PROSPECTUS for

M.Sc. RADIATION PHYSICS *COURSE 2017*

DEPARTMENT OF PHYSICS, UNIVERSITY OF CALICUT

Calicut University P.O., Kerala, 673635

M.Sc. Radiation Physics course is a highly specialized multidisciplinary course in applied physics with high profile job opportunities as Radiological Safety Officer (RSO) in hospital, Nuclear reactor facilities, Regulatory authorities, industries and research centers involving high dose radiation systems, Medical Physicists in hospitals having Radiation therapy facilities, Dosimetrists in Industries, teachers and scientist. All these positions are challenging and having a lot of responsibilities. University of Calicut is the pioneering institute to incorporate strong theoretical background and intense clinical training with high orientation toward academic research which will make the students academically excellent and professionally competent. The course is being conducted in collaboration with ***Malabar Cancer Centre, Thalassery.***

HOW TO APPLY

General information and brochure are available from the web site of the university of Calicut, www.universityofcalicut.info. "NOTIFICATION FOR ADMISSION TO PG PROGRAMMES WITH ENTRANCE EXAMINATION (2017-18)" ***Apply online (from 26.04.2017 to 25.05.2017) through the website www.cuonline.ac.in. Click on the link '***PG PROGRAMMES WITH ENTRANCE EXAMINATION (2017-18)***". Enter challan number and Pass word and go ahead for completing the registration process.*** *A fee of Rs.500/- (SC/ST Rs.170/) shall be remitted to Calicut University Fund by e-payment (SBT online/SBT e-chalan/Friends/Akshaya e-chalan). Please click the link "fee remittance" in (www.cuonline.ac.in) or the link "Instant Web Payment System" in (www.universityofcalicut.info) for remitting fee.* (Choose the correct purpose of remittance while processing the challan)**.** *The printout of the online application and supporting document should reach the* ***Coordinator M.Sc. Radiation Physics, University of Calicut, Calicut University P.O., Kerala 673635*** *on or before 27.05.2017.* ***NRI and foreign*** *candidates should contact the* ***Dean, Students' Welfare, University of Calicut, Email: dsw@uoc.ac.in, Ph:04942404777.***

ENCLOSURES TO BE ATTACHED ALONG WITH THE APPLICATION.

- -- Photo copy of Ist page of S.S.L.C. Book (proof of age).
- --Photo copies of the certificates and mark lists of qualifying examinations
- -- SC/ST/OEC/OBC candidates should attach photocopies of the Community, Nativity and income certificates along with the applications
- -- Those who are eligible for Nativity weightage should attach copy of the nativity certificate along with the application.
- -- Those who are awaiting the results of the qualifying examination can also apply. They have

to submit the copies of Marklist to the Co-ordinator before 22.06.2017

ELIGIBILITY FOR ADMISSION

A pass in **B. Sc. Physics main with Mathematics as** one of the subjects of University of Calicut or equivalent with 60% marks or equivalent grade in aggregate of the subjects.

ADMISSION CRITERIA:

The admission is made on the basis of an entrance test of the objective type / or short answer questions and of duration 2 hours with the syllabus of B. Sc. Physics of the University of Calicut . Rank list will be prepared on the basis of equal Weightages for both the qualifying examination the entrance examination.

The entrance examination shall have 100 marks; multiple choice type questions – covering subjects (based on the syllabus of University of Calicut) as detailed below:

Physics of B. Sc. standard - 60 marks
B. Sc. Subsidiary level Mathematics – 20 marks
B. Sc. Subsidiary level Chemistry – 10 marks
Basic Human Physiology and Anatomy – 10 marks

DURATION OF THE COURSE: - 3 years

Two years – Four semesters each of 6 months followed by clinical training and project work for one year. The course work will be conducted at the Department of Physics, University of Calicut. The students have to attend clinical/field training and undertake a project work at any of the reputed institutions approved by the university and Atomic Energy Regulator Board (AERB), Govt. of India. The students have to qualify Radiological Safety Officer (RSO)examination conducted by the Radiological Physics and Advisory Division of Bhabha Atomic Research Centre separately for eligibility for RSO (Level III).

NUMBER OF SEATS **:12 + 1 NRI**

FEE STRUCTURE: The students have to pay the following fee on admission.

a) Tuition Fee	: Rs. 50,000/- per semester for 4 semesters only

(Students need not to pay any fee during 5/6 semesters, However they should pay the charges for clinical training, if required by the institution. Certain institution offer stipendiary trainee)

for **NRI and foreign students**	**: US $5000 per annum**
b) Caution deposit	: Rs. 15,000/- (at the time of admission refundable, without interest, only after completion of the course)
c) Admission Fee	: Rs. 5000/-
for **NRI and foreign students**	**: US $250**
d) Lab fee	: Rs. 5,000
Annual fee	: Rs. 690/-
e) University ID card	: Rs. 55/-

Note:

#The University will not be responsible for non receipt or late receipt of application, interview memos and other correspondence regarding admission.

Candidates should produce the admission card, duly attested, during the entrance examination.

Roll number will be available at the venue of the examination.

Students are liable to pay the fee structure decided by the university from time to time that is published through the official website of the university

VII. COURSE CONTENTS AND STRUCTURE :

SEMESTER I:		**21 CREDITS**
RPH1C01	MATHEMATICAL METHODS IN PHYSICS	4 CREDITS
RPH1C02	CLASSICAL MECHANICS	2 CREDITS
RPH1C03	BASIC ELECTRONICS	4 CREDITS
RPH1C04	INTRODUCTORY NUCLEAR PHYSICS	4 CREDITS
RPH1C05	INTERACTION OF RADIATIONS WITH MATTER	2 CREDITS
RPH1C06	ELECTRONICS PRACTICAL	2 CREDITS
RPH1C07	NUCLEAR PHYSICS PRACTICALS	2 CREDITS
RPH1C08	COMPREHENSIVE SEMESTER VIVA VOCE	1 CREDIT
SEMESTER II		**21 CREDITS**
RPH2C09	QUANTUM MECHANICS	4 CREDITS
RPH2C10	ANATOMY, PHYSIOLOGY AND RADIOBIOLGY	4 CREDITS
RPH2C11	RADIATION DETECTION, MEASUREMENT & INSTRUMENTS	4 CREDITS
RPH2C12	NUMERICAL TECHNIQUES & COMPUTER PROGRAMMING	2 CREDITS
RPH2C13	RADIATION PHYSICS FUNDAMENTAL	2 CREDITS
RPH2C14	PRACTICALS IN COMPUTER APPLICATIONS	2 CREDITS
RPH2C15	PRACTICALS IN INSTRUMENTATION IN RADIOLOGY	2 CREDITS
RPH2C16	COMPREHENSIVE VIVA VOCE	1 CREDIT
SEMESTER III		**21 CREDITS**
RPH3C17	RADIATION HAZARDS SAFETY, EVALUATION & CONTROL	4 CREDITS
RPH3C18	PHYSICS OF MEDICAL IMAGING	4 CREDITS
RPH3C19	PHYSICS OF RADIOTHERAPY	4 CREDITS
RPH3C20	NUCLEAR MEDICINE	4 CREDITS
RPH3C21	PRACTICALS IN RADIATION DETECTION AND MEASURING INSTRUMENTS	2 CREDITS
RPH3C22	PRACTICALS IN MEDICAL IMAGING	2 CREDITS
RPH3C23	COMPREHENSIVE VIVA VOCE	1 CREDIT
SEMESTER IV:		**19 CREDITS**
RPH4C24	QUALITY ASSURANCE, ACCEPTANCE TESTING AND COMMISSIONING OF RADIOTHERAPY SYSTEM	4 CREDITS
RPH4C25	RADIOTHERAPY TREATMENT PLANNING	4 CREDITS
RPH4C26	MODERN TRENDS IN RADIOLOGY & RADITION THERAPY	4 CREDITS
RPH4C27	PRACTICALS DOSIMETRY IN RADIOTHERAPY	2 CREDITS
RPH4C28	PRACTICALS IN RADIOTHERAPY PLANNING & DOSIMETRY	2 CREDITS
RPH4C29	PRACTICALS IN Q/A AND CALIBRATION OF RADIOLOGICAL EQUIPMENTS	2 CREDITS
RPH4C30	COMPREHENSIVE VIVA VOCE	1 CREDIT
SEMESTER V & VI		**18 CREDITS**
RPH5C31	PROJECT WORK	8 CREDITS
RPH6E32	FIELD TRAINING	10 CREDITS
	TOTAL CREDITS 100	

PROJECT WORK:

Every candidate must do a project work under an approved supervisor (approved by the Coordinator) in a topic having relevance to the application of radiation in medicine, industry, agriculture and research in the 5/6th semester. The project thesis should be submitted to the University. The supervisor should certify about the satisfactory completion of the project. Students must present their project work before a committee constituted by the course coordinator. Project Report must be submitted within two months from the last working day of the final semester

CLINICAL TRAINING:

Total duration of the training will be 1 year (as prescribed by the AERB) in recognized institute with advanced facility for Radiation Therapy, under the supervision of a designated academic staff member of the institute. The supervisor must certify the adequacy of the field training on the basis of the performance and record of the candidate. The students should necessarily present at least one seminar on the basis of the field training and the record of the field training must be duly certified by the designated officer in the centre and the Course Coordinator. (The students should pay the charges for clinical training, if required by the institution. Certain institution offer one year stipendiary trainee which is treated as clinical training).

RADIOLOGICAL SAFETY OFFICER (RSO) approval by AERB:

The University shall initiate steps to get Radiological Safety Officer (Level III Medical) certification for all candidates. The examination for the same shall be conducted by the Department of Atomic Energy, Govt. of India, as per the regulations of the Atomic Energy Regulator Board (AERB). Candidate completing one year clinical training are eligible for this examination. Student should attend and qualify the RSO examination at their own capacity and expense of boarding and lodging. This certification is necessary those who are interested to work as RSO (Medical) and Medical Physicists.

IMPORTANT DATES !!!

Last date for submitting the application online : 25.05.2017
Last date for submitting printout of the application form : 27.05.2017
Issue of online hall ticket : 13.06.2017
Date of Entrance Examination : 17.06.2017
Time & Venue : 10.30 am Department of Physics, University of Calicut
Declaration of result and publication of rank list: 23.06.2017
Date of admission: 10.07.2017
Commencement of classes: 17.07.2017

For any queries in this regard email or call the Coordinator: Ph: 04942407416, 7415,
Email: curadphy@gmail.com, mmm@uoc.ac.in,