



# केरल केंद्रीय विश्वविद्यालय

## CENTRAL UNIVERSITY OF KERALA

(संसद के अधिनियम, वर्ष 2009 द्वारा स्थापित / Established under the Act of Parliament in 2009)

NAAC assessment. In order to speed up research publications related to policy matters it is proposed to set up Centre for Policy Research and Governance in the University by giving additional charge to any one of the senior faculty members.

RESOLVED to set up a Centre for Policy Research and Governance in the University by giving additional charge to any one of the senior faculty members.

### **AC 20:07 Formulation of 4 year graduate course as per National Education Policy- 2020.**

The Academic Council noted that as stipulated in the National Education Policy- 2020 University proposed to introduce 4 year graduate courses. Deans Committee has been authorized to prepare courses. Next year BS (Science and Technology) and BS (Informatics) are proposed to Introduce.

RESOLVED that two four-year multidisciplinary Bachelor's programmes with an option for multiple exits be started in the University. The courses may be BS (Data Science) and BS (Nano Science & Technology) and the exact name of the Degree Programmes shall be decided later. If a student exits the programme after Year 1: the student will receive a vocational certificate; Year 2: an Advanced Diploma; Year 3: Bachelor's degree; Year 4: Bachelor's degree with research.

### **AC 20:08 TO APPROVE the Minutes of the meeting of Board of Studies and Syllabus.**



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The Academic Council noted that the following Departments conducted their meetings of BoS for revision of syllabus:

**(1.) Dept. of Mathematics: -**

Approved the Minutes of the meeting of Board of Studies of Department of Mathematics held on 06.07.2020.

**(2.) Dept. of Public Health and Community Medicine: -**

APPROVED the Minutes of the meeting of Board of Studies of Department of Public Health and Community Medicine held on 08.07.2020.

**(3.) Dept. of English and Comparative Literature: -**

The Academic Council noted that a meeting of Board of Studies Dept. of English and Comparative Literature was held on 07.07.2020, and the recommendation item No. 1 is against CBCS guidelines, hence the Vice-Chancellor rejected the recommendation of the BoS. However, Item No. 2 Film Appreciation Course (online) with three credits and two exit systems has been recommended to place before Academic Council for its consideration and approval.

APPROVED the Minutes of the meeting of Board of Studies of Dept. of English and Comparative Literature held on 07.07.2020 except the recommendation of Item No.1 as it is against CBCS guidelines.

**(4.) Dept. of Chemistry**

APPROVED the Minutes of the meeting of Board of Studies of Department of Chemistry held on 08.07.2020.

**(5.) Dept. of Computer Science**



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APPROVED the Minutes of the A meeting of Board of Studies of Dept. of Computer Science held on 09.07.2020.

## (6.) Dept. of Law

APPROVED the Minutes of the meeting of Board of Studies of Department of Law held on 18.08.2020.

## (7.) Dept. of Education

APPROVED the Minutes of the meeting of Board of Studies of Department of Education held on 06.07.2020,

## (8) Department of Geology

APPROVED the Minutes of the Board of Studies of Department of Geology held on 17.07.2020.

**AC 20:09 TO CONSIDER starting of offline classes as per Academic Calendar 2020-2021.**

The item deferred.

**AC 20:10 TO CONSIDER the Proposal for Online Certificate and PG Diploma Course in Life Skills Education.**

The Academic Council noted that Prof. (Dr.). M. N Mohamedunni Alias Musthafa, Dean, School of Education and Coordinator, Centre for Life Skill Education, submitted a proposal for an Online Certificate Course (6 months, 1 - Semester) and PG Diploma Course (12 months, 2- Semester)



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CENTRAL UNIVERSITY OF KERALA  
शिक्षा स्कूल / SCHOOL OF EDUCATION

MINUTES OF THE MEETING OF THE SECOND BOARD OF STUDIES  
IN EDUCATION

Date of Meeting: 06.07.2020

Members present:

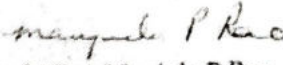
1. Prof. (Dr.) Amruth G Kumar	: Chairman
2. Prof. (Dr.) K P Suresh	: Member
3. Prof. (Dr.) Mohamedunni Alias Musthafa	: Member
4. Dr. K Thiyagu	: Member
5. Prof. (Dr.) Manjula P Rao	: Member
6. Prof. (Dr.) Mumtaz Begum	: Member
7. Prof. (Dr.) Haseen Taj	: Member
8. Prof. (Dr.) Usha P	: Member

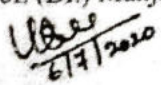
In the context of COVID 19 pandemic the meeting was conducted through Google Meet. The meeting started at 11 am with the welcome note of Prof. (Dr.) Amruth G Kumar (Chairman, BoS).


Resolutions


- 1) Discussed the syllabus in detail. The Syllabus is revised based on the suggestions of BoS members.
- 2) Resolved to allow students to opt elective courses from Massive Open Online Courses (MOOC) offered through SWAYAM platform in compliance to the credit requirement of the Syllabus.
- 3) Resolved to allow students to opt add on credits to a maximum of "8" credits through MOOC SWAYAM programme.

Prof. (Dr.) Mohamedunni Alias Musthafa extended the vote of thanks. The meeting was dissolved at 1:15 pm.

  
Prof. (Dr.) Manjula P Rao

  
Prof. (Dr.) P Usha

  
Prof. (Dr.) K P Suresh

  
Prof. (Dr.) Mohamedunni Alias Musthafa

  
Prof. (Dr.) Haseen Taj

  
Prof. (Dr.) Mumtaz Begum

  
Dr. K Thiyagu

  
Prof. (Dr.) Amruth G Kumar

**CENTRAL UNIVERSITY OF KERALA**

**DOCTOR OF PHILOSOPHY  
(Ph.D)**

**Regulations & Syllabus**

*With effect from Academic Session*

**2020 - 2021**

*Onwards*



**DEPARTMENT OF EDUCATION,  
SCHOOL OF EDUCATION  
CENTRAL UNIVERSITY OF KERALA,  
KASARAGOD - 671 320, KERALA, INDIA  
Phone : 04994-257042**

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# **CENTRAL UNIVERSITY OF KERALA**

## **DOCTOR OF PHILOSOPHY (Ph.D) – EDUCATION**

### **ORDINANCES:**

#### **ORDINANCES FOR THE AWARD OF THE DEGREE OF DOCTOR OF PHILOSOPHY (Ph.D.) OF THE CENTRAL UNIVERSITY OF KERALA**

(Sections 6(1) (ii, xviii) and 28(1)(a, d) of the Central Universities Act; Ordinances chapter VII, section 8 and Chapter XIX, Section 2)

These Ordinances shall be called the Central University of Kerala Ordinances for the award of the degree of Doctor of Philosophy (Ph.D.) and shall be deemed to have come in to force on

#### **The Ph.D. Programme**

1. The programme of study and research leading to the degree of Doctor of Philosophy (Ph.D.) of the CENTRAL UNIVERSITY OF KERALA may be pursued according to these regulations on a full-time basis in a Department of the University or in a research institution recognized by the University for the purpose.
2. Candidates seeking conversion of their original registration from full-time mode to part-time mode may be considered only where the respective Departmental Research Committee is convinced that effective supervision and minimum attendance of 60 days, even with breaks, in a calendar year can be ensured.
3. Candidates working in research projects as Project Fellows in Departments of the Central University shall be eligible to seek registration as doctoral candidate, provided the Research Guide and the Principal Investigator of the research project are one and the same.

#### **Notification and application for Registration**

4. A candidate seeking registration to the doctoral programme will be required to submit an application to that effect as a full-time student and

also take a national level test notified in this respect issued by the University from 2017 January onwards

5. Candidates who are exempted from entrance test in the category of UGC JRF holders and those entitled to similar fellowships, which have to be claimed within a specified time frame can submit their applications at any time during the academic year. Their admission is however contingent on their successful performance at the interview held for this purpose by the Departmental Research Committee.
6. The application for registration shall be submitted to the Head of the University Department concerned in the prescribed form along with the prescribed fees.
7. In the case of candidates intending to do research at a research institution recognized by the Central University of Kerala, the application shall be submitted to the Head of the University Department concerned through the Head of that institution along with her/his recommendation and a certificate that facilities will be provided to the candidate .

#### **Eligibility for Registration**

8. Candidates seeking registration to the doctoral programme shall have passed the Master's Degree in the concerned/allied/relevant subject with 55% marks in the qualifying examination, or with a CGPA of 6.0 in the 10 point scale, from a University recognized by the University Grants Commission, provided that a candidate belonging to SC/ST community shall be eligible for concession up to 5% of the marks secured.

#### **Director of Research**

9. One of the Deans of the University may be nominated by the Vice-Chancellor as Director of Research to administer and govern all matters relating to research programmes/activities of the University for a period of three years. Provided further that matters relating to evaluation of doctoral theses shall be handled by the Controller of Examinations until such time as a support structure to that effect is made in the office of the Director of Research



### **Recognized Research Centres (RRC)**

10. The University may, under the relevant provision of its Act, Statutes, Ordinances, etc. accord recognition to a Government/Semi-Government research institution, located within its territorial jurisdiction, as a Recognized Research Centre (RRC) of University for the purpose of pursuing doctoral research in disciplines that correspond to disciplines of the University Departments, provided that at least two members of the staff in every such discipline in the said institution meet the requirements, as per Clause 60(b), for being recognized as Research Guide of the University.
11. A research institution, as stated above, seeking such recognition shall submit an application to the Director of Research, specifying the University Department that corresponds to the discipline in which recognition is sought, and attaching the resume of the staff in the discipline concerned, who intend to seek recognition as Research Guides of the University. Such recognition may be sought by a research institution in one or more of its constituent disciplines that correspond to disciplines of the University Departments.
12. The Director of Research shall obtain the views of the Dean of School /Head of the Department concerned, and if they do favorably recommend the application of the research institution, the Director of Research shall cause to have the research institution inspected by a Committee constituted by the Vice-Chancellor, which will include the Dean of the School and the Head of the University Department concerned, to ascertain the infrastructural facilities available in the institution with respect to the discipline concerned.
13. The Director of Research shall submit the recommendations of the Inspection Committee to the Vice-Chancellor for appropriate further action.
14. Recognition accorded to a specific discipline in a research institution that corresponds to the discipline of a University Department, shall not be

construed as blanket recognition for all disciplines in the research institution.

15. Every research institution accorded recognition as an RRC in a specific discipline shall be attached to a University Department that corresponds to that discipline, and the University Department shall be responsible for regulating all matters relating to the doctoral research programme of the RRC in the discipline concerned. Thus, a single RRC may be attached to more than one University Department if recognition is granted in more than one discipline.
16. Permanent employees of an RRC engaged in research/teaching-related activities and those working in relevant research projects at an RRC shall be eligible to seek full-time registration.

#### **Departmental Research Committee (DRC)**

17. Every Department of study and research in the University shall have a Departmental Research Committee (DRC) with the Dean of the School concerned as the Chairman, the Head of the Department concerned as the convener, and all recognized Research Guides of the University Department as members.
18. In University Departments with less than two Research Guides, the Vice-Chancellor may, on the recommendation of the Head of the University Department concerned, nominate additional members from other relevant University Departments to such DRCs.
19. In the case of RRCs, the Heads of the institution or the persons in charge alone shall be members of the DRC of the University Department corresponding to the discipline in which the RRC is recognized. The Head of the RRC or the person in charge may be member of the DRCs of different University Departments, depending on the number of disciplines recognized by the University.
20. The DRC shall regulate and administer all matters regarding doctoral research in the University Department as well as in the RRCs attached to the Department.

21. The DRC shall meet at the beginning of every academic year to decide upon the number of research students and the areas of specialization to which they may be admitted for research in the University Department/RRC during that year. The DRC shall also meet whenever circumstances so require.
22. The DRC shall prepare the syllabus for Course 1 of the Course work as prescribed in Clause 39.
23. The DRC shall be empowered to take decisions on recommendations of the Doctoral Committee on matters such as change of Research Guide /Co-Guide, joint supervision, revision of topic/area of research, conversion of registration from full-time to part-time and vice-versa, extension of the period of registration, granting of re-registration, cancellation of registration in case of unsatisfactory progress/unethical practices in research committed by the student/misconduct of the student, condonation of delay in submission of thesis and consequent re-admission, etc. as provided for in the relevant Clauses contained herein.
24. Quorum for meetings of the DRC shall be 50% of the members, fractions being rounded off to the next integer.
25. All decisions taken by the DRC shall be reported to the Director of Research with copies of relevant documents for issuing orders, where necessary.

#### **Entrance Test**

26. From January 2017 onwards, the Central University of Kerala shall adopt a national level entrance examination for admission to Ph.D either in common with other Central Universities or on its own. All candidates, whose applications for registration to the doctoral programme are found to be in order, shall be required to take the National Entrance Test provided however, that the following candidates shall stand exempted from taking the test:
  - Candidates qualified under INSPIRE/ UGC-CSIR JRF or NET/ ICMR/ GATE(with valid date and score)/ ICAR/

DBT/NBHM/ ICSSR/ and KSCSTE recognized for the purpose by the University.

- Candidates with research fellowships awarded by a Governmental agency/Government of India.
- Foreign students, self-funded or sponsored by a Governmental agency, subject to clearance by Government of India.
- Students of Indian origin, working in an overseas institution/laboratory and involved in a collaborative research programme with a Research Guide of this University
- Students engaged in a sandwich doctoral programme of collaborative research between this University and another institution as approved by the Executive Council
- Teachers of Universities/Aided Colleges/Government or Quasi-Government institutions, Scientists or others who are holding academic/ research positions in Universities or in Government/Governmental institutions/Laboratories in India equivalent to that of an Assistant Professor with a minimum continuous service of three years as permanent employees provided that they are willing to join as full-time scholars and spend a minimum period of one year in that capacity.
- All M. Phil. Degree holders with a minimum CGPA of 6.0, provided they have completed course work as part of their M.Phil as per 2009 UGC regulations.

27. Admission for Ph.D is governed by the reservation rules in existence and the directions given in this regard by the UGC/ Government of India from time to time.

### **Interview and admission advice**

28. All eligible candidates who have qualified in the entrance test and those exempted from it shall be required to present and discuss their research interest at an Interview before the DRC concerned or a sub-committee constituted by it. The DRC shall have the power to allot candidates among the eligible supervisors having regard to the number of vacancies, area of research suggested by the candidates, the specializations of the supervisors and the reservation rules of the Government of India in force. The DRC shall ensure that vacancies of individual teachers are not filled in one go, but in a staggered manner, so that some vacancies exist for bright candidates who may apply for registration in the ensuing years.
29. All candidates certified by the DRC of being successful at the Interview, shall be served, on the same day, with an advice for admission mentioning the name of the guide allotted.

### **Admission and Registration**

30. A candidate advised for admission to the doctoral programme shall take admission in the University Department/RRC concerned within fifteen days from the date of such advice by paying the required fees and fulfilling such other requirements as per admission rules.
31. The Head of the University Department concerned shall be empowered to give an extension of time for a period up to three months to the candidate, if so requested by candidate and recommended by the Research Guide. In the case of candidate advised for admission at a RRC, the request shall have to be recommended by the Head of the RRC and forwarded to the Head of the University Department concerned.
32. Heads of RRCs shall forward to the Head of the University Department concerned a list of candidates who have taken admission at the respective RRC, along with their fees, certificate, documents etc.
33. The Director of Research, based on the recommendations of Head of the University Department concerned, shall issue an order granting provisional registration to every candidate admitted to the University Department/RRC. All orders granting registration shall be issued with effect from the date of joining and the payment of the requisite fees.

Orders granting provisional registration should clearly mention a title of proposed research, though the title can be modified at a later stage with the approval of the DRC.

34. The Head of the University Department shall submit to the Dean of the School concerned a consolidated list, along with certificates, documents etc. of all candidates admitted to the doctoral programme in the University Department and the RRCs concerned.
35. The Dean shall forward the list along with certificates, documents etc. to the Director of Research who, after scrutiny of the records, shall submit the final list of candidates granted provisional registration to the Executive Council for ratification w.e.f. the date of date of joining for research.
36. Upon ratification of the admissions by the Executive Council, the Director of Research shall issue formal orders of registration to every candidate with copies marked to the Dean of School/Head of the University Department /RRC concerned, the Registrar and the Finance Officer for appropriate further action at their ends.

### **Course Work**

37. Every student registered for the Ph.D. programme shall be required to undertake a course work for a minimum period of one semester (six months) in the University Department concerned.
38. If found necessary, the Doctoral committee may suggest that the Course work be carried out by the research student in a sister Department in the University.
39. The Course work shall be treated as pre-Ph.D. preparation and shall include a course on
  - a.) Research methodology including quantitative methods and computer application where relevant
  - b.) A Special Course related to the core area of research and
  - c.) A course on the specific research proposal including a review of relevant literature.
40. Integrated M.Phil. degree holders, as well as those possessing M.Phil. degree awarded in accordance with the provisions of the UGC (minimum standards and procedure for awards of M.Phil./Ph.D. degree) Regulation, 2009, shall stand exempted from undertaking the above Course Work. In such cases, the credits earned previously shall be transferred to the Ph.D. Course Work.
41. The syllabus for ‘\_Course 1- Research methodology (including quantitative methods and computer applications, where relevant)’, which shall be common

to all research students in a Department and RRC(s) attached to the Department, shall be prepared by the doctoral committee and approved by the DRC concerned, whereas that for –Course 2- Special Course related to the core area of research| and for –Course 3 \_Course on the specific research proposal including a review of relevant literature’ shall be prepared by the Doctoral Committee concerned.

42. The structure of the one-semester Ph.D. Course work shall be as follows:

Course	Title of the Course	Credit value	Marks		Total
			Continuous Evaluation	End- Semester Evaluation	
Course 1.	Advanced Research Methods in Education (Including quantitative methods and computer application, where relevant )	4	40	60	100
Course 2.	Research and Publication Ethics	2	40	60	100
Course 3.	Course related to the Specific area of Research	4	40	60	100
Course 4:	Course related to the Specific Research Proposal	6	-	100	100

43. Evaluation in respect of courses 1 and 2 shall be carried out by the teachers offering the courses and that of Course3 by the Research Guide.

44. Marks awarded to the research student for continuous and end- semester evaluations in respect of all the three courses shall be communicated by the respective teachers/ Research Guide to the Convener of the DRC.

45. Based on the marks obtained at the evaluations as indicated above, grade may be awarded as follows:

Range of marks	Grades	Grade weightage
90% and above	S-Outstanding	10
80-89%	A- Excellent	9
70-79%	B-Very Good	8
60-69%	C-Good	7
50-59%	D-Satisfactory	6
40-49%	F-Failed	0

The overall performance at the end of the semester will be indicated by the Grade Point Average (GPA) calculated as follows:

$$\text{GPA} = \frac{G1C1 + G2C2 + G3C3}{C1 + C2 + C3}$$

Where  $\_G'$  refers to the grade weightage and  $\_C'$  refers to the credit value of the corresponding course undergone by the student.

46. The DRC shall scrutinize the grades awarded to the research student in each course and finalize the result. Every research student who secures a minimum weightage of 6.0 in all the three courses shall be deemed to have successfully completed the Ph.D. Course Work.
47. Research students unable to secure a minimum grade weightage of 6.0 in any of the three courses mentioned in clause 39 above shall be eligible for one more chance to undergo the end- semester assessment in the Course(s) concerned.
48. If the research student is unable to secure the required minimum grade weightage of 6.0 in all the three courses within a period of 2 semesters from the date of her/his registration, the registration shall be cancelled.
49. Every research student who has successfully completed the Ph. D Course work shall be issued a Grade Card specifying the Grade obtained. The Grade Card shall be issued by the Controller of Examinations on completion of the course work and the Certificate of Compliance to UGC Regulation 2009 as when the candidate completes all the stages of the doctoral programme.

#### **Doctoral Committee**

50. There shall be a Doctoral Committee to monitor the progress of every student registered for research in the University Department/RRC.
51. The Head of the University Department in consultation with the Research Guide shall constitute the Doctoral Committee with the Research Guide as Convener, the Co- Guide if any, an approved Research Guide from the same or allied area in the University Department /RRC nominated by the Research Guide, and himself/herself as members. In the case of a



research student working in a RRC, the Head of the RRC or the person in charge of the institution shall also be a member.

52. The Doctoral Committee shall be in existence during the entire period of registration of the candidate, with such changes in membership as may become necessary from time to time.
53. The Doctoral Committee shall prepare the syllabi for Course 2 and Course 3 of Course work as prescribed in Clause 41.
54. The Doctoral Committee shall meet at the end of every semester to review the progress of the research student on the basis of progress reports submitted by her/him to the Research Guide and may provide necessary advice including suggestions for pursuing the Course Work in a sister Department in the University should that be relevant to a candidate's research. The Doctoral Committee shall also meet whenever circumstances so require.
55. In cases where the Doctoral Committee is convinced that a full-time research student needs to carry out part of her/his work in another institution, within the country or abroad, it shall permit the research student to spend a period of six months at a time, if deemed vital for the execution of the doctoral programme, provided that all such periods shall be counted for reckoning the minimum and maximum periods of registration as per relevant Clauses contained herein and provided further that the research student shall not be found wanting in attendance requirements or default in the payment of fees due to the University.
56. The Doctoral Committee shall be empowered to take decisions on matters such as joint guidance, change of centre of research, approval/revision of title of thesis, etc. as provided for in the relevant clauses contained herein within a maximum period of 3 years from the granting of registration.
57. The Doctoral Committee may make recommendations to the DRC on matters such as change of Research Guide/Co-Guide, revision of topic/area of research, conversion of registration from full-time to part-time and vice-versa, extension of the period of registration, granting of re-registration, cancellation of registration in case of unsatisfactory progress/unethical practices in research committed by the student/misconduct of the student / voluntary discontinuance, condonation of delay in submission of thesis and consequent re-admission, etc.

58. All decisions of the Doctoral Committee shall be reported to the Director of Research.

### **Research Guide**

59. The following categories of teachers /scientists shall be eligible to be recognized as Research Guides of this University:

- Permanent teachers of this University, not below the rank of Assistant Professor, holding a Ph.D. degree, except obtained through distance education programmes, and having at least two research publications in refereed journals after obtaining their Ph.D degree.
- Regular scientific /research staff of a RRC, not below the rank of an Assistant Professor of this University, holding a Ph.D. degree, except obtained through distance education programmes, and having at least two research papers published in refereed journals after obtaining their Ph.D degree.

### **Research Guide under more than one Department**

60. A person is eligible to be recognized as a Research Guide of more than one Department of the University provided that it shall not exceed three departments and the limit set in the number of Ph.D candidates per guide.

### **Procedure for recognition as Research Guide**

61. Any person coming under the purview of Clause 59, seeking recognition as a Research Guide of this University shall submit an application, supported by copies of his resume and published research papers, to the Dean of the School concerned, provided that staff of RRC shall route the application through the Head of the RRC.

62. The Dean of the School shall examine the application and shall submit the same along with his recommendation to the Vice-Chancellor routed through the Director of Research for an appropriate decision.

### **Change of Research Guide**

63. The DRC shall have the power to consider the request of research student for change of Research Guide together with or without change of topic /area of research provided that the request is supported by the present

and the proposed Research Guide and is recommended by the respective Doctoral Committee and the Director of Research

64. However, such requests for change of Research Guide shall be made at least six months prior to the candidate's notice for submission of the thesis, provided however that this limitation shall not be applicable in the cases where the present Research Guide is unable to continue supervision due to reasons of ill-health, shifting of place of work/residence to a distant place etc.

#### **Retirement/ transfer of Research Guide**

65. Research Guides of the University Departments may continue to supervise the work of research students already registered with them until their superannuation. Teachers who have less than two years of service remaining shall not enroll fresh Ph.D candidates under their guidance.
66. Recognized Research Guides of the University working in RRCs shall not be eligible to guide research students after their retirement, transfer outside the state of Kerala or after taking up employment with another institution, provided however that research students already registered under them may be allowed to continue under their guidance.

#### **Number of research students with Research Guide**

67. A Research Guide shall not have, at any given point of time, more than eight research students working under his/her supervision, including candidates already working under him/her at a previous institution, as the case may be, provided that students who have submitted their theses shall not be counted for reckoning this number.

#### **Co-Guidance**

68. If, for valid academic reasons such as inter -/multi-disciplinary or collaborative research, the Doctoral Committee feels that the service of an additional guide is desirable, it may recommend another Research Guide of this University or scientists or researchers of national institutes and

laboratories not below the rank of Assistant Professor recognized by the University as Co-Guide

69. The Research students under co-guidance shall be counted as 0.5 for each Research Guide for the purpose of determining Clause 67.
70. In the event of the temporary absence of a Research Guide due to inevitable reasons, the Co-guide shall perform all responsibilities of the Research Guide.

#### **Payment of Fees/Re-admission**

71. Every research student shall be required to pay on time such fees as may be prescribed by the University up to and including the semester in which s/he submits the thesis, failing which her /his name shall stand removed from rolls if the default is more than 30 days after the due date and the matter shall be displayed on the notice board of the Department/RRC concerned.
72. Within a period of 30 days from date of removal from the rolls, the research student may be re-admitted by the Head of the University Department concerned on an application made by the research student and duly recommended by the Research Guide and on payment of all arrears of fees, re-admission fee and fine as the University may prescribe from time to time.
73. In cases where the default in payment of fees exceeds 30 days, if the research student applies for re-admission within 180 days from the due date for payment of fees, such request shall be placed for the consideration of the DRC concerned. If the DRC is satisfied with the genuineness of the cause of delay, it shall be competent to take appropriate decision. If re-admitted, the student shall remit all arrears of fees, re-admission fee and fine as the University may prescribe from time to time and his name shall be re-entered on the rolls.
74. The registration of a candidate, who is in default of payment of fees for more than 180 days from the due date, shall remain cancelled.

75. Fees for the second semester onwards shall be accepted only when supported by (a) an attendance certificate for the previous end semester from the Research Guide and (b) a certificate regarding the previous end-semester open presentation issued as per Clause 85

### **Attendance, Leave**

76. Every Research Guide shall maintain an attendance register for all research students registered under her/him. It shall be the responsibility of the guide to provide evidence of attendance by a research student when required. Heads of Departments and RRCs shall ensure that there is no lapse on this count
77. Notwithstanding anything contained in these regulations, a candidate who comes under a national/State or such other fellowship/ scheme /project etc., shall be governed by the respective rules regarding attendance, leave, etc. governing the award of such fellowship/ scheme/ project.
78. A full-time research student shall be required to have at least 75% attendance in every semester, subject to the provisions of Clauses 80 and 81, failing which her/his name shall be removed from the roll of the University.
79. A research student shall be entitled to attend conferences/ seminars/ specialized training programmes connected with her/his area of research of undertake field-trips, research cruises or visits to other places for collecting samples /data, etc. if s/he has been duly permitted to do so as per Clause 87.
80. A full-time research student shall be eligible to avail of leave for thirty days in one calendar year and maternity/paternity leave as per rules, along with leave without fellowship for three months on medical grounds or for any other genuine reason with the consent of the Research Guide.
81. A part-time research student shall be required to have a minimum of 60 days attendance, even with breaks, in a calendar year in the University Department/RRC concerned.

82. In cases not provided for herein, the Vice-Chancellor shall take appropriate decisions where necessary.

**Progress Report/ End-semester presentation**

83. Every student shall submit a progress report to the Research Guide at the end of every semester and this shall be discussed by the Doctoral Committee to assess whether the student is making satisfactory progress or not.

84. Every research student shall also make an open presentation, at the end of every semester, at the Department /RRC on the progress of research during that semester, after which the Research Guide shall issue to the research student a certificate of end-semester open presentation.

85. The meeting for the above end-semester open presentation shall be convened by the Head of the Department/RRC concerned in consultation with the respective Research Guide.

**Participation in conference/ seminars / training programmes, etc.**

86. The Research Guide shall be empowered to take decisions in matters such as participation in conference/ seminars / specialized training programmes connected with the area of research or for undertaking field-trips, research cruises, visits to other places for collecting samples/data, etc. and the research student shall be deemed to be on duty during all such periods of time. In cases involving field visits, laboratory work and attachment to institutions outside the country, the candidate shall duly notify the university about the terms and conditions of such visit and conform to the university rules in force.

**Publication/ presentation of research paper**

87. Every research student shall be required to publish at least one research paper in a refereed Journal as first author and present at least one paper at a national/international seminar before giving notice for submission of the thesis. A copy of the published paper and a copy of the seminar proceedings shall be submitted at the time of giving notice for submission

of the thesis. Supervising teachers should certify that the paper published is in a refereed journal.

#### **Transfer of registration of research students from another University**

88. Research students working in other Universities, who were registered with Research Guides of this University while they were themselves working in the other University, may be permitted to transfer their registration(s) to this University with the approval of the DRC concerned and the concurrence of the previous university, subject to Clause 67, provided that such research students had successfully completed their Ph.D. Course work in the other University or are willing to do the Course work in this University.

#### **Change of Centre of Research of Central University of Kerala**

89. The DRC Committee shall have the power to consider and give assent to the request of a research student for change of center of research, provided that the request is recommended by the Research Guide and accompanied by a 'No Objection Certificate' from the Head of the present and the proposed Center of Research.

#### **Revision of Topic/Area of Research**

90. A research student shall be eligible to apply for revision of the topic/area of research within three years of registration and the DRC shall be competent to give assent to the request if it is recommended by the Doctoral Committee, provided that such application shall be permitted only once during the period of registration of the research student.

#### **Conversion of Registration from Full-time to Part-time and Vice-versa**

91. A research student shall be eligible to apply for conversion of the research work from full-time to part-time and vice-versa. The request duly recommended by the Research Guide and the Doctoral Committee shall be submitted to the DRC for decision.

Such conversion will be allowed only (1) if the candidate has completed one year of full-time research in a department/ Centre in which he/she has registered for PhD degree and has

successfully completed course work and (2) if the candidate joins a Central/ State/ Government-aided institution as a regular faculty or research staff. Even in the case of those fully exempted from course work, the minimum period required for seeking part-time registration shall be one year. Candidates who have converted their full-time research into part-time mode shall not be entitled to fellowships, scholarships or any other financial aid during this stage.

92. Provided further that the Vice Chancellor may allow a Ph.D candidate to keep his/her registration in a dormant state for a year if he/she secures employment within a year of his registration. In such cases, registration of the candidate will be automatically cancelled if he/she fails to rejoin his/her research immediately on completion of the period of dormancy. The period, however, shall not be counted for any relaxation in the maximum or minimum period of research as the case may be.

#### **Zero Semester/Year**

93. Provided further that a semester or year may be declared zero semester or zero year, as the case may be, if a student could not continue with the academic year due to illness and hospitalization subject to the guidelines laid down in the regulations. Such zero semester/year shall not be counted for calculation of the duration of the programme for such a student.

#### **Minimum and Maximum Periods of Registration/ Re-registration**

94. A full-time research student who has completed the Course Work requirement shall be eligible to submit her/his thesis for adjudication on completion of a minimum period of three years from the date of registration, provided further that M.Phil. degree holders who take up doctoral research in the same/directly related subject, as certified by the Research Guide, shall be eligible for a relaxation of up to one year in the above minimum period.



95. In the case of part-time students, the minimum period of registration shall be four years, subject to the relaxation available in Clause 94. Once a student moves into a part-time status and later comes back as a full-time student, the maximum period of research that will apply in his/her case shall be that of the part-time mode.
96. A full-time research student shall remain on the rolls of the University for a maximum period of five years after which the registration shall lapse, provided however, that the DRC shall be competent to recommend to the Director Research to extend the period of registration for one more year on the recommendations of the Research Guide and the Doctoral Committee based on satisfactory progress made by the research student. Women and differently abled persons are entitled to two more years over and above the normal maximum period of five years.
97. A part-time research student shall remain on the rolls of the University for a maximum period of seven years, after which the registration shall lapse, provided however, that the DRC shall be competent to recommend to the Director Research to extend the period of registration for one more year on the recommendations of the Research Guide and the Doctoral Committee, based on satisfactory progress made by the research student. Women and differently abled persons are entitled to two more years over and above the normal maximum period of seven years.
98. A full-time research student who secures an appointment to a research or teaching position during the period of her/his registration and seek conversion to part-time registration, shall be eligible to remain on the rolls of the University for one additional year of registration as part-time research student over and above the normal period of five years, in relaxation of Clause 96, but also shall be entitled to the regular extension available under Clause 96.

99. In case of research students whose registration have been transferred from another University to this University as per Clause 88, the period of research work carried out in the other University, provided it is not less than one year, as certified by documentary evidence, shall also be reckoned for determining the minimum and the maximum periods of registration by issuing necessary orders in this regard by the Director of Research.
100. A full-time/ part-time research student whose registration has lapsed as per Clauses 96 or 97, may apply to the Director of Research with the recommendation of the DRC for re-registration within a period of one year from the expiry of the initial registration period, provided the application is submitted with specific recommendations of Research Guide and Doctoral Committee regarding the progress made by the research student.
101. A research student shall cease to be on the rolls of the University as soon as his open defence is over, or from the date on which his registration/re-registration is cancelled or lapsed.

#### **Cancellation of Registration**

102. A research student who indulges in unethical practices or fails to make satisfactory progress in her/his research work, or who indulges in misconduct is liable to have her/his registration cancelled by the DRC on the recommendation of the respective Doctoral Committee.

#### **Panel of experts for adjudication of thesis**

103. The Research Guide shall prepare a panel of experts for adjudication of the thesis, which shall contain names, designation, number of years of teaching/research experience and full contact information of at least ten external experts, not below the rank of Professor of a University or an equivalent rank in a reputed research institution, of whom not more than one shall be from within State of Kerala, provided that none of the experts shall be Research Guides of this University nor be related to the research student or to the Research Guide/Co-Guide.

104. Should the Research Guide so desire, names of overseas experts may be included in the panel.

#### **Pre-Submission seminar**

105. Every research student intending to submit a thesis shall present the salient features of her/his research work at a pre-submission seminar convened for the purpose by the Head of the University Department concerned. All research students and Research Guides of the Department/the RRC, as the case may be, shall be invited for the seminar, upon completion of which a certificate of presentation shall be issued to the research student, signed by the Guide and the Head of the Department.

#### **Submission of Synopsis**

106. A research student proposing to submit the thesis shall inform the University of his/her intention to do so at least one month in advance, and such notice shall be accompanied by the following:

- a) Ten copies of synopsis of the research work done by him/her, prepared in the language proposed to be used in the thesis, as stipulated under Clause 112, and conforming to the format prescribed herein below
- b) A CD containing PDF soft copy of the Synopsis
- c) No-dues certificate from the university Department concerned
- d) A certificate from the Guide of the research student concerned that the student has presented the salient features of the proposed thesis in a pre-Synopsis seminar
- e) Evidence of having paid the fees prescribed by the University
- f) Copy of Grade Card in respect of the Course Work
- g) Attendance Certificate from Research Guide
- h) Copy of reprint of at least one research paper (either as single author or first author) and certificate of one seminar presentation.

- i) Certificate by the Research Guide that the paper published is in a refereed journal.
107. The Synopsis shall contain the title of the thesis along with a brief write-up on the work done, viz., its significance, scope, methodology, results/hypothesis, policy implications etc. in a maximum of 1500 words.
108. The Synopsis shall be printed in 1.5 line spacing, on A4 sheet paper, using 11 or 12 point font size of Arial, Times New Roman or any appropriate font in the language concerned.
109. The Synopsis along with all supporting documents shall be submitted to the Head of the University Department concerned, who shall forward the same to the Vice Chancellor

#### **Submission of Thesis**

110. Every research student shall be required to submit to the University a thesis embodying the result of his research findings to the University for Adjudication by examiners. Every thesis submitted should be checked for plagiarism by using the facility that is available in the University Library and the Guide shall issue a certificate to that effect based on the report submitted by the Librarian or a person authorized by him/her to provide such reports.
111. A research student shall be eligible to submit her/his thesis within a period of six months from the date of submission of the Synopsis.
112. The thesis shall be written in English (except in the case of thesis in language studies, where the language of thesis shall be in the language of the study)
113. Every research student shall submit to the University four copies of her/his thesis prepared according to the structure stipulated hereunder, along with a CD containing a PDF soft copy of the thesis. A fifth copy shall be deposited with the Research Guide for display in the University Department /School concerned three days prior to the date fixed for the Open Defence and viva-voce examination.

114. The thesis shall be submitted to the Head of the University Department concerned, who shall forward the same to the office of the Vice Chancellor.

### **Delay in submission of thesis, consequent Re-admission**

115. The delay in submitting a thesis beyond six months, but within one year, may be condoned by the DRC on the recommendation of the Doctoral Committee. In exceptional cases, a further delay of six months, for reasons beyond the research student's control, may be condoned by the Vice-Chancellor, provided that the candidate shall submit her/his thesis only during the currency of her/his registration/re-registration.

116. In all cases of delay in submission of thesis beyond six months, the research student shall be liable to pay a fine as prescribed by the University.

### **Structure of the Thesis**

117. The thesis shall be prepared in the sequence indicated below:

- Front cover (format indicated below)
- Inner facing page (format indicated below)
- Declaration by the author (format indicated below)
- Certificate from Research Guide(s) (format indicated below with a declaration on plagiarism)
- Acknowledgements
- Contents
- List of Symbols, if any
- List of figure, if any
- List of tables, if any
- List of abbreviations, if any
- BODY OF THE THESIS – individual chapters
- (Each Chapter shall have sections on Introduction, materials and Methods, Results and Discussion, Conclusion and References)
- Appendices, if any
- List and copies of research papers published/presented at seminars by the research student during the period of registration

118. The thesis shall be printed in 1.5 line spacing, on A4 sheet paper, using 11 or 12 Point font-size in Arial/Book Antiqua/Bookman old Style/Calibri or Times New Roman font and may be soft/hard-bound, but not spiral-bound. The body of the thesis could be printed on both sides of the paper with due care.

### **Format for the Thesis**

119. The formats for the front cover and inner pages, declaration and certificate are indicated below:

Format for front cover and inner page

TITLE OF THE THESIS

A thesis Submitted to  
Central University of Kerala  
in partial fulfillment of the requirements for the degree of

Doctor of Philosophy  
in

XXXXXXXXXXXXXXXXXX

Jointly from the Department of

XXXXXXXXXXXXXXXXXX

and

the Department of

XXXXXXXXXX

By

X. X. XXXXXXXX

Reg. No. XXXXXX



Department of XXXXX

School of XXXX

Central University of Kerala

Month, Year

(Specimen for an Inter-disciplinary thesis involving two departments)

Format for Declaration by research student

I hereby declare that this thesis is a bona fide record of the research work carried out by me under the supervision and guidance of ----- and that, to the best of my knowledge and belief, it contains no material previously published or written by another person nor material which has been accepted for the award of any other degree or diploma of a University or other institute of higher learning, except where due acknowledgment has been made in the text.

Place: \_\_\_\_\_ Name and Signature of research student

Date \_\_\_\_\_

Format for Certificate by Research Guide

This is to certify that this thesis is a bona fide record of the research work carried out by XXXXXXXX under my/our supervision and guidance at the Department of XXXXXXXXXXXX in this school XXXXXXXXX (and the school XXXXXXXXX) of the Central University of Kerala. It is also further certified that the thesis is free from plagiarism after having checked using XXXXXXXXX (mention software used) and no sentence, equation, diagram, table, paragraph or section has been copied from previous work verbatim except at a very minimal level with due acknowledgement of the original sources. The similarity found by running the plagiarism software is less than 25%.

Place: \_\_\_\_\_ Name(s) of Research Guide

Date: \_\_\_\_\_

## Procedure for Adjudication of the Thesis

120. Unless otherwise specified, in all matters regarding evaluation of theses (except in the case of evaluation reports from adjudicators of the theses), e-mail, in a confidential manner, shall be the preferred mode of correspondence by the Controller of Examinations.
121. The Controller of Examinations shall confidentially forward every thesis (hard copy and a PDF soft copy) to three adjudicators nominated by the Vice-Chancellor.
122. Each adjudicator shall be requested to send a report (a signed hard copy, as well as a soft copy by e-mail) on her/his adjudication of the thesis, wherein it shall be specifically stated whether:
  - The thesis should be accepted without any modifications
  - The thesis should be accepted with certain corrections, modifications and extensions approved by the Guide
  - The thesis requires substantial revision and extension by the candidate and is unacceptable in its present form and therefore should be resubmitted for evaluation to the same adjudicator as far as possible.
  - The thesis should be rejected outright
123. The Controller of Examinations shall make every effort to speed up the process of adjudication so that reports are received within 45 days from the date of receipt of the thesis by the adjudicator.
124. In the event of two adjudicators recommending the thesis for the award of the Ph.D. degree and the other adjudicator rejecting it, the thesis shall be sent within a month to a fourth expert nominated by the Vice-Chancellor, from the same panel (if the panel has not been exhausted) and the decision of the fourth adjudicator shall be final.
125. If two of the adjudicators reject the thesis, it shall stand rejected.
126. If one or two of the adjudicators suggest re-submission of thesis after revision, the research student may re-submit the thesis incorporating the changes proposed by the adjudicator(s) within a period of one year and



on payment of such fees as may be prescribed by the University. On re-submission, the thesis shall again be sent for adjudication to the same expert (s) who had adjudicated it previously, following the same procedure as before. If one or both of them be not available, they may be substituted with new experts nominated by the Vice-Chancellor from the same panel(if the panel has not been exhausted). The decision of the adjudicators to accept or reject the thesis at this stage shall be final with no provision for a further resubmission of the thesis.

127. If all the three examiners recommend the award of the degree, the research student shall be deemed to have qualified to appear for an Open Defence of his/her thesis.
128. The Controller of Examinations in consultation with the Director of Research shall constitute an Open Defence (OD) Board with one of the adjudicators of the thesis nominated by the Vice-Chancellor as the Chairman, the Research Guide as the Convener, and the head of the Department concerned. The matter shall be communicated to the Convener of the OD Board for further necessary action at his/her end.
129. All Open Defence events shall be held at a central venue facilitated by the Director of Research.
130. The Convener of the OD Board, in consultation with the Head of the Department concerned shall decide the date and time for the conduct of the Open Defence and shall notify the research student sufficiently well in advance.
131. The Chairman and Convener of the OD Board shall be required to be present at the Open Defence. Provided further that, in the absence of the Research Guide (Convener) due to exceptional circumstances, the Vice Chancellor shall appoint another Research Guide of the department concerned to act as the Convener.
132. The Convener of the OD Board shall make all arrangements necessary for the conduct of Open Defence. S/he shall cause to publish the details of the open Defence and viva-voce examination, such as name of the

research student, title of the thesis, venue, date etc. on the notice board of the University Department/School/RRC concerned and shall send invitations to Research Guides and other interested persons in the University Department/ School /RRC concerned and shall send invitations to scholars whose participation will enrich the proceedings of the Open Defence. S/he shall also arrange to display a copy of the thesis in the library of the University Department/School concerned (not of the RRC) three days prior to the date fixed for the Open Defence. The Convener shall notify at least 50 persons about the Open Defence through email or post as the case may be. S/he shall ensure that not less than 20 invitees/ participants are present at the Open Defence

133. In case of exigencies requiring the postponement of the Open Defence, the Convener of the OD Board, in consultation with the Chairman, shall schedule a subsequent date, notify the research student accordingly and repeat all arrangements indicated above.
134. At the Open Defence, the research student shall make a presentation on the research problem, significance of her/his work, methodology used, the salient features of the study, major findings/results and their policy implications/prospects for further study, as the case may be. This shall be followed by a viva-voce examination conducted by the OD Board. The research student may also respond to questions put forward by the audience with the permission of the Chairman.
135. The Chairman of the OD Board shall record the minutes of the Open Defence in a Minutes Book maintained for the purpose by the Head of the Department.
136. Members of the audience shall enter their names and affix their signatures in the attendance sheet circulated.
137. If OD Board finds that the research student has been successful in the Open Defence, the adjudicator shall prepare a confidential report recommending the award of the Ph.D. degree, which shall be signed by

the Convener and handed over to the Controller of Examinations in a sealed envelope along with the minutes.

138. If the OD Board finds that the research student has not been successful in the Open Defence, the student shall be given an opportunity for another Open Defence and viva-voce examination after a period of one month on payment of the prescribed fee, and the decision of OD Board at this examination shall be final. The Chairman of the Board shall prepare an appropriate confidential report and hand it over to the Convener in a sealed envelope for onward transmission to the Controller of Examinations.
139. If the confidential report of the Chairman of the OD Board recommends the award of the Ph.D. degree to the research student, the Controller of Examinations shall, within a period of one week, issue a Certificate to the research student stating that, after adjudication of the thesis submitted by the research student, she/he was found eligible to be awarded the Degree of Doctor of Philosophy of the Central University of Kerala in accordance with the provisions of the UGC(minimum standards and procedure for awards of M.Phil. /Ph.D. degree) Regulation, 2009 and forward the report to the Vice- Chancellor for the issue of a provisional certificate.
140. The date of successful completion of the Open Defence by the research student shall be deemed to be the date of eligibility for the award of the degree.
141. The Controller of Examinations shall, periodically, cause to submit to the Executive Council a consolidate list of research students duly declared eligible for the award of the Ph.D. degree, indicating the respective dates of eligibility. Subsequent to the decision of the Executive Council, the degree certificate shall be issued to them under the seal of the University.

### Publication of the Thesis/Papers

142. A research student who has been awarded the Degree of Doctor of Philosophy can publish the thesis with due acknowledgement that the work pertains to doctoral research work undertaken at the Central University of Kerala provided no adjudicator has specifically stated that the thesis should not be published.

### Transitory provisions

143. This ordinance shall supersede all earlier regulations in the matter, and registration of candidates for doctoral research from the academic year 2016-17 onwards shall be made under this ordinance.

### Inconsistency with other regulations

144. Where the provisions of any other regulation relating to matters dealt with in this ordinance are inconsistent with the provision of such other regulation, to the extent of such inconsistency, shall cease to have any effect.

### Repeal and Saving

145. Notwithstanding such repeal, anything done or deemed to have been done or any action taken or deemed to have been taken under the said regulation shall be deemed to have been done or taken under this ordinance.

### Eligibility and Admissions

<b>Eligibility</b>	Each candidate Master of Education (M.Ed.) with minimum 55% marks or an equivalent grade in the qualifying examination.
<b>Admission</b>	Admission shall be based on admission test and interview. Those who have qualified in the UGC/ CBSE NET are exempted from the admission test.

### Course Structure (Ph.D Programme)

No	Course Code	Course Title	Course Credits
01	EME7101	Advanced Research Methods in Education	4
02	EME7102	Research and Publication Ethics	2
03	EME7103	Course related to the Specific area of Research	4
04	EME7104	Course related to the Specific Research Proposal	6



# **COURSE WORKS**

<b>Course Work</b>		<b>Paper No: 01</b>
<b>Course: Course Work 01</b>		<b>Course Code: EME7101</b>
<b>Course Title: ADVANCED RESEARCH METHODS IN EDUCATION</b>		<b>Credits: 4</b>
<b>Internal Marks: 40</b>	<b>External Marks: 60</b>	<b>Total Marks: 100</b>

<b>Essence of the Course:</b>	
<p>The course is indented to inculcate interests and familiarize with characteristics and types of Research in Education. It is focused on all different types of research methods and designs with a view to enable the students to engage research and use proper statistical measures in analysing the research problem. The Course will develop the scholars understanding regarding the qualitative and quantitative techniques of research, use different types data for their research process and will help the scholars to pursue their career in the field of educational research.</p>	
<b>Expected Learning Outcome:</b>	
<p>On completion of this course, the students will be able to:</p> <ul style="list-style-type: none"> <li>▪ Familiarize the students with various methods and techniques of educational research.</li> <li>▪ Formulate design for undertaking research projects and to construct the tools for data collection.</li> <li>▪ Use various statistical techniques in education research.</li> <li>▪ Develop competency in software package for statistical analysis.</li> <li>▪ Analyse quantitative &amp; qualitative in educational research</li> <li>▪ Understand the various application of statistics in research</li> <li>▪ Use different software for data analysis</li> <li>▪ Identify issues of data collection and their treatment;</li> <li>▪ Develop competencies in Research reporting</li> </ul>	
<b>Course Content:</b>	
<p><b>Unit 1: Methods of Research (22 Hours)</b></p> <ul style="list-style-type: none"> <li>▪ Quantitative Research: Research designs: true experimental (single group pre-test, post-test design; two-group experimental-control group design; Solomon four-group design, rotational group design; factorial design), quasi-experimental designs, internal and external validity of the research designs</li> <li>▪ Qualitative Research: meaning, nature, characteristics, scope and relevance, types of qualitative research: naturalistic enquiry, hermeneutics, phenomenology symbolic interactionism, grounded theory, ethnography, case study, ex post facto research and development studies, qualitative research design</li> </ul> <p><b>Unit 2: Sampling, Tools&amp; Techniques in Research (22 Hours)</b></p> <ul style="list-style-type: none"> <li>▪ Concept of population and sample, sampling unit, representativeness of a sample, sampling frame, Sampling methods: meaning, nature, conditions and applicability of Probability Sampling (Simple Random Sampling, Stratified Random Sampling, Systematic Sampling, Cluster sampling, Multi-Stage Sampling) and Non-Probability Sampling (Incidental Sampling, Quota Sampling, Purposive Sampling and</li> </ul>	

judgmental sampling, Snowball sampling).

- Tools and techniques – observation, interview, inquiry forms, scaling techniques, rating scale, attitude scale, psychological tests and projective techniques, sociometry – development and standardization of research tools, Characteristics of the tools: item analysis, reliability, validity and usability

### **Unit 3: Advanced Statistical Techniques**

- Correlation: Meaning, Computation and Interpretation of Linear correlation, Product-Moment Correlation, Rank Order Coefficient of Correlation, partial and Multiple Correlation,
- Regression: Concept of linear regression, regression equations - computation and application, prediction in relation to correlation.
- Factor Analysis
- Inferential Statistics- Standard error; one-tailed and two-tailed test; type 1 and type 2 error, degrees of freedom, testing the significance of the difference between means, variances, ANOVA, ANCOVA, MANOVA- inference and generalization
- Non-parametric statistics in education - Use of non-parametric tests and its rationale for distribution free data; Chi-Square Test; Median Test; Sign Test, Mann Whitney U-test and Wilcoxon test, Kruskal-Wallis test and Friedman's test.

### **Unit 4: Data Analysis and Research Reporting**

- Computer application: Statistical package for social Sciences (SPSS),
- Mechanics of Reporting Quantitative/Qualitative Research- Format, Language, Style, Bibliography/Referencing, Appendix, Variation in the scheme of Reporting ,Tables and figures, Footnotes, Bibliography, Pagination Typing and Font, Format of Report Writing; APA reference style
- Ethical considerations in quantitative and qualitative research: Accuracy, credibility, confidentiality, transparency, honesty, originality, protecting, authenticity, plagiarism.

### **Modes of Transaction:**

- Lecture cum discussion
- Brainstorming
- Preparing reflective diaries / journal
- Small group discussions
- Assignment
- Supervised Learning
- Power point Presentation
- Computer software presentation

### **Learning Activities:**

- Preparation of Research Tools
- Review of Research Literature
- E-referencing & Styles in Referencing
- Use of Computers in data processing

### **Assessment Rubrics:**

- Preparing reflective diaries / journal
- E-referencing

- Project Work
- Seminar Presentation (PPT)
- Reflective written assignments
- Participation in discussions
- Practices and oral assessment
- Exercise performance analysis and observation

### Suggested Reading:

- Anfara, Vincent & Mertz Norma T. (2006). *Theoretical Frameworks in Qualitative Research*. New Delhi: SAGE Publication.
- Best J.W. (1986). *Research in Education*, New Delhi: Prentice Hall of India Pvt. Ltd.
- Borg, W.R. and Gall, M.D. (1983). *Educational Research – An Introduction*, New York: Longman, Inc.
- Clive Opie. (2004). *Doing Educational Research- A Guide for First time researchers*. New Delhi: Vistar Publications.
- Cohen, L., Lawrence, M. and Keith, M. (2007). *Research Methods in Education*. Routledge, London.
- Edwards (1973). *Statistical Methods for Behavioural Sciences*, New York: Holt, Rinehart and Winston.
- Ferguson, G. (1981). *A Statistical Analysis in Psychology and Education*, New York: McGraw Hill.
- Garret, H.E. (1967). *Statistics in Psychology and Education*, BombayVakils.
- Grbich, Carol (2006). *Qualitative Data Analysis: An Introduction*. SAGE Publication.
- Guilford, J.P. and B. Fruchter. (1987). *Fundamental Statistics in Education and Psychology*. Tokyo: McGraw Hill (Student-Sixth edition).
- Levin, J. (1977). *Elementary Statistics in Social Research*. New York: Harper and Row Publishers.
- Lichtman, Marilyn (2006). *Qualitative Research in Education-A User Guide*.SAGE Publication.
- Popham and Sirohic (1993). *Educational Statistics-Use and Interpretation*, New York: Harper and Row.
- Quinn, MC Nemar (1969). *Psychological Statistics*, New York: Wiley & Sons.
- Ferguson, G. (1981). *A Statistical Analysis in Psychology and Education*, New York, McGraw Hill.
- Garrett, H.E &Woodworth, R,S.( 1998) *Statistics in Psychology and Education*. New York: Longman Greens & Co.
- Glan, G.V., & Hopkins, K.D. (1996). *Statistical Methods in Education and Psychology*, (3rd edition). Boston: Allyn & Bacon.
- Guilford, J.P., and B. Fruchter. (1987). *Fundamental Statistics in Education and Psychology*. Tokyo: McGraw Hill (Student-Sixth edition).
- Good, Carter, V. *Methodology of Educational Research*, New York: Appleton Century Crafts.
- Elliott, Jane (2005). *Using Narrative in Social Research: Qualitative and Quantitative Approaches*. SAGE Publication.
- Fraenkel, J.R., Wallen, N.E. (1983). *How to Design and Evaluate Research in Education*. Singapore: McGraw Hill, Inc.
- Jill Porter & Penny Lacey (2005). *Researching Learning Difficulties- A Guide for Practitioners*. Paul Chapman Publishing.
- Scott, David & Usher, Robin (1996). *Understanding Educational Research*. Rout



ledge. London and New York.

- Travers, Robert M.W. (1978). *An Introduction to Educational Research* (4<sup>th</sup> edition). London: McMillan Publishers.
- Van Dalen, B. and Meyer, William J. (1979) *Understanding Educational Research: An Introduction*. New York: McGraw Hill Co.
- Wiersma, W., (2000). *Research Methods in Education*, (7<sup>th</sup> edition), Allyn & Bacon.
- Willis, Jerry W. (2007). *Foundations of Qualitative Research: Interpretive and Critical Approaches*, SAGE Publication.



<b>Course Work</b>		<b>Paper No: 20</b>
<b>Course: Course Work 02</b>		<b>Course Code: EME7102</b>
<b>Course Title: RESEARCH AND PUBLICATION ETHICS</b>		<b>Credits: 2</b>
<b>Internal Marks: 40</b>	<b>External Marks: 60</b>	<b>Total Marks: 100</b>

#### Essence of the Course:

- This course has 6 modules mainly focusing on basics of philosophy of science and ethics, research integrity, publication ethics. Hands on sessions are designed to identify research misconduct and predatory publications. Indexing and citation databases, open access publications, research and p-metrics and plagiarism tools introduced in the course.

#### Expected Learning Outcome:

On completion of this course, the students will be able to

- Understand the philosophy and ethics
- Realized the publication ethics and scientific conduct
- Access the open access publication and online databases
- Familiarize the publication misconduct and online research tools

#### Course Content:

##### **THEORY**

##### **RPE 01: PHILOSOPHY AND ETHICS (3 HRS)**

1. Introduction to Philosophy: definition, nature and scope, concept, branches
2. Ethics: definition, moral philosophy, nature of moral judgements and relations.

##### **RPE 02: SCIENTIFIC CONDUCT (5 HRS)**

1. Ethics with respect to science and research
2. Intellectual honest and research integrity
3. Scientific misconducts: falsification, fabrication, and plagiarism.
4. Redundant publications: duplicate and overlapping publications, salami slicing
5. Selective reporting and misrepresentation of data.

##### **RPE 03: PUBLICATION ETHICS (7 HRS)**

1. Publication ethics: definition, introduction and importance
2. Best practices/standards setting initiatives and guidelines: COPE, WAME, etc.
3. Conflicts of interest
4. Publication misconduct: definition, concept, problems that lead to unethical behavior and vice versa, types
5. Violation of publication ethics, authorship and contributor ship
6. Identification of publication misconduct, complaints and appeals
7. Predatory publishers and journal

## **PRACTICE**

### **RPE 04: OPEN ACCESS PUBLISHING (4 HRS)**

1. Open access publications and initiatives
2. SHERPA/RoMEO online resource to check publisher copyright and self-archiving policies.
3. Software tool to identify predatory publications developed by SPPU
4. Journal finder/ journal suggestion tools viz. JANE, Elsevier Journal Finder, Springer Journal Suggester, etc.

### **RPE 05: PUBLICATION MISCONDUCT (4 HRS)**

#### **A. Group Discussions (2 hrs)**

1. Subject specific ethical issues, FFP, authorship
2. Conflicts of interest
3. Complaints and appeals: examples and fraud from India and abroad

#### **B. Software tools (2 hrs)**

1. Use of plagiarism software like Turnitin, Urkund and other open source software tools.

### **RPE 06: DATABASES AND RESEARCH METRICS (7 HRS)**

#### **A Databases (4 hrs)**

1. Indexing databases
2. Citation databases: Web of Science, Scopus, etc.

#### **B. Research Metrics (3 hrs)**

1. Impact Factor of journal as per journal citation report, SNIP, SJR, IPP, Cite Score.
2. Metrics: h-index, g index, i10 index, altimetric

### **Modes of Transactions / Pedagogy**

- Classroom Lectures,
- Guest Lectures
- Group Discussions
- Practical Sessions

### **Assessment Rubrics/ Evaluation :**

Continuous assessment will be done through tutorials, assignments, quizzes and group discussions. Weightage will be given for active participation. Final written examination will be conducted at the end of the course.

### **Suggested Reading / References:**

- Bird, A. (2006). *Philosophy of Science*, Routledge.
- MacIntyre, Alasdair (1967). *A Short History of Ethics*, London.
- Chaddah. P. (2018). *Ethics in Competitive Research: Do not get scooped; do not get plagiarized*.

