

# **Guidelines for PhD Program-**

**Dr Ram Manohar Lohia Institute of  
Medical Sciences, Lucknow**

**Affiliated to  
King George Medical University, Uttar Pradesh  
Lucknow,  
India**

*Administrative Office :*

**Dean Office**

**Dr Ram Manohar Lohia Institute of Medical Sciences  
Lucknow (UP), 226010**

# 1. History

**Dr. Ram Manohar Lohia Institute of Medical Sciences, Lucknow** is an autonomous teaching superspeciality institute funded by the Government of Uttar Pradesh. The Institute is registered under the Society registration act 21, 1860 and the Registration No. is 1982 2006-07 dated 4<sup>th</sup> Nov 2006.

The institute was established in 2005 with the following aims and objectives:

- It would provide comprehensive/ holistic medical care which will include general care in various fields of medical/surgical and different super specialties in which selected super specialties are not available or grossly inadequate in this region.
- It will act as a secondary level as well as a selected tertiary level referral centre for the poor population of this region at affordable cost.
- To create a centre of excellence for providing patient care and educational facilities of high standard.
- To be a unique specialized training centre in Medical, Para-medical and allied fields.
- Educational training, research facilities and patient care will be harmonizing with SGPGIMS.
- Besides super specialty treatment Institute will offer opportunities of different Post Graduate courses e.g. D.M., M.Ch., M.D., Ph.D., P.D.C.C. Degrees in various subjects.
- The Medical Institute, with public service hospital will cater both to the poor patients who are unable to pay and to the population that has the capacity to pay on user charges at 'no profit no loss basis.

Currently 17 departments have been sanctioned at the Dr Ram, Manohar Lohia Institute of Medical Sciences including Neurology, Neurosurgery, Cardiology, Cardio-Vascular and Thoracic Surgery, Radiation Oncology, Pathology, Radio diagnosis, Anaesthesiology, Nephrology, Urology, Microbiology, Biochemistry, Surgical Oncology, Medical Oncology, Medical Gastroenterology and Surgical gastroenterology

Dr. Ram Manohar Lohia Combined Hospital is affiliated to the institute for teaching purposes and has wards for General Medicine, General Surgery, Obstetrics and Gynaecology, ENT, Ophthalmology, Skin, Tuberculosis and leprosy and other clinical subjects, Emergency, ICU, Blood Bank, Mortuary and trauma facilities. Total bed strength at the combined hospital is 395 currently. The Ram Manohar Lohia Combined Hospital is officially affiliated to the Dr Ram Manohar Lohia Institute of medical Sciences. The combined hospital has NABL accreditation and is conducting DNB courses in some subjects. The current OPD attendance of the Hospital is approximately 62868/ month and it also has beds in various specialities and patients for superspeciality treatment are referred to the Institute

Research and academic activities are being conducted at the Dr Ram Manohar Lohia Institute of Medical Sciences since 2011. An ethical committee, Research committee, academic council, research labs are all in place. Several intramural

research projects funded by the institute are being conducted by the faculty. Extramural projects from DST, ICMR and UPCST are also functional. Several workshops and national as well as international level Symposia have been conducted at the Institute. Several research paper have also been published in peer reviewed international and national journals.

High level infrastructure has been provided at the institute to offer the best in patient care to cases coming for treatment in public sector in the state of Uttar Pradesh. All departments are equipped with modern and high technology facilities. The ICU, Operation theatres and departments are equipped with latest in medical care. A web based Hospital Information system has been developed along with an automated Lab information system. Patient and investigation Information is available online. Telepathology services have also been established. The diagnostic departments offer the ultimate in diagnostic care and are being upgraded to a state referral centre to be interlinked to district hospitals and other state medical colleges to provide high end investigations at low cost and high quality.

## 2. Preamble

Ph.D. programme is being initiated at Dr. Ram Manohar Lohia Institute of Medical Sciences in 2013 in affiliation with King George Medical University U.P. (KGMU UP). The program will be conducted according to the KGMU guidelines. In this academic session faculty with required experience in all the MCI recognized/ permitted departments will be eligible to become chief guides. The candidates are trained in areas like research methodology, biostatistics, computer use, etc to ensure general proficiency as researcher in biomedical sciences and increase the likelihood of their pursuing a successful career in research. Successful candidates will be awarded **“DOCTOR OF PHILOSOPHY”** from **K.G. MEDICAL UNIVERSITY U. P.** While this degree is not being awarded in any specific subject, the award certificate mentions the title of the thesis along with the month and year of the award of degree. The Institute and is turn the university will ensure that outputs of Ph.D. programme are original works of excellence leading to discovery of new facts in science or evolution of fresh approach towards interpretation of existing facts. This document lists the rules and regulations for the Ph.D. programme to be followed at RMLIMS, Lucknow. These can be reviewed and modified from time to time in the interest of the programme.

## 3. Infrastructure

- 3.a. PhD students can be registered at RMLIMS, Lucknow with co-guide at KG Medical University, and other co-guides from the Institute as well as other academic and research institutions in India & abroad, if infrastructure along

with conducive academic environment exists with the guide and co-guide, who also have expertise in the area of research work proposed for PhD.

- 3.b. Any Department that is equipped to carry out research work can register a Ph.D. candidate in RMLIMS, Lucknow faculty who will guide the work in any basic and/or clinical medical sciences. The guide will have to register at from K.G. Medical University, Lucknow.

## **4. Eligibility Criteria**

### **4.1 For Non-Faculty Candidates**

#### **Educational Qualification**

- 4.a.1 Candidate must have graduate and post graduate degree with at least 60% marks.
- 4.a.2 Medical/Dental candidates must have MD/MS/MDS with at least 60% marks in MBBS/BDS aggregate

#### **Funding Criteria**

- 4.a.3 Candidates must either have fellowship from UGC /CSIR /ICMR and the fellowship funds must be sanctioned to RMLIMS

OR

The candidate has to be employed in extramurally funded project sanctioned to the Guide or Co-Guide of RMLIMS. The project funds must be sanctioned to the RMLIMS.

- 4.a.4 Candidates without secure funding will not be registered.
- 4.a.5 No financial assistance in the form of stipend, emoluments, honorarium etc. will be given to the candidate by the Institute.

#### **Age Criteria**

- 4.a.6 Candidates must not be over 35 years of age on 31<sup>st</sup> July of year of application, relaxable with the approval of the competent authority on case to case basis.

### **4b For Internal Candidates**

- 4.b.1. Faculty or other staff of RMLIMS who have completed at least 5 years of service can enroll in the Programme through their respective head of department.
- 4.b.2 Such candidates must avail at least one year's leave to work full time for their research. The nature of leave to be availed will be as per existing Institutional norms.
- 4.b.3 Rest of the rules and regulations are as for non-faculty candidates.

#### **4.c For External Candidates in Permanent Employment**

- 4.c.1 Candidates who are permanent employees of external institutions will have to provide a NOC for applying in PhD program of RMLIMS from the employers
- 4.c.2 Also such candidates have to provide a certificate at the time of submission of synopsis from the employer stating that in the event of selection to PhD program the candidate will be granted for a minimum of 2 years study leave with the full pay and permission to work in RMLIMS, Lucknow.

#### **4.d. For the Registration of Guides**

- 4.d.1 For a RMLIMS faculty to register as a guide for a Ph.D. candidate, he/she must have not less than fifteen years teaching and research experience after obtaining his postgraduate qualification and shall also have not less than ten years postgraduate teaching experience as a faculty member
- 4.d.2 It is necessary that the guide be currently involved in research with ongoing research project /s through extramural funding.
- 4.d.3 The guide must have a proven research track record, with at least 10 publications in indexed, peer-reviewed journals in last 5 years.
- 4.d.4 For guiding Ph.D. in basic sciences the guide must have bench experience of the techniques involved.
- 4.d.5 Only ONE candidate per year can be enrolled under each guide with a maximum of 5 candidates at any given time.
- 4.d.6 A faculty member cannot become co-guide of more than 2 students per year.
- 4.d.7 There must be at least one co-guide from the same/allied department as the guide, who is eligible to be PhD guide, so that in case of any eventuality like superannuation etc. of the Chief guide, the co-guide may take over as the Chief guide.
- 4.d.8 Long term leave for more than 3 months to the Chief guide can be permitted by the competent authority. In that case, the co-guide will certify in writing that he/she will substitute for the guide and not take long leave during that period.
- 4.d.9 If a faculty member is a co-guide for a candidate registered in another university, his/her candidate can conduct work within the Institute, with the approval of the institutional ethics committee.

### **5. Admission Procedure**

5.a **Enumeration of Ph.D. Seats :**

5.a.1 Only ONE candidate per year can be enrolled under each eligible guide (see section 4.d) with a maximum of 5 candidates at any given time. Based on the number of Ph.D. students who have already registered with an eligible Guide, willing to take PhD candidate for the current year, the maximum number of available PhD vacancies within each department for a given year will be counted and communicated by the each Head of Department, to the Dean in January of each year.

5.a.2 For each Department, as done for senior residents, these vacant PhD seats shall be divided as per reservation categories into unreserved, reserved for OBC, and reserved for SC/ST, and so classified. If no eligible reserved candidate is available for a particular seat in a given year, the same can be filled with a candidate from open category.

5.b **Selection Procedure:**

5.b.1 **Entrance Test:** For Eligible PhD applicants with secure funding (Excluding those with JRF from UGC/CSIR/ICMR) a PhD Entrance Test in English medium shall be conducted by the Institute through the Office of the Dean, RMLIMS.

- Entrance Test will be a written aptitude test in logical thinking, human biology (10+2 level), general awareness, research aptitude and basic computer knowledge (class 10 level). Qualifying marks will be 55% for general, 50% for SC/ST/OBC candidates. The qualified candidates will be called for Interview.
- The Entrance Test qualified candidates and JRFs will have to submit an application to the Head of the department of his/her chosen field within 15 days of declaration of result of Entrance Test.

5.b.2 **Departmental Interview:** The qualified candidates along with those with JRF from UGC/CSIR/ICMR will have to appear for interview/s, in the department/s of his/her choice, before a Departmental Interview Committee constituted by Director, under the Chairmanship of Dean, RMLIMS. The constitution of Departmental Interview Committee will be as follows:

1. Dean , RMLIMS – Chairperson
2. Director's Nominee
3. Head of the concerned Department
4. Faculty Members of concerned Department who are eligible and willing to be Guide
5. Faculty Member (Representative of OBC/SC/ST community)

### 5.c Registration Procedure:

- 5.c.1 The candidates who have been selected by Departmental Interview Committee shall be considered provisionally registered in the Ph.D. programme after payment of requisite fee.
- 5.c.2 Provisionally registered candidates will have to report to the concerned department and interact with eligible Ph.D. Guides willing to take a PhD candidate for the current year. The student will identify the broad area of PhD work within one month and submit this in writing to the concerned Head of Department.
- 5.c.3 Thereafter, the Departmental Committee under the chairpersonship of respective head will allot a guide to the candidate according to the candidate's expressed broad area of PhD work and expertise of the guide as well as facilities available with him/her.
- 5.c.4 The Guides will then submit the names for the Doctoral Committee of candidates to the Research Cell. The Doctoral Committee for each PhD scholar will consist of:
- a) Guide, RMLIMS – Convener
  - b) Co-Guides
  - c) Internal Expert/s

To be selected by Hon'ble VC from a panel of 5 potential faculty members of University/ Institute proposed by the Guide
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  - d) External Expert/s

To be selected by Hon'ble VC from a panel of 3 potential experts from outside the University proposed by the Guide
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- 5.c.6 The candidates will have to submit the synopsis to the respective Guide within two months after the Guide is allocated.
- 5.c.7 The Guide will then arrange for Doctoral Committee Meeting for presentation of synopsis submitted by the Ph.D. candidate. The Guide will send the approved synopsis along with the recommendations of Doctoral Committee to the Research Cell, through the respective Head of department, for approval of the Dean and Director.
- 5.c.8 After approval of the Director the student will be considered finally registered in the PhD Program of the Institute.

## 6 Duration of the Ph.D. Programme

- 6.1. Ordinarily the Ph.D. programme will be for a minimum period of three years from the date of final registration.
- 6.2. RMLIMS faculty or candidates from other institutions with at least 2 years of prior research from recognized universities/colleges may be allowed to complete the programme in two years period on the recommendation of Doctoral Committee.
- 6.3. Candidates who do not submit their thesis within 6 years after registration will be removed from PhD program of the RMLIMS, unless the Doctoral Committee recommends otherwise.
- 6.4 The period of a candidate's studentship shall be counted from the date on which he/she has deposited the first installment of his/her fees before the commencement of the Course Work.

### 6.b. Foundation Course:

- 6.b.1 All admitted candidates shall undergo a Foundation Course for one semester.
- 6.b.2 The Foundation Course work shall be treated as pre Ph.D. preparation and include a course on Bio-statistics; Research methodology; Personal skills development for research and scientific communication; Bio-Computing.
- 6.b.3 The Semester end examination of Foundation Course will be conducted by the Institute with 50% as pass marks.
- 6.b.4 Along with the Foundation Course the Guide may prescribe and arrange for a Elective Course work for his individual PhD candidate, if needed.

## 7 Place of Work

- 7.1 Majority of PhD work must be performed in the institution of



registration. In case additional help is needed from sister institution/s, then 1/3<sup>rd</sup> of work may be done outside the parent institution.

- 7.2 In no case a PhD candidate can be registered in a certain institution (like RMLIMS and allowed to complete his/her work in a different institution with no direct supervision of Guide/co-guide of the present Institution/department.

## 8 Quality Assurance Procedures

- 8.a.1. The Doctoral Committee formed as per point 5.c.4 will review the progress of PhD scholar annually, for adequacy of research work and submit its report within 15 days to the Research Cell for review by the Research Committee. The report will give recommendations for continuation of PhD work along with clear overall assessment of quality of work, with remarks, signed by all Doctoral Committee members, as one of the following:
- a) Excellent
  - b) Good
  - c) Satisfactory
  - d) Needs improvement, with suggestions
  - e) Not satisfactory, with reasons
- 8.a.2. The Doctoral Committee can make suggestions for modifications or extension of work if required. Detailed records of progress will be maintained simultaneously both with guide and at Research Cell. Completed PhD work has to be presented before the Doctoral Committee in routine biannual meetings or special meeting. On approval of the Doctoral Committee, the scholar will be allowed to submit his/her thesis for evaluation.
- 8.a.3. The guide will send the proposed Doctoral Committee to the Research Cell through Head of the concerned Department for approval from the Director. The guide will be the convener of the Doctoral Committee. The Doctoral Committee will be valid for entire duration of work of PhD scholar. Any changes in the Doctoral Committee will need prior approval from the Director.
- 8.a.4 Any modifications or additions in the thesis work, proposed by the Doctoral Committee, will be placed for approval before the Research Committee.

### 8.b. Ethical Clearances

No PhD work will be allowed without prior approval from present Institutional ethics Committee (RMLIMS) or/and Central Ethics Committee e.g. ICMR etc, if so required. All national norms of bio-medical research and research work on

animals will be followed.

## 9 **Ph.D. Evaluation Procedures**

- 9.a Before submission of the thesis it is essential for the candidate to have 2 papers either published or accepted for publication in peer reviewed indexed journals with his/her name as the first author in at least one paper and first or second author in second paper.
- 9.b After completion of Ph.D. work, the candidate shall submit four printed copies of thesis in English, alongwith a summary of 2000 words, to the Research cell. Published matter may also be incorporated as part of thesis. Ph.D. guides and co-guides will give a written certificate stating that the thesis is the original work of candidate conducted under his/her supervision alongwith the duration of work.
- 9.c Each thesis will have external and internal evaluation. In addition, the candidate will defend the work at oral presentation.

### ***9.c.i. External and Internal Evaluations***

- 9.c.i.1. All completed works will be presented before the Doctoral Committee. On approval of the Doctoral Committee, the Ph.D. thesis will be sent for external evaluation.
- 9.c.i.2. The Guide will give in writing names of eight examiners (panel of examiners) for external evaluation of the thesis to the Research Cell, which will be forwarded to Controller of Examination. Thesis will be sent for review to two external examiners selected by the Hon'ble Vice Chancellor.
- 9.c.i.3. Thesis guide will be the internal examiner for the Ph.D. work.
- 9.c.i.4. The thesis will be sent for evaluation to three experts by the office of Controller of Examination. In addition, the candidate will defend the work at oral presentation.
- 9.c.i.5. The examiners (external and internal) have to make clear recommendations whether the thesis can be accepted with or without modifications or rejected. Suggestions for modifications and reasons for rejection have to be submitted in writing.
- 9.c.i.6. If the examiners recommend that the candidate be asked to improve the thesis, then after taking approval from the Dean, RMLIMS, the candidate will revise the thesis accordingly and resubmit the revised version, not earlier than 6 months from the date of initial submission, along with point-wise response to all suggestions. S/he shall have to pay a fresh fee at the time of resubmitting the thesis and shall have to produce a certificate from the guide stating that the candidate has worked again for specified period and has improved the thesis submitted

by her/him earlier and s/he shall follow the procedure laid down earlier for submission of thesis.

- 9.c.i.7. Four copies of the revised Ph.D. thesis will be submitted and re-evaluated by 2 external and 1 internal (guide) examiners. The external examiners will ordinarily be the same who did the initial evaluation. However, if they are not available new external examiners can be selected from the panel of approved examiners.
- 9.c.i.8. In the event of divergence of opinion between the external examiners regarding the thesis, the thesis shall be sent for assessment to a fourth examiner from the panel of approved examiners.
- 9.c.i.9. In case all the examiners approve the thesis, or in the event of divergence of opinion, the fourth examiner approves the thesis, the candidate shall be called upon to appear for a viva voce examination before the Thesis Oral defence Committee
- 9.c.i.10. The Thesis will be rejected on recommendations of either (a) internal and at least 1 external examiner or (b) both external examiners.

### ***9.c.ii. Oral Defense***

- 9.c.ii.1. Oral examination will be a centralized, open house affair held within the University campus. It will be open to all faculty and students of RMLIMS. Other individuals interested in attending this can do so with permission from the administration office of the Ph.D. programme.
- 9.c.ii.2. The following will be the examiners of Oral Defense.
  - (a) One external examiner for each thesis (preferably the one who evaluated the thesis; if not available then any other member from the examination board as approved by the Vice Chancellor)
  - (b) Guide of concerned candidates will be the internal examiner.
- 9.c.ii.3. If a candidate fails to defend thesis on oral examination, he/she will be allowed one more attempt for defense at least 6 months after the first attempt.

## **10 Award of the Degree**

A candidate will be eligible for the award of Ph.D. degree after the recommendation of the examiners sent to the Controller of Examinations. The recommendations will be directly placed by the Controller of Examination before the Hon'ble Vice Chancellor for approval and the result would be declared immediately thereafter. A provisional certificate can be given to the candidate after the declaration of the result.

## 11 Depository with UGC

- 11.1 Following the successful completion of the evaluation process and conferment of the award of Ph.D. the University shall submit a soft copy of the Ph.D. thesis to the UGC within a period of thirty days, for hosting the same in INFLIBNET, accessible to all Institutions Universities.
- 11.2 The University shall host another soft copy of the Ph.D. thesis on its website for general viewing.
- 11.3 Only after completion of above for (8.1, 8.2) the University along with the Degree shall issues a provisional certificate certifying to the effect that the Degree has been awarded in accordance with the provision of UGC (Minimum standard and procedure for award of M.Phil/Ph.D. Degree) Regulation 2009.

## 12 Hostel Accommodation

Hostel accommodation will be subject to availability and will be given only after the full payment of accommodation fee according to the existing norms.

## 13 RMLIMS Ph.D. Calendar

- 13.a Applications will be invited by RMLIMS in a prescribed format through an advertisement in local notice boards, RMLIMS web-site and leading local dailies in the month of Feb every year.
- 13.b The annual calendar of Ph.D. activities is as follows :
  - i. Enumeration of Departmental PhD Seats: January every year
  - ii. Ph.D. Advertisement: February every year
  - iii. Ph.D. Entrance Exam: March every year
  - iv. Departmental Interview: March/April every year
  - v. Allocation of Guide: April/May every year
  - ii. Synopsis Submission: August every year

## 14 Fee Structure

Application Fees: Rs. 1500.00  
*(to be Submitted as a Draft of Rs. 1500/- in favour of "RMLIMS Academic Account" payable at Lucknow along with the Application Form)*

Registration Fee for Ph.D. candidate: Rs. 9000.00

*(within 15 days of recommendation of selection committee)*

Annual Fees\*: Rs. 9000.00

*(before 31<sup>st</sup> August every year)*

Annual Library Fees: Rs. 1000.00

Examination fee: Rs. 10000.00

*(to be deposited along with the thesis)*

(\*Annual Fees can be submitted with a late fees of Rs. 1000.00 within 30 days after due date)

Application forms can be obtained free of cost from the RMLIMS Research Cell or downloaded from the RMLIMS web-site “www.rmlims.in”. Application forms can only be submitted with the application fees of Rs. 1500.00 submitted as demand draft in the name of “*RMLIMS Academic Account*” payable at Lucknow. Application fee is non-refundable. Registration and examination fees will also only be submitted as demand drafts in the name of “*RMLIMS Academic Account*” payable in Lucknow.

- 14.b. If a candidate does not submit the thesis by 31<sup>st</sup> July of the next calendar year in which PhD Review Committee recommended submission then s/he will have to pay annual renewal of registration fees.

## 15 Other Rules

(e.g. leave, disciplinary action, cancellation of registration etc.)

- 15.1. Other rules will be applicable to these students as are applicable to other post graduate students of the Institute.
- 15.2. The candidates are eligible for maternity/paternity leave for a period of 135 days, once during the tenure of their award with the programme. Such leave period will be in addition to the period of award, if it exceeds the leaves permissible to post-graduates in the Institute.
- 15.3. The registration in Ph.D. programme is liable to be cancelled in case of non-deposition of fees, misconduct, unsatisfactory progress of research work, absence from work without information or if the candidate is found ineligible at a later date.

# Syllabus for Ph.D. Foundation Courses

## Section 1 : Biostatistics

1. Introduction & overview. Statistical pattern recognition
2. Descriptive statistics–Summarizing and displaying data
  - (i) Basic concepts and jargon used to denote various features of a set of observations
  - (ii) Distributions-Population Vs. Sample Random Vs. Selected Shapes
  - (iii) Common summary statistics used to describe a single distribution
    - (a) location : mean, median, mode
    - (b) Variation : variance, standard deviation, range, interquartile range
  - (iv) Methods of data display which preserve the raw numbers
  - (v) Methods of data display which utilize summary statistics
3. Probability : The binomial and normal distributions
4. Sampling distribution : basic concepts and understanding the concept of a statistical test of significance including :
  - the null and alternative including :
  - type I (alpha) and Type II (beta) errors
  - one and two sided tests
  - confidence intervals
5. Sampling distributions – Computer simulation of clinical trial scenarios
6. Inference on means – Single sample
7. Inference on means – Comparing two groups.
8. Inference on Proportions – Binomial and normal approximation
9. Introduction to Linear Regressions:
10. Introduction to Multiple Regressions and Logistic Regression:
11. Non-parametric tests:

## Section 2 : Research Methods (Introduction)

1. Development of a Research Question
2. Sharpening objectives – Identifying a problem

3. Research designs
4. Patient selection
5. Intervention (s)
6. Outcome measurement
7. Bias
8. Analytical Issues (Overview)
9. Ethical Issues
10. Critical Review of published literature

### **Research Methods (Advanced)**

1. Case control design
2. Cohort studies
3. Occupational and Environmental Research
4. Surveys
5. Clinical Trials
6. Administration
7. Budget management

### **Section 3 : Personal Skills Development**

1. Communication skills
2. Organizational designs–Planning and designing your set up
3. Managing an organization and measuring performance/Leadership and organizational development
4. Developing organizational missions, goals and objectives
5. Inter department and inter organizational relationships
6. Power in organizations, power and control in academic medical setting
7. Influencing and managing organizational changes and changes in medical curriculum / or Managing creativity and managing change
8. Time management and management by crisis
9. Quality Management

10. Research Management
11. Management information system

#### **Section 4. Bio-Computing**

1. Introduction to Personal Computer
2. Introduction to DOS
3. MS Office and Typing exercises
4. Questionnaire design
5. Data base
6. Computer graphics – charts, diagrams
7. Net surfing and literature search'
8. Epi Info 2002
9. Collection, storage, organization (documents – classification, cataloguing and indexing) and dissemination of information.
10. Citation index and impact factor.