Energy losses and uses - Skin effect - Tesla coil.
18UPHSB301	SBC I: Instrumentation	Skill Development	<b>Unit I:</b> Basic Characteristics of measuring devices - Calibration. <b>Unit III:</b> Analog display and recorder - Graphic recorder - Optical oscillograph

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18UPHSB401	SBC II: Laser Physics	Skill Development	<b>Unit II:</b> Helium - Neon Laser - Ruby Laser. <b>Unit V:</b> Lasers in Surgery - Lasers in ophthalmology - Lasers in cancer treatment. <b>Unit III:</b> Photo detection (photo electric effect, photo sensitive elements), Photo multiplier tube, detectors at different wavelength and their properties
18UPHSB501	SBC III: Spectrophysics	Skill Development	<b>Unit II:</b> Applications: Determination of Bond length - <b>Unit V:</b> Determination of atomic mass, NMR & ESR Spectroscopy
18UPHSB601	SBC IV: Materials and Processing	Skill Development	<b>Surface Treatment of Materials:</b> Introduction - Carburizing - Nitriding -Cyaniding - Carbonitriding - Hardening - Coating - Faced coatings - Weldings - Various welding processes - Process of soldering - Soldering alloys - Laser and Plasma surface treatment.



HoD

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Principal

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