

B.Sc. Mathematics with Computer Applications

Supportive/Allied Disciplines
Statistics and Commerce

**Programme : B.Sc. Mathematics with Computer Applications
Supportive/Allied Disciplines : Statistics and Commerce**

A. Distribution of Courses, Credits and Contact Hours

Part	Type of Course	Total No. of Courses	Credits per Course	Total Credits	Percentage in Total Credits	Total Contact Hours per Week	Percentage in Total Contact Hours
I	Language: Tamil/Malayalam/Hindi/French	2	4	8	5.71	10	5.56
II	English	2	4	8	5.71	10	5.56
III	Supportive/Allied (Compulsory)						
	Theory	4	4	16	11.43	16	8.89
	Core (Compulsory)						
	Generic/Cluster Core	4	4	16	51.43	18	54.44
	Discipline Centric Core	10	4	40		48	
	Core Laboratory	6	2	12		24	
	Project/Industrial Training/Internship	1	4	4		8	
	Elective (Optional)						
	Discipline Centric Elective	3	4	12	14.29	14	12.22
	Generic/Cluster Elective	1	4	4		5	
	Open (Inter-disciplinary) Elective	1	4	4		3	
	Ability (Skill) Enhancement						
	Soft and Quantitative Skills	4	0-1	2	4.29	10	8.89
Value Added Technical Skills	2	1	2	4			
Training on Skill Sets	1	2	2	2			
IV	Foundation						
	Compulsory	2	2	4	5.71	4	4.44
	Elective (Optional)	2	2	4		4	
V	Extension	1	2	2	1.43	Extra	-
Total		46	0-5	140	100	180	100

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B. List of Supportive/Allied, Core and Elective Courses

Supportive/Allied Courses (Compulsory)

Theory:

- 16UMC301 : Mathematical Statistics
- 16UMC302 : Statistical Methods
- 16UMC303 : Data Analytics I: Market Analytics
- 16UMC304 : Data Analytics II : Financial Analytics

Core Courses (Compulsory)

Generic/Cluster:

- 16UMS401 : Calculus
- 16UMS402 : Differential Equations and Laplace Transforms
- 16UMS403 : Analytical Geometry
- 16UMS404 : Mechanics

Discipline Centric:

- 16UMC501 : Office Automation
- 16UMC502 : Programming in C
- 16UMC503 : Programming in C++
- 16UMC504 : Classical Algebra
- 16UMC505 : Java Programming
- 16UMC506 : Trigonometry and Vector Calculus
- 16UMC507 : Real Analysis
- 16UMC508 : Complex Analysis
- 16UMC509 : Discrete Mathematics
- 16UMC510 : Modern Algebra

Laboratory:

- 16UMC551 : Office Automation
- 16UMC552 : Programming in C
- 16UMC553 : Programming in C++
- 16UMC354 : Java Programming
- 16UMC555 : Numerical Methods using C, C++ and JAVA
- 16UMC556 : Practical Mathematics

Elective Courses (Optional)

Generic/Cluster (Any One Course):

- 16UMS701 : Mathematical Modeling

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16UMS702 : Graph Theory
16UMS703 : Number Theory

Discipline Specific:

Group 1(Any One Course)

16UMC801 : Numerical Methods
16UMC802 : Coding Theory
16UMC803 : Transforms and Applications of Partial Differential Equations

Group 2(Any One Course)

16UMC804 : Linear Algebra
16UMC805 : Fuzzy Logic and Neural Networks
16UMC806 : Astronomy – I

Group 3(Any One Course)

16UMC807 : Operations Research
16UMC808 : Combinatorics
16UMC809 : Astronomy – II

Explanation for Course Code:

**First 02 Digits : Year 2016; Third Digit : Level of the Programme (U : UG / P : PG);
Fourth and Fifth Digits : Cluster / Discipline Code; Last 03 Digits : Nature of the
Course (Core/Elective/Supportive etc.,)**

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C. Semester-wise Distribution of Courses, Credits, Marks and Contact Hours

Part	Type of Course	Course Code	Title of the Course	Credits	Marks	Contact Hours / Week
Semester I						
I	Language	16UOT101/ 16UOM101/ 16UOH101/ 16UOF101	Modern Literature, Short Story, Grammar & History of Literature / Malayalam – I/ Hindi – I/ French – I	4	100	5
II	English	16UOE201	Language through Literature	4	100	5
III	Supportive/Allied : Statistics -1	16UMC301	Mathematical Statistics	4	100	4
III	Generic/Cluster Core – 1	16UMS401	Calculus	4	100	4
III	Discipline Centric Core -1	16UMC501	Office Automation	4	100	4
III	Core Laboratory-1	16UMC551	Office Automation	2	100	4
III	Ability (Skill) Enhancement	16UAB381	Soft and Quantitative Skills – I	-	CIA	2
IV	Compulsory Foundation-1	16UFC901	Environmental Studies	2	100	2
V	Extension	16UEX951	NSS/YRC/RRC	-	CIA	Extra
Sub-Total				24	700	30
Semester II						
I	Language	16UOT102/ 16UOM102/ 16UOH102/ 16UOF102	Sangam Literature, Epics, Prose, Grammar & History of Literature/ Malayalam – II/ Hindi – II/ French – II	4	100	5
II	English	16UOE202	Language for Empowerment	4	100	5
III	Supportive/Allied : Statistics -2	16UMC302	Statistical Methods	4	100	4
III	Discipline Centric Core – 2	16UMC502	Programming in C	4	100	4
III	Generic/Cluster Core – 2	16UMS402	Differential Equations and Laplace Transforms	4	100	4
III	Core Laboratory - 2	16UMC552	Programming in C	2	100	4
III	Ability (Skill) Enhancement	16UAB382	Soft and Quantitative Skills – II	-	CIA	2
IV	Compulsory Foundation - 2	16UFC902	Value Education: Human Rights	2	100	2
V	Extension	16UEX951	NSS/YRC/RRC	-	CIA	Extra
Sub-Total				24	700	30
Semester III						
III	Supportive/Allied : Commerce - 1	16UMC303	Data Analytics I: Market Analytics Data Analytics II: Financial Analytics	4	100	4
III	Generic/Cluster Core – 3	16UMS403	Analytical Geometry	4	100	5

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III	Discipline Centric Core – 3	16UMC503	Programming in C++	4	100	5
III	Discipline Centric Core – 4	16UMC504	Classical Algebra	4	100	5
III	Core Laboratory - 3	16UMC553	Programming in C++	2	100	4
III	Ability (Skill) Enhancement	16UAB383	Soft and Quantitative Skills – III	1	100	3
III	Ability (Skill) Enhancement	16UMC381	Value Added Technical Skills – I	1	100	2
IV	Elective Foundation - 1	16UFE901 or 16UFE902 or 16UFE903/ 16UFE904	Basic Tamil – I or Advanced Tamil – I or General Awareness/ Constitution of India	2	100	2
V	Extension	16UEX951	NSS/YRC/RRC	-	CIA	Extra
Sub-Total				22	800	30
Semester IV						
III	Supportive/Allied : Commerce - 2	16UMC304	Data Analytics	4	100	4
III	Discipline Centric Core – 5	16UMC505	Java Programming	4	100	5
III	Discipline Centric Core – 6	16UMC506	Trigonometry and Vector Calculus	4	100	5
III	Core Laboratory – 4	16UMC554	Java Programming	2	100	4
III	Discipline Centric Elective - 1	16UMC801/ 16UMC802/ 16UMC803	Numerical Methods/ Coding Theory/ Transforms and Applications of Partial Differential Equations	4	100	5
III	Ability (Skill) Enhancement	16UAB384	Soft and Quantitative Skills – IV	1	100	3
III	Ability (Skill) Enhancement	16UMC382	Value Added Technical Skills – II	1	100	2
IV	Elective Foundation - 2	16UFE905 or 16U FE906 or 16UFE907/ 16UFE908	Basic Tamil – II or Advanced Tamil – II or Yoga for Human Excellence/ Women’s Rights	2	100	2
V	Extension	16UEX951	NSS/YRC/RRC	2	100	Extra
Sub-Total				24	900	30
Semester V						
III	Generic/Cluster Core – 4	16UMS404	Mechanics	4	100	5
III	Discipline Centric Core – 7	16UMC507	Real Analysis	4	100	5
III	Discipline Centric Core – 8	16UMC508	Complex Analysis	4	100	5
III	Generic/Cluster Elective	16UMS701/ 16UMS702/ 16UMS703	Mathematical Modeling/ Graph Theory/ Number Theory	4	100	5
III	Discipline Centric Elective - 2	16UMC804/ 16UMC805/ 16UMC806	Linear Algebra / Fuzzy Logic and Neural Networks/ Astronomy – I	4	100	4
III	Core Laboratory - 5	16UMC555	Numerical Methods using C, C++ and JAVA	2	100	4
III	Ability (Skill) Enhancement	16UMC383	Training on Skill Sets	2	100	2
Sub-Total				24	700	30

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Semester VI						
III	Discipline Centric Core – 9	16UMC509	Discrete Mathematics	4	100	5
III	Discipline Centric Core – 10	16UMC510	Modern Algebra	4	100	5
III	Discipline Centric Elective - 3	16UMC807/ 16UMC808/ 16UMC809	Operations Research/ Combinatorics / Astronomy – II	4	100	5
III	Interdisciplinary Elective	Course offered by other Disciplines		4	100	3
III	Core Laboratory - 6	16UMC556	Practical Mathematics	2	100	4
III	Discipline Centric Core - 11	16UMC581	Project/Industrial Training/Internship	4	100	8
Sub-Total				22	600	30

Total Credits: $24+24+22+24+24+22 = 140$

Total Marks: $700+700+800+900+700+600 = 4400$