

REGIONAL CANCER CENTRE

THIRUVANANTHAPURM-695 011

PROSPECTUS FOR ADMISSION TO

**Post-M.Sc. Diploma in Radiological Physics (DipR.P.) Course
2017-18**

INTRODUCTION

Regional Cancer Centre, Thiruvananthapuram (RCC), now in its 36th year of service to the nation is an autonomous institution sponsored jointly by the Govt. of Kerala and the Govt. of India. It is an internationally acclaimed centre for cancer treatment and research and caters to the population of the state of Kerala and adjoining parts of Tamil Nadu. Handling over two lakhs patients including over 15,000 new cancer cases annually (30 lakhs patient visits in the last 15 years) RCC stands tall in the health map of Kerala carrying out innovative and pioneering work in cancer control, treatment, research and training.

RCC is a comprehensive cancer centre with full-fledged departments of Radiation Oncology, Surgical Oncology, Medical Oncology and Paediatric Oncology supported by allied services such as Pathology, Imageology, Nuclear Medicine, Anaesthesiology, Microbiology, Transfusion Medicine, Radiation Physics, Laboratory services and Nursing services. The centre also has separate divisions for Community Oncology, Medical Records, Cancer Epidemiology, Cancer Research, Palliative Medicine, Dental Care and Computerized Hospital Information System management. The information support for all these activities is provided by a well-organized Library & Information Services Division.

RADIATION PHYSICS DIVISION

The Division has five Linear accelerators and a Cobalt-60 Teletherapy unit. On a day about 475 patients are treated in these machines. It has a High Dose Rate (HDR) Brachytherapy unit that treats about six patients daily. A wide bore 16 slice CT Simulator and a Flat panel Digital Simulator are available for treatment planning that is done using Eclipse, Oncentra and Precise plan Treatment Planning Systems. A well- equipped Mould Room facility is also functioning in the Division. Radiation Safety of the Institution is handled by the Division. Imageology Division has a 16 slice CT Scanner, 1.5T MRI Scanner, Digital Radiography Systems, Digital Mammography unit and Ultrasound scanner with colour Doppler.

Nuclear Medicine Division has a Dual Head Gamma Camera with SPECT facility which is being upgraded now and PET-CT Scanner. Weekly 5-6 patients are given Radio Iodine for the treatment of thyroid cancer.

Treatment planning, acceptance testing and quality assessment of radiotherapy and diagnostic radiology equipment are part of the activities of the Division, along with Radiation Safety in Radiotherapy, Imageology and Nuclear Medicine Divisions.

The Division is involved in teaching Radiotherapy and Imaging Physics to PG students in Radiotherapy and Imageology and Radiation Technology students. It is also affiliated to Kerala, M.G., Bharathiar, and MAHER Universities for Ph.D program in Physics/Medical Physics.

I. Applications are invited for admission to the Post-M.Sc. Diploma in Radiological Physics (Dip RP) Course for the academic year 2017-18 at the Regional Cancer Centre, Thiruvananthapuram.

This PG Diploma will enable the successful candidate to perform Medical Physics related tasks, a few of which are mentioned below:

1. Radiological safety of patients and staff.
2. Site Plan preparation and obtaining permission from AERB for setting up diagnostic radiology, radiotherapy and nuclear medicine installations.
3. Commissioning of radiotherapy installations
4. Periodic Quality Assurance of Radiotherapy and diagnostic radiology equipment
5. Treatment Planning in Radiotherapy.
6. Radiation Safety in Radio iodine therapy
7. Teaching Medical Radiation Physics to undergraduate, post graduate medical and paramedical students.
8. Undertaking research work related to use of radiation for diagnosis and therapy

II. Duration of the Course:

Two years (including one year mandatory internship in RCC in Radiodiagnosis, Radiotherapy and Nuclear Medicine).

The date of commencement of the course will be **01/11/2017** or as certified by the

Director, RCC. Students will be provided a stipend of Rs.6000/-per month during the one year of internship.

Radiological Safety Officer (RSO) Approval by Atomic Energy Regulatory Board (AERB)

The Institution shall initiate steps to get RSO eligibility for all candidates. The examination for the same shall be conducted as directed by AERB or any other agency approved by AERB as per its regulations. Students qualifying this examination will be eligible for RSO.

Field Training and Project work:

Field training will be an integral part of the course. The candidates will be posted in Imageology, Nuclear Medicine, Radiation Physics and Radiation Oncology Divisions of the Institution during the course period under a faculty supervisor.

A field training report must be submitted to the supervisor at the end of every posting. Every candidate must do a project work also under an approved faculty supervisor in a topic having relevance to the application of radiation in medicine. The supervisor must certify to the adequacy of the field training and project work on the basis of the thesis reports submitted by the candidate. The students should necessarily present at least one seminar on the basis of the project work. The record of the field training must be duly certified by the designated faculty member.

The final result will be declared only after satisfactory completion of field training, project work and internship.

Students will be eligible to do internship only after passing all the theory papers, practicals and viva.

Award of the Certificate:

Post M.Sc Diploma in Radiological Physics (Dip RP) will be awarded to the successful candidates by the Kerala University of Health Sciences (KUHS) only after successful completion of the course as detailed above.

III. Eligibility for admission:

Applicants should satisfy the following conditions:-

a) **Nativity:** Should be an Indian Citizen

b) **Basic Academic Qualifications:**

1. B.Sc. with Physics as one of the Main subjects conducted by any of the UGC approved Universities in India.
2. A pass in Full time M.Sc. Physics conducted by any of the UGC approved Universities in India with 60% marks in aggregate of the subjects. **In case of Grade System, grade to percentage of marks conversion scheme obtained from University should be submitted along with the application.**

c) **Age: as on 01-01-2017:**

General:	26 years
OBC:	29 years
SC/ST:	31 years

d) For physically challenged candidates, **there is a relaxation of age by 10 years**. Only candidates with physical disabilities limited to the lower extremities, are able to stand and move and are physically able to carry out the course requirements will be considered. Persons with visual and hearing disability and loco-motor disability involving upper limb are not eligible for admission.

e) Number of seats: 4 (**Four**) per year

f) Admission will be made on the basis of an entrance test with objective type questions of 2 hours duration followed by an interview. Twenty (five times the number of seats) candidates will be shortlisted for interview on the basis of rank for entrance examination.

The entrance examination shall have multiple choice type questions for a total of 100 marks and they would cover subjects as detailed below:

M.Sc Level Physics – 60%

B.Sc. Subsidiary level Mathematics – 20%

B.Sc. Subsidiary level Chemistry – 10%

Basic Human Physiology and Anatomy – 10%

Interview – 20 marks

Entrance test will be conducted only if the number of eligible candidates is more than five times (20) the number of seats. Otherwise selection will be made based on marks scored in qualifying examination (MSc) and Interview.

IV. Fees:

1	Application fees	₹ 300/- (₹ 100/- for SC/ST Candidates)
2	Administrative Charges	₹ 3000/- (non-refundable)
3	Tuition fees	₹ 1,20,000/-
4	Caution Deposit	₹ 50,000/- (refundable without interest after Internship)
5	University fees	as fixed by Kerala University of Health Sciences, Thrissur
6	Examination fees	as fixed by Kerala University of Health Sciences, Thrissur

V. How and when to apply:

(a) Candidates seeking admission to the course should do online registration and complete the application form provided in the Website: www.rcctvm.org. The **Prospectus and Annexures** can be downloaded from the website.

(b) Step wise procedure for Online submission:

The candidate has to visit www.rcctvm.org where he/she can find the link '**Application for Post-M.Sc Dip RP 2017-18**' for submitting his/her application.

Step 1:

The candidate will be directed to another page where he/she should click the link '**Apply Online**'

Fill in the required details. Click '**save button**'. Verify all details entered and click '**submit button**' for final submission. A '**Confirmation Page**' will be displayed with a unique application number. **Note down the application number and password.** This is required for completing the application process and for future reference.

Step 2:

Candidate Login

Candidate login is required to complete the rest of the steps of online application. For

login enter the Application Number and password.

Step 3:

Upload Photograph Once you are successfully logged in you will be directed to upload the photograph.

*Photograph:-*The candidate has to upload his/her passport size photo in **jpg** format not more than **50 kb** of size by clicking on the browse button provided. Photographs must be taken **on or after 01/08/2017** with a placard indicating **name and date of photograph**. It must be a good quality colour 'STUDIO' photograph with light colour background. The photograph should not have Cap or Goggles. Spectacles are allowed if being used regularly. POLAROID and COMPUTER / MOBILE PHONE generated photos are not acceptable.

Important: The candidate must upload the same photograph that is to be pasted in the print out of the application. The photograph should be firmly affixed to the print out of the application (in the space provided) by gum / fevicol and should not be pinned or stapled.

The photograph affixed to the application form should be **attested by a Gazetted Officer**.

Applications not complying with these instructions or with unclear photographs are liable to be rejected.

Step 4:

Complete Application Form. Click on the '**Continue**' button. Fill the application form completely on-line. Details of the payment of Application fee (Demand Draft) also needs to be entered in the application form.

Once the candidate is sure that the data entered are correct in all respects, he/she has to click the '**Submit**' button placed below the '**Declaration**' by the candidate. The declaration is meant to state that all details entered by the candidate are true and no corrections will be requested in future. Some preliminary validations on the data entered will be done during this stage. If the validation is not cleared, the candidate will have to look into all the errors shown in the page and correct it. Once all the corrections are made and the candidate is sure that all the entries are correct, he/she can click the '**Confirm**' button and save his/her application or click '**Edit**' button to correct. When the '**Confirm**' button is

clicked, the application will be saved and submitted. **Last date for submitting the online application is 03/10/2017.**

The '**Application Number**' of the candidate will also be displayed on the page. The candidate is instructed to use the application number for further correspondence with this office. **The candidate will not be able to edit/modify/correct his application, once the 'Confirm' button is clicked. If any of the details submitted are found incorrect, the candidature will be cancelled.**

Step 5:

Take a printout of the filled Application Form.

Step 6:

Affix passport size photograph (attested by a Gazetted Officer) in the space provided. Use the same photograph as the one uploaded.

- a) Please do not alter the application form in any way.

The candidate is advised to keep a photocopy of the application (complete with photo and signatures) and keep it with him/her for reference.

- b) Enclose **self-attested copies of all required supporting documents** as mentioned in **clause V (Step 6: e) and Certificates as in ANNEXURE I**

- c) Duly completed application must be accompanied by a **Demand Draft** payable at **State Bank of Travancore, Medical College Branch, Thiruvananthapuram** or any of its service branches payable at Thiruvananthapuram for **Rs.300/-** drawn in favour of "**Director, Regional Cancer Centre**". **Application Fee** is not refundable under any circumstance.

- d) The completed and signed application form with all the necessary enclosures should be sent to '**The Director, Regional Cancer Centre, Medical College Campus, Thiruvananthapuram – 695011**' by **Registered/Speed Post only** and should reach the Director, RCC, latest by **4.30 pm on 09/10/2017**. The envelope containing the application should be superscribed – "**APPLICATION FOR POST- M.Sc. DIP RP COURSE**".

e) Certificates / Documents to be attached to applications

Self-attested photo-copies of the following documents:

1. Proof of age (Passport/ Secondary School Leaving certificate showing date of birth/ Tahsildar's certificate).
2. Community certificate for SC/ST/OBC candidates issued by Revenue Officer not below the rank of a Tahsildar.
- 3) Disability certificate: Certificate of disability from the District Medical Board, certifying the degree of percentage of disability issued not earlier than 3 months prior to submission of application. No document/certificate other than those mentioned above will be accepted.

Candidates should not send more than one application form to RCC. The application submitted by the candidate should be complete in all respects and the certificates produced after the last date of receipt will not be considered at all. No opportunity will be given to incorporate any details after the submission of the application form.

Admit cards will be issued only to eligible candidates whose **complete applications are received in the office of the Director, Regional Cancer Centre, Thiruvananthapuram on or before 4.30 pm on 09/10/2017.**

NOTE:--Only those application forms submitted **online as well as by post** will be processed further. Candidates who fail to submit any one of these will risk rejection of the application. If there is any doubt regarding the authenticity of any certificate furnished by the candidates, such certificates will be accepted only if found correct on further verification. Admission even if given will be cancelled if it is found later that false certificates have been produced or that the admission has been secured by fraudulent means.

IMPORTANT INSTRUCTIONS FOR CANDIDATES

1. Admit cards will have to be down loaded from the website www.rcctvm.org. Date for downloading admit cards will be notified later on the website. **The application number and password is required for downloading the admit card.**
2. Admit cards should **be printed in colour** using inkjet/laser printer on A4 size paper.

3. Candidate must bring Admit Card with him / her to secure admission to the Examination Hall.
4. Only those with original admit cards will be allowed inside the examination hall.
5. If an eligible candidate is unable to download the admit card by notified date he/she may contact the office of the Director, Regional Cancer Centre, Thiruvananthapuram. Please contact **Ms. Lalitha B / Ms. Kalpana Soni at 9895546790/ 0471 2522278/2522505.**
6. The admit card is being issued provisionally subject to the scrutiny of the eligibility. It is only after verification of the eligibility that the candidate would be considered for admission. Merely qualifying in the test does not entitle a candidate for selection / admission.
7. Please bring your own **blue/black ball point pen.**
8. Scientific calculator will be allowed inside the exam hall.
9. The examination hall will be opened half an hour before the commencement of the examination.
10. No candidate will be allowed into the examination hall after fifteen minutes of commencement of the examination.
11. Mark your answers on the "Answer Sheet" by blackening the circles using **BLUE/BLACK BALL POINT PEN.**
12. No candidate will be allowed to leave the examination room till the examination is over.
13. At the end of the examination, candidate should hand over the Answer Sheet to the Invigilator.
14. Candidates will be required to sign his / her attendance at designated places in the presence of the Invigilator when directed to do so.
15. Candidates who fail to observe these regulations will be disqualified and debarred from appearing in subsequent entrance tests held by RCC.
16. No TA / DA will be admissible for attending the written test and joining the course.
17. Any malpractice or attempt to commit any kind of malpractice in the examination

will result in the disqualification of the candidate and withdrawal of candidature.

For each question, four suggested responses will be given as choices A, B, C and D, of which only one will be the **most appropriate answer**. The candidate has to select and darken the circle corresponding to the most appropriate response in the answer sheet provided. All entries in the answer sheet including darkening of circles should be done using **BLUE/BLACK BALLPOINT PEN** only.

Candidates are to darken only one circle for each question. In the event of darkening more than one circle/ erasing already darkened circles, the candidate shall not be awarded any mark for that answer. There is no provision for revaluation or rechecking of answer sheets.

VI. APPEAL

The answer keys of the entrance examination will be published on the RCC website on the same day of the examination. Candidates can appeal against any mistakes in the questions/answers. A committee appointed by the Director, RCC will look into the appeal and if the appeal is found to be valid such questions/answers will not be considered for calculation of marks at all. Only those candidates who have appeared for the entrance examination will be eligible to appeal. Written appeals (as prescribed in **Annexure IV**) should be submitted to the office of the Director, Regional Cancer Centre, Thiruvananthapuram (**Date will be published on website of RCC on 11/10/2017**). The application number and admit card number should be quoted in the appeal. Any appeal which does not comply with the above rules will be rejected.

Selection for Interview:

Candidates will be short listed for the interview purely on the basis of marks obtained in the MCQ paper. The number of candidates short listed will be approximately five times the number of seats. In case of equal cut-off marks in the MCQ test, all the candidates with the same marks shall be short listed for the interview.

Documents to be produced at the time of Interview:

1. Admit card of the Entrance Examination.
2. Originals of documents mentioned in **CLAUSE V (Step 6: e)**
3. Original and self-attested copy of following documents:
 - a. M.Sc Mark sheets.
 - b. M.Sc Degree Certificate.
 - c. B.Sc. Degree Certificate.
 - d. Certificate from concerned University regarding conversion of grade to percentage of MSc marks.
4. Proof of Nationality (Passport/ Voters ID/ PAN Card/ Tahsildar's certificate).
5. Character/conduct certificate issued by competent authority (head of institute/gazetted officer).

VII. Rank list & Selection:

- a) The Director, Regional Cancer Centre will prepare and publish the select list and wait list of candidates.
- b) The select list of candidates will be based on the marks obtained in the entrance examination (Part I, II in Annexure II) based on the total scores obtained out of a maximum of 120 marks which will be derived by adding 100 marks (MCQ) and 20 marks (interview) – see Annexure II for details.
- c) If test is not conducted (due to less number of applicants) select list will be based on marks for MSc Physics and interview.

Resolution of Tie:

If more than one candidate obtains equal marks in the Entrance Examination

(Written Test + Interview), tie will be resolved as follows:-

1. Candidate with higher marks in MCQ paper will be ranked higher.
2. If the tie still persists, the candidate with more marks for M.Sc. will be given preference.
3. If the tie still persists, the older candidate will be given preference.

- c) Admission Memo will be issued to the selected candidates. The candidate has to report on the date fixed by the Director. The candidates who get selection **will have to remit the fees as mentioned in Clause IV (2, 3 & 4) at the time of admission.**
- d) Candidates who do not turn up for admission as per schedule, at the place notified, will forfeit their chance for admission, and will not be considered for admission in future or arising vacancies, irrespective of the rank.
- e) If a candidate is not able to attend the admission process on genuine grounds, the parent/guardian, or any authorized person may act as a proxy at the risk of the candidate, on production of authorization letter (**Annexure III**). In such a case the candidate has to report to the Director in person within one week or he/she will forfeit his/her claim to the seat and the seat will be allotted to the next candidate in the merit/wait list.
- f) Fees remitted will not be refunded under any circumstance after **10.00 am on 01/11/2017.**
- g) Candidates who discontinue the course after **10.00 am on 01/11/2017** will forfeit the fees paid and will be liable to pay Liquidated damages.
- h) The Select List and Wait List published will be valid till **04/11/2017.**

Documents to be produced at the time of Admission:

1. Admit card of the Entrance Examination.
2. **Original** of following documents:
 - a. M.Sc. Mark sheets.
 - b. M.Sc. Degree Certificate.
 - c. B.Sc. Degree Certificate.
 - d. Proof of age. (Passport/ Secondary School Leaving certificate showing date of birth/ Tahsildar's certificate).
 - e. Proof of Nationality (Passport/ Voters ID/ PAN Card/ Tahsildar's certificate).
 - f. Character/conduct certificate issued by competent authority (head of institute/gazetted officer).
 - g. Community certificate for SC/ST/OBC candidates issued by Revenue Officer not below the rank of a Tahsildar.

- h. Disability certificate: Certificate of disability from the District Medical Board, certifying the degree of percentage of disability issued not earlier than 3 months from the date of submission of application. No document/certificate other than those mentioned above will be accepted.
 - i. Certificate of Eligibility/Equivalency of the qualifying examination by the Kerala University of Health Sciences, Thrissur in the case of candidates who have passed their Post Graduate Degree courses from Universities outside Kerala.
3. Authorization letter as per **Annexure III** and its photocopy, if a proxy is attending admission process on behalf of the candidate.
 4. Any other documents mentioned in the admission notification.

All original documents will be retained in RCC and will be returned only on successful completion of the course

IMPORTANT DATES

Event	Date
Last Date for completing online application	03/10/2017
Last Date for receiving postal application	09 /10/2017
Downloading Admit cards	--/ /2017 *
MCQ Entrance Examination	--/ /2017*
Challenging questions	--/ /2017 *
Result of Entrance Examination	--/ /2017*
Interview	--/ /2017 *
Final Result	--/ /2017 *
Date of Commencement of course	01/11/2017

*Date will be published on **11/10/2017** on www.rcctvm.org

VIII. Liquidated damages & Execution of Bond:

All candidates selected for the course have to execute a bond as in clause (a) below in stamped paper (all pages of the bond should be in stamped paper) of a total value of Rs.200/- of Kerala stamp paper at the time of joining the course to the effect that :

- a) He/she shall not discontinue the course he/she has been selected to after **10.00 am on 01/11/2017**. If a student discontinues the course after this, he/she shall pay **Rs. 2 Lakhs (Rs. Two lakhs only)** as Liquidated damages and will forfeit any fees paid.

1. No admission shall be made without getting the bonds as detailed above executed at the time of joining. Format of bond will be available in the RCC web site.
2. The parents/guardians/husband/wife shall stand as sureties. The signatures of the candidate and the sureties have to be attested by a Gazetted Officer of State/Central Government or Grama/Block/District/Panchayat President/ Municipal Chairperson/ Mayor or MLA/MP, by countersigning in the bond agreement as a witness.

A candidate is required to have a minimum of 80% attendance in theory and 100% in practical subjects for the course .

He/she will have to complete the total duration of the course before being given the course completion certificate.

During the course they will be entitled to weekly off and closed holidays of the Centre. During the one year internship they will be permitted to avail casual leave for 20 days, but not more than 10 days at a stretch. Any other leave will entail extension of the internship. Those who take leave without prior sanction are liable to be considered to be on unauthorized absence. If the student is absent without authorization for more than 10 days, he / she will be terminated from the course and liquidated damages will be realized. CMEs, workshops and other academic programmes conducted by recognized academic bodies are essential aspects of the training programme. All the students will be permitted to attend such programmes without affecting the routine working of the Division concerned. The Director shall sanction leave-on-duty to the students provided they apply prior to the CME programme and the Head of Division is convinced about the genuineness of the programme and utility of the particular course. The student on returning from the programme should submit attendance certificate to the Head of the Division.

No student shall leave the country without prior sanction of the Director, RCC. Any violation will be viewed seriously warranting termination from the course.

X. General

All students admitted to RCC will be bound by the rules and regulations as decided by the Director, RCC from time to time.

Notwithstanding anything contained in the Prospectus, the Director may at any time revise or amend any clause in the prospectus.

The court cases/disputes shall be within the exclusive jurisdiction of competent courts in Kerala.

Hostel accommodation is not available in the campus. Candidates will have to find their own accommodation.

Preserve your admit card which has to be produced before the admission committee in case you are selected.

Thiruvananthapuram

19/09/2017

Sd/-

DIRECTOR