



MARIAN COLLEGE KUTTIKANAM  
( AUTONOMOUS )

# CURRICULUM DEVELOPMENT EFFORTS OF INTEGRATED MASTER OF SCIENCE IN PHYSICS



Submitted to  
THE NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL (NAAC)  
FOURTH CYCLE OF ASSESSMENT



## CONSTITUTION OF BOARD OF STUDIES

### List of institutions visited in connection with curriculum development

No	Name of the institution	Major activities during the visit	Outcome of the visit
1	IISER (Physics and Chemistry Departments), Trivandrum	Physics, chemistry lab design. Preparation of list of experiments for integrated MSc, Physics	Design and layout of the lab is finalised. List of basic physics and chemistry experiments finalised
2	CUSAT, Department of Physics, Cochin	Physics, chemistry lab design. Preparation of list of experiments for integrated MSc, Physics	Design and layout of the lab is finalised. List of basic physics and chemistry experiments finalised
3	St Thomas College Pala, Department of Physics.	Physics, chemistry lab design. Preparation of list of experiments for integrated MSc, Physics	Design and layout of the lab is finalised. List of basic physics and chemistry experiments finalised



## 1. List of Academic experts consulted

No	Name and official address of the Expert	Area of consultation	Courses designed through this consultation
1	Dr. Vincent Mathew	Physics -Theoretical Physics	Mathematical Physics I to V Computational Physics Lab I to IV Thermal Physics
2	Dr. Reji Philip	Physics –Laser spectroscopy	General Physics courses Physics Lab courses
3	Dr. John Philip	Physics Nanotechnology	Specialization Courses
4	Dr. Thomas Baby	Physics - Instrumentation	General Physics courses Physics Lab courses
5	Dr Sakthi S	Physics Nanotechnology	General Physics courses- Nano technology courses
6	Dr Joby Joseph	Physics – Laser Spectroscopy	General Physics courses
7	Dr. Sankararama S	Physics Optoelectronics	General Physics courses



			Nanotechnology Practical courses
8	Dr. Titus K Mathew	Physics Theoretical Physics	General Physics courses
9	Dr. Nandakumar K	Physics Nanotechnology	General Physics courses Nanotechnology
10	Dr. George James T	Physics - Nano electronics	LaTex Programming General Physics courses Experimental Physics courses
11	Dr. Benoy M D	Physics Thin Film Technology	General Physics courses
12	Dr. Vinod G	Physics Theoretical Physics	General Physics courses
13	Dr. Abraham K E	Physics Thin Film Technology	Electronics courses Physics Lab courses
14	Dr. Sreekumar R	Physics Materials Sciences	General Physics courses



			Experimental Physics courses
15	Prof M S Abraham	Physics	Quantum Mechanics General Physics courses  Experimental Physics courses
16	Dr Augustine J Edakkara	Physics	Classical Mechanics General Physics courses  Experimental Physics courses
17	Dr Ison V V	Physics Nano technology	Statistical Mechanics General Physics courses  Experimental Physics courses
18	Prof Raju Mathew T	Physics	Atomic and Nuclear Physics  General Physics courses
19	Prof Jacob George	Physics	General Physics courses  Experimental Physics courses



20	Dr Simon Augustine	Physics Materials Science Yoga	Yoga and Excerise for sound health Health and Emergency care
21	Dr Santhoshkumar S	Physics Theoriti	General Physics courses Experimental Physics courses
22	Dr Saji Augustine	Physics Material science	General Physics courses Experimental Physics courses
23	Dr Joe Jacob	Physics Astrophysics	Astrophysics Observational Astrophysics
24	Dr Jojo George	Botany	Plant propagation
25	Dr Juby George	Computer science	Python programming Machine Learning
26	Tommy Thomas	Mathematics	Mathematics I to IV



27	Mr Jolly Cyriac	Instrumentation	Physics courses Practical
28	Mr. Umer Salim	Electronic Industry	Flexible electronic technology

## 2. List of reports/policy documents referred for curriculum development

No	Details of reports	Link to reports if any
1	UGC model curriculum for BSc and MSc Physics	<a href="https://drive.google.com/file/d/1rWaKv7SUu8-i_sN7VSH0eREtrNOqZgCS/view?usp=sharing">https://drive.google.com/file/d/1rWaKv7SUu8-i_sN7VSH0eREtrNOqZgCS/view?usp=sharing</a>
2	JAM syllabus of Physics	<a href="https://jam.iitk.ac.in/PH.php">https://jam.iitk.ac.in/PH.php</a>
3	CSIR NET syllabus of Physics	<a href="https://drive.google.com/file/d/1SZOiDJftMirNQmdakLm6e0PlnGtjsHGE/view?usp=sharing">https://drive.google.com/file/d/1SZOiDJftMirNQmdakLm6e0PlnGtjsHGE/view?usp=sharing</a>
4	JEST syllabus of Physics	<a href="https://drive.google.com/file/d/14-gAhi1iNOjpbqxOWOag_sxxNr0rjib_/view?usp=sharing">https://drive.google.com/file/d/14-gAhi1iNOjpbqxOWOag_sxxNr0rjib_/view?usp=sharing</a>



### 3. List of industries consulted for curriculum development

No	Name and official address of the Expert from industry	Area of consultation	Courses designed through this consultation
1	Mr Jolly cyriac , MD Opto Mechatronics Pvt Ltd Kochi holmarc.com	Physics experiments in the field of Advanced topics	Optoelectronics experiments Nanotechnology experiments Thin Films experiments Optical experiments Materials science experiments
2	Mr A V Murali CEO, Prompt Engineering Works,Kochi promptengineering.in	Physics experiments in the field of Advanced topics	Thin films experiments Materials science experiments Conductivity studies Vacuum techniques
3	Mr Devesh K V M D, New Educational and Scientific Appliances, Thrissur.	General Physics Experiments	General Physics experiments Mechanics, properties of matter, electricity and magnetism experiments, heat experiments, electronics etc





4	Mr Umer Salim CEO, i4Technologies Pvt Ltd , Dubai.	Flexible Electronic Technology	Flexible Electronic Technology theory and practical courses.
---	--	-----------------------------------	--

#### 4. List of local experts consulted for identifying local needs

No	Name and official address of the Expert from industry	Area of consultation	Courses designed through this consultation
1	Dr George James T Associate Professor, Newman College Thodupuzha , Idukki Dist	Scientific type setting	LaTex Programming
2	Dr. Jojo George, Associate Professor, St Dominics College, Kanjirappally	Plant Propagation	Plant Propagation
3	Dr. Simon Augustine Associate Professor, St Thomas College Pala	Health	Yoga Exercises and sound health. Health and emergency care.
4	Dr Ison V V Associate Professor, St Thomas College Pala	Environmental	Environmental Science