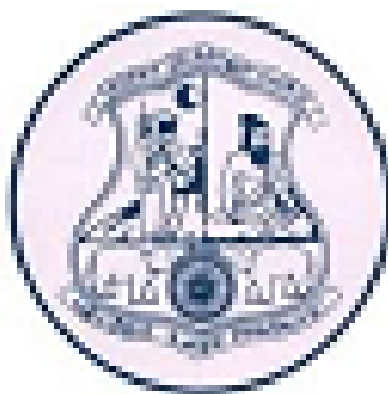


GOVERNMENT ARTS COLLEGE FOR MEN
(Autonomous)
NANDANAM, CHENNAI – 600 035.



DEPARTMENT OF MATHEMATICS

COURSE OUTCOME FOR
B.Sc Degree Course in MATHEMATICS

Semester System

(Three Year UG Degree Course) / (Two Year PG Degree Course)

CHOICE BASED CREDIT SYSTEM

Effective from the Academic Year

2019 - 2020

**GOVERNMENT ARTS COLLEGE FOR MEN (AUTONOMOUS), NANDANAM,
CHENNAI - 600035.**

COURSE: Mathematics

OUTCOME:

- The students will be able to recognize and understand the basic concepts of Mathematics.
- They will also know how to make use of various methods for further Studies.
- Student will possess skills to effectively deliver formal and informal presentations in multiple contexts.
- The subjects will give knowledge about computer.
- The students will gain knowledge in operating system, computer hardware, education about MS word, MS Excel, MS Power point and Internet. This will be very useful to run day - to - day use of computer operation in any field.
- The subjects enhance the technical skills of the students.
- Engineers and Scientists use Mathematical tools to model real life problems.
- These courses increase the analytical skills of the students which helps them in their competitive examinations.
- Develops the creative design for engineering purposes.
- Helps in applying basic knowledge of maths and physics to solve real-world problems.

PART	COURSE	SUBJECT CODE	TITLE	OUTCOME
SEMESTER I				
I	LANGUAGE I		LANGUAGE PAPER I	
II	ENGLISH I		ENGLISH I	
III	CORE I	196101	Algebra	<i>The students will be able to understand the concept of theory of equations , summation of series and they can solve real life problems using matrices and number theory.</i>
III	CORE II	196102	Trigonometry	<i>On completion of courses the student will be able to understand the concept of expansion of sine , cosine function, Hyperbolic functions and summation of trigonometric series.</i>
IV	ALLIED I		Chemistry - I	
IV	NME 1		Non Major Elective	
IV	SOFT SKILL I		SOFT SKILLS I	
SEMESTER II				
I	LANGUAGE II		LANGUAGE PAPER II	
II	ENGLISH II		ENGLISH II	
III	CORE III	196103	Differential Calculus	<i>Upon completion of courses the student will be able to understand the concept of Successive differentiation, Maxima and Minima of functions of 2 variables, Curvature, evolutes and Envelopes.</i>
III	CORE IV	196104	Integral Calculus	<i>Upon completion of courses the student will be able to solve problems related to area, volume ,length of the curve using Integral calculus,They also gains the knowledge of improper integrals,Fourier series and Fourier transform.</i>
IV	ALLIED II		Chemistry - II	
IV	NMEC 2		Non Major Elective	
IV	SOFT SKILLS II		SOFT SKILLS II	
SEMESTER III				
I	LANGUAGE III		LANGUAGE PAPER III	
II	ENGLISH III		ENGLISH III	
III	CORE V	196105	Differential Equations & Laplace Transforms	<i>After completing the course successfully the student will be able to solve second order differential equation of various types, partial differential equations and gains the knowledge of Laplace transform and using that they can solve differential equation.</i>
III	CORE VI	196106	Numerical Methods	<i>Upon completion of this course the student will be able to develop a basic understanding of differential equation</i>

				<i>and solve this by numerical methods and find the solution of algebraic and transcendental equations. Derive numerical methods for various mathematical operations and tasks, such as interpolation, differentiation, integration.</i>
III	ALLIED III		Physics – I	
IV	SOFT SKILLS III		SOFT SKILL III	
SEMESTER IV				
I	LANGUAGE IV		LANGUAGE PAPER IV	
II	ENGLISH IV		ENGLISH IV	
III	CORE VII	196107	Analytical Geometry of 3D & Vector Calculus	The students gain good knowledge in 3 dimensional geometry and vector calculus.
III	Elective 1	192121	Probability and Statistics	<i>Upon completion of this course students will be able to understand the concept of probability and application of Baye's theorem in decision making, a good understanding of the concepts of a statistical distributions and data analysis using correlation and regression.</i>
III	ALLIED IV		Physics – II	
IV	SOFT SKILLS IV		SOFT SKILLS IV	
SEMESTER V				
III	CORE VIII	196108	Modern Algebra	<i>The students will be able to understand the concepts of groups, rings and the techniques to solve the problem of groups and rings.</i>
III	CORE IX	196109	Real and Complex Analysis – I	<i>On successful completion of this course student should gain knowledge and problem solving skill in these concepts.</i>
III	CORE X	196110	Statics	<i>The students will be able to understand type of forces for parallelogram and coplanar forces. Analyze friction and centre of mass and get an idea of about catenary. Result applied in physics.</i>
III	CORE XI	196111	Discrete Mathematics	<i>The students will be able to knowledge acquired the basic idea of logic, predicate calculus, graphs and trees.</i>
III	MAJOR ELECTIVE II	192123	Linear programming	<i>Upon completion of this course students will be able to understand the basic concepts of linear programming problem and its formulation. Gains the knowledge of transportation problem, assignment problems and its applications.</i>
III	EVS		Environmental Studies	
SEMESTER VI				
III	CORE XII	196112	Linear Algebra	<i>The student will be able to understand</i>

				<i>the concepts of vector space, inner product spaces, algebra of linear transformations and the techniques to solve the problem of matrices.</i>
III	CORE XIII	196113	Real and Complex Analysis – II	<i>To introduce concepts like metric spaces and continuity in metric spaces, Riemann integral, derivatives, Cauchy's theorems and series development of complex function.</i>
III	CORE XIV	196114	Dynamics	<i>Upon completion of this course the students will be able to understand dynamics topics such as kinematics, simple harmonic motions, projectiles and motion under the action of central forces. Apply their mathematical skills to intermediate dynamics problems. Generate the dynamics equations of motion for system of rigid bodies. Analyze the impact of elastic bodies.</i>
III	CORE XV	196115	Programming in C with Practical	<i>The students will be able to join IT industry with this programming knowledge</i>
III	MAJOR ELECTIVE III	192125	Operations Research	<i>To improve the skills of solving very common problems which we come across in various fields like Game theory, inventory models and industries with machines: To develop computational skill and logical thinking in formulating industry oriented problems as a mathematical problem and finding solutions to these problems.</i>
III			Value Education	
V	EXTENSION ACTIVITY		NSS / NCC / YRC / RRC / Sports	