

Programme Project Report (PPR)

**for Distance Learning Programme
under School of Distance Education**

**Master of Science in Mathematics
2018-19**

School of Distance Education

**University of Calicut
Malappuram District
Kerala 673635**

UNIVERSITY OF CALICUT

SCHOOL OF DISTANCE EDUCATION

Master of Science (Mathematics)

PROGRAMME PROJECT REPORT (PPR)

1. Programme's Mission and Objectives :

i. Mission

Mathematics is an indispensable problem-solving and decision making tool used in most of the advanced development in science, engineering and technology. Therefore, a significant increase of interest in Mathematics has been grown among different disciplines as well as other areas of life in recent past. With that spirit in mind and keeping the mission that to foster the analytical skills among the students, so that they develop the traits of being potentially employable in their career, the School of Distance Education, University of Calicut, started postgraduate Mathematics course.

ii. Objectives

- To cultivate a mathematical attitude and nurture the interests.
- To enable the students to apply their knowledge in modern industry or teaching, or secure acceptance in high quality graduate programs in Mathematics and other fields such as the field of quantitative/ Mathematical finance, Mathematical computing and Statistics
- To acquire knowledge about the nature, concepts, methods, techniques and objectives of advanced fields of Algebra, Analysis, Geometry and Topology, and Applied Mathematics, together with some historical perspective of their development
- To enable the students to communicate effectively both orally and in writing
- To enable to work effectively in teams
- To exhibit ethical and professional behavior
- To motivate for research in mathematical and statistical sciences

- To train computational scientists who can work on real life challenging problems

2. Relevance of the program with HEI's Mission and Goals:

The postgraduate Mathematics course has great relevance with the Mission and Goal set by the University of Calicut. The primary aim of this programme is to acquaint the learners with the core values of life. The programme will also help the learners to keep abreast with the latest developments in Mathematics from national and international stand points. This course will help the economic and social growth of the country by supplying more qualified Mathematicians, which is basic need in today's competitive environment.

3. Nature of prospective target group of learners:

The postgraduate Mathematics programme is in demand for large number of human resource in various fields. This programme has been welcomed by those who missed the opportunity for higher science education. As per the needs of the learners, the university has prepared course curriculum of this programme.

The prospective target group of learners are :-

- Working professionals
- Unemployed graduates
- Academic faculty
- Home makers

4. Appropriateness of programme to be conducted in Open and Distance Learning mode to acquire specific skills and competence :

Postgraduate Mathematics programme will meet the learning aspiration for Mathematics by providing a chance to those who had to discontinue their formal education or could not join regular colleges or Universities owing to social, economic, and other constraints. It is 3 years programme. This programme focuses on the main branches of Mathematics such as Algebra, Analysis, Differential Equations, Numerical Analysis and computer programming, Topology, Differential Geometry, Functional Analysis and Graph Theory which will help the students to pursue the higher studies in these topics.

Besides imparting theoretical knowledge, the University provides the opportunity to the human resource, basically to those who are financially backward and rural people to get a quality education in Mathematics, which can fulfill the demand of the society.

5. Instructional Design :

i) **Curriculum Design**

Sl. No	Paper	Title of the Paper	Maximum Marks
First Year			
1	Paper I	Algebra	120
2	Paper II	Linear Algebra	120
3	Paper III	Real Analysis	120
4	Paper IV	Topology	120
5	Paper V	Differential Equations	120
		Total	600
Second Year			
6	Paper VI	Complex Analysis	150
7	Paper VII	Functional Analysis	150
8	Paper VIII	Differential Geometry	150
9	Paper IX	Topics in Discrete Mathematics	150
10	Paper X	Elective Paper I	100
11	Paper XI	Elective Paper II	100
12	Paper XII	Elective Paper III	100
		Total	900
		Grand Total	1500

ii) **Programme Duration :** Course duration is 2 years

iii) **Faculty and support staff requirement:**

There is one full time faculty member available to coordinate M. Sc Programme in Mathematics. Supporting staff from the School of Distance Education are performing the administrative functioning for all the programs. The service of qualified guest teachers and experts from panels approved by the Vice Chancellor are used in preparation of study materials, for taking contact classes and conducting internal evaluation.

iv) **Instructional delivery mechanism :**

The academic contents are being delivered to the students through study learning materials and contact classes as stipulated by norms of the Distance Education Programme. Normally, contact

classes are held as per a schedule drawn beforehand by the Study Centre Coordinator. They are held on weekends. Eminent teachers from SDE and other institutes drive these classes with their vast experience and help the learners to understand the subject better.

6. Procedure for admission, curriculum transaction and evaluation :

Admission Procedure: Candidates having the required qualifications (there is no restriction related to the number of seats for admission) should complete their registration through online within the prescribed date mentioned in the admission notifications, along with the required documents.

Eligibility:

i) Students under mark system

B Sc degree of this University with Mathematics (Main) or equivalent degree with at least 50% marks for Part III (excluding subsidiaries). OBC/OEC candidates are eligible for relaxation of marks up to 5%. SC/ST candidates need only to get a pass.

ii) Students under grade scheme

B Sc degree of this University with Mathematics (Core) or equivalent degree with option 2.

Fee Structure:

Sl. No	Fee	Amount
1	Application Fee	Rs. 200
2	Admission Fee	Rs. 250
2	Course Fee	Rs. 2000 (For 1 Year)
3	Matriculation Fee	Rs. 100
4	Re- matriculation Fee	Rs. 150
5	Recognition Fee	Rs. 100
6	Postage Charges	Rs. 50
7	Spot Admission Fee	Rs. 50

- *Matriculation fee for those who are enrolling in University of Calicut for the first time*
- *Re-matriculation fee for those who have migrated from the University of Calicut to other Universities*
- *Recognition fee for those who have qualified from Boards/ Universities of other States*

- *Postage charges for those who not availing the facility of Spot admission*
- *Spot admission fee for those who are availing the spot admission facility*

Financial Assistance: Concession for tuition fee will be given to SC/ST and OEC students. The students belonging to SC/ST and OEC category will be admitted to the programme without remitting the tuition fee, only if they are not employed in Govt/Quasi Govt/Public Sector Services. They should submit the duly filled in application form (available in the SDE website) for fee concession with relevant documents at the time of admission. No fee concession for OBC students.

Visually challenged candidates are also eligible for fee concession on production of Medical Certificate.

Curriculum transaction and evaluation:

Curriculum is transacted in the Distance mode with the help of study materials and contact classes. Evaluation is by end year examinations. End Year Examinations are conducted by the Controller of Examinations, University of Calicut. The written exams carry 120 marks per paper. The examiners for evaluation are drawn from the panel of examiners available for the corresponding disciplines in the regular mode.

Academic planner for the PG programmes proposed for the academic session July 2018

Sl No	Activity	From	To
1	Admission	1 st week of June 2018	Last week of June 2018
2	Distribution of I st Semester Study Materials	2 nd week of July 2018	2 nd week of August 2018
3	I st Semester Contact Classes	Last week of July 2018	Last week of October 2018
4	Commencement of I st Semester examination	I st week of January 2019	Last week of January 2019
5	Publication of results	II nd week of May 2019	
6	Distribution of II nd Semester Study Materials	II nd week of February 2019	II nd week of March 2019
7	II nd Semester Contact Classes	II nd week of February 2019	Last week of May 2019
8	II nd Semester Examinations	1 st week of July 2019	III rd week of July 2019
9	Publication of results	I st Week of November 2019	

10	Distribution of III rd Semester Study Materials	1 st week of August 2019	1 st week of September 2019
11	III rd Semester Contact Classes	I st week of August 2019	Last week of October 2019
12	III rd semester Examinations	Last week of November 2019	II nd week of December 2019
13	Publication of Results	II nd week of April 2020	
14	Distribution of IV th semester Study Materials	I st week of January 2020	Last week of January 2020
15	IV th Semester Contact Classes	I st week of January 2020	Last week of May 2020
16	IV th Semester Examinations	2 nd week of June 2020	Last week of June 2020
17	Publication of Results	Last week of September 2020	

7. Requirement of the laboratory support and Library Resources :

The SDE has its own library with a good collection of books, periodicals, reference books etc. Students can make use of the library resources and the reference services by producing their Student's ID card.

8. Cost estimate of the programme:

Sl. No	Expenditure	Cost estimate for B. Sc Mathematics Programme proposed to be offered from July 2018(300 students expected)
1	Cost of SLM preparation including DTP charges	150,000
2	Printing and distribution of SLM	139,650
3	Contact classes	296,243
4	Pay & Allowances of staff at HQ	414,307
5	Examination & Valuation	272,727
6	Miscellaneous Expenses	4,545
	Grand Total	1,277,474
	Expense per student	4258

9. Quality assurance mechanism and expected programme outcomes :

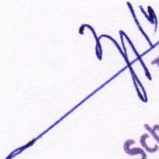
SDE has constituted the Centre for Internal Quality Assurance (CIQA) as per UGC(Open and Distance Learning) Regulations, 2017 to ensure the delivery of high quality programmes to its learners.

Expected Programme Outcomes:

On completion of this programme, the successful students will be able to:

- ✓ Solve problems in the advanced areas of Real Analysis, Linear Algebra, Abstract Algebra, Topology, Differential Equations, Differential Geometry, Functional Analysis Etc.
- ✓ Read, analyze, and write logical arguments to prove mathematical concepts
- ✓ Communicate mathematical ideas with clarity and coherence, both written and verbally.
- ✓ Perform research in conjunction with others as well as individually
- ✓ Develop strategies to solve mathematical in a range of relevant areas
- ✓ Criticize mathematical arguments developed by themselves and others
- ✓ Learn effectively
- ✓ Solve practical problems in a range of areas of Mathematics
- ✓ Communicate Mathematics effectively to a wide range of audience
- ✓ Work effectively and constructively as part of a team
- ✓ Motivate and communicate complex ideas accurately using a range of formats
- ✓ Identify and benefit from opportunities for personal and career development


Vice-Chancellor


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