FATIMA COLLEGE (AUTONOMOUS)

Re-Accredited with "A" Grade by NAAC (3rd Cycle)
74th Rank in India Ranking 2020 (NIRF) by MHRD
Maryland, Madurai- 625 018, Tamil Nadu, India

NAME OF THE DEPARTMENT : MATHEMATICS

NAME OF THE PROGRAMME : B.Sc. MATHEMATICS

PROGRAMME CODE : UAMA

ACADEMIC YEAR : 2020 - 2021

Minutes of the Board of Studies Meeting in Mathematics (Regular and Self Finance) held on 28.02.2020 at 2 p.m

The following members were present in the Board of Studies meeting.

1. Mrs. P. Meenakshi (University Nominee), Head, Department of Mathematics, AKD Dharmaraja Women's College, Rajapalayam - 626117
e-mail : gmeenakshisjpm@gmail.Com.
2. Dr. R. Rajkumar, Assistant Professor, Department of Mathematics, Gandhigram Rural Institute (Deemed to be University), Gandhigram - 624302 Dindigul Dt. e-mail : rajkumar.iitm@gmail.Com.
3. Dr. Wilson Baskar, Assistant Professor, Department of Mathematics, Saraswathi Narayanan College, Perungudi, Madurai - 625022.
e-mail : arwilvic@yahoo.Com
4. Mrs. P. Nalini, Assistant Professor, Department of Mathematics, Sourashtra College for Women, Madurai. e-mail : nalini.Seeni76@gmail.Com.
5. Mrs. A. Paulin Mary (HOD)
6. Mrs. A. Sheela Roselin
7. Dr. Sr. M. Fatima Mary
8. Dr. C. Prasanna Devi
9. Dr. E. Helena
10. Mrs. Nigila Ragavan
11. Mrs. M. Teresa Nirmala
12. Dr. V. Vanitha
13. Ms. R. Rajeswari
14. Mrs. R. Jenovi Rosary Deepa.
15. Mrs. B. Veltamary Jacquline.

16. Ms. J. Annal Mercy
17. Dr. N. Malathi, Dean of Sciences, Fatima College, Madurai.

The Board reviewed the Syllabi (OBE) for I UG (I & II Semesters) Major and Allied papers, II UG (III & IV Semesters) Major, Allied and Skill Based papers, III UG (V & VI Semesters) Major, Elective and Skill Based papers, I PG (I & II Semesters) all papers including EDC, II PG (III & IV Semesters) all papers including Elective Papers.

The Board passed the Syllabi for new Self learning Courses, "History of Mathematics" (19UGSLM1) for advanced learners of III UG and "Problems in Advanced Mathematics" (19PGSLM1) for advanced learners of II PG.

The Board approved 10% Self study Components for I UG (I and II Semesters) Major and Allied papers, II UG (III & IV Semesters) Major, Allied and Skill based Papers, III UG (V and VI Semesters) Major, Elective and Skill Based Papers. The Board also approved 20% Self study Components for I PG (I & II semesters) all papers including EDC, II PG (III & IV Semesters) all papers including Elective papers.

Board members said that MOOC Courses are open online Courses where

Students are given choice to choose their own area of interest. The Courses are updated or changed once in two months. So it is not possible to fix Courses for one year. They also questioned whether there is any provision to clear if a student is unable to Complete the Course.

28/02/2020

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P. Meenakshi
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28/02/2020

FATIMA COLLEGE (AUTONOMOUS), MADURAI-18

DEPARTMENT OF MATHEMATICS

PROGRAMME CODE: UAMA

S. No	SEM.	COURSE CODE	COURSE TITLE	HRS	CREDITS	CIA Mks	ESE Mks	TOT. MKs
1.	I	19M1CC1	Calculus	6	4	40	60	100
2.		19M1CC2	Classical Algebra	6	4	40	60	100
3.		19M1AC1	Statistics	5	5	40	60	100
4.		19P1ACM1	Allied Mathematics-I	5	5	40	60	100
5.	II	19M2CC3	Differential Equations	6	4	40	60	100
6.		19M2CC4	Numerical Methods	6	4	40	60	100
7.		19M2AC2	Advanced Statistics	5	5	40	60	100
8.		19P2ACM2	Allied Mathematics-II	5	5	40	60	100
9.	I & II	19M1NME/ 19M2NME	Quantitative Aptitude	2	2	40	60	100

S. No	SEM.	COURSE CODE	COURSE TITLE	HRS	CREDITS	CIA Mks	ESE Mks	TOT. MKs
10.	**III**	19M3CC5	Modern Algebra	6	4	40	60	100
11.		19M3CC6	Vector Calculus and Fourier Transforms	6	4	40	60	100
12.		19M3SB1	Applications of Calculus & Differential Equations	2	2	40	60	100
13.		19C3ACM1	Allied Mathematics - I	5	5	40	60	100
14.		19B3ACM1	Linear Programming	5	5	40	60	100
15.	**IV**	19M4CC7	Sequences and Series	6	4	40	60	100
16.		19M4CC8	Linear Algebra	6	4	40	60	100
17.		19M4SB2	Foundations of Mathematics	2	2	40	60	100
18.		19C4ACM2	Allied Mathematics - II	5	5	40	60	100
19.		19B4ACM2	Algebra and Graph Theory	5	5	40	60	100

For those who join in 2016 onwards

Sem	Sub.Code	Title of the Paper	Hr	Cr	CIA			Int A	Ext B	Total A+B
					T	A	Q			
V	M5CC9	Real Analysis	6	5	15	5	5	25	75	100
	M5CC10	Mechanics	6	5	15	5	5	25	75	100
	M5CC11	Computer Programming in C	6	5	15	5	5	25	75	100
	M5CCP1	C Practicals	3	2	-	-	-	40	60	100
	M5ME1	Graph Theory	5	5	15	5	5	25	75	100
	M5ME2	Fuzzy Mathematics	5	5	15	5	5	25	75	100
	M5SB3	Fourier Transforms	2	2	30	10	10	50	50	100
	M5SB4	Advanced Linear Programming	2	2	30	10	10	50	50	100
	M6CC12	Complex Analysis	6	5	15	5	5	25	75	100
	M6CC13	Numerical Methods	5	4	15	5	5	25	75	100

VI	M6CC14	Operations Research	5	4	15	5	5	25	75	100
	M6ME3	Object Oriented Programming with C++	3	3	15	5	5	25	75	100
	M6MEP1	C++ Practicals	2	2	-	-	-	40	60	100
	M6ME4	Astronomy	5	3	15	5	5	25	75	100
	M6MEP2	Astronomy Project	-	2	-	-	-	40	60	100
	M6ME5	Lattices and Boolean Algebra	5	5	15	5	5	25	75	100
	M6ME6	Automata Theory	5	5	15	5	5	25	75	100
	M6ME7	Theory of Numbers	5	5	15	5	5	25	75	100
	M6SB5	MATLAB	2	2	30	10	10	50	50	100
	M6SB6	Applied Dynamics	2	2	30	10	10	50	50	100

EXTRA CREDIT COURSE

Course Code	Courses	Hrs.	Credits	Semester in which the course is offered	CIA Mks	ESE Mks	Total Marks
19UGSLM1	History of Mathematics	-	-	V & VI	40	60	100

III B.Sc. Mathematics
SELF LEARNING COURSE
HISTORY OF MATHEMATICS-19UGSLM1
(For those who join in 2019 onwards)

COURSE DESCRIPTION

This course to study A survey of the historical development of mathematics. The emphasis will be on mathematical concepts, problem solving, and pedagogy from a historical perspective.

COURSE OBJECTIVIE

Students will demonstrate their knowledge of basic historical facts; they wil demonstrate understanding of the development of mathematics and mathematical thought.

COURSE OUTCOMES

At the end of the course, students will be able to

CO 1: Describe the development of mathematics across and within civilizations around the world.

CO 2: Explain how differnt cultures have affected and been affected by the history of mathematics.

CO 3: Recognize the distinction between formal and intuitive mathematics.

CO 4: Research historical mathematical concepts and present the conclusions of them.

CO 5: Present the history of mathematics in written forms.

UNIT 1: FOUNDATION OF MATHEMATICS

The Axiomatic Method- Geometry according to Euclid- Euclid's Common Notions-Euclid's Postulates- Non-Euclidean Geometry –The formal Axiomatic Method-The Formal Axiomatic Method aplied to arithmetic –The Traditional axiomatic method(Eulid's) applied to geometry- Description of the formal axiomatic method- Analysis of axiomatic method- Consistency of an axiom system- Completeness of an axiom system- Categoricalness of an axiom system- Advantages and Disadvantages of an axiomatic method.

UNIT 2: THE ANCIENT, MEDIEVAL PERIOD AND MIDDLE AGE

The Beginnings- The Ancient and Medieval Period- Mesopotamia –Egypt, Grece: Thales and Pythagoras- Pythagorean arithmetic – Pythagorean geometry- The Athenian School-Hellenistic Mathematics –Alexandria Euclid, Archimedes and Apollonius- Pappus and Diophantus- The Middle Ages.

UNIT 3: THE MODERN AGES

The Modern Period – The Sixteenth century: The rise of analysis- The Seventeenth Century: Dascartes, Pascal, Newton Leibniz- Kepler's Laws- Newton- Leibniz – The Bernoullis – The Eighteenth Century- The Nineteenth Century- Twentieth Century: Ramanujan.

UNIT 4: HISTORY OF ALGEBRA, GEOMETRY AND CALCULUS

Algebra- Geometry- Euclidean geometry – Analytic geometry- Non-Euclidean geometry-Projective geometry- Topology and Measure theory- Calculus.

UNIT 5: MEN OF MATHEMATICS

Archimedes – Aristotle – Aryabhata I – Aryabhata II- Bhaskara I- Bhaskara II-Boole-Brahmagupta- Cantor- Euler – Gauss- Hilbert- Mahavira –Narayana Pandita- Newton – Ramanujan- Riemann- Bertrand Russell- Sridhara- Varahamihira.

TEXT BOOK:

1. History of Mathematics by Narayanan .K.S and Narashmhan.K

REFERENCE BOOKS:

2. History of Mathematics by Boyar, Carl B
3. History of Mathematics by Tabak , John
4. History of Mathematics by Sundaram. M.

Dr. A. Paulin Mary
Associate Professor & Head
Department of Mathematics
Fatima College (Autonomous)
Madurai - 625 018