# UNIVERSITY OF KERALA

Re-accredited by NAAC with A++ GRADE

## College Basket

**June 25, 2024, 9:29 a.m.**

**College** : **V T M N S S College (145)**
**Year of admission** : **Batch 2024**
**Discipline** : **FYUGP Physics**

| Category | Course Code | Course Name | Entered by | Entered on | Description |
|---|---|---|---|---|---|
| **Semester: 1** | | | | | |
| DSC | UK1DSCPHY100 | Foundation Course in Physics-I | Vidya V.Sankar | Sun, 12 May 2024 15:14:05 GMT | Language of Physics, Laws of motion, Work energy, dyanmics of motion, Oscillations, |
| DSC | UK1DSCPHY102 | Properties of Solids | Vidya V.Sankar | Sun, 12 May 2024 15:14:05 GMT | Molecules and solids, heat, superconductivity,dielectric propertes, electronic devices |
| DSC | UK1DSCPHY103 | Introduction to Mechanics and Energy resources | Vidya V.Sankar | Sun, 12 May 2024 15:14:05 GMT | Physical quantities and vectors, Gravitation, Rotational motion, energy and energy resourses, waves |
| MDC | UK1MDCPHY104 | Physics of Everyday Appliances | Vidya V.Sankar | Sun, 12 May 2024 15:14:24 GMT | Lighting devices, mirror lenses and camera, heat transfer and cooling systems, other domestic appliances, hands on training |
| **Semester: 2** | | | | | |
| DSC | UK2DSCPHY100 | Foundation Course in Physics-II | Vidya V.Sankar | Sun, 12 May 2024 15:15:08 GMT | Precision in practice, waves, fluid statics & dynamics, elasticity |

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| DSC | UK2DSCPHY101 | Electricity, Magnetism and Acoustics | Vidya V.Sankar | Sun, 12 May 2024 15:15:08 GMT | Electricity, Magnetic, thermal chemical effects of current, AC and DC circuits, ultrasonics and Acoustics |
| DSC | UK2DSCPHY102 | Optics and Thermodynamics | Vidya V.Sankar | Sun, 12 May 2024 15:15:08 GMT | Geometric optics, wave optics, thermodynamics, entropy, statistical mechanics |
| MDC | UK2MDCPHY101 | Basics of Artificial Intelligence | Vidya V.Sankar | Sun, 12 May 2024 15:15:42 GMT | Introduction to AI, knowledge representations and search algorithms, machine learning, performance measures, ethical considerations, applications in AI. |
| **Semester: 3** | | | | | |
| 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 | Vidya V.Sankar | Sun, 12 May 2024 15:17:20 GMT | Number system and codes, digital logic, combinational logic with circuits, introduction to data science, data analysis and data analytics |
| DSC | UK3DSCPHY202 | Solid State Physics and Spectroscopy | Vidya V.Sankar | Sun, 12 May 2024 15:17:20 GMT | solid state physics, band theory of solids, spectroscopy and spectroscopic techniques |
| DSE | UK3DSEPHY202 | Basics of Nanoscience and Nanotechnology | DR. ANANDAKUMAR V M | Tue, 25 Jun 2024 09:28:07 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 |

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| DSE | UK3DSEPHY204 | Introduction to medical physics | Vidya V.Sankar | Sun, 12 May 2024 15:18:03 GMT | |
| **Semester: 4** | | | | | |
| 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, trancient current. |
| DSE | UK4DSEPHY202 | Synthesis of Nanomaterials | Vidya V.Sankar | Sun, 12 May 2024 15:19:11 GMT | Introductory quantum mechanics, fabrication of nanostructured materials, physical methods, chemical methods, self-assembly and liithography, elementary ideas of structural and optical characterization of nanostructures |
| DSE | UK4DSEPHY204 | Physics of Medical Diagnostics | Vidya V.Sankar | Sun, 12 May 2024 15:19:11 GMT | |
| INT | UK4INTPHY200 | Internship | Vidya V.Sankar | Wed, 15 May 2024 04:21:56 GMT | |
| SEC | UK4SECPHY201 | Wiring and Electrical Devices | DR. ANANDAKUMAR V M | Sun, 12 May 2024 16:04:45 GMT | Basic circuit elements,transformers and eletric motors, electric connectors and meters, electrical wiring, electrical and electronic drawings |
| **Semester: 5** | | | | | |
| DSC | UK5DSCPHY300 | Optics (Mandatory) | University of Kerala | Thu, 02 May 2024 12:02:38 GMT | Intereference frenel and fraunhofer |

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| | | | | | 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 | Vidya V.Sankar | Sun, 12 May 2024 15:20:06 GMT | Structural characterization, microscopic and surface analysis, spectroscopy, electrical, mechanical and magnetic properties, thermal and optical properties |
| DSE | UK5DSEPHY304 | Physical Aspects of Therapeutics | Vidya V.Sankar | Sun, 12 May 2024 15:20:06 GMT | |
| **Semester: 6** | | | | | |
| 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 | crystal structure, free electron theory, band theory of solids, |

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| | | | | GMT | magnetic properties of materials, superconductivitydielectric properties of materials |
| DSE | UK6DSEPHY302 | Nanotechnology For Energy Conversion and Storage Devices | Vidya V.Sankar | Sun, 12 May 2024 15:22:05 GMT | Fundamental concepts in electrochemistry, energy conversion systems, energy storage system - Batteries, electrochemcal capacitor, photovoltaic systems. |
| DSE | UK6DSEPHY304 | Practical Medical Physics | Vidya V.Sankar | Sun, 12 May 2024 15:22:05 GMT | |
| **Semester: 7** | | | | | |
| DSC | UK7DSCPHY400 | Advanced Mathematical Physics | Vidya V.Sankar | Sun, 12 May 2024 15:23:01 GMT | Complex analysis, Differential equations and special functions, Integrals transforms, some special integrals, Tensor analysis |
| DSC | UK7DSCPHY401 | Quantum Mechanics-II | Vidya V.Sankar | Sun, 12 May 2024 15:23:01 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 | Vidya V.Sankar | Sun, 12 May 2024 15:23:20 GMT | Photocatalysis for Environmental remediation, Undersanding photocatalysis and photocatalyts, Water splitting for Hydrogen production, Nanotechnology for carbon dioxide capture and conversion, circular economy for waste reduction and carbon footprint |
| **Semester: 8** | | | | | |
| CIP | UK8CIPPHY400 | Capstone Intership | Vidya V.Sankar | Wed, 15 May 2024 04:21:28 | |

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| RPH | UK8RPHPHY400 | Research Project | Vidya V.Sankar | Wed, 15 May 2024 04:26:41 GMT | |