



## UNIVERSITY OF KERALA

Re-accredited by NAAC with A++ GRADE

### College Basket

May 15, 2024, 3:12 a.m.

College : Kumbalathu Sankupillai Memorial Devaswom Board College (104)  
Year of admission : Batch 2024  
Discipline : FYUGP Physics

Category	Course Code	Course Name	Entered by	Entered on	Description
<b>Semester: 1</b>					
DSC	UK1DSCPHY100	Foundation Course in Physics-I	Dr Nisha Panicker	Wed, 08 May 2024 16:30:45 GMT	Language of Physics, Laws of motion, Work energy, dynamics of motion, Oscillations,
DSC	UK1DSCPHY101	Principles of Dynamics	Dr Nisha Panicker	Wed, 08 May 2024 16:30:45 GMT	Introduction to kinematics, Linear momentum, impulse, collisions, circular motion, angular momentum, central force
DSC	UK1DSCPHY102	Properties of Solids	Dr Nisha Panicker	Wed, 08 May 2024 16:30:45 GMT	Molecules and solids, heat, superconductivity, dielectric properties, electronic devices
DSC	UK1DSCPHY103	Introduction to Mechanics and Energy resources	Dr Nisha Panicker	Wed, 08 May 2024 16:30:45 GMT	Physical quantities and vectors, Gravitation, Rotational motion, energy and energy resources, waves

MDC	UK1MDCPHY102	Green Energy	Dr Nisha Panicker	Wed, 08 May 2024 16:32:19 GMT	Solar energy, wind energy, hydro, tidal and wave energy, other sources of energy and storage
MDC	UK1MDCPHY103	Physics in Arts and Sports	Dr Nisha Panicker	Wed, 08 May 2024 16:32:19 GMT	physics of painting and photography, music, sports
MDC	UK1MDCPHY104	Physics of Everyday Appliances	Dr Nisha Panicker	Wed, 08 May 2024 16:32:19 GMT	Lighting devices, mirror lenses and camera, heat transfer and cooling systems, other domestic appliances, hands on training
<b>Semester: 2</b>					
DSC	UK2DSCPHY100	Foundation Course in Physics-II	Dr Nisha Panicker	Wed, 08 May 2024 16:34:32 GMT	Precision in practice, waves, fluid statics & dynamics, elasticity
DSC	UK2DSCPHY101	Electricity, Magnetism and Acoustics	Dr Nisha Panicker	Wed, 08 May 2024 16:34:32 GMT	Electricity, Magnetic, thermal chemical effects of current, AC and DC circuits, ultrasonics and Acoustics
DSC	UK2DSCPHY103	Modern Physics	Dr Nisha Panicker	Wed, 08 May 2024 16:35:12 GMT	Quantum Mechanics, digital electronics, Atom models, atomic nucleus, crystallography
MDC	UK2MDCPHY100	Archaeo Physics	Dr Nisha Panicker	Wed, 08 May 2024 16:37:45 GMT	Introduction to archaeology, basics of radioactivity, radioactive dating technics, digital archaeology, activities
MDC	UK2MDCPHY101	Basics of Artificial Intelligence	Dr Nisha Panicker	Mon, 13 May 2024 17:00:37 GMT	Introduction to AI, knowledge representations and search algorithms, machine learning,

					performance measures, ethical considerations, applications in AI.
MDC	UK2MDCPHY102	Beyond the Sky	Dr Nisha Panicker	Wed, 08 May 2024 16:37:45 GMT	Introduction to astronomy, observational astronomy, solar system, stellar evolution, galaxies and beyond
MDC	UK2MDCPHY103	Foundations in Forensic Science	Dr Nisha Panicker	Wed, 08 May 2024 16:37:45 GMT	Science in criminal justice system, Crime scene, physical evidence, micro trances, fire arms
<b>Semester: 3</b>					
DSC	UK3DSCPHY200	Basic Electronics (Mandatory)	University of Kerala	Thu, 02 May 2024 12:02:38 GMT	Diodes and transistors, transistor amplifiers, feedback circuits, op amps, logic gates and boolean algebra, practicals
DSC	UK3DSCPHY201	Digital Electronics and Datascience	Dr Nisha Panicker	Wed, 08 May 2024 16:45:01 GMT	Number system and codes, digital logic, combinational logic with circuits, introduction to data science, data analysis and data analytics
DSC	UK3DSCPHY203	Heat, Magnetism and Geophysics	Dr Nisha Panicker	Wed, 08 May 2024 16:45:01 GMT	Terrestrial physics, atmospheric physics, earths magnetism, transmission of heat, magnetism
DSE	UK3DSEPHY202	Basics of Nanoscience and Nanotechnology	Dr Nisha Panicker	Wed, 08 May 2024 16:46:18 GMT	Materials structure and bonding, Crystals and imperfections in solids, electrical and optical properties of materials, generation of nanoscience and nanotechnology, applications of nanoscience

					and nanotechnology for sustainable future: addressing global challenges
DSE	UK3DSEPHY204	Introduction to medical physics	Dr Nisha Panicker	Wed, 08 May 2024 16:46:18 GMT	
VAC	UK3VACPHY201	Introduction to laboratory safety measurements	Prof(Dr.) K C PRAKASH	Mon, 13 May 2024 17:15:55 GMT	Introduction, electrical safety measures, chemical safety measures, radiation effects, gas safety norms
VAC	UK3VACPHY202	The history of physics and its influence on society	Prof(Dr.) K C PRAKASH	Mon, 13 May 2024 17:16:07 GMT	Birth of physics and early human society, Renaissance and Newtonian Era, Physics in 18th and 19th and early 20th centuries, Physics in 20th and 21st centuries, Indian contributions in the modern era
<b>Semester: 4</b>					
DSC	UK4DSCPHY200	Classical Dynamics (Mandatory)	University of Kerala	Thu, 02 May 2024 12:02:38 GMT	Lagrangian and hamiltonian dynamics, motion in central force field, special theory of relativity, theory of small oscillations, practicals
DSC	UK4DSCPHY201	Electromagnetics and Transient Currents (Mandatory)	University of Kerala	Thu, 02 May 2024 12:02:38 GMT	Electrostatic field, field in matter, magnetostatics, electromagnetic induction, transient current.
DSE	UK4DSEPHY202	Synthesis of Nanomaterials	Dr Nisha Panicker	Wed, 08 May 2024 16:49:46 GMT	Introductory quantum mechanics, fabrication of nanostructured materials, physical methods, chemical methods, self-assembly and

					lithography, elementary ideas of structural and optical characterization of nanostructures
DSE	UK4DSEPHY204	Physics of Medical Diagnostics	Dr Nisha Panicker	Wed, 08 May 2024 16:49:46 GMT	
INT	UK4INTPHY200	Internship	Dr Nisha Panicker	Tue, 14 May 2024 15:58:36 GMT	
SEC	UK4SECPHY200	Basic Instrumentation Skills	Prof(Dr.) K C PRAKASH	Mon, 13 May 2024 17:18:47 GMT	Measurements and basic componets, digital and analog meters, function generators,CRO, LEDs and LCDs, transducers, hands on training
SEC	UK4SECPHY201	Wiring and Electrical Devices	Prof(Dr.) K C PRAKASH	Mon, 13 May 2024 17:18:47 GMT	Basic circuit elements,transformers and eletric motors, electric connectors and meters, electrical wiring, electrical and electronic drawings
VAC	UK4VACPHY200	Introductory course on physics in financial market	Prof(Dr.) K C PRAKASH	Mon, 13 May 2024 17:19:02 GMT	Introduction to Econophysics, Basic statistical methods, Random walk in physics and economics, Temporal correlations of stochastic processes, power law distributions in physics and economics
VAC	UK4VACPHY201	Research and Publication Ethics	Prof(Dr.) K C PRAKASH	Mon, 13 May 2024	Introduction, scientific conduct, publication ethics,

				17:19:02 GMT	databases and research metrics, online publishing
<b>Semester: 5</b>					
DSC	UK5DSCPHY300	Optics (Mandatory)	University of Kerala	Thu, 02 May 2024 12:02:38 GMT	Interference frenel and fraunhofer diffraction,polarisation, diffraction, laser, practicals
DSC	UK5DSCPHY301	Quantum Mechanics - I (Mandatory)	University of Kerala	Thu, 02 May 2024 12:02:38 GMT	Limitations of classical, emergence of quantum theory, wavepackets and wave functions,schrodinger equations, eigen value problem, general formalism, practicals
DSC	UK5DSCPHY302	Thermodynamics & Statistical Mechanics (Mandatory)	University of Kerala	Thu, 02 May 2024 12:02:38 GMT	Transfer of heat, thermodynamics, entropy,thermodynamic potentials and maxwell' s equation, statistical mech., practicals
DSE	UK5DSEPHY302	Characterization of Nano Materials	Dr Nisha Panicker	Wed, 08 May 2024 16:51:58 GMT	Structural characterization, microscopic and surface analysis, spectroscopy, electrical, mechanical and magnetic properties, thermal and optical properties
DSE	UK5DSEPHY304	Physical Aspects of Therapeutics	Dr Nisha Panicker	Wed, 08 May 2024 16:51:58 GMT	
DSE	UK5DSEPHY305	Forensic Physics	Dr Nisha Panicker	Wed, 08 May 2024 16:51:58 GMT	Introduction to forensic science, microscopy, Blood pattern analysis, Ballistics, Physical Evidences

SEC	UK5SECPHY300	Optics in Digital Photography	Prof(Dr.) K C PRAKASH	Mon, 13 May 2024 17:22:25 GMT	Light, lenses and image formation, know your camera, DSLR Camera, 4H photography, Enhancing the photography, UV and IR photography
<b>Semester: 6</b>					
DSC	UK6DSCPHY300	Atomic & Molecular Physics (Mandatory)	University of Kerala	Thu, 02 May 2024 12:02:38 GMT	Atomic spectra and atoms in external fields, microwave and infrared spectroscopy, electronic spectroscopy, raman spectroscopy, resonance spectroscopy
DSC	UK6DSCPHY301	Nuclear & Particle Physics (Mandatory)	University of Kerala	Thu, 02 May 2024 12:02:38 GMT	Properties of nuclei, nuclear models, radioactivity, Nuclear reactions, particle physics, particle detectors and accelerators
DSC	UK6DSCPHY302	Solid State Physics (Mandatory)	University of Kerala	Thu, 02 May 2024 12:02:38 GMT	crystal structure, free electron theory, band theory of solids, magnetic properties of materials, superconductivity dielectric properties of materials
DSE	UK6DSEPHY302	Nanotechnology For Energy Conversion and Storage Devices	Dr Nisha Panicker	Wed, 08 May 2024 16:54:42 GMT	Fundamental concepts in electrochemistry, energy conversion systems, energy storage system - Batteries, electrochemical capacitor, photovoltaic systems.
DSE	UK6DSEPHY304	Practical Medical Physics	Dr Nisha Panicker	Wed, 08 May 2024 16:54:42 GMT	

DSE	UK6DSEPHY306	Computational Physics	Dr Nisha Panicker	Wed, 08 May 2024 16:54:42 GMT	Introduction to python programming List and Tuples, computer oriented Numerical Methods, Curve fitting, Numerical differentiation and integration
SEC	UK6SECPHY301	PCB Making and Designing	Prof(Dr.) K C PRAKASH	Mon, 13 May 2024 17:23:37 GMT	Printed circuit boards, layout planning and design, mechanical operations, fabrication
<b>Semester: 7</b>					
DSC	UK7DSCPHY400	Advanced Mathematical Physics	Dr Nisha Panicker	Wed, 08 May 2024 16:56:02 GMT	Complex analysis, Differential equations and special functions, Integrals transforms, some special integrals, Tensor analysis
DSC	UK7DSCPHY401	Quantum Mechanics-II	Dr Nisha Panicker	Wed, 08 May 2024 16:56:02 GMT	symmetries and conservation laws, matrix representations and pictures, angular momentum, 3 dimensional energy eigen value, relativistic wave equations
DSE	UK7DSEPHY401	Environmental Sustainability of Nanomaterials	Dr Nisha Panicker	Wed, 08 May 2024 16:56:32 GMT	Photocatalysis for Environmental remediation, Understanding photocatalysis and photocatalysts, Water splitting for Hydrogen production, Nanotechnology for carbon dioxide capture and conversion, circular economy for waste



					reduction and carbon footprint
<b>Semester: 8</b>					
CIP	UK8CIPPHY400	Capstone Intership	Dr Nisha Panicker	Tue, 14 May 2024 16:05:46 GMT	