DEPARTMENT OF MATHEMATICS

CENTRAL UNIVERSWITY OF KEREALA

PERIYE, KASARAGOD

Minutes of the Second Board of studies meeting held on Thursday, 7th February, 2019 in the Department of Mathematics in Room No. 28 at 2.30 p.m.

The following members were present:

1. *Prof. Gadadhar Misra,*

   Department of Mathematics,
   Indian Institute of Science, Bangalore – 560 012.

2. *Prof. A.K. Nandakumaran,*

   Department of Mathematics,
   Indian Institute of Science, Bangalore – 560 012.

3. *Prof. A. R. Rajan, Emeritus Professor,*

   Department of Mathematics, University of Kerala,
   Thiruvananthapuram, Kerala – 695 581.

4. *Mr. V. Kumar, Assistant Professor,*

   Department of Computer Science, CU Kerala.

5. *Dr. V. Vilfred, Associate Professor & Head,*

   Department of Mathematics, CU Kerala.

6. *Dr. K. A. Germina, Associate Professor,*

   Department of Mathematics, CU Kerala.

7. *Dr.* Ali Akbar K, Assistant Professor,

   Department of Mathematics, CU Kerala.

The Meeting started at 2.30 p.m. The Chairperson Dr. V. Vilfred welcomed the members and submitted the modified Course Structure and Syllabus approved by the Faculty Council, Department of Mathematics, CU Kerala. Then, he briefed how and what modifications were done in the communicated Course Structure and Syllabus.

With the permission of the experts in the Board of Studies, the convenor invited Dr. Shaini P, Dr. S. Gnanavel and Dr. Manikandan Rangaswamy to join the BoS Meeting. The committee commended on each and every paper and also on the course structure. The whole structure and Syllabus was thoroughly discussed. The revised version of the same was prepared and submitted for the approval. The Members of the Board of Studies approved the revised Course Structure and Syllabus. (A copy of the approved Course structure and Syllabus is attached herewith.) The committee decided to implement the revised course structure and syllabus from the academic year 2019 - 20 onwards.

The members also commented on the Method of Evaluation of M.Sc. Mathematics Programme and requested to include the same in the minutes. The experts strongly recommended that the mode of evaluation of examinations should be strictly internal.

The members of the BoS seriously noted the current strength of intake at CU Kerala to M.Sc. Maths programme that is increased to fourty seats and strongly recommend that for quality teaching the number of teaching faculty in the Department of Mathematics should be increased sufficiently since present strength of seven faculty is quiet insufficient.

The meeting was fruitful and Dr. K.A. Germina thanked the experts for their valuable suggestions and guidance.

The meeting came to a close at 5.00 p.m.

1. Prof. Gadadhar Misra,
   Department of Mathematics,
   I.I.Sc., Bangalore – 560 012.

2. Prof. A.K. Nandakumaran,
   Department of Mathematics,
   I.I.Sc., Bangalore – 560 012.

3. Prof. A. R. Rajan, Emeritus Professor,
   Department of Mathematics,
   University of Kerala, Trivandrum, Kerala – 695 581.

4. Mr. V. Kumar, Assistant Professor,
   Department of Computer Science, CU Kerala.

5. Dr. V. Vilfred, Associate Professor & Head,
   Department of Mathematics, CU Kerala. 07.02.2019

6. Dr. K. A. Germina, Associate Professor,
   Department of Mathematics, CU Kerala. 7/2/2019

7. Dr. Ali Akbar K, Assistant Professor,
   Department of Mathematics, CU Kerala. 7/02/2019

Code:MAT5391: Computational Lab Prerequisites: Basics in Computer programming	L	T	P	Credit
	1	0	2	2

Course Category	Core
Course Type	Theory and Practical
Course Objective	Reinforce a structured, top-down approach to formulate and solve problems. 2. Introduce common approaches, structures, and conventions for creating and evaluating computer programs, primarily in a procedural paradigm, but with a brief introduction to object-oriented concepts and terminology. 3. Apply a variety of common numeric techniques to solve and visualize engineering-related computational problems. 4. Introduce the MATLAB software environment.
Course Outcome(s)	Provide students with the background and skills required to numerically simulate and solve problems of approximations and optimizations. This will be a hands-on class with theory accompanied by practical implementation in MATLAB. After a review of programming in MATLAB and basic numerical methods (linear equations, interpolation, numerical differentiation, integration), methods to solve various ordinary and partial differential equations will be covered.

Syllabus:

Introduction to basic operators, Functions and Predefined Variables, Defining Variables. Matrices, Matrix Operations. Plotting Graphs - Two-Dimensional Plots - Three-Dimensional Plot., General Commands, Polynomials, Curve Fitting and Interpolation -programming exercise (Numerical Methods) including development of algorithms to solve ordinary differential equations and partial differential equations. Using which Programming you will be taught for this.

The program coding executed using C or C++ programming languages are preferred.
However, codes may also use software programs including Matlab/Octave, Mathematica.

LATEX - Introduction, Document preparation - Basic.

References:

1. J. Stoer and R. Bulirsch, Introduction to Numerical Analysis, Springer-Verlag, ISBN 0-387- 90420-4.
2. A. Quarteroni, F. Saleri and P. Gervasio, Scientific Computing with MATLAB and Octave, Springer, Science & Business Media, 2010.

MAT 5490: Dissertation Prerequisites: Reasonably good understanding about M.Sc. first year courses; especially those related to the project topic	L	T	*PD	Credit
	0	0	18	6

Course Category	Core
Course Type	Theory
Course Objective	To provide training in scientific skills ; To prepare students for professional training programme or entry level jobs in any area of Mathematics