

Govt. Degree College Amb

BCA Department

TEACHING PLAN

BCA 1st Semester

BCA0101 Mathematics

UNIT	TOPIC/DETAIL	MONTH	METHOD OF TEACHING
1	Set theory, Relations, quadratic equations, sequence & series, binomial theorems, determinants, matrices.	July	PPT/Lectures
2	Rectangular co-ordinates, length of a line segment, section ratio, area of a triangle, equations of a straight line circles.	August	PPT/Lectures
3	Trigonometric functions, trigonometrical ratios of negative and associated angles, trigonometrical ratios of compound angles, multiple and sub multiple angles, Heights and distances.	September	PPT/Lectures
4	Functions, limits and continuity, Derivative of functions, Maxima & Minima, Indefinite integrals and definite integrals.	October	PPT/Lectures

NOTE: ASSIGNMENTS, CLASS TEST & MID TERM WILL BE TAKEN DURING THE SESSION.

BCA 2nd Semester

BCA0201 Mathematics-II

UNIT	TOPIC/DETAIL	MONTH	METHOD OF TEACHING
1	Rolle's Theorem, Lagrange's Mean Value Theorem, Cauchy's Mean Value Theorem, their geometrical significance and applications. Successive differentiation and Leibnitz Theorem.	December	PPT/Lectures
2	Number system: division algorithm, greatest common divisor, Least	February	PPT/Lectures

	common multiple, congruence relation, Integer arithmetic, Modular arithmetic.		
3	Group: definition of Group, Groups of numbers, groups of residues, groups of matrices, Groups of functions, Groups of subsets of a set, Properties of Groups, characterization of Groups, cyclic Groups.	March	PPT/Lectures
4	Ring: commutative ring, ring with unity, Ring of Polynomials, ring of functions, Elementary properties of ring. Fields.	April	PPT/Lectures

BCA 3rd Semester

BCAO 301 Mathematics-III

UNIT	TOPIC/DETAIL	MONTH	METHOD OF TEACHING
1	Order, degree, solution and formation of a differential equation. Standard techniques of solving linear differential equations with constant coefficients, Cauchy's and Legendres.	July	PPT/Lectures/Practical
2	Complex numbers and their representation in a plane. Argand diagram, algebra of complex numbers, modulus and arguments of a complex number, square root of a complex number and cube roots of unity, triangle inequality, De-Moivre's theorem, roots of complex numbers	August	PPT/Lectures/Practical
3	Primes, Primarily testing, Factorization, Chinese Remainder Theorem, Quadratic congruence, Exponentiation and Algorithm	September	PPT/Lectures/Practical
4	Finite fields, GF(p) fields, GF(pn) fields, Polynomials and their operations over GF(2) and GF(2n)	October	PPT/Lectures/Practical

NOTE: ASSIGNMENTS, CLASS TEST & MID TERM WILL BE TAKEN DURING THE SESSION.

BCA 5th Semester

BCA0505 Computer Oriented Statistical Methods

UNIT	TOPIC/DETAIL	MONTH	METHOD OF TEACHING
1	Frequency distribution, Histogram, Frequency Polygram, Arithmetic Mean, Median, mode, geometric Mean, Harmonic Mean, Dispersion, Measures of Dispersion, Coefficients of Dispersion.	July	PPT/LECTURES/Practical
2	Probability, Addition and multiplication Theorems of Probability, Conditional Probability, Independent events Pointwise independent events	August	PPT/LECTURES/Practical
3	Mathematical expectation, Expected value of function of a random variable, Properties of expectation, Properties of variance, Covariance	September	PPT/LECTURES/Practical
4	Correlation, Karl Pearson's Coefficient of correlation calculation of the correlation, coefficient for a biovariate frequency distribution, rank correlation.	October	PPT/LECTURES/Practical

NOTE: ASSIGNMENTS, CLASS TEST & MID TERM WILL BE TAKEN DURING THE SESSION.

BCA 6th Semester

BCA0602 Numerical Methods

UNIT	TOPIC/DETAIL	MONTH	METHOD OF TEACHING
1	Representation of numbers: Decimal to Binary conversion, Floating point representation of numbers, Integer and real/floating point arithmetic, different types of errors, error in the approximation of a function, error in series approximation.	December	PPT/LECTURES
2	Solution of algebraic and transcendental equation using Bisection method, Regula-Falsi method, Newton-Raphson method. Solution of simultaneous linear equations using Gauss Elimination method, Gauss-Jordon method, Jacobi's iterative method, GaussSeidel iterative method.	February	PPT/LECTURES

3	Interpolation, Finite difference and operators, Newton Forward, Newton Backward, Games forward, Games backward.	March	PPT/LECTURES
4	Numerical differentiation: Differentiating a Graphical function, Differentiating a Tabulated function- Equal and Un-equal intervals, Numerical integration, Newton-Cotes formula, Trapezoidal rule, Simpson's 01/3rd and 3/8th rule, Weddle's rule	April	PPT/LECTURES

NOTE: ASSIGNMENTS, CLASS TEST & MID TERM WILL BE TAKEN DURING THE SESSION.

BCA 6th Semester

BCA0603 Multimedia Technology

UNIT	TOPIC/DETAIL	MONTH	METHOD OF TEACHING
1	Introduction to Multimedia : Needs and areas of use, Development platforms for multimedia, Identifying Multimedia elements Text, Images, Sound, Animation and Video, Making simple Multimedia with PowerPoint. Concepts of plain & formatted text, RTF & HTML texts, Object Linking and Embedding concept.	December	PPT/LECTURES
2	Sound: Sound and it Attributes, Mono V/S Stereo Sound, Sound Channels, Sound and Its Effect In Multimedia, Analog V/S Digital Sound, Overview Of Various Sound File Formats On PC WAV, MP3.	February	PPT/LECTURES
3	Graphics: Importance of Graphics in Multimedia, Vector and Raster Graphics, Image Capturing Methods Scanner, Digital Camera Etc. Various Attributes of Images Size, Color, Depth , Resolution etc, Various Image File Format BMP, DIB, EPS, PIC, and TIF Format Their Features and imitations, Basics of animation, Software Tools for animation	March	PPT/LECTURES
4	Video: Basics of Video Analog and Digital Video, How to use video on PC. Introduction to graphics accelerator cards, Brief note on various video standards NTSC, HDTV,	April	PPT/LECTURES

	Introduction to video capturing Media & instrument Videodisk. Virtual Reality Terminology Head Mounts Display (HMD), Boom, Cave, Input Devices and Sensual Technology		
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NOTE: ASSIGNMENTS, CLASS TEST & MID TERM WILL BE TAKEN DURING THE SESSION.

**Prepared by
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