



**UNIVERSITY OF CALICUT**

**Abstract**

M.Sc Programme in Mathematics under CUCSS (PG)-Scheme and Syllabus Approved-revised w.e.f. 2016 admn onwards-Orders issued.

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**G & A - IV - J**

U.O.No. 8964/2016/Admn

Dated, Calicut University.P.O, 23.07.2016

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*Read:-*1. U.O No. GAIV/J1/1373/08 dated. 23.07.2010

2. Item no. 12 in the minutes of the meeting of the Board of Studies in Mathematics PG held on 04.03.2016
3. Remarks of Dean Faculty of Science dtd. 24.04.2016
4. Orders of the VC in the file of even No. dtd. 27.04.2016

**ORDER**

Vide paper read as (1), Credit semester System was implemented to PG programmes in affiliated Arts and Science Colleges and Self Financing Centres of the University with effect from 2010 admission onwards.

The Board of Studies in Mathematics PG, vide paper read as (2), resolved to modify the syllabus for M.Sc Mathematics w.e.f. 2016 admission onwards and made the required modifications in the syllabus.

The Dean Faculty of Science approved the minutes of the Board vide paper read as (3).

The Hon'ble Vice Chancellor, exercising the powers of the Academic Council has approved the minutes of the Board of Studies in Mathematics PG, subject to ratification by the Academic Council, and has given orders to implement the resolutions, vide paper read as (4),

Sanction has, therefore, been accorded for revising the Syllabus of M.Sc Mathematics, in the University, effective from 2016 admission.

Orders are issued accordingly.

(The syllabus is available in the website: [www.universityofcalicut.info](http://www.universityofcalicut.info))

Lalitha K.P  
Assistant Registrar

To

PS to VC/PA to Registrar/Pareeksha Bhavan/Enquiry/System Administrator(with a request to upload in the website)/GA I F Section

Forwarded / By Order

Section Officer

**UNIVERSITY OF CALICUT**  
**SYLLABUS FOR THE M. Sc MATHEMATICS PROGRAMME**  
**UNDER CUCSS – PG – 2016**  
**(Total Credits – 80)**

**EFFECTIVE FROM 2016 ADMISSIONS**

## **CONTENTS**

1. Major Changes
2. Semester wise plan and Electives
3. Detailed Syllabi
4. Guideline for Project
5. Guideline to conduct the Viva Voce
6. Evaluation and Grading
7. Question paper pattern for MT4E07: Computer Oriented Numerical Analysis
8. Question Paper Pattern for the End Semester Examination
9. Practical detail
10. Procedure for conducting the practical examination
11. Rules for conducting viva voce of project and the practical.

## Major Changes from the Previous Syllabus:

1. Viva Voce of two credits each is introduced in both first and third semesters instead of the General Viva at the end of the course.
2. Number of credits for Project is 4.
3. In the syllabus certain changes like
  - (i) Topology is made into a single paper
  - (ii) Functional Analysis is made into a single paper
  - (iii) A new course "Multivariable Calculus and Geometry" is introduced
  - (iv) Differential Geometry paper moved to the elective papers
  - (v) ODE and Calculus of Variation paper is moved to the second semester
  - (vi) Number Theory paper is in the first semester
  - (vii) PDE and integral equations is moved to the third semester
  - (viii) Linear Programming and Applications is replaced by Operations Research
  - (ix) Number of Electives increased to four in the proposed syllabus and the electives to be chosen one each from four groups of electives.
4. Detailed instruction for conducting the (i) Practical (ii) Viva Voce and (iii) Project Viva Voce are given.
5. Detailed Question Paper pattern for the End Semester Examination is given.

**UNIVERSITY OF CALICUT**  
**SYLLABUS FOR THE M.Sc. (MATHEMATICS) PROGRAMME**  
**UNDER CUCSS – PG – 2016**  
 (Total Credits : 80)  
**EFFECTIVE FROM 2016 ADMISSIONS**

**Semester I**

Course Code	Title of the Course	No. of Credits	Work Load Hrs./week	Core/ Elective
MT1C01	<b>Algebra- I</b>	<b>4</b>	<b>5</b>	<b>core</b>
MT1C02	<b>Linear Algebra</b>	<b>4</b>	<b>5</b>	<b>core</b>
MT1C03	<b>Real Analysis-I</b>	<b>4</b>	<b>5</b>	<b>core</b>
MT1C04	<b>Number Theory</b>	<b>4</b>	<b>5</b>	<b>core</b>
MT1C05	<b>Discrete Mathematics</b>	<b>4</b>	<b>5</b>	<b>core</b>
MT1V06	<b>Viva Voce</b>	<b>2</b>		

**Semester II**

Course Code	Title of the Course	No. of Credits	Work Load Hrs./week	Core/ Elective
MT2C07	<b>Algebra- II</b>	<b>4</b>	<b>5</b>	<b>core</b>
MT2C08	<b>Real Analysis-II</b>	<b>4</b>	<b>5</b>	<b>core</b>
MT2C09	<b>Topology</b>	<b>4</b>	<b>5</b>	<b>core</b>
MT2C10	<b>ODE and Calculus of Variations</b>	<b>4</b>	<b>5</b>	<b>core</b>
MT2C11	<b>Operations Research</b>	<b>4</b>	<b>5</b>	<b>core</b>

**Semester III**

Course Code	Title of the Course	No. of Credits	Work Load Hrs./week	Core/ Elective
MT3C12	<b>Multivariable Calculus and Geometry</b>	<b>4</b>	<b>5</b>	<b>core</b>
MT3C13	<b>Complex Analysis</b>	<b>4</b>	<b>5</b>	<b>core</b>
MT3C14	<b>Functional Analysis</b>	<b>4</b>	<b>5</b>	<b>core</b>
MT3C15	<b>PDE and Integral Equations</b>	<b>4</b>	<b>5</b>	<b>core</b>
<b>MT4C17</b>	<b>Project</b>		<b>5</b>	<b>core</b>
MT3V16	<b>Viva Voce</b>	<b>2</b>		