

SRI KRISHNA ARTS AND SCIENCE COLLEGE

An Autonomous College Affiliated to Bharathiar University
Coimbatore-641008, Tamil Nadu, India.

LEARNING OUTCOMES BASED CURRICULUM FRAMEWORK (LOCF)

B.Sc. Mathematics
(I to VI Semester)

for 2024-25 admitted Students

DEPARTMENT OF MATHEMATICS



SRI KRISHNA ARTS AND SCIENCE COLLEGE
COIMBATORE – 641008

DEPARTMENT OF MATHEMATICS

(2024-2025)

I. PROGRAMME EDUCATIONAL OBJECTIVES (PEOs)

Graduates from the B.Sc. Mathematics Programme are expected to achieve the following PEOs

PEO 1	Prepare industry relevant quality graduates with programming and critical AEC skills to serve the domestic and global community.
PEO 2	Disseminate the conceptual knowledge in the concerned discipline for societal development and transformation.
PEO 3	Develop as a capable technical industry leader with outstanding communication skills.
PEO 4	Become technically competent in the field of computer science with a passion for lifelong learning.

II. PROGRAMME LEARNING OUTCOMES (PLOs)

The Graduates of B.Sc Mathematics programme will be able to:

PLO 1	Knowledge:(Cognitive) Ability to apply knowledge of mathematics to the solutions of complex problems in all fields.
PLO 2	Critical Thinking Skills:(Cognitive) Graduates will equip with skills and knowledge to get employment in industry/ Institution as well as government departments by imparting the computational skills.
PLO 3	Practical Skills:(Psychomotor) Exhibit extensive technical skills in the area of computational mathematics.
PLO 4	Teamwork Skills:(Affective) Graduates will have capability to work in a team to become leaders and entrepreneurs with ethical responsibility
PLO 5	Communication Skills:(Affective) Imbibe effective scientific and/or technical communication in both oral and writing.
PLO 6	Digital Skills:(Affective) To encourage the use of relevant mathematical software's like LaTeX, MATLAB, and further the use of the R-programming, PYTHON to the expectations of Industry 4.0and 5.0.
PLO 7	Numeracy Skills:(Cognitive) An ability to develop and conduct appropriate experimentation, analyze and

	interpret data by using statistical tools.
PLO 8	Leadership Skills:(Affective) Demonstrate effective leadership skills to work efficiently in a competitive domestic and global environment.
PLO 9	Lifelong Learning Skills:(Affective) Apply the Mathematical concepts in all the fields of learning including higher research,and recognize the need and prepare for lifelong learning.
PLO 10	Entrepreneurial Skills:(Affective) Enhance entrepreneurial skills and professional development through consultancy and extension services at a competitive level.
PLO 11	Ethics & Professional Skills:(Affective) Apply ethical principles and commit to professional ethics, responsibilities and norms in the society.

III. PROGRAMME LEARNING OUTCOMES VS GRADUATE ATTRIBUTES VSTAXONOMY OF VERBS														
PLO	Graduate Attributes										Blooms			
	Knowledge	Critical Thinking	Practical Skills	Team work	Communication skills	Digital skills	Numeracy	Leadership skills	Lifelong learning	Entrepreneurial skills	Ethics & Professionalism	Cognitive	Psychomotor	Affective
1	√										√			
2		√									√			
3			√									√		
4				√										√
5					√									√
6						√								√
7							√				√			
8								√						√
9									√					√
10										√				√
11											√			√

IV. PROGRAMME LEARNING OUTCOMES VS PROGRAMME EDUCATIONAL OBJECTIVES				
	PEO 1	PEO 2	PEO 3	PEO 4
PLO 1		√		
PLO 2	√			
PLO 3			√	
PLO 4		√		
PLO 5			√	

PLO 6				√
PLO 7		√		
PLO 8		√		
PLO 9				√
PLO 10	√			
PLO 11	√			

V. ADDITIONAL PROGRAMME OUTCOMES (APOs)

APO 1	Graduates will have ability with good IQ and EQ (Intelligent Quotient and Emotional Quotient)
APO 2	Graduates will have an ability to virtually collaborate.
APO 3	Graduates will have an ability to o effectively use social media for productive purposes.
APO 4	Graduates will have critical thinking and innovative skills to perform given task in their profession.
APO 5	Graduates will have a good distinct footprint.

VI. PROGRAMME SPECIFIC OUTCOMES (PSO's)

PSO 1	Understand the concepts and methodologies in the field of mathematical sciences and apply in the Mathematical and Statistical applications such as Business, Scientific Research, and Technological Computations.
PSO 2	Apply techniques and tools of computational science to provide real time solutions with latest applications.

VII. Mapping of PEOs with PSOs

	PSO 1	PSO 2
PEO 1	√	
PEO 2		√
PEO 3	√	
PEO 4		√

VIII. Curriculum Structure for B.Sc. Mathematics

Course Components, Credits & Marks Distribution

Part No	Group	Basic Structure: Distribution of Courses	Number of Courses	Total Marks	Total Credits
I - IV	1	AEC – Ability Enhancement Courses	10	1000	30
III & IV	2	DSC – Discipline Specific Courses	15	1500	56
	3	DSE – Discipline Specific Electives	10	1000	36
	4	GEC – Generic Elective Courses	4	400	14
	5	SEC – Skill Enhancement Courses	2	100	4
IV	6	ANCC I & II – Audit Non-Credit Courses	2	Completed	
V		ANCC III – Audit Non-Credit Courses	1		
-	7	Drive Through Courses (DTCs) – (SWAYAM-NPTEL, Coursera, any courses certified by statutory bodies, etc.)	Any number	-	Additional Credits
Total				4000	140

Group 1. Ability Enhancement Courses (AECs)(10 Courses)– Part (I–IV)

AEC are the courses based upon the content that leads to knowledge enhancement. Ability Enhancement Courses (AEC) are the following:

S. No.	Course Code	Course Title	Semester	Ownership Department	Contact Hours	Credits	Marks
1	24AEC02/ 24AEC07/ 24AEC11	AEC Part I: Language – I: Tamil-I - Tamil Nila-I/ Hindi-I/ French-I	I	Language Dept.	5	3	100
2	24AEC22	AEC Part II: English-I: English Language Dynamics	I	English Dept.	5	3	100
3	24AEC04/ 24AEC08/ 24AEC12	AEC Part I: Language – II: Tamil-II - Tamil Nila-II/ Hindi-II/ French-II	II	Language Dept.	5	3	100
4	24AEC24	AEC Part II: English – II: Campus to	II	English Dept	5	3	100

		Corporate					
5	24AEC32	AEC Part III: Academic Skills for Mathematics	II	Maths Dept.	2	2	100
6	24AEC05/ 24AEC09/ 24AEC13	AEC Part I: Language –III: Tamil-III - Then Malar/Hindi-III /French-III	III	Language Dept	5	3	100
7	24AEC25	AEC Part II: English-III: English Literary Horizons.	III	English Dept	5	3	100
8	24AEC42	AEC Part III: Comprehensive Project for Mathematics	III	Maths Dept.	-	4	100
9	24AEC06/ 24AEC10/ 24AEC14	AEC Part I: Language –IV: Tamil-IV - Kavin Malar/Hindi-IV/French- IV	IV	Language Dept	5	3	100
10	24AEC26	AEC Part II: English-IV: English Literary Insights	IV	English Dept	5	3	100

Group 2. Discipline Specific Courses (DSCs)(15 Courses) – Part III

These courses are to be studied compulsorily by the students as a core requirement. The students are required to take DSCs across six semesters. The courses designed under this category aim to cover the basics that a student is expected to imbibe in the particular discipline. It includes major project.

S. No.	Course Code	Course Title	Semester	Contact Hours	Marks	Credits
1	24MAU01	DSC 1: Classical Algebra	I	4	100	4
2	24MAU02	DSC 2: Calculus	I	4	100	4
3	24MAU05	DSC 3: Analytical Geometry and Vector Calculus	II	6	100	4
4	24MAU08	DSC 4: Trigonometry and Fourier Series	III	5	100	3
5	24MAU09	DSC 5: Differential Equations and Laplace Transforms	III	4	100	3
6	24MAU10	DSC 6: Statics	III	4	100	3
7	24MAU11	DSC 7: Abstract Algebra	IV	6	100	4
8	24MAU12	DSC 8: Dynamics	IV	5	100	3
9	24MAU18	DSC 9: Real Analysis	V	5	100	4
10	24MAU19	DSC 10: Differential Geometry	V	5	100	4
11	24MAU20	DSC 11: Number Theory	V	5	100	4
12	24MAU26	DSC 12: Linear Algebra	VI	6	100	4
13	24MAU27	DSC 13: Complex Analysis	VI	6	100	4
14	24MAU28	DSC 14: Graph Theory	VI	5	100	4
15	24MAU33	DSC 15: Project	VI	5	100	4

Project Work

During the Sixth semester each student should undertake a project work and submit the report. A guide will be allotted to each student by the Department. A student can select any research topic in discussion with the guide. The project report shall be subject to internal evaluation followed by a Viva-Voce. The project should be demonstrated at the time of examination.

Internal Evaluation:

- Reviews (3) – 60 Marks
- Report – 20 Marks
- Attendance – 20 Marks
- Total – 100 Marks will be converted to 40 (Internal) Marks

End Semester Viva-Voce will be conducted for 60 Marks.
(Dissertation - 40 Marks & Viva-voce - 20 Marks)

Group 3. Discipline Specific Elective (DSEs) (10 Courses) – Part III

Discipline Specific Elective courses offered under the main discipline of study which may be specialized or advanced or supportive to the discipline of study. Students can choose any one course from two courses each in the list of following DSEs.

S. No.	Course Code	Course Title	Ownership Department	Semester	Contact Hours	Marks	Credits
1	24MAU03A	DSE1: Mathematical Statistics-I	Mathematics	I	3	50	3
	24MAU03B	DSE 1: Practical - Mathematical Statistics - I			2	50	2
	24MAU04A	DSE 1: Statistical Data Analytics - I			3	50	3
	24MAU04B	DSE 1: Practical - Statistical Data Analytics - I			2	50	2
2	24MAU06A	DSE 2: Mathematical Statistics- II		II	3	50	3
	24MAU06B	DSE 2: Practical - Mathematical Statistics- II			2	50	2
	24MAU07A	DSE 2: Statistical Data Analytics - II			3	50	3
	24MAU07B	DSE 2: Practical - Statistical Data Analytics - II			2	50	2
3	24MAU13	DSE 3: Mathematical Ethics and Professional Values	Mathematics	IV	4	100	3
	24MAU14	DSE 3: Time Series and Data Analytics					
4	24MAU15	DSE 4: Practical - LaTeX	Mathematics	IV	2	100	2
	24MAU16	DSE 4: Practical – Computational Mathematics using SymPy					
5	24MAU17	DSE 5: Industrial Exposure Training	Mathematics	V	4 weeks	100	4

6	24MAU21A	DSE 6: Introduction to MATLAB	Mathematics	V	3	100	2
	24MAU21B	DSE 6: Practical – Computational Mathematics			2		2
7	24MAU22	DSE 7: Essential Mathematics for Machine Learning	Mathematics	V	4	100	4
	24MAU23	DSE 7: Introduction to Industry 4.0					
8	24MAU24	DSE 8: Fuzzy Sets and Fuzzy Logic	Mathematics	V	3	100	3
	24MAU25	DSE 8: Automata Theory					
9	24MAU29	DSE 9: Practical – Exploring Statistical Data using Python	Mathematics	VI	4	100	3
	24MAU30	DSE 9: Practical – Exploring Statistical Data using R					
10	24MAU31	DSE 10: Numerical and Computational Methods	Mathematics	VI	4	100	3
	24MAU32	DSE 10: Combinatorial Mathematics					

Industrial Exposure Training (IET)

Students can opt for Industrial Exposure Training during fifth semester for a period of 4 weeks.

The Continuous Internal Assessment mark distribution for IET is as follows:

Component	Mode of Conduct	Project Coverage	Marks
3 Reviews	Presentation	Phase by Phase	60
Work Diary	Written	Phase by Phase	20
Report	Submission	Entire Process	20
Total			100*

*100 Marks will be converted to 40 (Internal) Marks

The end semester examination of the Industrial Exposure Training will be given based on the report and viva-voce for 60 marks, conducted by the Department.

Report: 40 Marks

Viva-voce: 20 Marks

Group 4. Generic Elective Courses (GECs)(4 Courses)– Part III

Generic Elective Courses are interdisciplinary in nature. They are additional courses based on expertise, specialization, requirements, scope, and need of the department.

Sl. No.	Course Code	Course Title	Semester	Ownership Department	Contact Hours	Marks	Credits
1	24GEU36A	Programming in C and Data Structures	I	Computer Applications	3	50	2
	24GEU36B	Programming in C and Data Structures Lab			2	50	2
	24GEU37A	Programming in C++			3	50	2

	24GEU37B	Programming in C++ Lab			2	50	2
2	24GEU38A	JAVA Programming	II		3	50	2
	24GEU38B	JAVA Programming Lab			2	50	2
	24GEU39A	Web Development using PHP			3	50	2
	24GEU39B	Web Development using PHP Lab			2	50	2
	24GEU40A	Python Programming			2	50	2
3	24GEU40B	Python Programming Lab	III	Computer Applications	2	50	2
	24GEU41A	Database Management System			2	50	2
	24GEU41B	Database Management System Lab			2	50	2
	24GEU56	Practical - Accounting Software			III	Commerce	3
24GEU57	Practical - Financial Analysis						
Total						400	14

Group 5. Skill Enhancement Courses (SECs) (2 Courses)

SEC I: Compulsory Course : Skill Enhancement Course : Aptitude and Logical Reasoning - I

SEC II: A Bucket of Skill based Courses are offered for the Under Graduate programmes by the departments aimed at imparting skill. A Student has to subscribe one course from list offered by the department.

S.No	Course Code	Course Title	Ownership Department
1.	24SEC18	Statistics for Competitive Examination	Statistics
2.	24SEC19	Aptitude and Logical Reasoning - II	Mathematics

Group 6. Audit Non-Credit Courses (ANCC)– Part IV & V

Non-Credit Courses are intended for students who want to gain general knowledge, learn a new skill, upgrade existing skills, enrich their understanding of a wide range of topics, or develop personal interests. A student has to complete any two courses during Semester I and II.

Part IV- ANCC			
S. No.	Course Code	Course Title	Ownership Department
ANCC 1 (Semester I)			
1	24ANC01	Environmental Studies	Bioscience
ANCC 2 - Values & Ethics (Semester II)			
2	24ANC02	Human Rights	Social Work
3	24ANC03	Women's Rights	Social Work
4	24ANC04	Yoga for Human Excellence	Psychology
5	24ANC05	Indian Culture and Heritage	English
6	24ANC06	Introduction to Cyber Security	CS
7	24ANC07	Consumer Protection	Commerce
8	24ANC08	Constitution of India	Commerce
9	24ANC09	Waste Management	Bioscience
10	24ANC10	Sustainable Development Goals	CS

Student has to take part in any one extension activity during their course of study.

Part V- ANCC		
ANCC 3 - Extension Activities		
S. No.	Course Code	Course Name
1	24ANC11	National Service Scheme
2	24ANC12	National Cadet Corps
3	24ANC13	Youth Red Cross
4	24ANC14	Red Ribbon Club
5	24ANC15	Rotaract Club
6	24ANC16	Sports
7	24ANC17	Association Activities
8	24ANC18	Club Activities

Group 7.

i) Drive-Through Courses (DTCs) I & II- Additional Credits

These courses are intended to bring out and promote the self-learning initiative of the students – where their own motivation is what drives them to complete the course and not external compulsions. This fosters the habit of keeping oneself updated always by means of self-study. It gives opportunities to the students to explore new areas of interest and earn additional credits. Students can take any number of courses under this cafeteria system. The credits will

not be taken for CGPA calculation. Additional 4/3/2 credits per course will be given on submission of certificate.

1. Coursera
2. NPTEL
3. Any courses certified by statutory bodies.

ii) **Drive-Through Course (DTC – III)**

Internship Training/Mini Project/ Spoken Tutorial/etc.

Students individually or with the maximum of four members per batch should take up either Internship training or mini project for a period of fifteen days during IV Semester vacation. The report will be evaluated and viva-voce examination will be conducted during V semester. Otherwise, the students have to complete one spoken tutorial course or any certification course suggested by the department.

VIII. Semester-wise Scheme

Semester I										
Course Code	Course Title	T/P/E	Ins. Hrs/ Week	ESE Dur. Hrs	CIA Marks	ES Marks	Total Marks	Credits	SD/ EM/ EN	L/ R/ N/ G
24AEC02/ 24AEC07/ 24AEC11	AEC PART I: Language I: Tamil-I - Tamil Nila - I/ Hindi - I/ French-I	T	5	3	25	75	100	3	SD	R/ N/ G
24AEC22	AEC PART II: English-I: English Language Dynamics	T	5	3	25	75	100	3	EM	G
24MAU01	DSC1: Classical Algebra	T	4	3	25	75	100	4	SD	G
24MAU02	DSC 2: Calculus	T	4	3	25	75	100	4	SD	G
24MAU03A	DSE 1: Mathematical Statistics – I	E	3	3	10	40	50	3	EM	G
24MAU03B	DSE 1: Practical - Mathematical Statistics – I		2		10	40	50	2	EM	G
24MAU04A	DSE 1: Statistical Data Analytics - I	E	3		10	40	50	3	EM	G
24MAU04B	DSE 1: Practical – Statistical Data Analytics - I		2		10	40	50	2	EM	G
24GEU36A	GEC 1: Programming in C and Data Structures	E	3	3	10	40	50	2	EM	G
24GEU36B	GEC 1: Programming in C and Data Structures Lab		2		10	40	50	2	EM	G
24GEU37A	GEC 1: Programming in C++	E	3		10	40	50	2	EM	G
24GEU37B	GEC 1: Programming in C++ Lab		2		10	40	50	2	EM	G
24ANC01	ANCC1 (NF2F) Environmental Studies	T	2	-	-	-	Completed	SD	G	
Drive Through Course I: Additional Credit Courses							Additional Credits			
Total			30				600	23		
Semester II										
Course Code	Course Title	T/P/E	Ins. Hrs/ Week	ESE Dur. Hrs	CIA Marks	ES Marks	Total Marks	Credits	SD/ EM/ EN	L/ R/ N/ G
24AEC04/ 24AEC08/ 24AEC12	AEC - PART I : Language II: Tamil-II – Tamil Nila-II/ Hindi-II/ French-II	T	5	3	25	75	100	3	SD	R/ N/ G

24AEC24	AEC - PART II: English - II: Campus to Corporate	T	5	3	25	75	100	3	EM	G
24AEC32	AEC Part III: Academic Skills for Mathematics	P	2	3	100	-	100	2	SD	G
24MAU05	DSC 3: Analytical Geometry and Vector Calculus	T	6	3	25	75	100	4	SD	G
24MAU06A	DSE 2: Mathematical Statistics- II	E	3	3	10	40	50	3	EM	N
24MAU06B	DSE 2: Practical -Mathematical Statistics- II		2		10	40	50	2	EM	N
24MAU07A	DSE 2: Statistical Data Analytics - II		3		10	40	50	3	EM	G
24MAU07B	DSE 2: Practical - Statistical Data Analytics - II	E	2		10	40	50	2	EM	G
24GEU38A	GEC 2 : JAVA Programming	E	3	3	10	40	50	2	EM	G
24GEU38B	GEC 2 : JAVA Programming Lab		2		10	40	50	2	EM	G
24GEU39A	GEC 2 : Web Development using PHP	E	3	3	10	40	50	2	EM	G
24GEU39B	GEC 2 : Web Development using PHP Lab		2		10	40	50	2	EM	G
24ANC02/ 24ANC03/ 24ANC04/ 24ANC05/ 24ANC06/ 24ANC07/ 24ANC08/ 24ANC09/ 24ANC10	ANCC2 (NF2F) Human Rights/ Women's Rights/ Yoga for Human Excellence/ Indian Culture and Heritage/ Introduction to Cyber Security / Consumer Protection/ Constitution of India/ Waste Management/ Sustainable Development Goals	T	2	-	-	-	Completed	SD	G	
Drive Through Course II: Additional Credit Courses							Additional Credits			
Total			30				600	21		
Semester III										
Course Code	Course Title	T/P/E	Ins. Hrs/ Week	ESE Dur. Hrs	CIA Marks	ES Marks	Total Marks	Credits	SD/ EM/ EN	L/ R/ N/ G
24AEC05/ 24AEC09/ 24AEC13	AEC Part I: Language –III: Tamil-III - Then Malar/ Hindi-III/ French-III	T	5	3	25	75	100	3	SD	R/ N/ G
24AEC25	AEC Part II: English-III: English Literary Horizons	T	5	3	25	75	100	3	EM	N

24AEC42	AEC Part III : Comprehensive Project for Mathematics	P	-	3	100	-	100	4	EN	N
24MAU08	DSC 4: Trigonometry and Fourier Series	T	5	3	25	75	100	3	SD	G
24MAU09	DSC 5: Differential Equations and Laplace Transforms	T	4	3	25	75	100	3	SD	G
24MAU10	DSC 6: Statics	T	4	3	25	75	100	3	SD	G
24GEU40A	GEC 3: Python Programming	E	2	3	10	40	50	2	EM	G
24GEU40B	GEC 3: Python Programming Lab		2		10	40	50	2	EM	G
24GEU41A	GEC 3: Database Management System	E	2		10	40	50	2	EM	G
24GEU41B	GEC 3: Database Management System Lab		2	10	40	50	2	EM	G	
24GEU56	GEC 4: Practical - Accounting Software	P	3	3	40	60	100	2	SD	G
24GEU57	GEC 4: Practical - Financial Analysis									
Total			30				800	25		

Semester IV

Course Code	Course Title	T/P/E	Ins. Hrs/ Week	ESE Dur. Hrs	CIA Marks	ES Marks	Total Marks	Credits	SD/ EM/ EN	L/ R/ N/ G
24AEC06/ 24AEC10/ 24AEC14	AEC Part I: Language –IV: Tamil- IV - Kavin Malar/ Hindi-IV/ French- IV	T	5	3	25	75	100	3	SD	R/ N/ G
24AEC26	AEC Part II: English-IV: English Literary Insights	T	5	3	25	75	100	3	EM	G
24MAU11	DSC 7: Abstract Algebra	T	6	3	25	75	100	4	SD	G
24MAU12	DSC 8: Dynamics	T	5	3	25	75	100	3	SD	G
24MAU13	DSE 3: Mathematical Ethics and Professional Values	T	4	3	25	75	100	3	EN	G
24MAU14	DSE 3: Time Series and Data Analytics									
24MAU15	DSE 4: Practical -LaTeX	P	2	3	40	60	100	2	EN	G
24MAU16	Practical – Computational Mathematics using SymPy									
24SEC01A	SEC I: Aptitude and Logical Reasoning - I	T	3	3	50	-	50	2	EM	G
Total			30				650	20		

Semester V										
Course Code	Course Title	T/P/E	Ins. Hrs/ Week	ESE Dur. Hrs	CIA Marks	ES Marks	Total Marks	Credits	SD/ EM/ EN	L/ R/ N/ G
24MAU17	DSE 5 Industrial Exposure Training	-	4 Weeks	-	40	60	100	4	EM	G
24MAU18	DSC 9: Real Analysis	T	5	3	25	75	100	4	SD	G
24MAU19	DSC 10: Differential Geometry	T	5	3	25	75	100	4	SD	G
24MAU20	DSC 11: Number Theory	T	5	3	25	75	100	4	SD	G
24MAU21A	DSE 6: Introduction to MATLAB	E	3	3	10	40	50	2	SD	G
24MAU21B	DSE 6: Practical – Computational Mathematics		2		10	40	50	2	SD	G
24MAU22	DSE 7: Essential Mathematics for Machine Learning	T	4	3	25	75	100	4	EM	G
24MAU23	DSE 7: Introduction to Industry 4.0									
24MAU24	DSE 8: Fuzzy Sets and Fuzzy Logic	T	3	3	25	75	100	3	EM	G
24MAU25	DSE 8: Automata Theory									
24SEC18	SEC –II: Statistics for Competitive Examinations	T	3	3	50	-	50	2	EM	G
24SEC19	SEC –II: Aptitude and Logical Reasoning - II									
Drive Through Course III – Internship Training /Mini Project/Spoken Tutorial							Completed			
Total			30				750	29		
Semester VI										
Course Code	Course Title	T/P/E	Ins. Hrs/ Week	ESE Dur. Hrs	CIA Marks	ES Marks	Total Marks	Credits	SD/ EM/ EN	L/ R/ N/ G
24MAU26	DSC 12: Linear Algebra	T	6	3	25	75	100	4	SD	G
24MAU27	DSC 13 : Complex Analysis	T	6	3	25	75	100	4	SD	G
24MAU28	DSC 14: Graph Theory	T	5	3	25	75	100	4	SD	G
24MAU29	DSE 9: Practical – Exploring Statistical Data using Python	P	4	3	40	60	100	3	EN	G
24MAU30	DSE 9: Practical – Exploring Statistical Data using R									
24MAU31	DSE 10: Numerical and Computational Methods	T	4	3	25	75	100	3	EM	G

24MAU32	DSE 10: Combinatorial Mathematics										
24MAU33	DSC 15: Project	-	5	3	40	60	100	4	EM	G	
24ANC11/ 24ANC12/ 24ANC13/ 24ANC14/ 24ANC15/ 24ANC16/ 24ANC17/ 24ANC18	ANCC 3 Extension Activities National Service Scheme / National Cadet Corps / Youth Red Cross / Red Ribbon Club / Rotaract Club / Sports / Association Activities / Club Activities	-	-	-	-	-	Grade	-	SD	G	
Total			30				600	22			
Total							4000	140			
Drive-Through Courses (DTCs): Courses offered in Coursera OR NPTEL OR Any courses certified by statutory bodies.		Additional 4 credits per course will be given on submission of Certificate					During Semester I to Semester VI				

The courses focus on the following needs	
SD	Skill Development
EM	Employability
EN	Entrepreneurship
L	Local
R	Regional
N	National
G	Global

Semester-wise Distribution of Marks and Credits

Semester	Total Marks	Total Credits
I	600	23
II	600	21
III	800	25
IV	650	20
V	750	29
VI	600	22
Total	4000	140

OFFERED BY

List of Courses Offered by Mathematics Department

Sem	Course Code	Course Name	Programme	T/ P/ E	Ins.h rs	CIA	ES	Total Marks	Credit	SD/ EM/ EN	L/R/ N/G
I	24GEU01	Mathematics- I	ECS	T	5	25	75	100	4	SD	G
I	24GEU03	Statistics for Management	BBA/BBA CA/ BBA Logistics/ BSC ISM	T	5	25	75	100	3	EM	G
I	24GEU04	Mathematics for Management	BBA/BBA CA/ BBA Logistics/ BSC ISM	T	5	25	75	100	3	EM	G
I	24GEU07	Probability and Statistics	B.Sc CS with Cognitive Systems/ B.Sc., CS/IT/CT/BCA/ SS/CSA/AIML/ DS	T	5	25	75	100	3	EM	G
I	24GEU10	Statistics for Machine Learning	B.Sc AIML/DS	T	5	25	75	100	3	EM	G
I	24GEU14	Mathematical Foundation for Computer Science	B.Sc., CS/IT/CT/BCA/ SS/CSA/ B.Sc CS with Cognitive Systems	T	5	25	75	100	3	EM	G
I	24CUG03	Business Mathematics	B.Com/ B.Com (CA/BA/IT/BPS/ BI/CS/A&F)	T	5	25	75	100	4	EM	G
I	24CPU03	Business Mathematics and Logical Reasoning	B.Com PA	T	5	25	75	100	4	EM	G
II	24GEU02	Mathematics- II	ECS	T	5	25	75	100	4	SD	G
II	24GEU05	Operations Research for Management	BBA/BBA CA/ BBA Logistics/ B. Sc ISM	T	5	25	75	100	3	EM	G
II	24GEU06	Mathematics for Business	BBA/BBA CA/ BBA Logistics/ BSC ISM	T	5	25	75	100	3	SD	G
II	24GEU08	Discrete Mathematics	B.Sc CS with Cognitive Systems/ B.Sc., CS/IT/CT/BCA/ SS/CSA/AIML/ DS	T	5	25	75	100	3	EM	G
II	24GEU11	Linear Algebra for Machine Learning	B.Sc AIML/DS	T	5	25	75	100	3	EM	G

II	24GEU15	Numerical Methods and Statistics	B.Sc., CS/IT/CT/BCA/SS/CSA/ B.Sc CS with Cognitive Systems	T	5	25	75	100	3	EM	G
II	24GEU17A	Biostatistics	B.Sc. (BT/MB)	E	3	10	40	50	2	EN	G
	24GEU17B	Practical - Biostatistics Lab			2	10	40	50	2	EN	G
II	24GEU18A	Statistics for Bioscience		E	3	10	40	50	2	EN	G
	24GEU18B	Practical - Statistics for Bioscience Lab			2	10	40	50	2	EN	G
II	24GEU19	Business Statistics and Applications	All commerce streams except B.COM PA	T	5	25	75	100	3	SD/EM	G
II	24GEU20	Applied Statistics for Commerce	All commerce streams except B.COM PA	T	5	25	75	100	3	SD/EM	G
II	24GEU21	Business Statistics and Logical Reasoning	B.Com PA	T	5	25	75	100	3	SD/EM	G
III	24GEU16	Operations Research for Computer Studies	B.Sc., CS/IT/CT II /BCA/SS/CSA/ B.Sc CS with Cognitive Systems	T	5	25	75	100	3	SD/EM	G
III	24GEU09	Numerical Methods	II B.Sc CS with Cognitive Systems/ B.Sc., CS/IT/CT/BCA/SS/CSA/AIML/DS	T	5	25	75	100	3	SD/EM	G
III	24GEU12	Statistics for Data Science	II B.Sc.DS	T	5	25	75	100	3	SD/EM	G
III	24GEU13	Applied Mathematics	II B.Sc AIML	T	5	25	75	100	3	SD/EM	G
III	24CBU05	Optimization Techniques for Analytics	II B.Com BA	T	5	25	75	100	4	EN	G
III	24CBU06	Data Analytics for Commerce	II B.Com BA	T	5	25	75	100	4	EN	G
IV	24SEC01A	SEC 1 : Aptitude and Logical Reasoning - I	B.Sc Mathematics	T	3	50	-	50	2	SD	G
IV	24SEC01B	SEC 1 : Arithmetical Ability	ALL COMPUTER SCIENCE STREAMS and B.Sc ECS	T	3	50	-	50	2	SD	G
IV	24SEC01C	SEC 1 : Career Guidance	ALL UG COMMERCE STREAMS	T	3	50	-	50	2	SD	G
IV	24SEC01D	SEC 1 : Mathematics for Competitive Examination	BBA, BBA (CA), BBA Logistics, B.Sc., ISM, B.Sc., CDF, B.Sc CSHM, B.Sc Psychology,	T	3	50	-	50	2	SD	G

			B.Sc.,MB, B.Sc., BT, B.A., English,								
V	24AIU14 /24DSU14	Time Series Analysis	III B.Sc AIML/DS	T	5	25	75	100	4	EN	G
V	24AIU15 /24DSU15	Practical: Scientific Programming using R	III B.Sc AIML/DS	P	3	20	30	50	2	EN	G
V	24CBU07A/ 24CBU07B	Exploratory Data Analysis	III B.Com BA	E	3	10	40	50	2	EN	G
V		Practical - Analysing Big Data with R			2	10	40	50	2	EN	G
V	24CBU08	Practical - Data Analysis using SPSS	III B.Com BA	P	5	40	60	100	4	EN	G
V	24GEU22	Practical - Statistics and Psychometrics	III B.Sc. Psychology	P	5	40	60	100	3	EN	G
V	24GEU23	Practical - Statistical Tools for Research	III B.Sc. Psychology	P	5	40	60	100	3	EN	G

OFFERED TO

List of Courses Offered to Mathematics Department

Sem	Course Code	Course Name	Programme	T/ P/ E	Ins. Hrs	CI A	ES E	TotalMa rks	Cre dit	SD/ EM/ EN	L/R/ N/G
I	24GEU36A	Programming in C and Data Structures	B.Sc., Mathemat ics	E	3	10	40	50	2	EM	G
	24GEU36B	Programming in C and Data Structures Lab			2	10	40	50	2	EM	G
	24GEU37A	Programming in C++		E	3	10	40	50	2	EM	G
	24GEU37B	Programming in C++ Lab			2	10	40	50	2	EM	G
II	24GEU38A	JAVA Programming		E	3	10	40	50	2	EM	G
	24GEU38B	JAVA Programming Lab			2	10	40	50	2	EM	G
	24GEU39A	Web Development using PHP		E	3	10	40	50	2	EM	G
	24GEU39B	Web Development using PHP Lab			2	10	40	50	2	EM	G
III	24GEU40A	Python Programming	E	2	10	40	50	2	EM	G	
	24GEU40B	Python Programming Lab		2	10	40	50	2	EM	G	

	24GEU41A	Database Management System		E	3	10	40	50	2	EM	G
	24GEU41B	Database Management System Lab			2	10	40	50	2	EM	G
	24GEU56	Practical - Accounting Software		P	3	40	60	100	2	SD	G
	24GEU57	Practical - Financial Analysis									