DEPARTMENT OF PHYSICS
SCHOOL OF MATHEMATICAL AND PHYSICAL SCIENCES
CENTRAL UNIVERSITY OF KERALA
(Established under the Central Universities Act 2009)
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Minutes of the Meeting: PG Board of Studies

29.07.2016

Members Present:

1. Professor K J Thomas (Chairman)
2. Professor P. Kolandaivel, Bharathiar University
3. Dr. Alok Sharan, Pondicherry University
4. Dr. Vincent Mathews
5. Vijay Shenoy, IISc, Bangalore (on Skype)

The meeting began at 11.00 AM on 29.07.2016 in the office of the Dean, SPS. The members of the board have discussed and deliberated on the content of the Programme Structure. After the deliberations, the Board of Studies has suggested some modifications to the existing syllabus. The modified programme structure is approved and enclosed herewith.

The programme structure with the modified syllabus will be in force for students admitted in 2016-17 academic year onwards.

Professor P. Kolandaivel

Dr. Alok Sharan

Dr. Vincent Mathew

Professor K J Thomas

PHY5011 Materials Characterization Techniques

Course Code	PHY5011	Semester	
Course Title	*Materials Characterization Techniques*		
Credits	3	Type	Elective

Course Outcome

Again it is a skill oriented course in which hands on as well as virtual demonstration based training is provided in various high end characterisation tools.

Course Structure

Contents: The course is a survey of various materials characterization techniques used in solid state physics and nuclear physics. The lectures will be supplemented with hands-on training with available instruments. The topics shall include the following: (1) X-Ray Diffraction. (2) Atomic Force Microscopy. (3) Scanning Electron Microscopy & EDAX. (4) Transmission electron microscopy. (5) Raman spectroscopy. (6) Fourier Transform IR spectroscopy. (7) Vibrating sample magnetometer. (8) Nuclear techniques.

Suggested Books

1. Y. Leng, Materials Characterization, Wiley (2013)
2. R.P. Prasankumar (Ed.), Optical techniques for Solid State Materials Characterization, CRC Press (2013)