MINUTES OF THE THIRTEENTH BOARD OF STUDIES MEETING

Faculty: Basic and Applied Sciences **Board: Medical Physics**

The Meeting of Board of Studies (BoS) was held as given below:

Name of the Body	**BoS**
Department	**Medical Physics**
Meeting No.	**13**
Date and Time	**01 / 08 / 2022 @ 11 a.m.**
Venue	**Board Room, KMCH**
Members Attended	**The details are given in the ANNEXURE -I**

AGENDA	
1.	Discussion on PG Curriculum for AY 2022-23 and onwards adopting R4 guidelines
2.	Discussion on PG syllabi for the first semester courses 2022-23 Batch
3.	Discussion on PG DSE syllabi for the first semester courses 2022-23 Batch
4.	Any other matter

MINUTES OF THE THIRTEENTH BOARD OF STUDIES MEETING

Faculty: Basic and Applied Sciences **Board: Medical Physics**

The Chairman of BoS welcomed all the Panel members for the meeting. The items listed in the agenda were taken for discussion.

The following are the minutes of the meeting:

Item - 01	**Discussion on PG Curriculum for AY 2022-23 and onwards adopting R4 guidelines**
Discussion	Under regulation R4, PG Curriculum for AY 2022-23 has been designed and was presented for discussion.
Resolution	The Board unanimously approved the Curriculum.

Item - 02	**Discussion on PG syllabi for Core Courses for the first semester 2022-23 Batch**
Discussion	**The content of the courses of I semester of M.Sc. Medical Physics Batch: 2022 – 23 were discussed in the board as per the Atomic Energy Regulated Board (AERB) syllabus.** **222MP2A1CA – Nuclear Physics** Dr. Velmurugan and Dr. Saravanakumar suggested to include the following topics • Unit II: Geiger - Nuttal law, which relates the decay constant of a radioactive isotope with the energy of the alpha particles emitted. • Unit IV: Nuclear energy and social development topic explains about the various needs of nuclear energy for developing country like India. • Unit V: Position - Sensitive Detectors (PSD), Categories- photonic devices, light detection and characterization, optoelectronics, vision, displays and imaging, optical metrology imparts knowledge about how to measure the position of a light spot in one or two dimensions.

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222MP2A1CB – Radiation Physics (New Course)

Mr. Antovaz and Mr. Sankar suggested the following changes in the content.

- Unit I: Ionizing Radiation: Electromagnetic Radiation and its Properties – Electromagnetic Spectrum - Radio waves, Microwaves, Infrared, Visible light, UV, X-rays and Gamma rays – Particulate Radiation – Properties of alpha, beta, neutrons and positrons – Classification of Radiation – Directly Ionizing Radiation – Electrons, Positrons, Heavy charged particles and Pions - Indirectly Ionizing Radiation – X-rays, Gamma rays and Neutrons topics are added to relevant parts of the course.
- Unit II: Fixed X-ray machines, Portable X-ray machines and Mobile X-ray machines teaches differences about extensive range of machines of different size, power and manufacture.
- Unit III: Photo disintegration explains the mechanism of photon interaction with matter.
- Unit IV: Alpha bragg curve and Proton bragg curve plots the energy loss of ionizing radiation during its travel through stopping medium.
- Unit V: Fast neutron, slow neutron and thermal neutron and its interactions with matter, Neutron teaches about the types of neutrons and it's interaction mechanism with matter.

222MP2A1CC – Biomedical Electronics and Instrumentation

Dr. Saravanakumar and Mr. Antovaz suggested to include the following topics.

- Unit I: Diode and Triode topics are removed due to semiconductor diode topic is already exist. Uni-junction Transistor (UJT) – Construction, Working Principle, and Characteristic Features teaches about negative resistance and switching characteristics in biomedical instruments.
- Unit II: Sample 8085 assembly language programmes impart knowledge about micro controller based devices.
- Unit IV: Ventricular assist devices (VADs) is a modern device explains working mechanism and it helps pump blood from the lower chambers of your heart (ventricles) to the rest of your body.
  Unit V: Different types of bio electric signal and recording electrodes- surface electrodes and the deep- seated electrodes impart knowledge about Different types of electrodes used for biological measurements.

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	222MP2A1CP – Core Practical - Biomedical Electronics and Instrumentation Lab Mr.Antovaz and Dr. Velmurugan suggested the following changes in the practical. • UJT characteristics experiment was added to study about the negative resistance characteristics. • Verification of De Morgan's Theorem was included to verify the fundamental digital electronics principles. • The experiment OP-Amp applications - Adder, Subtractor, Differentiator, and Integrator was divided into two experiments: OP-Amp applications—Adder and Subtractor and OP-Amp applications - Differentiator and Integrator because it requires long time. • Analog to digital conversion using IC-74148 was included to study about the analog to digital conversion process. • The Microprocessor Programming experiment was removed as a new practical update.
Resolution	**The Board members unanimously approved the revised syllabus.**

Item - 03	**Discussion on PG DSE syllabi for the first semester courses 2022-23 Batch**
Discussion	**222MP2A1DA – Solid State Physics (DSE-I)** Dr. Velmurugan, Dr. Saravanakumar and Mr. Antovaz suggested the following changes in the Discipline Elective Courses (DSE). • Unit I: Bravais lattice topic was added to teach about 14 different types of space lattices. Types of Lattices topic was removed due to that covered in Bravais Lattice. • Unit II: Primitive cell and Unit cell topics were included and Mono atomic Lattices - Lattice with two Atoms Per Primitive Cell topics were removed due to that exist in the added topic. • Unit V: The London Equation topic was removed due to repetition in the first unit.

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	222MP2A1DB – Non Ionizing Radiation in Medicine (New Course) **222MP2A1DC – Programme in C++** • Unit I: The Usages of C++ topic explains its various applications. • Unit III: A Sample program to implement Inheritance topic was included which explains about how to create a new class (derived class) from an existing class. • Unit V: A Sample program to implement Polymorphism was added about how C++ can be used more than one form.
Resolution	The Board members approved the syllabi for the above three courses.

Item – 04	**Any other matter**
Discussion	The Board members discussed and recommended the Panel of Examiners.
Resolution	The Board unanimously approved the Panel of Examiners.

The chairman of Board of Studies (BoS) thanked all the members for their active participation and cordially invited them for the next meeting.

D. Sivakumar 01/8/2022

Date: 01/08/2022

(Mr. D. Sivakumar)

BoS Chairman/HoD
Department of Medical Physics
Dr. N. G. P. Arts and Science College
Coimbatore – 641 048

Syllabus Revision

Faculty: Basic and Applied Sciences **Board: Medical Physics**

Semester: I

Course Code/ Name: 222MP2A1CA / Nuclear Physics

Unit	Existing	Changes
I	**Nucleus:** General Properties of Nuclei – Constituents of Nuclei, Nuclear Size, Nuclear Radii, Nuclear Mass – Nuclear Units - Atomic Mass Unit, Electron Volt- Binding Energy - Systematic of Binding Energy - Mass Defect, Mass Excess, Packing and Binding Fraction - Discovery of Radioactivity – Radioactive Decay- Activity, Half Life, Mean Life - Decay Constant - Radioactive Series – Radioactive Equilibrium - Secular, Transient, Non Equilibrium.	-
II	**Radioactive Decay Type:** Alpha Decay – Energetics and Spectrum- Beta Decay and its Energies – Origin of Continuous Beta Spectrum - Neutrino Hypothesis – Properties of Neutrino - Nuclear Isomerism- Gamma Decay – Nature of Gamma Rays- Internal Conversion – Positron Emission - Electron Capture- Nuclear Fission and it's Discovery - Energy Release in Fission - Nature of the Fission Fragments - Energy Distribution Between the Fission Fragments - Fissile and Fertile Materials - Spontaneous Fission - Source of Energy in Stars - Nuclear Reactions and its Types - Conservation Laws - Q Values - Cross Section.	Geiger-Nuttal law topic
III	**Particle Accelerators:** Introduction - Classification and Performance Characteristics of Accelerators - Industrial, Medical and Research Applications – Resonant Transformer – Cascade Generator - Van De Graff Generator - Cyclotron - Betatron - Syncro Cyclotron- Linear Accelerator - Microtron– Electron Syncrotron – Proton Syncrotron.	-
IV	**Nuclear Models, Fission And Fusion Reactors** Shell Model, Liquid Drop Model - Fission - Energetics of Fission Process, Controlled Fission Reactions - Chain Reaction – Basics of Reactor - Gas Cooled Reactors - Advanced Gas Cooled Reactors- Pressurized Water Reactor - Boiling Water Reactor - Heavy Water Reactor - Breeder Reactor - Fusion Process - Characteristics of Fusion - Solar Fusion -Controlled Fusion Reactors - Critical Conditions - Four Factor Formula.	Nuclear energy and social development
V	**Nuclear Electronics And Techniques** Preamplifiers – Amplifiers - Single Channel Analyzers - Counting Statistics - Energy Measurements - Spectrometer - Introduction to Spectroscopy - Definition of Energy Spectra - Measurement of an Integral Spectrum and Differential Spectrum - Energy Resolution of a Detection System - Multichannel Analyzer - Calibration of MCA - Charged Particle Spectroscopy - Energy Straggling- Time of Flight Spectrometer – Detector Telescopes.	Position - Sensitive Detectors (PSD), Categories - photonic devices, light detection and characterization, optoelectronics, vision, displays and imaging, optical metrology topics

PERCENTAGE OF SYLLABUS REVISED: 5 %

COURSE FOCUS ON: Skill Development / Employability

Syllabus Revision

Faculty: Basic and Applied Sciences **Board: Medical Physics**

Semester: I

Course Code/ Name: 222MP2A1CB / Radiation Physics

Unit	Existing	Changes
I	~~Non Ionizing Radiation:~~ ~~Different Sources of Non Ionizing Radiation – Radio Frequency, Microwaves, Infrared, Visible and Ultra Violet Radiation Production, Physical Properties and their Interaction with Tissues – Electrical Impedance and Biological Impedance – Thermography – Radio Frequency Ablation.~~ ~~Lasers: Theory and Mechanism- Interaction of Laser Radiation with Tissues – Phototherapy – Photothermal -Photochemical - Photoablation – Electromechanical Effect – Lasers in Medicine.~~	**Ionizing Radiation:** Electromagnetic Radiation and its Properties – Electromagnetic Spectrum - Radio waves, Microwaves, Infrared, Visible light, UV, X-rays and Gamma rays – Particulate Radiation – Properties of alpha, beta, neutrons and positrons – Classification of Radiation – Directly Ionizing Radiation – Electrons, Positrons, Heavy charged particles and Pions - Indirectly Ionizing Radiation – X-rays, Gamma rays and Neutrons.
II	**X Ray Generators:** Discovery - Production - Properties of X-Rays - Characteristics and Bremstralung - Design of Hot Cathode X-Ray Tube - Basic Requirements of Medical Diagnostic, Therapeutic and Industrial Radiographic Tubes - Rotating Anode Tubes - Hooded Anode Tubes - X-Ray Tubes for Crystallography - Rating of Tubes - Safety Devices in X-Ray Tubes: Ray Proof and Shockproof Tubes - Insulation and Cooling of X- Ray Tubes - ~~Mobile Unit~~ - C- Arm and Dental Unit – Maintenance of X-Ray Tube Unit. Filament and High Voltage Transformers – High Voltage Circuits - Half-Wave and Full Wave Rectifiers - Condenser Discharge Apparatus - High Frequency Genetrators - Voltage Doubling Circuits - Current and Voltage Stabilizers - Control Panels - X-Ray Circuits - Image Intensifiers and Closed Circuit TV Systems – Flat Panel Technology.	Fixed X-ray machines, Portable X-ray machines and Mobile X-ray machines
III	**Interaction Of Photon With Matter:** Ionization and Excitation- Attenuation - Linear Attenuation Coefficient - Mass Attenuation Coefficient - Energy Transfer and Mass Energy Absorption Coefficients - HVL – Rayleigh Scattering – Thomson Scattering - Photoelectric Effect Compton Effect – Pair Production – Positron Annihilation - Relative Importance of Various Types of Interactions - Importance of Interaction in Tissue.	Photo disintegration topic
IV	**Interaction Of Charged Particles With Matter:** Classical Theory of Inelastic Collisions with Atomic Electrons – Energy Loss Per Ion Pair by Primary and Secondary Ionization – Dependence of Collision Energy Losses on the Physical and Chemical State of the Absorber – Cerenkov Radiation – Electron Absorption Process – Radiative Collision – Range Energy Relation – Continuous Slowing Down Approximation (CSDA) – Straight ahead Approximation and Detour Factors – Transmission and Depth Dependence Methods for Determination of Particle Penetration - Empirical Relations Between Range and Energy – Back Scattering. Interaction of Heavy Charged Particles - Energy Loss by Collision – Range Energy Relation – ~~Bragg Curve~~ – Specific Ionization – Stopping Power – Bethe Bloch Formula.	Alpha bragg curve and Proton bragg curve
V	**Interaction Of Photon With Matter:** Neutron Sources – Properties – Energy Classifications – Elastic and Inelastic Scattering, Coefficients and Cross Sections – Energy Transfer and Logarithmic Energy Decrement - Nuclear Reactions – Dependence on E and Z – (n,p), (n,2n), (n,γ) and other Reactions – Neutron Activation - Radio Isotope Production.	Fast neutron, slow neutron and thermal neutron and its interactions with matter, Neutron capture

PERCENTAGE OF SYLLABUS REVISED: 30 %

COURSE FOCUS ON: Skill Development / Employability

Syllabus Revision

Faculty: Basic and Applied Sciences **Board: Medical Physics**

Semester: I

Course Code/ Name: 222MP2A2CC / Biomedical Electronics and Instrumentation

Unit	Existing	Changes
I	**Basic Electronics: ~~Diode and Triode~~** - Semi Conductor Diode - Characteristics - Voltage Regulator Circuits - LED - Bipolar Junction Transistors - CB and CE Configuration Characteristics. FET - MOSFET- Principle of Operation – Characteristics - JFET Amplifier. Op-Amp - Circuit Symbol-Ideal Op-Amp Characteristics-CMRR-Applications: Adder, Subtractor, Analog Integrator, Analog Differentiator, Voltage-to-Current Converter, Current-to-Voltage Converter and Logarithmic Amplifier.	UniJunction Transistor (UJT)
II	**Basic Electronics:** Logic Gates - Boolean Algebra - Boolean Laws – De-Morgan's Theorem - Implementation of Logic Circuits From Truth Table – Sum-of-Products Method – Products-of-Sum Method - Combinational Circuits: Multiplexer and De- Multiplexer Circuits - BCD to Decimal Decoders Seven Segment Decoders - Decimal to BCD Encoder. Arithmetic Building Blocks: Half-Adder and Full-Adder - Digital Comparator. Flip Flops: RS, Clocked RS, D-Flip Flop, Edge-Triggered D Flip Flop – J K Flip Flop- Sequential Logic Circuits: Registers - Shift Registers – Applications. Counters: Ripple Counters Up, Down and Up-Down Ripple Counters - Asynchronous and Synchronous Counters-ADC And DCA.	-
III	**Microprocessor:** Architecture of 8-Bit Microprocessor: Intel 8085A Microprocessor, Pin Description and Internal Architecture - Operation and Control of Microprocessor: Timing and Control Unit, Op-Code Fetch Machine Cycle, Memory Read/Write Machine Cycles, I/O Read/Write Machine Cycles, Interrupt Acknowledge Machine Cycle, State Transition Diagram- Instruction Set - Assembly Language Programming - Interfacing - Interrupts - Programmable Peripheral Interface - Programmable Interval Timer.	Sample 8085 assembly language programmes
IV	**Physiological Assist Devices:** Measurement of Blood Pressure – Direct Methods And Indirect Methods - Temperature - Respiration Rate - Heart Rate Measurement - O2 , CO2 Measurements, Respiratory Volume Measurement, BMR Measurement, Plethysmography Technique, Detection of Various Physiological Parameters Using Impedance Technique. Kidney Machine – Hemodialysis Units – Peritoneal Dialysis- Lithotripsy - Various Types of Endoscopy.	Ventricular assist devices (VADs) topic
V	**Bioelectric Signal Recording And Clinical Equipment:** Bioelectric Signals (ECG, EMG, EEG, EOG & ERG) and their Characteristics - Electrodes For ECG, EEG And EMG - ECG Machine - EMG Machine – 10-20 Electrodes Placement System for EEG - EEG Machine	Different types of bio electric signal and recording electrodes -surface electrodes and the deep- seated electrodes topic

PERCENTAGE OF SYLLABUS REVISED: 5 %

COURSE FOCUS ON: Skill Development / Employability

Syllabus Revision

Faculty: Basic and Applied Sciences **Board: Medical Physics**

Semester: I

Course Code/ Name: 222MP2A2CP / Biomedical Electronics and Instrumentation

Experiments	Existing	Changes
1	Zener regulated power supply and percentage of regulation.	
2	Transistor characteristics- CB and CE configuration.	
3	Transistor characteristics- CB and CE configuration.	
4	Single stage FET amplifier- CS configuration.	
5	FET characteristics	
6	OP-Amp applications - Adder, Subtractor, ~~Differentiator and Integrator~~	
7		OP-Amp applications - Differentiator and Integrator
8	Logic gates OR, AND, NOT, NOR and NAND Gates.	
9	Half adder and Full adder.	
10	NAND gate as a universal gate	
11	A/D and D/A converters.	
12	~~Microprocessor programming~~.	UJT characteristics
13	Photosensitive diodes	
14		Verification of De-morgan's theorem
15		Construct analog to digital conversion using IC-74148

Note: 12 out of 15 experiments to be performed.

PERCENTAGE OF SYLLABUS REVISED: 25 %

COURSE FOCUS ON: Skill Development / Employability

Syllabus Revision

Faculty: Basic and Applied Sciences **Board: Medical Physics**

Semester: I

Course Code/ Name: 222MP2A1DA / Solid State Physics

Unit	Existing	Changes
I	CRYSTAL PHYSICS ~~Types of Lattices~~ - Miller Indices - Simple Crystal Structures - Crystal Diffraction - Bragg's Law - Reciprocal Lattice (Sc, Bcc, Fcc) - Laue Equations - Structure Factor - Atomic Form Factor - Types of Crystal Binding - Cohesive Energy of Ionic Crystals- Madelung Constant - Inert Gas Crystals - Vander Waal - Landon Equation - Metal Crystals - Hydrogen Bonded Crystals.	Bravais lattice
II	LATTICE DYNAMIC ~~Mono-atomic Lattices - Lattice with two Atoms Per Primitive Cell~~ - First Brillouin Zone - Group and Phase Velocities - Quantization of Lattice Vibrations - Phonon Momentum – Inelastic Scattering by Phonons - Debye's Theory of Lattice Heat Capacity - Einstein's Model and Debye's Model of Specific Heat - Thermal Expansion - Thermal Conductivity - Umklapp Processes.	Primitive cell and Unit cell
III	THEORY OF METALS AND SEMICONDUCTORS: Free Electrons Gas in Three Dimensions - Electronic Heat Capacity - Wiedmann- Franz Law - Hall Effect - Band Theory of Metals and Semiconductors - Bloch Theorem - Kronig-Penny Model -Semiconductors - Intrinsic Carrier Concentration - Mobility - Impurity Conductivity - Fermi Surfaces and Construction - Experimental Methods in Fermi Surface Studies - De Haas Van Alphen Effect - Application of Semiconductor in Medicine	-
IV	MAGNETIC PROPERTIES OF MATERIALS: Elementary Ideas of Dia, Para and Ferro Magnetism - Quantum Theory of Paramagnetism - Rare Earth Ion - Hund's Rule - Quenching of Orbital Angular Momentum - Adiabatic Demagnetization - Quantum Theory of Ferromagnetism - Curie Point - Exchange Integral - Heisenberg's Interpretation of Weiss Field - Ferromagnetic Domains - Bloch Wall - Spin Waves - Quantization - Magnons - Thermal Excitation of Magnons - Curie Temperature and Susceptibility of Ferrimagnets - Theory of Antiferromagnetism - Neel Temperature - Application of Magnet in Medicine.	-
V	SUPER CONDUCTIVITY Experimental Facts-Occurrence - Effect of Magnetic Fields - Meissner Effect - Entropy and Heat Capacity - Energy Gap - Microwave and Infrared Properties - Type I and II Superconductors - Theoretical Explanation - Thermodynamics of Super Conducting Transition - ~~London Equation~~ - Coherence Length - BCS Theory - Single Particle Tunneling - Josephson Tunneling - DC And AC Josephson Effects - High Temperature Super Conductors - SQUIDS.	London Equation

PERCENTAGE OF SYLLABUS REVISED: 5 %

COURSE FOCUS ON: Skill Development / Employability

Syllabus Revision - New Course

Faculty: Basic and Applied Sciences **Board: Medical Physics**

Semester: I

Course Code/ Name: 222MP2A1DB – Non Ionizing Radiation in Medicine

Unit	New Content
I	Fundamentals of Non-Ionizing Radiation physics: Electromagnetic spectrum - Different sources of Non Ionizing radiation-their physical properties first law of photochemistry - Law of reciprocity - Electrical Impedance and Biological Impedance - Principle and theory of thermography – Applications.
II	Applications of optical radiation: Introduction to optical radiations – UV, visible and IR sources - Lasers: Theory and mechanism Lasers in Surgery - fluence measurement from optical sources - Optical properties of tissues – interaction of laser radiation with tissues– photothermal -photochemical – photoablation – electromechanical effect
III	Lasers in Medicine: Lasers in medicine-applications of Ultrafast pulsed Lasers -Lasers in dermatology, oncology and cell biology - Lasers in blood flow measurement - Fiber optics in medicine - Hazards of lasers and their safety measures.
IV	Ultrasound in Medicine: Production, properties and propagation of ultrasonic waves – Bioacoustics - Acoustical characteristics of human body - Ultrasound in Obstetrics and Gynecology Vascular System - Early pregnancy and foetal activity - Ultrasound in ophthalmology and echocardiography - Ultrasonic Dosimetry - High power ultrasound in therapy.
V	Radio Frequency and Microwave in Medicine: Production and properties- interaction mechanism of RF and microwaves with biological systems: Thermal and non-thermal effects on whole body, lens and cardiovascular systems - tissue characterization and Hyperthermia and other applications.

PERCENTAGE OF SYLLABUS REVISED: 100%

COURSE FOCUS ON: Employability / Skill Development

Syllabus Revision

Faculty: Basic and Applied Sciences **Board: Medical Physics**

Semester: I

Course Code/ Name: 222MP2A1DC – Programme in C++

Unit	Existing Content	New Content
I	Introduction To C++ : Key concepts of Object-Oriented Programming –Advantages – Object Oriented Languages – I/O in C++ - C++ Declarations. Control Structures: - Decision Making and Statements: If, Else, jump, goto, break, continue, Switch case statements - Loops in C++: For, While, Do - Functions in C++ - Inline functions – Function Overloading.	Usages of C++
II	Classes and Objects: Declaring Objects – Defining Member Functions – Static Member variables and functions – array of objects –friend functions – Overloading member functions – Bit fields and classes – Constructor and destructor with static members.	-
III	Operator Overloading: Overloading unary, binary operators – Overloading Friend functions – type conversion – Inheritance: Types of Inheritance – Single, Multilevel, Multiple, Hierarchal, Hybrid, Multi path inheritance – Virtual base Classes – Abstract Classes.	Sample programs to implement Inheritance.
IV	Pointers: Pointers – Declaration – Pointer to Class , Object – this pointer – Pointers to derived classes and Base classes – Arrays – Characteristics – array of classes – Memory models – new and delete operators – dynamic object – Binding , Polymorphism and Virtual Functions	-
V	Files: Operations – Binary and ASCII Files – Random Access Operation – Templates – Exception Handling - String – Declaring and Initializing string objects – String Attributes – Miscellaneous functions.	Sample programs to implement Polymorphism

PERCENTAGE OF SYLLABUS REVISED: 5 % (Transferred from II semester to I semester)

COURSE FOCUS ON: Skill Development / Employability

ATTENDANCE OF THE THIRTEENTH BOARD OF STUDIES MEETING

Faculty : Basic and Applied Sciences **Board:** Medical Physics

Venue : Board Room, KMCH.

Date : 01/08/2022

Time : 11 a.m.

The following members were present for the board of studies meeting.

S. No.	Name	Designation	Signature*
1.	Mr. D. Sivakumar Assistant Professor & Head, Department of Medical Physics, Dr.N.G.P. ASC	Chairman	D. Sivakumar 1/8/22
2.	Dr. J. Velmurugan Professor, Department of Medical Physics Anna University Chennai - 25	VC nominee	J. Velmurugan 01/08/22
3.	Mr. Prabakar Victor M.Sc., RSO Assistant Professor of Radiological Physics, Coimbatore Medical College and Hospital, Trichy Road, Coimbatore - 641018.	Subject Expert	ABSENT
4.	Dr. A.Saravanakumar RSO Assistant Professor & Chief Medical Physicist, Department of Medical Physics, PSG Institute of Medical Sciences and Research, Peelamedu, Coimbatore -641004.	Subject Expert	1/8/22
5.	Mr. Antovaz M.Sc., RSO Chief Medical Physicist Cum RSO Department of Radiation Oncology Kovai Medical Centre & Hospital, Coimbatore-641014	Industrial Expert	S. Antovaz 01/Aug/22

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6.	Mr. Sankar S M.Sc., RSO Medical Physicist Department of Radiation Oncology, VPS Lakeshore Hospital , Nettoor, Ernakulam, Kerala 682040.	Alumni	01/08/2022
7.	Dr. Subramanian M.D. Head, Department of Radiation Oncology, KMCH, Coimbatore-641014	Co-opted Member	1/8/22
8	Mr. T. Velmurugan M.Sc., RSO Senior Medical Physicist Cum RSO Department of Radiation Oncology KMCH, Coimbatore-641014	Co-opted Member	1/8/2022
9.	Dr. C. Selvakumar PhD Professor & Head, Department of Physics, Dr.N.G.P. ASC	Co-opted Member	01/08/2022
10.	Dr. R. Sowrirajan PhD Assistant Professor & Head, Department of Mathematics, Dr.N.G.P. ASC	Co-opted Member	ABSENT
11.	Mrs. G. Daisy Assistant Professor, Department of Medical Physics, Dr.N.G.P. ASC	Internal Member	ABSENT
12	Mr. S. Hari Krishnan II M.Sc. Medical Physics, Dr. N.G.P. ASC	Student Representative	R.S. HK 01/08/22

D. Sivakumar 1/8/22

Date: 01/08/2022

(Mr. D. Sivakumar)
BoS Chairman/HoD
Department of Medical Physics
Dr. N. G. P. Arts and Science College
Coimbatore – 641 048

Academic Council
Dr.V. Rajendran
CHAIRMAN
Dr. N.G.P. Arts and Science College