Department of Mathematics

Programme outcome for Honours

PO1 Logicalthinking: Agraduate Mathematics honours student will be capable of thinking and analyze logically with scientific view.

PO2 Laboratory skill : Student will becapable of solving various mathematical equations applying the computer programmin and demonstrate experiments with skill.

PO3 Communication skills : Students will be capable of communicating scientifically and canconvince anyarguments logicallytoothers.

PO4 Environmental aspects : The roots of most of the recent environmental problems are explained by the theories of science. A Mathematics student may be able to find out the causes of various environmental crisis to overcome the harmful situations.

PO5 Ethics :A Mathematics student will be able to appreciate the impact of Mathematics in social,economical, and environmental issues

PO6 Social interactive skill : A Mathematics student will be able to identify, analyze and solve the various problems faced by the society in daily life which can be justified by the underlying theoriesof Science.

PO7 Self improvement and lifelong learning: A Mathematics graduate will have confidence in his ability and will be motivated for lifelong learning.

PSO (Programme Specific Outcome for Mathematics Honours)

PSO1 : Graduate Mathematics honours students will acquire clear knowledge in science.

PSO2 : Students will get clear ideas about the basic mechanism of the instruments and machines used in every day life.

PSO3 : Mathematics students willl earn various computerlanguages.

PSO4 : Mathematics students will aware of simple and complex electricalcircuits and net works.

PSO5 : Students will have knowledge of Algebra, Geometry, Calculus Differential equations and Analysis.

Course Outcome (Mathematics Department)

For the year 2018-2023

Year	Papers	Course	Outcomes
Semester1	HCC1 (Cal, Geometry, Diff. Equ)	CO1	The topics of the course are effective for the students because • It develops required fundamental mathematical skills to solve problems in Mathematics
	HCC2 (Algebra)	CO2	• It develops required fundamental mathematical skills to solve algebric problems in Mathematics
Semester 2	HCC3 (Real Analysis)	CO3	• This course is very beneficial for the students because it gives the idea of Mathematics that was develop to formalise the study of numbers and functions and to investigate important concepts such as limits and continuity. This concepts leads to the calculus and its applications.
	HCC4 (D.E & Vector Calculus)	CO4	Students will acquire the concrete idea about • Movement or flow of electricity, waves and their characteristics. • Motion of an object to and fro like a pendulam, to explain thermodynamic concepts. • Vector calculus plays an important role in differential geometry and in the study of partial differential equations. It is used extensively in physics and engineering, especially in the description of electromagnetic fields, gravitational fields, and fluid flow.
Year	**Papers**	**Course**	**Outcomes**

Semester 3	HCC5 (Theory Of Real Functions & Introduction of the metric space)	CO5	• The topics of the course are effective for the students for developing the basic concepts of numbers and structures.
	HCC6 (Group Theory-I)	CO6	• The topics of the course are effective for the students for developing the basic concepts of Mathematical structures.
	HCC7 (Riemann Integration & Series of functions)	CO7	• The topics of the course are effective for the students for developing the basic concepts of integral calculus.
Semester 4	HCC8 (Multivariate Calculus)	CO8	. • The topics of the course are effective for the students for developing the basic concepts of integral calculus.
	HCC9 (Ring Theory & Linear Algebra I)	CO9	• The topics of the course are effective for the students for developing the basic concepts of Algebra.
Year	**Papers**	**Course**	**Outcomes**
Semester 4	HCC10 (Metric Space & Complex Theory)	CO10	• The topics of the course are effective for the students for developing the basic concepts of Abstruct structure and their real applications.
Semester 5	HCC11 (Group TheoryII)	CO11	• The topics of the course are effective for the students for developing the deep concepts of Abstruct algebra.
	HCC 12 (Numerical Methods+Lab)	CO12	• In this area the students will learn different programming languages (C++) and applying this they will find out the solution of numerical equations.
	DSE 1 (Probability & Statistics/Linear Programming)	CO 15	• Student will study about the uncertaintity using Mathematics. • Students will be capable of solving a system of linar equations under certain constrain.

	DSE 2 (Number Theory/Mechanics)	CO 16	• Students will learn about the woders of numbers • Lagrangian and Hamiltonian mechanics. • Small amplitude oscillation
Year	**Papers**	**Course**	**Outcomes**
Semester 6	HCC 13 (Ring Theory & Linear Algebra-II)	CO 13	• The topics of the course are effective for the students for developing the deep concepts of Abstruct algebra. .
	HCC 14 (Partial Differential Equations & Applications)	CO 14	• The topics of the course are effective for the students for developing the deep concepts of Calculus. .
	DSE-3 (Point Set Topology /Boolean Algebra & Automata Theory)	CO 17	Students will have the basic ideas about • Functional Analysis. • Boolean Algebra and switching circuit. • The Automata Theory.
	DSE-4 (Differential Geometry/Theory Of Equation)	CO 18	• On completing this course, students will get a clear idea about Space curves and surfaces.

Year	Papers	Course	Outcomes
Semester 1	Ability Enhancement Compulsory Courses (AECC)-I (English Communication)	CO19	Students will be capable of • Communicating scientifically • Able to convince any arguments logically to others.
Semester 2	Ability Enhancement Compulsory Courses (AECC)-II (Environmental Science)	CO20	Students will get an idea about • Knowledge of environment. • Protection of environmental damage from different causes.

Year	Papers	Course	Outcomes
Semester 3	Skill Enhancement Courses (SEC)-1 (ElectricalcircuitsandNetworkSkills)	CO21	Students will achieve the theory and practical skills about • The electrical principles and circuits. • Electrical drawing and symbols. • Theories and operations of generators, transformers and electric motors. • Idea about solid state devices, electrical wiring, and electrical protection.
Semester 4	Skill Enhancement Courses (SEC)-2 (Renewable Energy and EnergyHarvesting)	CO22	Students will get an idea about • Need of renewal energy sources. • Energy harvesting procedure from solar, wind, ocean, geothermal, hydro, piezoelectric and electromagnetic energy.

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PO1 Logicalthinking	PO2 Laboratoryskill	PO3 Communicationskill	PO4 Environmentalaspects	PO 5 Ethics	PO6 Socialinteractive skill	PO7 Selfimprovement andlifelong learning
CO 1	CO 1	CO 19	CO 20	CO 20	CO 19	CO 21
CO 2	CO 2				CO20	CO 22
CO 3	CO 4					
CO 4	CO 5					
CO 5	CO 12					
CO 6	CO 14					
CO 7	CO 18					
CO 8						
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