



**SRI VENKATESWARA COLLEGE**

**2018-19**

**EVEN SEMESTER**

**TEACHING PLANS**

**Department of Mathematics**  
**Sri Venkateswara College**  
Even Semester Teaching Plan (Jan-April 2018)

MS. SHAKUNTLA WADHWA

Month		Topics	Course	Paper Code/Name
Jan	<b>Theory</b>	Linear Diophantine equation, prime counting function, statement of prime number theorem, Goldbach conjecture, linear congruence, complete set of residues, Chinese remainder theorem, Fermat's little theorem, Wilson's theorem	B.Sc(H) Maths Sem-VI	Number Theory
	<b>Tutorials:</b>	To Discuss the doubt of students and to solve various exercise of Linear Diophantine equation, prime counting function, statement of prime number theorem, Goldbach conjecture, linear congruences, complete set of residues, Chinese remainder theorem, Fermat's little theorem, Wilson's theorem.	B.Sc(H) Maths Sem-VI	Number Theory
	<b>Practicals</b>	1. Plotting of second and third order respective solution family of differential equation.  2. Growth and decay model (exponential case only).  3. (a) Lake pollution model (with constant/seasonal flow and pollution concentration).  (b) Case of single cold pill and a	B.Sc(H) Maths Sem-II A	Differential Equations

	<b>Practicals</b>	<p>1. Declaring a complex number and graphical representation. e.g. <math>Z_1 = 3 + 4i</math>, <math>Z_2 = 4 - 7i</math></p> <p>2. Program to discuss the algebra of complex numbers. e.g., if <math>Z_1 = 3 + 4i</math>, <math>Z_2 = 4 - 7i</math>, then find <math>Z_1 + Z_2</math>, <math>Z_1 - Z_2</math>, <math>Z_1 * Z_2</math>, and <math>Z_1 / Z_2</math></p> <p>3. To find conjugate, modulus and phase angle of an array of complex numbers. e.g., <math>Z = [2 + 3i, 4 - 2i, 6 + 11i, 2 - 5i]</math></p>	B.Sc(H) Maths Sem-VI	Complex Analysis
Feb	<b>Theory</b>	Number theoretic functions, sum and number of divisors, totally multiplicative functions, definition and properties of the Dirichlet product, the Möbius inversion formula, the greatest integer function, Euler's phi-function, Euler's theorem, reduced set of residues, some properties of Euler's phi-function.	B.Sc(H) Maths Sem-VI	Number Theory
	<b>Tutorials:</b>	To discuss the doubt of students and to solve various exercise of number theoretic functions, sum and number of divisors, totally multiplicative functions, definition and properties of the Dirichlet product, the Möbius inversion formula, the greatest integer function, Euler's phi-function, Euler's theorem, reduced set of residues, some properties of Euler's phi-function.	B.Sc(H) Maths Sem-VI	Number Theory

<b>Practicals</b>	<p>4. (a) Predatory-prey model (basic volterra model, with density dependence, effect of DDT, two prey one predator).</p> <p>(b) Epidemic model of influenza (basic epidemic model, contagious for life, disease with carriers).</p> <p>(c) Battle model (basic battle model, jungle warfare, long range weapons).</p> <p>5. Plotting of recursive sequences, and study the convergence.</p> <p>6. Find a value that will make the following inequality holds for all m</p>	B.Sc(H) Maths Sem-II A	Differential Equations
<b>Practicals</b>	<p>5. To perform contour integration.</p> <p>6. To plot the complex functions and analyze the graph</p> <p>7. To perform the Taylor series expansion of a given function <math>f(z)</math> around a given point <math>z</math>. The number of terms that should be used in the Taylor series expansion is given for each function. Hence plot the</p>	B.Sc(H) Maths Sem-VI	Complex Analysis
<b>Test</b>	To take class test related to syllabus and lab test related to above Practical.	B.Sc(H) Maths Sem-II A/VI	ODE/Number Theory/Complex Analysis

March	<b>Theory</b>	Order of an integer modulo $n$ , primitive roots for primes, composite numbers having primitive roots, Euler's criterion, the Legendre symbol and its properties, quadratic reciprocity.	B.Sc(H) Maths Sem-VI	Number Theory
	<b>Tutorials:</b>	To discuss the doubt of students and to solve various exercise of order of an integer modulo $n$ , primitive roots for primes, composite numbers having primitive roots, Euler's criterion, the Legendre symbol and its properties, quadratic reciprocity.	B.Sc(H) Maths Sem-VI	Number Theory
	<b>Practicals</b>	7. Verify the Bolzano-Weierstrass theorem through plotting of sequences and hence identify convergent subsequences from the plot. 8. Study the convergence /divergence of infinite series of real numbers by plotting their sequences of partial sum. 9. Cauchy's root test by plotting $n$ th roots. 10. D'Alembert's ratio test by	B.Sc(H) Maths Sem-II A	Differential Equations

	<b>Practicals</b>	<p>8. To determine how many terms should be used in the Taylor series expansion of a given function <math>f(z)</math> around <math>z = 0</math> for a specific value of <math>z</math> to get a percentage error of less than 5 %.</p> <p>9. To perform Laurent's series expansion of a given function <math>f(z)</math> around a given point <math>z</math>.</p> <p>10. To compute the poles and corresponding residues of complex</p>	B.Sc(H) Maths Sem-VI	Complex Analysis
	<b>Assignments</b>	To give assignment related to syllabus		
	<b>Test</b>	<p>To take internal test related to syllabus</p> <p>And internal lab test related to above Practicals.</p>	B.Sc(H) Maths Sem-II A/VI	ODE/Number Theory/Complex Analysis
April	<b>Theory</b>	Quadratic congruence with composite moduli. Public key encryption, RSA encryption and decryption, the equation $x^2 + y^2 = z^2$ , Fermat's Last Theorem and to revise whole syllabus, to discuss last previous year questions papers.	B.Sc(H) Maths Sem-VI	Number Theory
	<b>Tutorials:</b>	To discuss the doubt of students and to solve various exercise of quadratic congruence with composite moduli. Public key encryption, RSA encryption and decryption, the equation $x^2 + y^2 = z^2$ , Fermat's Last Theorem.	B.Sc(H) Maths Sem-VI	Number Theory

<b>Practicals</b>	For the given various sequences given k find m such that given condition satisfied.  For the given series, to calculate $\left  \frac{a_{n+1}}{a_n} \right $ and $\left  a_n \right ^{\frac{1}{n}}$ , To revise whole syllabus.	B.Sc(H) Maths Sem-II A	Differential Equations
<b>Practicals</b>	10.To perform Conformal Mapping and Bilinear Transformations and to revise whole syllabus.	B.Sc(H) Maths Sem-VI	Complex Analysis
<b>Test</b>	To take test related to syllabus  And internal lab related to above practical.	B.Sc(H) Maths Sem-IV B	ODE/Number Theory/Complex Analysis

**Dr. R. K. BUDHRAJA**

Month		Topics	Course	Paper Code/Name
JANUARY	<b>Theory</b>	Transportation Problem (TP) and its Mathematical Model. Different Methods of finding initial BFS of TP.	B.Sc.(Hons) Maths III Year, Sem VI	DSE-4(ii) / Linear Programming and Theory of Games
	<b>Practicals</b>	1. Algebra of complex numbers- basic operations, finding and plotting nth roots of unity, polar representation of complex numbers, graphical representation of a complex number.	B.Sc. (H) Maths Sem-VI B	C 13 Complex analysis
	<b>Tutorials</b>	Practice to find initial BFS for Transportation Problems	B.Sc.(Hons) Maths III Year, Sem VI	DSE-4(ii) / Linear Programming and Theory of Games
FEBRUARY	<b>Theory</b>	Algorithm to solve TP. Assignment Problem (AP) and its Mathematical Model. Hungarian method to solve an AP	B.Sc.(Hons) Maths III Year, Sem VI	DSE-4(ii) / Linear Programming and Theory of Games
	<b>Practicals</b>	2. To compute the integral over a straight line path between the two specified end points. 3. To perform contour integration.	B.Sc. (H) Maths Sem-VI B	C 13 Complex analysis
	<b>Tutorials</b>	Solving Transportation Problems and Assignment Problems.	B.Sc.(Hons) Maths III Year, Sem VI	DSE-4(ii) / Linear Programming and Theory of Games
MARCH	<b>Theory</b>	Game Theory: Two person zero sum games, Solving a game using Mixed Strategies, Graphical method and Relations of Dominance.	B.Sc.(Hons) Maths III Year, Sem VI	DSE-4(ii) / Linear Programming and Theory of Games



MARCH	<b>Practicals</b>	<p>4. To plot the complex functions and analyze the graph.</p> <p>5. To perform the Taylor series expansion of a given function <math>f(z)</math> around a given point <math>z</math>.</p> <p>6. To determines how many terms should be used in the Taylor series expansion of a given function <math>f(z)</math> around <math>z = 0</math> for a specific value of <math>z</math> to get a percentage error of less than 5 %.</p>	B.Sc. (H) Maths Sem-VI B	C 13 Complex analysis
	<b>Tutorials</b>	Examples and Questions based on Game Theory	B.Sc.(Hons) Maths III Year, Sem VI	DSE-4(ii) / Linear Programming and Theory of Games
	<b>Test</b>	Class test of 10 marks will be	B.Sc.(Hons) Maths III	
APRIL	<b>Theory</b>	<p>Duality : Introduction to Duality, Formation of Dual problem, Weak Duality and Strong Duality theorems. Complementary Slackness Property (C S P). Solving a Primal Problem using Duality. Solving a Game using equivalent Dual problems.</p>	B.Sc.(Hons) Maths III Year, Sem VI	DSE-4(ii) / Linear Programming and Theory of Games
	<b>Practicals</b>	<p>7. To perform Laurent series expansion of a given function <math>f(z)</math> around a given point <math>z</math>.</p> <p>8. To compute the poles and corresponding residues of</p>	B.Sc. (H) Maths Sem-VI B	C 13 Complex analysis
	<b>Tutorials</b>	Questions based on dual formation, solving using Duality and C S P. Equivalent dual problems of various games.	B.Sc.(Hons) Maths III Year, Sem VI	DSE-4(ii) / Linear Programming and Theory of Games
	<b>Assignment</b>	Assignment of 10 marks will be given on any two of the above topics.	B.Sc.(Hons) Maths III Year, Sem VI	

**Dr. Mainak Mukherjee**

Month		Topics	Course	Paper Code/Name
Jan	<b>Theory</b>	Definition of Riemann integration, Inequalities for upper and lower Darboux sums, Necessary and sufficient conditions for the Riemann integrability, Definition of Riemann integration by Riemann sum and equivalence of the two definitions, Riemann integrability of monotone functions and continuous functions, Properties of Riemann integrable functions, Definitions of piecewise continuous and piecewise monotone functions and their Riemann integrability,	B.Sc(H) Maths Sem-IV B	Riemann Integration & Series of Functions
	<b>Theory</b>	Riemann integral.	B.A(P) Sem-IV	Paper IV : <b>Analysis</b>
	<b>Tutorials:</b>	To Discuss the Doubt of students and to solve various exercise of Definition of Riemann integration, Inequalities for upper and lower Darboux sums, Necessary and sufficient conditions for the Riemann integrability, Definition of Riemann integration by Riemann sum and equivalence of the two definitions, Riemann integrability of monotone functions and continuous functions, Properties of Riemann integrable functions, Definitions of piecewise continuous and piecewise monotone functions and their Riemann integrability, intermediate value theorem for integrals.	B.Sc(H) Sem-IVB	Riemann Integration & Series of Functions

	<b>Practicals</b>	1. Solution of Cauchy problem for first order PDE. 2. Plotting the characteristics for the first order PDE. 3. Plot the integral surfaces of a given first order PDE with initial data	B.Sc(H) Maths Sem-IV B	C8 Partial Differential Equations
Feb	<b>Theory</b>	Fundamental theorems (I and II) of calculus, and the integration by parts, Improper integrals of Type-I, Type-II and mixed type, Convergence of Beta and Gamma functions, and their properties.	B.Sc(H) Maths Sem-IV B	Riemann Integration & Series of Functions
	<b>Theory</b>	integrability of continuous.	B.A(P) Sem-IV	Paper IV : <b>Analysis</b>
	<b>Tutorials:</b>	To Discuss the Doubt of students and to solve various exercise of	B.Sc(H) Maths Sem-IV B	Riemann Integration & Series of Functions
	<b>Practicals</b>	Solution of wave equation for associated conditions, Solution of one-Dimensional heat equation for a homogeneous rod of length $l$ with various examples.	B.Sc(H) Maths Sem-IV B	C8 Partial Differential Equations
	<b>Test</b>	To take class test related to syllabus And lab test related to above Practicals.	B.Sc(H) Maths Sem-IV B/IVA/VI B / BA(P)	

March	<b>Theory</b>	Pointwise and uniform convergence of sequence of functions, Theorem on the continuity of the limit function of a sequence of functions, Theorems on the interchange of the limit and derivative, and the interchange of the limit and integrability of a sequence of functions. Pointwise and uniform convergence of series of functions, Theorems on the continuity, Derivability and	B.Sc(H) Maths Sem-IV B	Riemann Integration & Series of Functions
	<b>Theory</b>	integrability of monotonic functions.	B.A(P) Sem-IV	Paper IV : <b>Analysis</b>
	<b>Tutorials:</b>	To Discuss the Doubt of students and to solve various exercise of Pointwise and uniform convergence of sequence of functions, Theorem on the continuity of the limit function of a sequence of functions, Theorems on the interchange of the limit and derivative, and the interchange of	B.Sc(H) Maths Sem-IV B	Riemann Integration & Series of Functions
	<b>Practicals</b>	Solving systems of ordinary differential equations, Approximating solution to Initial Value Problems using approximate methods with various examples, To draw sequence of functions on given the interval and discuss the	B.Sc(H) Maths Sem-IV B	C8 Partial Differential Equations
	<b>Assignments</b>	To give assignment related to syllabus		
	<b>Test</b>	To take internal test related to syllabus  And internal lab test related to above Practical		

April	<b>Theory</b>	Definition of a power series, Radius of convergence, Absolute convergence (Cauchy-Hadamard theorem), Uniform convergence, Differentiation and integration of power series, Abel's Theorem to Revise whole syllabus. to Discuss last	B.Sc(H) Maths Sem-IV B	Riemann Integration & Series of Functions
	<b>Theory</b>	To revise of Riemann integral, integrability of continuous and monotonic functions and to Discuss last previous year questions papers	B.A(P) Sem-IV	Paper IV : <b>Analysis</b>
	<b>Tutorials:</b>	To Discuss the Doubt of students and to solve various exercise of Definition of a power series, Radius of convergence, Absolute convergence (Cauchy-Hadamard theorem), Uniform convergence, Differentiation and integration of power series, Abel's Theorem to Revise whole syllabus, to Discuss last	B.Sc(H) Maths Sem-IV B	Riemann Integration & Series of Functions
	<b>Practicals</b>	Discuss the uniform convergence of sequence of functions with various examples and to revise whole Practical.	B.Sc(H) Maths Sem-IV B	C8 Partial Differential Equations

Dr. Swarn Singh

Month		Topics	Course	Paper Code/Name
JANUARY	<b>Theory:</b>	To introduce the concepts of Algorithms, Convergence, Bisection Method and various problems related to these and to discuss various theorems related to convergence of the method	B.Sc.(Hons.)Maths Sem V	DSE-1(i) Numerical Methods
	<b>Practicals:</b>	First order exact differential equations including rules for finding integrating factors	B.A.(Prog.) Sem V	DSE1:PaperV:Differential Equations
		Basic concepts of Mathematica and Practical (i) of the list given in the syllabus: To	B.Sc.(Hons.)Maths Sem V	DSE-1(i) Numerical Methods
		<b>Tutorials:</b> To discuss the doubt of students and various exercise questions and examples related to exact differential equations	B.A.(Prog.) Sem III	DSE1:PaperV:Differential Equations
		To discuss the doubt of students and various exercise questions and examples related to polar representation of complex	B.Sc.(Hons.)Maths Sem I	C 2- Algebra
FEBRUARY	<b>Theory:</b>	False position method, Fixed point iteration method, Newton's method, Secant method, LU decomposition, Gauss-Jacobi method and various problems related to these and to discuss various theorems related to convergence of these methods.	B.Sc.(Hons.)Maths Sem V	DSE-1(i) Numerical Methods
	<b>Practicals:</b>	First order higher degree equations solvable for $x, y, p$ , Wronskian and its properties	B.A.(Prog.) Sem III	DSE1:PaperV:Differential Equations
		Practicals (ii) to find the absolute value of an integer, (iii) to enter 100 integers into an array and sort them in ascending order and (iv) Bisection method, Newton Raphson Method, Secant method, Regula Falsi Method	B.Sc.(Hons.)Maths Sem V	DSE-1(i) Numerical Methods
		<b>Tutorials:</b> To discuss the doubt of students and various exercise questions and examples related to first order higher degree equations solvable for $x, y, p$ , Wronskian and its properties	B.A.(Prog.) Sem III	DSE1:PaperV:Differential Equations

		To discuss the doubt of students and various exercise questions and examples related to $n$ th roots of unity, De Moivre's theorem for rational indices and its applications	B.Sc.(Hons.)Maths Sem I	C 2- Algebra
MARCH	<b>Theory:</b>	Gauss-Seidel method, SOR iterative method and various problems related to these and to discuss various theorems related to convergence of these methods.	B.Sc.(Hons.)Maths Sem V	DSE-1(i) Numerical Methods
		Linear homogenous equations with constant coefficients, Linear non-homogenous equations	B.A.(Prog.) Sem III	DSE1:PaperV:Differential Equations
	<b>Practicals:</b>	Practicals (v) LU decomposition method and (vi) Gauss-Jacobi method	B.Sc.(Hons.)Maths Sem V	DSE-1(i) Numerical Methods
		To discuss the doubt of students and various exercise questions and examples related to Linear homogenous equations with constant coefficients, Linear non-homogenous equations	B.A.(Prog.) Sem III	DSE1:PaperV:Differential Equations
	<b>Tutorials:</b>			
		To discuss the doubt of students and various exercise questions and examples related to equivalence relations, functions, composition of functions	B.Sc.(Hons.)Maths Sem I	C 2- Algebra
	<b>Assignment</b>	Assignment to be given related to syllabus.	B.Sc.(Hons.)Maths Sem V	DSE-1(i) Numerical Methods
		Assignment to be given related to syllabus	B.A.(Prog.) Sem V	DSE1:PaperV:Differential Equations
APRIL	<b>Theory</b>	Lagrange and Newton interpolation: linear and higher order, finite difference operators, Numerical differentiation: forward difference, backward difference and central difference  To discuss previous year questions papers some of which are available on my Blog <a href="https://mathsmodellig.wordpress.com/">https://mathsmodellig.wordpress.com/</a>	B.Sc.(Hons.)Maths Sem V	DSE-1(i) Numerical Methods

		The method of variation of parameters, Euler's equations	B.A.(Prog.) Sem V	DSE1:PaperV:Differential Equations
	<b>Practicals:</b>	Practicals (vii) SOR method, Gauss Siedel method and (viii) Lagrange Interpolation, Newton Interpolation	B.Sc.(Hons.)Maths Sem V	DSE-1(i) Numerical Methods
	<b>Tutorials:</b>	To discuss the doubt of students and various exercise questions and examples related to the method of variation of parameters, Euler's equations I	B.A.(Prog.) Sem V	DSE1:PaperV:Differential Equations
		To discuss the doubt of students and various exercise questions and examples related to one to one correspondence and cardinality of a set, well-ordering property of positive integers	B B.Sc.(Hons.)Maths Sem I	C 2- Algebra
	<b>Mid Term Test</b>	To take internal Test based on the syllabus covered.	B.Sc.(Hons.)Maths Sem V	DSE-1(i) Numerical Methods
		To take internal Test based on the syllabus covered.	B.A.(Prog.) Sem V	DSE1:PaperV:Differential Equations
		To take internal Lab Test based on the syllabus covered.	B.Sc.(Hons.)Maths Sem V	DSE-1(i) Numerical Methods
MAY	<b>Theory:</b>	Integration: trapezoidal rule, Simson's rule, Euler's method and to revise whole syllabus. To discuss previous year questions papers some of which are available on my Blog <a href="https://numericalmaths.wordpress.com/">https://numericalmaths.wordpress.com/</a>	B.Sc.(Hons.)Maths Sem V	DSE-1(i) Numerical Methods
		Simultaneous differential equations, total differential equations	B.A.(Prog.) Sem V	DSE1:PaperV:Differential Equations



<b>Practicals:</b>	Practical (ix):Simpson's rule and revise all practicals	B.Sc.(Hons.)Maths Sem V	DSE-1 Numerical Methods
<b>Tutorials:</b>	To discuss the doubt of students and various exercise questions and examples related to simultaneous differential equations, total differential equations	B.A.(Prog.) Sem V	DSE1:PaperV:Differential Equations
	To discuss the doubt of students and various exercise questions and examples related to division algorithm, divisibility and Euclidean algorithm	B.Sc.(Hons.)Maths Sem I	C 2- Algebra

## Deepti Jain

Month		Topics	Course	Paper Code/Name
JANUARY	<b>Theory</b>	Algebraic and order properties of $\mathbb{R}$ , $\delta$ -neighborhood of a point in $\mathbb{R}$ , Idea of countable sets, uncountable sets and uncountability of $\mathbb{R}$ , Bounded above sets, Bounded below sets, Bounded sets, Unbounded sets, Supremum and infimum of a set.	B.Sc.(H) Mathematics II Semester	C3 Real Analysis
	<b>Tutorial</b>	Exercises and doubts based on countable and uncountable sets, bounded and unbounded sets and supremum and infimum of sets.		
	<b>Practical</b>	N/A		
	<b>Theory</b>	Fundamental operation with vectors in Euclidean space $\mathbb{R}^n$ , Linear combination of vectors, Dot product and their properties, Cauchy–Schwarz inequality, Triangle inequality, Projection vectors, Some elementary results on vector in $\mathbb{R}^n$ , Matrices, Gauss–Jordan row reduction	GE-II II Semester	Linear Algebra
	<b>Tutorial</b>	Practice on operations with vectors.		
	<b>Practical</b>	N/A		
	<b>Practical</b>	(1). Plotting of recursive sequences (2). Study the convergence of sequences through plotting.	B.Sc.(H) Mathematics II Semester	C4 Differential Equations

FEBRUARY	<b>Theory</b>	The completeness property of $\mathbb{R}$ , The Archimedean Property, Density of Rational (and irrational) numbers in $\mathbb{R}$ , Limit Points of a set, Isolated points, Illustrations of Bolzano-Weierstrass theorem for sets, Sequences, Bounded sequences, Convergent sequences.	B.Sc.(H) Mathematics II Semester	C3 Real Analysis
	<b>Tutorial</b>	Exercises based on the Archimedean Property, Limit points and Convergence of sequences.		
	<b>Practical</b>	N/A		
	<b>Theory</b>	Reduced row echelon form, Row equivalence, Rank, Linear combination of vectors, Row space, Eigenvalues, Eigenvectors, Eigenspace, Characteristic polynomials, Diagonalization of matrices, Definition and examples of vector space, Some elementary properties of vector spaces, Subspace.	GE-II II Semester	Linear Algebra
	<b>Tutorial</b>	Exercises and doubts based on eigenvalues and eigenvectors.		
	<b>Practical</b>	N/A		
	<b>Practical</b>	(3).Verify Bolzano Weierstrass theorem through plotting of sequences and hence identify convergent subsequences from the plot.  (4).Study the convergence/divergence of infinite series by plotting their sequences of partial sum.  Assignments related to the above topics.	B.Sc.(H) Mathematics II Semester	C4 Differential Equations
MARCH	<b>Theory</b>	Limit of a sequence, Limit Theorems, Monotone Sequences, Monotone Convergence Theorem, Subsequences, Divergence criteria, Monotone Subsequence Theorem, Bolzano Weierstrass Theorem for sequences, Cauchy sequence, Cauchy's convergence criterion.	B.Sc.(H) Mathematics II Semester	C3 Real Analysis

	<b>Tutorial</b>	Exercises and doubts based on convergence and divergence of sequences using various results and/or tests.		
	<b>Practical</b>	N/A		
	<b>Assignment</b>	Questions from the topics including Supremum and Infimum of sets, and sequences of real numbers.		
	<b>Theory</b>	Span of a set, A spanning set for an eigenspace, Linear independence and linear dependence of vectors, Basis and dimension of a vector space, Maximal linearly independent sets, Minimal spanning sets.	GE-II II Semester	Linear Algebra
	<b>Tutorial</b>	Exercises based on linear independence and dependence of vectors.		
	<b>Practical</b>	N/A		
	<b>Assignment</b>	Questions from the topics: eigenvalues, eigenspace and eigenvectors.		
	<b><u>Mid Term Test</u></b>	Operations on vectors, linear independence and dependence of vectors, Solving system of linear equations using row echelon form.		
	<b>Practical</b>	(5). Cauchy's root test by plotting nth roots. (6). Ratio test by plotting the ratio of nth and n+1th term. (7). Plot the given series and identify the convergent series. Assignments related to above topics	B.Sc.(H) Mathematics II Semester	C4 Differential Equations
APRIL	<b>Theory</b>	Infinite series, Convergence and divergence of infinite series, Cauchy criterion, Tests for convergence: Comparison Test, Limit Comparison Test, Ratio Test, Cauchy's nth root test, Integral Test, Alternating Series, Leibniz Test, Absolute and Conditional convergence.	B.Sc.(H) Mathematics II Semester	C3 Real Analysis
	<b>Tutorial</b>	Exercises based on convergence of series and alternating series.		

	<b>Practical</b>	N/A		
	<b>Theory</b>	Application of rank, Homogenous and nonhomogenous systems of equations, Coordinates of a vector in ordered basis, Transition matrix, Linear transformations: Definition and examples, Elementary properties, The matrix of a linear transformation, Linear operator and Similarity.	GE-II II Semester	Linear Algebra
	<b>Tutorial</b>	Questions based on Linear transformations and matrices of linear transformations.		
	<b>Practical</b>	N/A		
	<b>Practical</b>	(8). Solving Inequality  (9). Checking the convergence of a sequence using Cauchy criterion of convergence.	B.Sc.(H)  Mathematics  II Semester	C4  Differential Equations

## Ninian Nauneet Kujur

Month		Topics	Course	Paper
January	<b>Theory</b>	Algebraic and Order Properties of $R$ , $d$ -neighborhood of a point in $R$ , Idea of countable sets, uncountable sets and uncountability of $R$ . Bounded above sets, Bounded below sets, Bounded Sets, Unbounded sets, Suprema and Infima, The Completeness Property of $R$ , The Archimedean Property, Density of Rational (and Irrational) numbers in $R$ , Intervals.	B.Sc(H) Maths Sem-II (B)	Real Analysis
	<b>Theory</b>	De Moivre.s theorem (both integral and rational index). Solutions of equations using trigonometry	BA(P) Sem II	Algebra

	<b>Practicals</b>	Mathematica: Plotting functions of two variables using Plot3D, ContourPlot, plotting parametric curves and surfaces, customizing plots, animating plots, producing table of values, working with piecewise defined functions, combining graphics, simple programming in Mathematica.	B.Sc(H) Maths Sem-IV(A)	CAS and related softwares (SEC-II)
	<b>Practicals</b>	1. Solution of Cauchy problem for first order PDE. 2. Plotting the characteristics for the first order PDE.	B.Sc(H) Maths Sem-IV(A)	C8- Partial Differential Equations
	<b>Tutorials</b>	Questions related to the portion covered .	B.Sc(H) Maths Sem-II (B)	Real Analysis
February	<b>Theory</b>	Limit points of a set, Isolated points, Illustrations of Bolzano-Weierstrass theorem for sets.  Sequences, Bounded sequence, Convergent sequence, Limit of a sequence. Limit Theorems,	B.Sc(H) Maths Sem-II (B)	Real Analysis
	<b>Theory</b>	Expansion for $\cos nx$ , $\sin nx$ in terms of powers of $\sin x$ , $\cos x$ , and $\cos^n x$ , $\sin^n x$ in terms of Cosine and Sine of multiples of $x$ , Summation of series	BA(P) Sem II	Algebra

<b>Practicals</b>	Exercises based on Mathematica and R: working with matrices, performing gauss elimination, operations like transpose, determinant, inverse of matrices, minors, cofactors, working with large matrices, solving of linear equations, rank and nullity of a matrix, eigen values, eigen vectors and diagonalization, Statistical software R: R as calculator,	B.Sc(H) Maths Sem-IV(A)	CAS and related softwares (SEC-II)
<b>Practicals</b>	3. Plot the integral surfaces of a given first order PDE with initial data.  4. Solution of wave equation associated with initial conditions.	B.Sc(H) Maths Sem-IV(A)	C8-Partial Differential Equations
<b>Tutorials</b>	Questions related to the portion covered	B.Sc(H) Maths Sem-II (B)	Real Analysis



March	<b>Theory</b>	<p>Monotone Sequences, Monotone Convergence Theorem. Subsequences, Divergence Criteria, Monotone Subsequence Theorem (statement only), Bolzano Weierstrass Theorem for Sequences. Cauchy sequence, Cauchy's Convergence Criterion.</p> <p>Infinite series, convergence and divergence of infinite series,.</p>	B.Sc(H) Maths Sem-II (B)	Real Analysis
	<b>Theory</b>	<p>Relation between roots and coefficients of <math>n^{\text{th}}</math> degree equation. Solutions of cubic and biquadratic equations, when some conditions on roots of the equation are given,</p>	BA(P) Sem II	Algebra
	<b>Practicals:</b>	<p>Exercises based on R: types and structure of data items with their properties, manipulating vectors, data frames, matrices and lists, viewing objects within objects, constructing data objects and conversions, summary commands, summary statistics for vectors, data frames, matrices and lists, summary tables, stem and leaf plot, histogram</p>	B.Sc(H) Maths Sem-IV(A)	CAS and related softwares (SEC-II)

	<b>Practicals</b>	5. Solution of one-Dimensional heat equation , for a homogeneous rod of length l.  6. Solving systems of ordinary differential equations.	B.Sc(H) Maths Sem-IV(A)	C8-Partial Differential Equations
	<b>Tutorials</b>	Questions related to the portion covered	B.Sc(H) Maths Sem-II (B)	Real Analysis
April	<b>Theory:</b>	Cauchy Criterion, Tests for convergence: Comparison test, Limit Comparison test, Ratio Test, Cauchy's nth root test, Integral test, Alternating series, Leibniz test, Absolute and Conditional convergence	B.Sc(H) Maths Sem-II (B)	Real Analysis
	<b>Theory</b>	Symmetric functions of the roots for cubic and biquadratic equations.	BA(P) Sem II	Algebra
	<b>Assignment</b>			

<b>Practicals</b>	Plotting in R: Box whisker plots, scatter plot, pairs plot, line charts, pie charts, Cleveland dot charts, bar charts, explore data and relations, saving graphs and revision.	B.Sc(H) Maths Sem-IV(A)	CAS and related softwares (SEC-II)
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<b>Practicals</b>	7. Approximating solution to Initial Value Problems using any of the following approximate methods: (a) The Euler Method (b) The Modified Euler Method. (c) The Runge-Kutta Method. Comparison between exact and approximate results for any representative differential equation.  8. Draw the functions on given the interval and discuss the pointwise	B.Sc(H) Maths Sem-IV(A)	C8-Partial Differential Equations
<b>Tutorials</b>	Questions related to the portion covered	B.Sc(H) Maths Sem-II (B)	Real Analysis

**Amit Kumar**

Month		Topics	Course	Paper Code/Name
Jan	<b>Theory</b>	Definition of Riemann integration, Inequalities for upper and lower Darboux sums, Necessary and sufficient conditions for the Riemann integrability, Definition of Riemann integration by Riemann sum and equivalence of the two definitions, Riemann integrability of monotone functions and continuous functions, Properties of Riemann integrable functions, Definitions of piecewise continuous and piecewise monotone functions and their Riemann integrability,	B.Sc(H) Maths Sem-IV	Riemann Integration & Series of Functions
	<b>Tutorials</b>	To Discuss the Doubt of students and to solve various exercise of Definition of Riemann integration, Inequalities for upper and lower Darboux sums, Necessary and sufficient conditions for the Riemann integrability, Definition of Riemann integration by Riemann sum and equivalence of the two definitions, Riemann integrability of monotone functions and continuous functions, Properties of Riemann integrable functions, Definitions of piecewise continuous and piecewise monotone functions and their Riemann integrability, intermediate value theorem for	B.Sc(H) Maths Sem-IV	Riemann Integration & Series of Functions
	<b>Theory</b>	Differential equations and mathematical models, Order and degree of a differential equation, Exact differential equations and integrating factors of first order differential equations, Reducible second order differential equations, Applications of first order differential equations to	B.Sc(H) Maths Sem-II	Differential Equaton

<b>Practicals</b>	1. Solution of first order differential equation. 2. Plotting of second order solution family of differential equation. 3. Plotting of third order solution family of differential equation. 4. Solution of differential equation by variation of parameter method. 5. Solution of system of ordinary	B.Sc(H) Maths Sem-II	Differential Equations
<b>Test</b>	To take class test related to syllabus and lab test related to above Practical.	B.Sc(H) Maths Sem-II and IV	Riemann Integration & Series of Functions  And  Differential Equations

Feb	<b>Theory</b>	Fundamental theorems (I and II) of calculus, and the integration by parts, Improper integrals of Type-I, Type-II and mixed type, Convergence of Beta and Gamma functions, and their properties.	B.Sc(H) Maths Sem-IV	Riemann Integration & Series of Functions
	<b>Tutorials</b>	To Discuss the Doubt of students and to solve various exercise questions of related above topics	B.Sc(H) Maths Sem-IV	Riemann Integration & Series of Functions
	<b>Theory</b>	General solution of homogeneous equation of second order, Principle of superposition for a homogeneous equation; Wronskian, its properties and applications, Linear homogeneous and non-homogeneous equations of higher order with constant coefficients, Euler's equation, Method of undetermined coefficients, Method of variation of parameters,	B.Sc(H) Maths Sem-II	Differential Equation
	<b>Assignments</b>	To be given assignment related to syllabus.	B.Sc(H) Maths Sem-II and Sem-IV	Riemann Integration & Series of Functions /Differential Equation
	<b>Practicals</b>	Solution of Cauchy problem for first order partial differential equations.  Solutions and plotting graphs of the Lake pollution model (with case study of Lake Burley Griffin), Drug assimilation into the blood (case of a single cold pill, case of a course of cold pills, case study of alcohol in the bloodstream) via Mathematica software.		Differential Equation

March	<b>Theory</b>	Pointwise and uniform convergence of sequence of functions, Theorem on the continuity of the limit function of a sequence of functions, Theorems on the interchange of the limit and derivative, and the interchange of the limit and integrability of a sequence of functions. Pointwise and uniform convergence of series of functions, Theorems on the continuity, Derivability and integrability of the sum function of a series of functions, Cauchy criterion and the Weierstrass M-Test for uniform	B.Sc(H) Maths Sem-IV	Riemann Integration & Series of Functions
	<b>Tutorials</b>	To discuss the doubt of students and various exercise questions and examples related work done in Theory Class.	B.Sc(H) Maths Sem-IV	Riemann Integration & Series of Functions
	<b>Theory</b>	Introduction to compartmental models, Lake pollution model (with case study of Lake Burley Griffin), Drug assimilation into the blood (case of a single cold pill, case of a course of cold pills, case study of alcohol in the bloodstream), Exponential growth of population,	B.Sc(H) Maths Sem-II	Differential Equation
	<b>Practicals</b>	Graphs and solutions of the Exponential growth of population, Limited growth of population, Limited growth with harvesting. Interacting population models, Epidemic model of influenza and its	B.Sc(H) Maths Sem-II	Differential Equations
	<b>Test</b>	To take internal test related to syllabus  And internal lab test related to above Practical.	B.Sc(H) Maths Sem-II/IV	Riemann Integration & Series of Functions / Differential Equation

April	<b>Theory</b>	Definition of a power series, Radius of convergence, Absolute convergence (Cauchy-Hadamard theorem), Uniform convergence, Differentiation and integration of power series, Abel's Theorem to Revise whole syllabus, to Discuss last previous year questions papers	B.Sc(H) Maths Sem-IV A	Riemann Integration & Series of Functions
	<b>Tutorials</b>	To discuss the doubt of students and various exercise questions and examples related to Properties of Cauchy-Hadamard theorem and Uniform convergence, Differentiation and integration of power series, Abel's Theorem	B.Sc(H) Maths Sem-IV B	Riemann Integration & Series of Functions
	<b>Theory</b>	Interacting population models, Epidemic model of influenza and its analysis, Predator-prey model and its analysis, Equilibrium points, Interpretation of the phase plane, Battle model and its analysis and revise whole syllabus, to discuss last previous year questions papers.	B.Sc(H) Maths Sem-II	Differential Equation
	<b>Practicals</b>	Solutions and graphs of the Interpretation of the phase plane, Battle model and its analysis via Mathematica software.  Revision of Practical	B.Sc(H) Maths Sem-II	Differential Equations



## Nisha Bohra

		Topics	Course	Paper Code/Name
Jan	<b>Theory</b>	Limits, Limits involving the point at infinity, continuity.  Properties of complex numbers, regions in the complex plane, functions of complex variable, mappings. Derivatives, differentiation formulas, Cauchy-Riemann equations, sufficient conditions for differentiability.	B.Sc. (H) Maths Sem-VI A	C 13:Complex analysis
	<b>Theory</b>	Dual spaces, dual basis, double dual, transpose of a linear transformation and its matrix  in the dual basis, annihilators.	B.Sc. (H) Maths Sem VI-B	C14: Ring theory and linear algebra-II
	<b>Tutorials</b>	To Discuss the Doubts of students and to solve various exercise questions based on topics covered in the class.	B.Sc. (H) Maths Sem-VI A and B	C13 and C 14
	<b>Practicals</b>	1. Algebra of complex numbers- basic operations, finding and plotting nth roots of unity, polar representation of complex numbers, graphical representation of a complex number.	B.Sc. (H) Maths Sem-VI B	C 13 Complex analysis
Feb	<b>Theory</b>	Analytic functions, examples of analytic functions, exponential function, Logarithmic function, trigonometric function, derivatives of functions, definite integrals of functions. Contours, Contour integrals and its examples, upper bounds for moduli of contour	B.Sc(H) Maths Sem-VI A	C 13 Complex analysis

	<b>Theory</b>	Eigenspaces of a linear operator, diagonalizability, invariant subspaces and Cayley-Hamilton theorem, the minimal polynomial for a linear operator.	B.Sc. (H) Maths Sem-VI B	C14: Ring theory and linear algebra-II
	<b>Tutorials</b>	To Discuss the Doubts of students and to solve various exercise questions based on topics covered in	B.Sc. (H) Maths Sem-VI A and VI B	C 13 and C14
	<b>Practicals</b>	<ol style="list-style-type: none"> <li>2. To compute the integral over a straight line path between the two specified end points.</li> <li>3. To perform contour integration.</li> </ol>	B.Sc. (H) Maths Sem-VI B	C 13 Complex analysis
<b>March</b>	<b>Theory</b>	Antiderivatives, proof of antiderivative theorem, Cauchy-Goursat theorem, Cauchy integral formula. An extension of Cauchy integral formula, consequences of Cauchy integral formula, Liouville's theorem and the fundamental theorem of algebra. Convergence of sequences and series, Taylor series and its examples. Laurent series and its examples, absolute and uniform convergence of power series.	B.Sc(H) Maths Sem-VI A	C 13 Complex analysis
	<b>Theory</b>	Inner product spaces and norms, Gram-Schmidt orthogonalization process, orthogonal complements, Bessel's inequality, the adjoint of a linear operator	B.Sc. (H) Maths Sem-VI B	C14: Ring theory and linear algebra-II
	<b>Tutorials</b>	To Discuss the Doubts of students and to solve various exercise questions based on topics covered in the class.	B.Sc. (H) Maths Sem-VI A	C 13 and C14

	<b>Practicals</b>	<p>4. To plot the complex functions and analyze the graph.</p> <p>5. To perform the Taylor series expansion of a given function <math>f(z)</math> around a given point <math>z</math>.</p> <p>6. To determines how many terms should be used in the Taylor series expansion of a given function <math>f(z)</math> around <math>z = 0</math> for a specific value of <math>z</math> to get a percentage error of less than 5 %.</p>	B.Sc. (H) Maths Sem-VI B	C 13 Complex analysis
	<b>Assignments</b>	To give assignment related to syllabus	B.Sc(H) Maths Sem-VI A and VI B	C 13 and C 14
	<b>Test</b>	To take internal test related to syllabus and internal lab test related to above Practicals	B.Sc(H) Maths Sem-VI A and VI B	C 13 and C 14
<b>April</b>	<b>Theory</b>	Uniqueness of series representations of power series, Isolated singular points, residues, Cauchy's residue theorem, residue at infinity. Types of isolated singular points, residues at poles and its examples, definite integrals involving sines and cosines.	B.Sc(H) Maths Sem-VI A	C 13 Complex analysis
	<b>Theory</b>	Least Squares Approximation, minimal solutions to systems of linear equations, Normal and self-adjoint operators, Orthogonal projections and Spectral theorem and to revise the whole syllabus	B.Sc(H) Maths Sem-VI B	C14: Ring theory and linear algebra-II
	<b>Tutorials</b>	To Discuss the Doubts of students and to solve various exercise questions and to Revise whole syllabus, to discuss previous year questions papers.	B.Sc(H) Maths Sem-VI and B	C 13 and C14

	<b>Practicals</b>	<p>7. To perform Laurent series expansion of a given function <math>f(z)</math> around a given point <math>z</math>.</p> <p>8. To compute the poles and corresponding residues of complex functions.</p>	B.Sc(H) Maths Sem-VI B	C 13 Complex analysis
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**Mr. Sudhakar Yadav**

Month		Topics	Course	Paper Code/Name
Jan	<b>Theory</b>	Introduction to linear programming problem, Theory of simplex method.	B.Sc(H) Maths Sem-IV	Linear Programming and Theory of Games
	<b>Theory</b>	Limits, Limits involving the point at infinity, continuity.  Properties of complex numbers, regions in the complex plane, functions of complex variable, mappings. Derivatives, differentiation formulas, Cauchy-Riemann equations, sufficient conditions for differentiability.	B.Sc(H) Maths Sem-VI B	Complex Analysis (Analysis V)
	<b>Theory</b>	Order completeness of Real numbers.	BA(P) Sem-IV	Paper IV : <b>Analysis</b>
	<b>Tutorials:</b>	To discuss the doubt of students and various exercise questions and examples related to Introduction to linear programming problem, Theory of simplex method	B.Sc(H) Maths Sem-VI	Linear Programming and Theory of Games
	<b>Practicals</b>	1. Declaring a complex number and graphical representation. e.g. $Z_1 = 3 + 4i$ , $Z_2 = 4 - 7i$  2. Program to discuss the algebra of complex numbers. e.g., if $Z_1 = 3 + 4i$ , $Z_2 = 4 - 7i$ , then find $Z_1 + Z_2$ , $Z_1 - Z_2$ , $Z_1 * Z_2$ , and $Z_1 / Z_2$	B.Sc(H) Maths Sem-VI B	Complex Analysis (Analysis V)
Feb	<b>Theory</b>	Optimality and unboundedness, the simplex algorithm.	B.Sc(H) Maths Sem-VI	Linear Programming and Theory of Games
	<b>Theory</b>	Analytic functions, examples of analytic functions, exponential function, Logarithmic function, trigonometric function, derivatives of functions, definite integrals of functions, Contours, Contour integrals and its examples, upper bounds for moduli of contour integrals.	B.Sc(H) Maths Sem-VI B	Complex Analysis

<b>Theory</b>	Open and closed sets, limit point of sets.	BA(P) Sem-IV	Paper IV : <b>Analysis</b>
<b>Tutorials:</b>	To discuss the doubt of students and various exercise questions and examples related to Optimality and unboundedness, the simplex algorithm.	B.Sc(H) Maths Sem-VI	Linear Programming and Theory of Games
<b>Practicals</b>	To perform contour integration, To plot the complex functions and analyze the graph and To perform the Taylor series expansion of a given function $f(z)$ around a given point $z$ . The number of terms that should be used in the Taylor series expansion is given for each function. Hence plot the magnitude of the function and magnitude of its Taylors series expansion.	B.Sc(H) Maths Sem-VI B	Complex Analysis (Analysis V)
<b>Test</b>	To take class test related to syllabus and lab test related to above Practicals.	B.Sc(H) Maths Sem-VI/VI B	

March	<b>Theory</b>	Method in tableau format, introduction to artificial variables, two-phase method.	B.Sc(H) Maths Sem-VI	Linear Programming and Theory of Games
	<b>Theory</b>	Antiderivatives, proof of antiderivative theorem, Cauchy-Goursat theorem, Cauchy integral formula. An extension of Cauchy integral formula, consequences of Cauchy integral formula, Liouville's theorem and the fundamental theorem of algebra, Convergence of sequences and series, Taylor series and its examples. Laurent series and its examples, absolute convergence of power series.	B.Sc(H) Maths Sem-VI B	Complex Analysis
	<b>Theory</b>	Bolzano Weierstrass Theorem, properties of continuous functions.	BA(P) Sem-IV	Paper IV : <b>Analysis</b>
	<b>Tutorials:</b>	To discuss the doubt of students and various exercise questions and examples related to method in tableau format, introduction to artificial variables, two-phase	B.Sc(H) Maths Sem-VI	Linear Programming and Theory of Games
	<b>Practicals</b>	To determines how many terms should be used in the Taylor series expansion of a given function $f(z)$ around $z = 0$ for a specific value of $z$ to get a percentage error of less than 5 %,To perform Laurent's series expansion of a given function $f(z)$ around a given point $z$ .	B.Sc(H) Maths Sem-VI B	Complex Analysis (Analysis V)
		<b>Assignments</b>	To give assignment related to above syllabus.	
	<b>Test</b>	To take internal test related to syllabus and internal lab test related to above Practical.	B.Sc(H) Maths Sem-VI/VI B	

April	<b>Theory</b>	Big-M method and their comparison and and revise whole syllabus, to discuss last previous year questions papers.	B.Sc(H) Maths Sem-VI	Linear Programming and Theory of Games
	<b>Theory</b>	Uniform convergence of power series, uniqueness of series representations of power series, Isolated singular points, residues, Cauchy's residue theorem, residue at infinity. Types of isolated singular points, residues at poles and its examples, definite integrals involving sines and cosines and revise the syllabus.	B.Sc(H) Maths Sem-VI B	Complex Analysis
	<b>Theory</b>	Uniform continuity and revise the whole syllabus.	BA(P) Sem-IV	Paper IV : <b>Analysis</b>
	<b>Tutorials:</b>	To discuss the doubt of students and various exercise questions and examples related to whole syllabus and discuss previous year questions papers	B.Sc(H) Maths Sem-VI	Linear Programming and Theory of Games
	<b>Practicals</b>	To compute the poles and corresponding residues of complex functions, to perform Conformal Mapping and Bilinear Transformations and to revise the whole Practical's syllabus.	B.Sc(H) Maths Sem-VI B	Complex Analysis (Analysis V)



Ms. Rajni Arora

		Topics	Course	Paper name
J A N U A R Y	Theory 1	Sample space, probability axioms, real random variables (discrete and continuous), cumulative distribution function, probability mass/density functions, Mathematical expectation, moments, moment generating function, characteristic function, discrete distributions: uniform, binomial, Poisson, geometric, negative binomial, continuous distributions: uniform, normal, exponential, Joint cumulative distribution function and its properties, joint probability density functions,	B.Sc(H) Mathematics Sem-VI	Probability Theory and Statistics (DSE-3)
	Theory 2	Introduction to R, Using R as calculator, reading and getting data into R: combine and scan commands, types and structure of data items with their properties	B.Sc(H) Mathematics Sem-IV	CAS and related softwares (SEC-II)
	Theory 3	Gauss elimination method (with row pivoting), Gauss–Jordan method, Gauss Thomas method for tridiagonal systems Iterative methods: Jacobi and Gauss Seidel iterative methods	B.Sc(H) courses	Numerical Methods (GE-4)
	Practicals	Downloading and installing statistical software R, Using R as calculator, reading and getting data into R: combine and scan commands, types and structure of data items with their properties	Sem-IV	CAS and related softwares (SEC-II)
	Tutorials	Doubts and discussion on guidelines' problems	Sem-VI	DSE-3

		Topics	Course	Paper name
F E B R U A R Y	Theory 1	Marginal and conditional distributions, expectation of function of two random variables, conditional expectations, independent random variables, bivariate normal distribution, correlation coefficient, joint moment generating function (jmgf) and calculation of covariance (from jmgf), linear regression for two variables	B.Sc(H) Mathematics Sem-VI	Probability Theory and Statistics (DSE-3)
	Theory 2	Manipulating vectors, data frames, matrices and lists, viewing objects within objects, constructing data objects and conversions, summary commands, stem and leaf plot, histogram, scatter plot, pairs plot, bar charts	B.Sc(H) Mathematics Sem-IV	CAS and related softwares (SEC-II)
	Theory 3	Interpolation: Lagrange's form and Newton's form Finite difference operators, Gregory Newton forward and backward differences Interpolation, Piecewise polynomial interpolation: Linear interpolation	B.Sc(H) courses	Numerical Methods (GE-4)
	Practicals	Exercises based on R: manipulating vectors, data frames, matrices and lists, viewing objects within objects, constructing data objects and conversions, summary commands, stem and leaf plot,	Sem-IV	CAS and related softwares (SEC-II)

	histogram, scatter plot, pairs plot, bar charts		
Tutorials	Doubts and discussion on guidelines' problems	Sem-VI	DSE-3
Assignment 1	Assignment to be submitted by the end of October consisting of questions of topics covered in September and October	B.Sc(H) Mathematics Sem-VI	DSE-3
Assignment 2	Assignment to be submitted by the end of October consisting of questions of topics covered in September and October	B.Sc(H) Mathematics Sem-IV	SEC-II
Assignment 3	Assignment to be submitted by the end of October consisting of questions of topics covered in September and October	B.Sc(H) courses	GE-4

	Topics	Course	Paper name	
M A R C H	Theory 1	Chebyshev's inequality, statement and interpretation of (weak) law of largenumbers and strong law of large numbers, Central Limit theorem for independentand identically distributed random variables with finite variance, Markov Chains	B.Sc(H) Mathematics Sem-VI	Probability Theory and Statistics (DSE-3)
	Theory 2	Plotting in R: line charts, pie charts, box-whisker plots, Cleveland dot charts, bar charts, explore data and relations, saving graphs	B.Sc(H) Mathematics Sem-IV	CAS and related softwares (SEC-II)
	Theory 3	Cubic splineinterpolation (only method), Numerical differentiation: First derivatives andsecond order derivatives, Richardson extrapolation, Numerical integration:Trapezoid rule, Simpson's rule (only method), Newton–Cotes open formulas	B.Sc(H) courses	Numerical Methods (GE-4)
	Practicals	Exercises based on R: Plotting in R: line charts, pie charts, box-whisker plots, Cleveland dot charts, bar charts, explore data and relations, saving graphs	Sem-IV	CAS and related softwares (SEC-II)
	Tutorials	Doubts and discussion on topics covered	Sem-VI	DSE-3
	Test 1	Test in mid-October of topics covered till date	B.Sc(H) Mathematics Sem-VI	DSE-3
	Test 2	Test in mid-October of topics covered till date	B.Sc(H) Mathematics Sem-IV	SEC-II
	Test 3	Test in mid-October of topics covered till date	B.Sc(H) courses	GE-4

	Topics	Course	Paper name	
A P R I L	Theory 1	Chapman-Kolmogorov equations, classification of states and related problems	B.Sc(H) Mathematics Sem-VI	Probability Theory and Statistics (DSE-3)
	Theory 2	Summary statistics for vectors, data frames, matrices and lists; summary tables and revision	B.Sc(H) Mathematics Sem-IV	CAS and related softwares (SEC-II)

	Theory 3	Extrapolation methods: Romberg integration, Gaussian quadrature	B.Sc(H) courses	Numerical Methods (GE-4)
	Practicals	Summary statistics for vectors, data frames, matrices and lists; summary tables and revision.	Sem-IV	CAS and related softwares (SEC-II)
	Tutorials	Doubts and discussion on previous year question papers	Sem-VI	DSE-3

**Ms. Shahna**

Month		Topics	Course	Paper Code/Name
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JANUARY	<b>Theory</b>	Introduction, classification, construction and geometrical interpretation of first order partial differential equations (PDE), method of characteristic and general solution of first order PDE, canonical form of first order PDE, method of separation of variables for first order PDE.	B.Sc(H) Maths Sem-IV A	C8-Partial Differential Equations
	<b>Practicals</b>	1. Solution of Cauchy problem for first order PDE. 2. Plotting the characteristics for the first order PDE.	B.Sc(H) Maths Sem-IV A	C8- Partial Differential Equations
	<b>Tutorials</b>	To discuss the doubt of students and various exercise questions and examples related to topics covered.	B.Sc(H) Maths Sem-IV A	C8- Partial Differential Equations
	<b>Theory</b>	Fundamental operation with vectors in Euclidean space $R^n$ , Linear combination of Schwarz inequality, Triangle–vectors, Dot product and their properties, Cauchy inequality, Projection vectors, Some elementary results on vector in $R^n$ , Matrices, Gauss–Jordan row reduction, Reduced row echelon form, Row equivalence, Rank, Linear combination of vectors, Row space. Eigenvalues. Eigenvectors.	Sem II BA(Hons) and Bsc(Hons) Other than BSc(Hons) Mathematics	GE-2 Linear Algebra
	<b>Theory</b>	Floating point representation and computer arithmetic, Significant digits, Errors: Roundoff error, Local truncation error, Global truncation error, Order of a method, Convergence and terminal conditions, Efficient computations Bisection method.	Sem IV BA(Hons) and Bsc(Hons) Other than BSc(Hons) Mathematics	GE-4 Numerical Methods
	<b>Assignment</b>	To give assignments to some students of the above courses.		

FEBRUARY	<b>Theory:</b>	Mathematical modeling of vibrating string, vibrating membrane, conduction of heat in solids, gravitational potential, conservation laws and Burger's equations, classification of second order PDE, reduction to canonical forms, equations with constant coefficients, general	B.Sc(H) Maths Sem-IV A	C8-Partial Differential Equations
	<b>Practicals</b>	3. Plot the integral surfaces of a given first order PDE with initial data. 4. Solution of wave equation associated with initial conditions.	B.Sc(H) Maths Sem-IV A	C8-Partial Differential Equations
	<b>Tutorials</b>	To discuss the doubt of students and various exercise questions and examples related to topics	B.Sc(H) Maths Sem-IV A	C8- Partial Differential Equations
	<b>Theory</b>	Characteristic polynomials, Diagonalization of matrices, Definition and examples of vector space, Some elementary properties of vector spaces, Subspace, Span of a set, A spanning set for an eigenspace, Linear independence and linear dependence of vectors, Basis and dimension of a vector space, Maximal linearly independent sets, Minimal spanning sets, Application of rank, Homogenous and nonhomogenous systems of	Sem II BA(Hons) and Bsc(Hons) Other than BSc(Hons) Mathematics	GE-2 Linear Algebra
	<b>Theory</b>	Regula Falsi method, Newton Raphson method, Newton's method for solving nonlinear systems, Jordan method, Gauss–Gauss elimination method (with row pivoting) and Gauss Thomas method for tridiagonal systems Iterative methods: Jacobi and GaussSeidel iterative methods Interpolation: Lagrange's form and Newton's	Sem IV BA(Hons) and Bsc(Hons) Other than BSc(Hons) Mathematics	GE-4 Numerical Methods
	<b>Assignment</b> :	To give assignment to some students of the above courses.		

MARCH	<b>Theory:</b>	Cauchy problem for second order PDE. Homogeneous wave equation, initial boundary value problems, non-homogeneous boundary conditions, finite strings with fixed ends, non-homogeneous wave equation.	B.Sc(H) Maths Sem-IV A	C8-Partial Differential Equations
	<b>Practicals:</b>	5. Solution of one-Dimensional heat equation , for a homogeneous rod of length l. 6. Solving systems of ordinary differential equations.	B.Sc(H) Maths Sem-IV A	C8-Partial Differential Equations
	<b>Tutorials</b>	To discuss the doubt of students and various exercise questions and examples related to topics	B.Sc(H) Maths Sem-IV A	C8- Partial Differential Equations
	<b>Theory</b>	Coordinates of a vector in ordered basis, Transition matrix, Linear transformations: Definition and examples, Elementary properties, The matrix of a linear transformation, Linear operator and Similarity, Application: Computer graphics- Fundamental movements in a plane, Homogenous coordinates, Composition of movements,	Sem II BA(Hons) and Bsc(Hons) Other than BSc(Hons) Mathematics	GE-2 Linear Algebra
	<b>Theory</b>	Gregory Newton forward and backward differences Interpolation, Piecewise polynomial interpolation: Linear interpolation, Cubic spline interpolation (only method), Numerical differentiation: First derivatives and second order derivatives, Richardson extrapolation Numerical integration: Cotes open formulas–Trapezoid rule, Simpson’s rule (only method), Newton Extrapolation methods:	Sem IV BA(Hons) and Bsc(Hons) Other than BSc(Hons) Mathematics	GE-4 Numerical Methods
	<b>Assignment :</b>	To give assignment to some students of the above courses.		
<b>Test</b>	To take internal lab test of the above Practicals.			

APRIL	<b>Theory:</b>	Riemann problem, Goursat problem, spherical and cylindrical wave equation. Method of separation of variables for second order PDE, vibrating string problem, existence and uniqueness of solution of vibrating string problem, heat conduction problem, existence and uniqueness of solution of heat conduction problem, Laplace and	B.Sc(H) Maths Sem-IV A	C8-Partial Differential Equations
	<b>Practicals</b>	7. Approximating solution to Initial Value Problems using any of the following approximate methods: (a) The Euler Method (b) The Modified Euler Method. (c) The Runge-Kutta Method. Comparison between exact and approximate results for any representative differential equation. 8. Draw the functions on given	B.Sc(H) Maths Sem-IV A	C8-Partial Differential Equations
	<b>Tutorials</b>	To discuss the doubt of students and various exercise questions and examples related to topics	B.Sc(H) Maths Sem-IV A	C8- Partial Differential Equations
	<b>Theory</b>	Dimension theorem, One to one and onto linear transformations, Invertible linear transformations, Isomorphism: Isomorphic vector spaces (to $R^n$ ), Orthogonal and orthonormal vectors, Orthogonal and orthonormal bases, Orthogonal complement, Projection theorem (Statement only), Orthogonal projection onto a subspace, Application: Least square solutions for inconsistent systems.	Sem II BA(Hons) and Bsc(Hons) Other than BSc(Hons) Mathematics	GE-2 Linear Algebra
	<b>Theory</b>	Gaussian quadrature, Ordinary differential equation: Euler's method Modified Euler's methods: Heun method and Mid-point method, Runge-Kutta second methods: Heun method without iteration, Mid-point method and Ralston's method Classical 4th order Runge-Kutta method. Finite difference method	Sem IV BA(Hons) and Bsc(Hons) Other than BSc(Hons) Mathematics	GE-4 Numerical Methods

	<b>Assignment</b>	To give assignment to some students of the above courses		
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Dr. Garima V. Arora

Month		Topics	Course	Paper Code/Name
JAN	<b>Theory</b>	Introduction, classification, construction and geometrical interpretation of 1 <sup>st</sup> order PDE, method of characteristic and general solution, canonical forms, method of separation of variables	B.Sc(H) Maths Sem-IV B	C8- Partial Differential Equations
	<b>Practicals</b>	Solution of Cauchy problem for 1 <sup>st</sup> order PDE, Plotting the characteristics for the 1 <sup>st</sup> order PDE	B.Sc(H) Maths Sem-IV B	C8- PDE
	<b>Theory</b>	Sample space, probability axioms, real random variables, cumulative distribution function, probability mass/density function, expectation, moments, moment generating function, characteristic function, uniform distribution, binomial and poisson distribution.	B.Sc(H) Maths Sem-VI B	DSE-3(i)- Probability Theory and Statistics
	<b>Tutorials</b>	To discuss the doubt of students and various exercise questions and examples related to topics covered.	B.Sc(H) Maths Sem-VI B	DSE-3(i)- Probability Theory and Statistics



	<b>Assignment</b>	To give assignments to some students of both the courses		
FEB	<b>Theory:</b>	Mathematical modelling of vibrating string, vibrating membrane, conduction of heat, gravitational potential, conservation laws, classification of 2 <sup>nd</sup> order PDE, canonical forms, equations with constant coefficients, general solution	B.Sc(H) Maths Sem-IV B	C8- PDE
	<b>Practicals</b>	Plot the integral surfaces of the 1 <sup>st</sup> order PDE with initial data, solution of wave equation	B.Sc(H) Maths Sem-IV B	C8- PDE

	<b>Theory</b>	Geometric distribution, negative binomial, continuous uniform, normal and exponential distributions, Joint CDF, Joint PDF.	B.Sc(H) Maths Sem-VI B	DSE-3(i)- Probability Theory and Statistics
	<b>Tutorials</b>	To discuss the doubts of students and various exercise questions and examples related to the topics covered in the theory class.	B.Sc(H) Maths Sem-VI B	DSE-3(i)- Probability Theory and Statistics
	<b>Assignment</b> :	To give assignment to some students of both the courses		
MARCH	<b>Theory:</b>	Cauchy problem for 2 <sup>nd</sup> order PDE, homogeneous wave equation, initial boundary value problem, non- homogeneous boundary conditions, finite strings with fixed ends, non-homogeneous wave equations, Goursat problem	B.Sc(H) Maths Sem-IV B	C8- PDE
	<b>Practicals:</b>	Solution of 1-D heat equation, Solving system of ordinary differential equations	B.Sc(H) Maths Sem-IV B	C8- PDE
	<b>Test</b>	To take practical test of the syllabus covered till date		
	<b>Theory</b>	Marginal and conditional distributions, expectations, conditional expectation, independent random variable, bivariate normal distributions, correlation coefficient, joint mgf, covariance, linear regression	B.Sc(H) Maths Sem-VI B	DSE-3(i)- Probability Theory and Statistics

	<b>Tutorials</b>	To discuss the doubt of students and various exercise questions and examples related to the topics covered in the class.	B.Sc(H) Maths Sem-VI B	DSE-3(i)- Probability Theory and Statistics
	<b>Assignment</b> :	To give assignment to some students of both the courses		

APRIL	<b>Theory:</b>	Method of separation of variables for 2 <sup>nd</sup> order PDE, vibrating string problem and existence and uniqueness of its solution, heat conduction problem and existence and uniqueness of its solution, non- homogeneous problem	B.Sc(H) Maths Sem-IV B	C8- PDE
	<b>Practicals</b>	To draw the sequence of functions on a given interval and discuss pointwise convergence, To discuss uniform convergence.	B.Sc(H) Maths Sem-IV B	C8- PDE
	<b>Theory</b>	Chebyshev's inequality, weak and strong law of large numbers, central limit theorem, Markov chain, Chapman-Kolmogorov equations, classification of states.	B.Sc(H) Maths Sem-VI B	DSE-3(i)- Probability Theory and Statistics
	<b>Tutorials</b>	To discuss the doubt of students and various exercise questions and examples related to topics covered.	B.Sc(H) Maths Sem-VI B	DSE-3(i)- Probability Theory and Statistics
	<b>Assignment</b>	To give assignment to some students of both the courses		



## SEMESTER WISE TEACHING PLAN

**SRI VENKATESWARA COLLEGE 2018-2019**

**Name of the Faculty: Dr Deepika Singh  
science**

**Department: political**

**Semester : IV (Even)**

**Paper : POLITICAL PROCESSES AND INSTITUTIONS IN COMPARATIVE  
PERSPECTIVE**

Month		Topics	Course	Paper Code/Name	
JANUARY	<b>Theory</b>	APPROACHES TO STUDYING COMPARATIVE POLITICS;  A) Political culture B) New institutionalism	B A HONOUR S	<b>: POLITICAL PROCESSES AND INSTITUTIONS IN COMPARATIVE PERSPECTIVE</b>	
	<b>Practicals</b>				
	<b>Tutorials</b>	Discussion on political culture			
FEBRUARY	<b>Theory:</b>	ELECTORAL SYSTEM;  A)DEFINITIONS AND PROCEDURES; TYPES OF ELECTION SYSTEM ( first past the post, proportional representation, mixed representation)  Party system			

	<b>Practicals</b> :			
	<b>Tutorials:</b>			

	<b><u>Assignment :</u></b>	Approaches to the study of comparative politics		
MARCH	<b>Theory:</b>	Nation state  What is nation state? HISTORICAL EVOLUTION IN WESTERN EUROPE AND POST COLONIAL CONTEXT  NATION AND STATE DEBATE  DEMOCRATISATION: PROCESS OF		
	<b>Practicals:</b>			
	<b>Tutorials:</b>	Concept of nation State		
	<b><u>Test</u></b>	Internal test		
APRIL	<b>Theory:</b>	POST AUTHORITARIANISM AND POST COMMUNIST COUNTRIES		
	<b>Practicals:</b>			
	<b>Tutorials:</b>	Discussion on Federalism		

MAY	<b>Theory:</b>	DEBATES AROUND TERRITORIAL DIVISION		
	<b>Practicals:</b>			
	<b>Tutorials:</b>	Discussion on territorial division		

Semester : EVEN IV

Paper : Public Opinion and Survey Research

Month		Topics	Course	Paper Code/Name
JANUARY	<b>Theory</b>	I. Introduction to th course Definition and characteristics of public opinion, conceptions and characteristics, debates about its role in a democratic political system, uses for opinion poll	B A PROG	<b>Public Opinion and Survey Research</b>
	<b>Practicals</b>			

	<b>Tutorials</b>	DISCUSSION ON SIGNIFICANCE OF PUBLIC OPINION		
FEBRUARY	<b>Theory:</b>	<p>I. <b>Measuring Public Opinion with Surveys: Representation and sampling (6 lectures)</b></p> <p>a. <b>What is sampling? Why do we need to sample? Sample design.</b></p>		
	<b>Practicals:</b>			
	<b>Tutorials:</b>	DISCUSSION ON MIXED ECONOMY		

	<b><u>Assignment :</u></b>	DISCUSSION ON VARIOUS ELECTION AND PUBLIC OPINION		
MARCH	<b>Theory:</b>	<p>b. Sampling error and non-response</p> <p>c. Types of sampling: Non random sampling (quota, purposive and snowball sampling); random sampling: simple and stratified</p>		
	<b>Practicals :</b>			

	<b>Tutorials:</b>		
	<b><u>Test</u></b>	Internal test	
APRIL	<b>Theory:</b>	<p>Survey Research (2 lectures) a.  Interviewing: Interview techniques  pitfalls, different types of and forms  of interview b. Questionnaire:  Question wording; fairness</p> <p>. Quantitative Data Analysis (4</p>	
	<b>Practicals :</b>		
	<b>Tutorials:</b>	DISCUSSION ON HOW TO PREPARE QUESTIONNAIRE	



MAY	<b>Theory:</b>	b. Basic concepts: correlational research, causation and prediction, descriptive and inferential Statistics  V. Interpreting polls (6 lectures)		
	<b>Practicals:</b>			
	<b>Tutorials:</b>	REVISION		



**SEMESTER WISE TEACHING  
PLAN (2018-2019)  
SRI VENKATESWARA COLLEGE**

**Name of the Faculty: Dr JITA MISHRA**  
**Political Science**

**Department:**

**Semester : II/IV/VI      INDIA'S FOREIGN POLICY IN A GLOBALISING  
WORLD**

Month		Topics	Course	Paper Code/Name
JANUARY	<b>Theory</b>	India,s foreign policy from a post colonial state to an aspiring global power	BaHons political science III YEAR VI Semester	Paper 5.3f India's foreign policy in a globalizing world
	<b>Practicals</b>			
	<b>Tutorials</b>	determinants		
FEBRUARY	<b>Theory:</b>	India's relations with USA and USSR		
	<b>Practicals:</b>			

	<b>Tutorials:</b>	INDO SOVIET TREATY		
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	<b><u>Assignment</u></b> :	Discuss India and Russia relations in the 1990's
MARCH	<b>Theory:</b>	India china relations
	<b>Practicals:</b>	
	<b>Tutorials:</b>	Border dispute
	<b><u>Test</u></b>	Discuss India -china relation with special reference to the border dispute and the Tibetan issue
APRIL	<b>Theory:</b>	India in South Asia debating regional strategies
	<b>Practicals:</b>	

	<b>Tutorials:</b>	India and Nepal
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MAY	<b>Theory:</b>	Trade environment and security regimes India in a contemporary multipolar world
	<b>Practicals:</b>	
	<b>Tutorials:</b>	India as an emerging power

**SEMESTER WISE TEACHING  
PLAN (2018-2019)  
SRI VENKATESWARA COLLEGE**

**Name of the Faculty: Dr Jita mishra**  
**Department: POLITICAL SCIENCE**

**Semester : II/IV/VI    Modern political philosophy**

Month		Topics	Course	Paper Code/Name
JANUARY	<b>Theory</b>	Modernity and its discourses	Ba Hons political science III year VI Semester	6.1 Modern Political philosophy
	<b>Practicals</b>			
	<b>Tutorials</b>	Modernity		
FEBRUARY	<b>Theory:</b>	Romantics Rousseau		

	<b>Practicals:</b>			
	<b>Tutorials:</b>	General will		

	<b><u>Assignment :</u></b>	Rousseau General will
MARCH	<b>Theory:</b>	Mary Wollstonecraft Js mill
	<b>Practicals:</b>	
	<b>Tutorials:</b>	Womens education
	<b><u>Test</u></b>	Critically evaluate JSMill defence of liberty.
APRIL	<b>Theory:</b>	KARL MARX

	<b>Practicals:</b>	
	<b>Tutorials:</b>	SURPLUS VALUE

MAY	<b>Theory:</b>	Alexandra kollontai
	<b>Practicals:</b>	
	<b>Tutorials:</b>	A Kollantai



**SEMESTER WISE TEACHING PLAN**

**SRI VENKATESWARA COLLEGE**

**January-June, 2017**

**Name of the Faculty: Dr SANTOSH KUMAR SINGH**

**Department: POLITICAL SCIENCE**

**Semester: B.A (P)-VIth**

Month		Topics	Course	Paper Code/Name
January	<b>Theory:</b>	Understand the issues concerning the rights of citizens, Conceptual dimensions, international trends on Human Rights, Social Inequality-Caste, Gender, Ethnicity and Class	B.A (P)	Human Rights, Gender and Environment
	<b>Tutorials:</b>	Understanding of socio – economic and political problems of marginalized groups in society such as women, dalits, minorities and adivasis		
February	<b>Theory:</b>	Globalisation and its impact on workers, peasants, dalits, adivasis and women, Human Rights: Various Meanings, UN Declarations and Covenants, Human Rights and Citizenship Rights	B.A (P)	Human Rights, Gender and Environment
	<b>Tutorials:</b>	Understand the impact of globalisation-Economic, political and Social Human right in Globalisation		
March	<b>Theory:</b>	Human Rights and the Indian Constitution, Human Rights, Laws and Institutions in India-NHRC, Human Rights of Marginalized Groups: Dalits, Adivasis, Women, Minorities and Unorganized	B.A (P)	Human Rights, Gender and Environment



		Workers, Consumer Rights, Human Rights Movement in India		
	<b>Tutorials:</b>	Human Rights and Constitutional Rights, UN and Human Rights, Consumers Rights Human Rights and Globalisation		
	<b>Assignment</b>	What do understand by the term ‘social inequality’? Discuss the various forms of inequality in the form of class and gender on Human Rights		
		What do you understand the term Patriarchy? Discuss the role and impact of patriarchy on Indian Society.		
		Discuss the role and significant contributions of Universal Declaration on Human Rights.		
		Discuss the role of various institutions of India to protect the Women’s right.		
		What do you understand by the term Sustainable Development? Discuss the various initiative undertaken in the world.		
April	<b>Theory</b>	Analysing Structures of Patriarchy & Gender, Economic Development and Women, Women’s Political Participation and Representation in India, Women’s Rights in India, Women’s Movements in India	B.A (P)	Human Rights, Gender and Environment
	<b>Tutorials:</b>	Women Institutions in India Women in Legislature Women in India		

	<b><u>Mid Term Test</u></b>	<p>1. What is social inequality? discuss the impact and role of globalisation on social inequality. with especial reference to India.</p> <p>2. Critically discuss the impact of globalisation on Indian social structure.</p> <p>3. What do you understand by the term Globalisation. How are the forces of globalisation affected the working class in the rural and urban India?</p>		
		<p>4. 'The Constitution of India upholds the tenets of Human Rights through various provisions enumerated in it' Discuss.</p> <p>5. Critically examine the role of Universal Deceleration of Human Rights on India/</p> <p>6. What are the provisions related to the protection of human rights in the Indian Constitution.</p>		
May	<b>Theory:</b>	Environmental and Sustainable Development, UN Environment Programme: Rio, Johannesburg and after, Issues of Industrial Pollution, Global Warming and threats to Bio – diversity, Environment Policy in India, Environmental Movement in India	B.A (P)	Human Rights, Gender and Environment
	<b>Tutorials:</b>	Human and Environment Change in the environment Environmental Rights		



**SEMESTER WISE TEACHING  
PLAN (2018-2019)  
SRI VENKATESWARA COLLEGE**

**Name of the Faculty:** Namita Pandey

**Department:** Political Science

**Semester :** II/IV/VI

Month		Topics	Course	Paper Code/Name
JANUARY	<b>Theory</b>	Approaches to International Relations A. classical Realism of Hans J. Morgenthau B. Neo Realism of Kenneth Waltz C. Neo-liberalism of Robert Keohane and Joseph Nye D. Structural Approach of Emmanuel Wallerstein E. Dependency School, A.G Frank	B.A(Prog) Sem IV	Introduction to International Relations
	<b>Practicals</b>			
	<b>Tutorials</b>	Discussion on Politics among Nations by Hans. J Morgenthau		
FEBRUARY	<b>Theory:</b>	Feminist Perspective on International Relations with reference to Ann Tickner  Cold War and Post Cold War Era: Consequences of the Second World War  Cold War: Definitions, Nature & Origin		

	<b>Practicals:</b>			
	<b>Tutorials:</b>	Discussion on the causes and consequences of the Second World War as Hitlers War		

	<b><u>Assignment :</u></b>	Discuss the Feminist Perspective of International Relations
MARCH	<b>Theory:</b>	Phases of Cold War First Phase (1945-55) Second Phase (1956-62)with special reference to the Cuban Missile Crisis Rise and Fall of Detante New Cold War with special reference to Afghan Crisis
	<b>Practicals:</b>	
	<b>Tutorials:</b>	Discussion on Different Phases of Cold War
	<b><u>Test</u></b>	Discuss Political Realism of Hans. J Morgenthau Critically examine Wallersteins World Systems Theory
APRIL	<b>Theory:</b>	Collapse of Soviet Union: Causes and Consequences End of Cold War Post Cold War World Era Emerging Centres of Power (EU, China & Japan)

	<b>Practicals:</b>	
	<b>Tutorials:</b>	Discussion on China as a Global power

MAY	<b>Theory:</b>	India's Foreign Policy A. Basic Determinants B. Non Alignment C. India as an Emerging Power
	<b>Practicals:</b>	
	<b>Tutorials:</b>	Discussion on India's Rise as a Global Power



**SEMESTER WISE TEACHING  
PLAN (2018-2019)  
SRI VENKATESWARA COLLEGE**

**Name of the Faculty:** Namita Pandey

**Department:** Political Science

**Semester :** II/IV/VI

Month		Topics	Course	Paper Code/Name	
JANUARY	<b>Theory</b>	Globalisation - Concepts and Perspectives:  Understanding globalisation and its alternative perspectives with reference to hyperglobalists, skeptics and transformational debate.  Political: Debates on Sovereignty and Territoriality	BA(Hons) Pol. Sc. 4th Semester	Global Politics	
	<b>Practicals</b>				
	<b>Tutorials</b>	Discussion on Robert Keohane, Susan Strange, Concept of Sovereignty			
FEBRUARY	<b>Theory:</b>	Culture and technological dimensions: Culture and Globalisation with reference to convergence, differentiation and diffusion of culture  Globalisation and Technology: Technological Facilitation of Globalization and its impact.  Global Resistance Movement: A) Global Social Movement B)NGO's			
	<b>Practicals:</b>				

	<b>Tutorials:</b>	Discussion on Samuel Huntington's Clash of Civilization and Benjamin Barber's Article on Mcworld vs Jihad		
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	<b><u>Assignment</u></b> :	Define Globalisation; Discuss Alternative perspectives of Globalization
MARCH	<b>Theory:</b>	Contemporary Global Issues  Proliferation of Nuclear Weapons  International Terrorism, Non-State Actors and State Terrorism; Post 9-11 developments
	<b>Practicals:</b>	
	<b>Tutorials:</b>	Discussion of Non Proliferation Treaty and its impact.
	<b><u>Test</u></b>	Discuss the concept of Political with special reference to debates of Sovereignty & Territoriality  Critically examine the working of the WTO  Write an Essay on Global Social Movements
APRIL	<b>Theory:</b>	Migration: Definition and nature of international migration  Human Security - Difference between traditional and human security; Components of Human Security
	<b>Practicals:</b>	

	<b>Tutorials:</b>	Presentation on Food Insecurity in India
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MAY	<b>Theory:</b>	Global Shifts: Power and Governance
	<b>Practicals:</b>	
	<b>Tutorials:</b>	Discussion on Major Shifts in the nature of power and governance post 1990





## SEMESTER WISE TEACHING PLAN

### SRI VENKATESWARA COLLEGE

January-June, 2019

Name of the Faculty: Dr SANTOSH KUMAR SINGH

Department: POLITICAL SCIENCE

Semester: B.A (H) GE -IVth

Month		Topics	Course	Paper Code/Name
January	<b>Theory:</b>	Philosophy, Theory and Thought Birth of Gandhi as a Philosopher Gandhi's Life	B.A (H) GE	Gandhi and the Contemporary World
	<b>Tutorials:</b>	Evolution of Gandhi as Philosopher, Why we are studying Gandhi		
February	<b>Theory:</b>	Gandhi's Book Swaraj Interpretation.  Gandhi's Swaraj, Satyagraha, Social Harmony, Peace and Violence, Social Movement	B.A (H) GE	Gandhi and the Contemporary World
	<b>Tutorials:</b>	Gandhi's critique of modern civilisation can be an alternative model or development.  Narmada Bachao Movement is a reflection of the Gandhian outlook. Comment		

March	<b>Theory:</b>	Gandhi on Tolerance, The Pacifist Movement, Women's Question, Caste and Religion Question, Gandhigiri: Perce	B.A (H) GE	Gandhi and the Contemporary World
	<b>Tutorials:</b>			
	<b>Assignment</b>	Gandhi's critique of modern civilisation can be an alternative model or development.  Narmada Bachao Movement is a reflection of the Gandhian outlook. Comment.  Critically examine the Gandhi's views to remove the untouchability in caste system.		
April	<b>Theory</b>	Gandhi on Modernity Gandhi on Civilization Gandhi on Development	B.A (H) GE	Gandhi and the Contemporary World
	<b>Tutorials:</b>			
	<b>Mid Term Test</b>	Critically examine the Gandhi's critique of Modernity.  What do you understand by 'Gandhigiri'? Can it be an effective weapon in the eradication of corruption?		

		<p>What do you understand by the term 'Swaraj'. Critically examine the Gandhi's concept of Swaraj.</p> <p>What is Satyagraha? Discuss the Gandhi's philosophy of Satyagraha.</p>		
May	<b>Theory:</b>	<p>Gandhi in a global frame Gandhi in the contemporary period</p>	B.A (H) GE	Gandhi and the Contemporary World
	<b>Tutorials:</b>	<p>Gandhi on Women Gandhi on Tolerance Gandhi on Lawyers Gandhi's idea of Trusteeship</p>		

Name of the Faculty: Dr Deepika Singh  
science

: Department: political

Semester : EVEN IV

PAPER: YOUR LAWS YOUR RIGHTS (SHARED PAPER)

Month		Topics	Course	Paper Code/Name
JANUARY	<b>Theory</b>	<b>RULE OF LAW AND CRIMINAL JUSTICE SYSTEM IN INDIA</b>	B A (H)  SEC	<b>YOUR LAWS YOUR RIGHTS</b>
	<b>Practicals</b>			
	<b>Tutorials</b>	DISCUSSION ON RULE OF LAW		
FEBRUARY	<b>Theory:</b>	<b>II. CONTINUE UNIT 1</b>		

	<b>Practicals:</b>		
	<b>Tutorials:</b>	DISCUSSION ON CRIMINAL JUSTICE SYSTEM IN INDIA	

	<b><u>Assignment :</u></b>	PRESENTATION ON RULE OF LAW	
MARCH	<b>Theory:</b>	EQUALITY AND NON-DISCRIMINATION	
	<b>Practicals :</b>		
	<b>Tutorials:</b>		
	<b><u>Test</u></b>	Internal test	
APRIL	<b>Theory:</b>	GENDER: THE PROTECTION OF WOMEN AGAINST DOMESTIC VIOLENCE, RAPE AND SEXUAL HARRASEMENT	

<b>Practicals</b> :			
<b>Tutorials:</b>	DISCUSSION ON VIOLENCE AGAINST WOMEN		

MAY	<b>Theory:</b>	CASTE: LAWS ABOLISHING UNTOUSHABILITY.		
	<b>Practicals:</b>			
	<b>Tutorials:</b>	REVISION		

DR DEEPIKA SINGH

ASSISTANT PROFESSOR

DEPARTMENT OF POLITICAL SCIENCE



**SEMESTER WISE TEACHING PLAN  
(2018-2019)**

**SRI VENKATESWARA COLLEGE**

**Name of the Faculty: Dr. Sunita Atal**

**Department: Sanskrit**

**Semester: II/IV/VI**

Month		Topics	Course	Paper Code/Name
JANUARY	<b>Theory</b>	SECTION-A UNIT-1 SCIENCE OF INQUIRY	B.A.(H)3 <sup>rd</sup> year	INDIAN SYSTEM OF LOGIC AND DEBATE
		SECTION-A BRIEF INTRODUCTION AND ELEMENTS OF	B.A (H)2 <sup>nd</sup> year AEEC	SANSKRIT METER AND MUSIC
FEBRUARY	<b>Theory:</b>	SECTION-A UNIT-2 METHOD OF DEBATE TYPES OF DEBATE	B.A.(H)3 <sup>rd</sup> year	INDIAN SYSTEM OF LOGIC AND DEBATE



		SECTION-C ANALYSIS OF SELECTED VEDIC METERS AND THEIR MUSICAL RENDERING	B.A (H)2 <sup>nd</sup> year AEEC	SANSKRIT METER AND MUSIC
	<b>Tutorials:</b>	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN.		

	<b><u>Assignment :</u></b>	ASSIGNMENTS WILL BE GIVEN REGARDING THE TOPICS		
MARCH	<b>Theory:</b>	SECTION-C UNIT-1 THEORY OF DEBATE	B.A.(H)3 <sup>rd</sup> year	INDIAN SYSTEM OF LOGIC AND DEBATE
		SECTION-D ANALYSIS OF SELECTED CLASSICAL METERS AND THEIR MUSICAL RENDERING	B.A (H)2 <sup>nd</sup> year AEEC	SANSKRIT METER AND MUSIC
	<b>Tutorials:</b>	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN.		
	<b><u>Test</u></b>	TESTS WILL BE TAKEN TIMELY		
APRIL	<b>Theory:</b>	SECTION-C UNIT-2 THEORY OF DEBATE	B.A.(H)3 <sup>rd</sup> year	INDIAN SYSTEM OF LOGIC AND DEBATE
		SECTION-A BRIF INTRODUCTION TO CHHANDAHSASTRA	B.A (H)2 <sup>nd</sup> year AEEC	SANSKRIT METER AND MUSIC
	<b>Tutorials:</b>	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN.		



## SEMESTER WISE TEACHING PLAN (2018-2019)

### SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Kanwar Singh

Department: Sanskrit

Semester: II/IV/VI

Month		Topics	Course	Paper Code/Name
JANUARY	<b>Theory</b>	SECTION 'A': INTRODUCTION TO INDIAN MEDICINE SYSTEM: AYURVEDA  UNIT I	B.A. 2 <sup>ND</sup> YEAR (H)  G.E.	GE-4 BASIC PRINCIPLES OF INDIAN MEDICINE SYSTEM (AYURVEDA)
		SECTION 'A': MAHAKAVYA AND CHARITAKAVYA	B.A. 2 <sup>ND</sup> YEAR (H)	C-9 MODERN SANSKRIT LITERATURE
		SECTION 'A': VIBHAKTYARTHA, VOICE AND KRT	B.A. 3 <sup>RD</sup> YEAR (H)	C-14 SANSKRIT COMPOSITION AND COMMUNICATION
	<b>Tutorials</b>	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN.		
FEBRUARY	<b>Theory:</b>	SECTION 'A': INTRODUCTION TO INDIAN MEDICINE SYSTEM: AYURVEDA  UNIT II	B.A. 2 <sup>ND</sup> YEAR (H)  G.E.	GE-4 BASIC PRINCIPLES OF INDIAN MEDICINE SYSTEM (AYURVEDA)

		SECTION 'B': GADYAKAVYA AND RUPAKA	B.A. 2 <sup>ND</sup> YEAR (H)	C-9 MODERN SANSKRIT LITERATURE
		SECTION 'B': TRANSLATION AND COMMUNICATION  UNIT I	B.A. 3 <sup>RD</sup> YEAR (H)	C-14 SANSKRIT COMPOSITION AND COMMUNICATION
	<b>Tutorials:</b>	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN.		

	<b><u>Assignment :</u></b>	ASSIGNMENTS WILL BE GIVEN REGARDING THE TOPICS.		
MARCH	<b>Theory:</b>	SECTION 'A': INTRODUCTION TO INDIAN MEDICINE SYSTEM: AYURVEDA  UNIT III	B.A. 2 <sup>ND</sup> YEAR (H)  G.E.	GE-4 BASIC PRINCIPLES OF INDIAN MEDICINE SYSTEM (AYURVEDA)
		SECTION 'C': GITIKAVYA AND OTHER GENRES	B.A. 2 <sup>ND</sup> YEAR (H)	C-9 MODERN SANSKRIT LITERATURE
		SECTION 'B': TRANSLATION AND COMMUNICATION  UNIT II	B.A. 3 <sup>RD</sup> YEAR (H)	C-14 SANSKRIT COMPOSITION AND COMMUNICATION
	<b>Tutorials:</b>	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN.		
	<b><u>Test</u></b>	TESTS WILL BE TAKEN TIMELY.		
APRIL	<b>Theory:</b>	SECTION 'D': IMPORTANT MEDICINAL PLANTS AND THEIR BASED ON AYURVEDA	B.A. 2 <sup>ND</sup> YEAR (H)  G.E.	GE-4 BASIC PRINCIPLES OF INDIAN MEDICINE SYSTEM (AYURVEDA)
		SECTION 'D': GENERAL SURVEY OF MODERN SANSKRIT LITERATURE	B.A. 2 <sup>ND</sup> YEAR (H)	C-9 MODERN SANSKRIT LITERATURE
		SECTION 'C': ESSAY	B.A. 3 <sup>RD</sup> YEAR (H)	C-14 SANSKRIT COMPOSITION AND COMMUNICATION

	<b>Tutorials:</b>	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN.		
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**SEMESTER WISE TEACHING PLAN  
SRI VENKATESWARA COLLEGE**

**Name of the Faculty: Dr. Kalyani Krishna  
Semester : II/IV/VI 2018-19**

**Department: Botany**

Month		Topics	Course	Paper Code/Name
January	<b>Theory</b>	Introduction to paper and discussion about the paper	B.Sc. (H) Botany Semester VI	Plant metabolism
		Introduction to paper	B.Sc. (H) Biological Sciences Semester VI	Analytical techniques in Plant Sciences
	<b>Practicals</b>	<ul style="list-style-type: none"> <li>Chemical separation of photosynthetic pigments</li> </ul>	B.Sc. (H) Botany Semester VI	Plant metabolism
		Study of Blotting Techniques (Southern, Northern and Western ), Polymerase Chain Reaction, DNA finger printing and DNA sequencing <ul style="list-style-type: none"> <li>To determine osmotic potential of plant cell sap by                plasmolytic method</li> </ul>	B.Sc. (H) Biological Sciences Semester VI  B.Sc. (P) Life Sciences	Analytical techniques in Plant Sciences  Plant Physiology and Metabolism
<b>Tutorials</b>	-----			
February	<b>Theory:</b>	Carbon assimilation, historical background, concept of light, absorption spectra, photosynthetic pigments, their role, antenna molecules, reaction centre, photochemical reactions, ETC, photophosphorylation, PSI, PSII, Qcycle,	B.Sc. (H) Botany Semester VI	Plant metabolism
		Chromatography: principle and applications of paper chromatography	B.Sc. (H) Biological Sciences Semester VI	Analytical techniques in Plant Sciences

	<b>Practicals:</b>	<ul style="list-style-type: none"> <li>To study Hill's reaction</li> <li>To study the effect of light intensity on rate of photosynthesis</li> <li>To study the effect of carbon dioxide on rate of photosynthesis</li> <li>To compare the rate of respiration in different parts of a plant</li> </ul>	B.Sc. (H) Botany Semester VI	Plant metabolism
		working and applications of Transmission and Scanning Electron Microscopy, negative and positive staining	B.Sc. (H) Biological Sciences Semester VI	Analytical techniques in Plant Sciences
		<ul style="list-style-type: none"> <li>Comparison of the rate of respiration in any two parts of a plant.</li> <li>To study the effect of two environmental factors (light and wind) on transpiration by excised twig</li> <li>To demonstrate hill reaction</li> </ul>	B.Sc. (P) Life Sciences	Plant Physiology and Metabolism
	<b>Tutorials:</b>	-----		
March	<b>Theory:</b>	CO <sub>2</sub> reduction, photorespiration, C <sub>4</sub> pathways, CAM, factors affecting CO <sub>2</sub> reduction Synthesis and catabolism of sucrose and starch ATP synthesis: mechanism, substrate level phosphorylation, chemiosmotic mechanism, ATP synthase	B.Sc. (H) Botany Semester VI	Plant metabolism
		Column chromatography, TLC, GLC, HPLC	B.Sc. (H) Biological Sciences Semester VI	Analytical techniques in Plant Sciences

	<p><b>Practicals:</b></p> <ul style="list-style-type: none"> <li>To study the activity of nitrate reductase in leaves of two different plant sources</li> <li>To study the activity of urease enzyme and effect of substrate concentration on enzyme activity</li> <li>To demonstrate the activity of lipase in germinating oilseeds</li> <li>To demonstrate mobilization of lipids during germination</li> </ul> <p>Methods of sample preparation for electron microscopy (shadow casting, freeze fracture, etching), characterization of nucleic acids</p> <ul style="list-style-type: none"> <li>To study the activity of catalase</li> <li>To study the effect of pH on catalase</li> </ul> <p>To study the effect of enzyme concentration on catalase</p>	<p>B.Sc. (H) Botany Semester VI</p> <p>B.Sc. (H) Biological Sciences Semester VI</p> <p>B.Sc. (P) Life Sciences</p>	<p>Plant metabolism</p> <p>Analytical techniques in Plant Sciences</p> <p>Plant Physiology and Metabolism</p>
	<p><b>Tutorials:</b> -----</p>		
	<p><b>Assignment :</b> Given to all students for respective papers</p>		
April	<p><b>Theory:</b> Boyer's conformational model, racker's experiment, Jagendorf's experiment, role of uncouplers Nitrate assimilation, biological nitrogen fixation, physiology and biochemistry</p> <p>Ion-exchange chromatography, molecular sieve chromatography, Affinity chromatography</p>	<p>B.Sc. (H) Botany Semester VI</p> <p>B.Sc. (H) Biological Sciences Semester VI</p>	<p>Plant metabolism</p> <p>Analytical techniques in Plant Sciences</p>
	<p><b>Practicals:</b></p> <ul style="list-style-type: none"> <li>To demonstrate fluorescence by isolated chlorophyll pigments</li> <li>To demonstrate absorption spectrum of photosynthetic pigments</li> <li>To demonstrate respiratory quotient</li> </ul> <p>Estimation of proteins by Lowry's method, Gel electrophoresis</p> <ul style="list-style-type: none"> <li>To demonstrate bolting</li> <li>To demonstrate effect of auxins on rooting</li> </ul> <p>To demonstrate suction due to transpiration</p>	<p>B.Sc. (H) Botany Semester VI</p> <p>B.Sc. (H) Biological Sciences Semester VI</p> <p>B.Sc. (P) Life Sciences</p>	<p>Plant metabolism</p> <p>Analytical techniques in Plant Sciences</p> <p>Plant Physiology and Metabolism</p>
	<p><b>Tutorials:</b> -----</p>		
	<p><b>Test</b> Conducted for all papers</p>		

May	<b>Theory:</b>	Ammonia assimilation, reductive amination and transamination	B.Sc. (H) Botany Semester VI	Plant metabolism
		Use of radioisotopes in biological research, auto-radiography, pulse-chase experiment	B.Sc. (H) Biological Sciences Semester VI	Analytical techniques in Plant Sciences
	<b>Practicals:</b>	<ul style="list-style-type: none"> <li>• Repetitions of experiments which students feel</li> <li>• Revision and test</li>   <li>• Repetitions of experiments which students feel</li> <li>• Revision and test</li>   <li>• Repetitions of experiments which students feel</li> </ul> Revision and test	B.Sc. (H) Botany Semester VI  B.Sc. (H) Biological Sciences Semester VI  B.Sc. (P) Life Sciences	Plant metabolism  Analytical techniques in Plant Sciences.  Plant Physiology and Metabolism
<b>Tutorials:</b>	-----			



**SEMESTER WISE TEACHING PLAN**  
**SRI VENKATESWARA COLLEGE(2018-19 Even)**

**Name of the Faculty: Dr. Shukla Saluja**

**Department: Botany**

**Semester :**

**I/III/V**

Month		Topics	Course	Paper Code/Name
JAN	<b>Theory</b>	Plant identification, Classification, Nomenclature; Biosystematics.	B.Sc. Botany (Sem: IV)	CC-10: Plant Systematics
		Ecosystems (4 lectures) Structure; Processes; Trophic organisation;	B.Sc. Botany (Sem: IV)	CC-9: Ecology
		Applications of Biotechnology (14 lectures) Pest resistant (Bt-cotton); herbicide resistant plants (RoundUp Ready soybean);	B.Sc. Botany (Sem: VI)	CC-14: Plant Biotechnology
	<b>Practicals</b>	Ex.1: Study of vegetative and floral characters terminology for families description. Ex.2: Study of vegetative and floral characters for family-Brassicaceae (description). Ex.3: Study of vegetative and floral characters for family-Solanaceae(description). Ex.4: Study of vegetative and floral characters for family-Lamiaceae (description).  I , Study of instruments used to measure microclimatic variables: Soil thermometer, maximum and minimum thermometer, anemometer, psychrometer/hygrometer, rain gauge and lux meter. 2. Determination of ph, and analysis of two soil samples for carbonates, chlorides, nitrates, sulphates, organic matter and base deficiency by rapid field test  Construction of restriction maps, Preparation of LB media and understand the functioning of autoclave, Agrobacterium tumefaciens mediated gene transfer methods and indirect methods of gene transfer, Plasmid isolation	B.Sc. Botany (Sem: IV)  B.Sc.(P)-Life Science Sem.II  B.Sc. Botany (Sem: VI)	CC-10: Plant Systematics  CC-2/Plant Ecology & Taxonomy  CC-14: Plant Biotechnology
<b>Tutorials</b>	-----			
FEB	<b>Theory:</b>	Field inventory; Functions of Herbarium; Important herbaria and botanical gardens of the world and India; ; Virtual herbarium; E-flora; Documentation: Flora, Monographs, Journals; Keys: Single access and Multi-access	B.Sc. Botany (Sem: IV)	CC-10: Plant Systematics
		Food chains and Food webs; Ecological pyramids.	B.Sc. Botany (Sem: IV)	CC-9: Ecology
		Transgenic crops with improved quality traits (Flavr Savr tomato, Golden rice);	B.Sc. Botany (Sem: VI)	CC-14: Plant Biotechnology

	<p><b>Practicals:</b> Ex.5: Study of vegetative and floral characters for family-Asteraceae (description). Ex.6: Study of vegetative and floral characters for family-Euphorbiaceae (description). Ex.7: Study of vegetative and floral characters for family-Liliaceae (description).</p> <p>3, Comparison of bulk density, porosity and rate of infiltration of water in soil of three habitats. 4. (a) Study of morphological adaptations of hydrophytes and xerophytes (flair each). (b)Study of biotic interactions of the following: Stein parasite (C uscula), Root parasite ( Orobanche), Epiphytes, Predation (Insectivorous plants)</p> <p>Understanding Genetically modified crop plants (Bt cotton, Golden rice and Flavr savr tomato), somatic embryogenesis (direct and indirect), artificial seeds and in vitro tissue culture methods</p>	<p>B.Sc. Botany (Sem: IV)</p> <p>B.Sc.(P)-Life Science Sem.II</p> <p>B.Sc. Botany (Sem: VI)</p>	<p>CC-10: Plant Systematics</p> <p>CC-2/Plant Ecology &amp; Taxonomy</p> <p>CC-14: Plant Biotechnology</p>
	<p><b>Tutorials:</b> -----</p>		
MAR	<p><b>Theory:</b> Principles and rules (ICN); Ranks and names; Typification, author citation, valid publication, rejection of names, principle of priority and its limitations; Names of hybrids.</p> <p>: Functional aspects of ecosystem (8 lectures) Principles and models of energy flow; Production and productivity; Ecological efficiencies</p> <p>Improved horticultural varieties (Moondust carnations); Role of transgenics in bioremediation (Superbug);</p>	<p>B.Sc. Botany (Sem: IV)</p> <p>B.Sc. Botany (Sem: IV)</p> <p>B.Sc. Botany (Sem: VI)</p>	<p>CC-10: Plant Systematics</p> <p>CC-9: Ecology</p> <p>CC-14: Plant Biotechnology</p>

	<p><b>Practicals:</b> Ex.8: Study of vegetative and floral characters for family-Myrtaceae(description). Ex.9: Study of vegetative and floral characters for family-Apiaceae(description).</p> <p>Determination of minimal quadrat size for the study of herbaceous vegetation in the college campus by species area curve method. (species to be listed) 6. Quantitative analysis of herbaceous vegetation in the college campus for frequency and comparison with Raunkiaer's frequency distribution law</p> <p>Experiments: Micropropagation technique and isolation of protoplast methods, in vitro sterilization methods</p>	<p>B.Sc. Botany (Sem: IV)</p> <p>B.Sc.(P)-Life Science Sem.II</p> <p>B.Sc. Botany (Sem: VI)</p>	<p>CC-10: Plant Systematics</p> <p>CC-2/Plant Ecology &amp; Taxonomy</p> <p>CC-14: Plant Biotechnology</p>
	<p><b>Tutorials:</b> -----</p>		
APR	<p><b>Theory:</b> Major contributions of Theophrastus, Bauhin, Tournefort, Linnaeus, Adanson, de Candolle, Bessey, Hutchinson, Takhtajan and Cronquist Classification systems of Bentham and Hooker (upto series) and Engler and Prantl (upto series); Brief reference of Angiosperm Phylogeny Group (APG III) classification.</p> <p>Biogeochemical cycles; Cycling of Carbon, Nitrogen and Phosphorus.</p> <p>Edible vaccines; Industrial enzymes (Aspergillase, Protease, Lipase); Genetically Engineered Products–Human Growth Hormone; Humulin; Biosafety concerns.</p>	<p>B.Sc. Botany (Sem: IV)</p> <p>B.Sc. Botany (Sem: IV)</p> <p>B.Sc. Botany (Sem: VI)</p>	<p>CC-10: Plant Systematics</p> <p>CC-9: Ecology</p> <p>CC-14: Plant Biotechnology</p>
	<p><b>Practicals:</b> Ex.10: Study of vegetative and floral characters for family-Ranunculaceae (description). Ex.11: Study of vegetative and floral characters for family-Poaceae(description).</p> <p>7. Study of vegetative and floral characters of the following families (Description, V.S. flower, section of ovary, floral diagram/s, floral formula/e and systematic position according to Bentham &amp; Hooker's system of classification): Brassicaceae - Brassica, Alyssum / Iberis; Asteraceae - Sonchus/Launaea, Vernonia/Ageratum, Eclipta/Tridax; Solanaceae - Solanum nigrum, Withania; Lamiaceae - Salvia, Ocimum; Liliaceae - Asphodelus / Lilium / Allium. 8. Mounting of a properly dried and pressed specimen of any wild plant with herbarium label (to be submitted in the record book).</p> <p>Study of embryo and endosperm culture, gel electrophoresis, Mock test and file evaluation</p>	<p>Botany (Sem: IV)</p> <p>B.Sc.(P)-Life Science Sem.II</p> <p>B.Sc. Botany (Sem: VI)</p>	<p>CC-10: Plant Systematics</p> <p>CC-2/Plant Ecology &amp; Taxonomy</p> <p>CC-14: Plant Biotechnology</p>
	<p><b>Tutorials:</b> -----</p>		
	<p><b>Test</b></p>		

<b>Practicals:</b>			
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**SEMESTER WISE TEACHING PLAN (2018-19))**  
**SRI VENKATESWARA COLLEGE**

**Name of the Faculty: Dr. Aditi Kothari Chhajer**

**Department: Botany**

**Semester : II/IV/VI**

Month		Topics	Course	Paper
JANUARY	<b>Theory</b>	<ul style="list-style-type: none"> <li>Origin of Cultivated Plants: Concept of centres of origin, their importance with reference to Vavilov's work</li> <li>Cereals-Wheat -Origin, morphology, uses</li> </ul>	B.Sc.(P.) Life Sciences Sem VI	Economic Botany and Plant Biotechnology
		<ul style="list-style-type: none"> <li>Introduction to Intellectual Property: Historical Perspective, Different Types of IP, Importance of protecting IP.</li> <li>Copyrights Introduction, How to obtain, Differences from Patents.</li> </ul>	B.Sc.(P.) Life Sciences Sem VI	Intellectual Property Rights
		Characterization of proteins and nucleic acids; Electrophoresis: AGE, PAGE, SDS-PAGE	B.Sc.(H.) Biological Science Sem VI	Analytical Techniques in Plant Sciences
	<b>Practicals</b>	Familiarization with basic equipment in tissue culture. Study of economically important plants - Black pepper, Clove and Tea through specimens and sections.	B.Sc.(P.) Life Sciences Sem VI	Economic Botany and Plant Biotechnology
		Copyright infringement Plagiarism check Introduction to IPR e-diary	B.Sc.(P.) Life Sciences Sem VI	Intellectual Property Rights
<b>Tutorials</b>				
FEBRUARY	<b>Theory:</b>	<ul style="list-style-type: none"> <li>Legumes-General account with special reference to Gram and soybean.</li> <li>Micropropagation: Introduction</li> <li>PCR and Reverse Transcriptase-PCR</li> </ul>	B.Sc.(P.) Life Sciences Sem VI	Economic Botany and Plant Biotechnology
		Trade Marks Introduction, How to obtain, Different types of marks — Collective marks, certification marks, service marks, Trade names, etc. Differences from Designs.  Geographical Indications Definition, rules for registration, prevention of illegal exploitation, importance to India.	B.Sc.(P.) Life Sciences Sem VI	Intellectual Property Rights

		Column chromatography, TLC, GLC, HPLC, Ion exchange chromatography	B.Sc.(H.) Biological Science Sem VI	Analytical Techniques in Plant Sciences
	<b>Practicals:</b>	Study of economically important plants: Wheat, Gram, Soybean through specimens, sections and microchemical tests.	B.Sc.(P.) Life Sciences Sem VI	Economic Botany and Plant Biotechnology
		Trademark Search Patent search Industrial designs	B.Sc.(P.) Life Sciences Sem VI	Intellectual Property Rights
	<b>Tutorials:</b>			

MARCH	<b>Theory:</b>	Haploid production through androgenesis and gynogenesis; DNA Fingerprinting; Molecular DNA markers i.e. RAPD, RFLP, SNPs	B.Sc.(P.) Life Sciences Sem VI	Economic Botany and Plant Biotechnology
		Patents Historical Perspective, Basic and associated right, WIPO, PCT system, Traditional Knowledge, Patents and Healthcare — balancing promoting innovation with public health, Software patents and their importance for India  Industrial Designs Definition, How to obtain, features, International design registration.	B.Sc.(P.) Life Sciences Sem VI	Intellectual Property Rights
		Principle; Paper chromatography; Molecular sieve chromatography; Affinity chromatography.	B.Sc.(H.) Biological Science Sem VI	Analytical Techniques in Plant Sciences
	<b>Practicals:</b>	Study through photographs: Anther culture, somatic embryogenesis, endosperm and embryo culture; micropropagation	B.Sc.(P.) Life Sciences Sem VI	Economic Botany and Plant Biotechnology
		Geographical Indicators i) food (Basmati rice, Tirupati laddu, etc.) ii) handlooms (kota saree, banarase, etc.) iii) industry (mysore agarbatti, feni, champagne, etc.) iv) Natural resources (Makrana marble, etc)	B.Sc.(P.) Life Sciences Sem VI	Intellectual Property Rights
	<b>Tutorials:</b>			

APRIL	<b>Theory:</b>	DNA sequencing Hybridoma and monoclonal antibodies, ELISA	B.Sc.(P.) Life Sciences Sem VI	Economic Botany and Plant Biotechnology
		Layout design of integrated circuits Circuit Boards, Integrated Chips, Importance for electronic industry. Trade Secrets Introduction and Historical Perspectives, Scope of Protection, Risks involved and legal aspects of Trade Secret Protection. Different International agreements (a) World Trade Organization (WTO): (i) General Agreement on Tariffs & Trade (GATT), Trade Related Intellectual Property Rights (TRIPS) agreement	B.Sc.(P.) Life Sciences Sem VI	Intellectual Property Rights
		Radioisotopes: Use in biological research, auto- radiography, pulse chase experiment.  Spectrophotometry: Principle and its application in biological research	B.Sc.(H.) Biological Science Sem VI	Analytical Techniques in Plant Sciences
	<b>Practicals:</b>	Study of molecular techniques: PCR, Blotting techniques, AGE and PAGE	B.Sc.(P.) Life Sciences Sem VI	Economic Botany and Plant Biotechnology
		Biopiracy Industrial Designs	B.Sc.(P.) Life Sciences Sem VI	Intellectual Property Rights
	<b>Tutorials:</b>			
MAY	<b>Theory:</b>	Blotting techniques: Northern, Southern and Western Blotting, Presentations and Revision of Concepts	B.Sc.(P.) Life Sciences Sem VI	Economic Botany and Plant Biotechnology
		General Agreement on Trade related Services (GM'S) (iii) Madrid Protocol (iv) Berne Convention (v) Budapest Treaty (b) Paris Convention WIPO and TRIPS, IPR and Plant Breeders Rights, IPR and Biodiversity IP Infringement issue and enforcement — Role of Judiciary, Role of law enforcement agencies Police, Customs etc. Economic Value of Intellectual Property , Intangible assets and their valuation, Intellectual Property in the Indian Context Various laws in India: Licencing and tech transfer	B.Sc.(P.) Life Sciences Sem VI	Intellectual Property Rights
		Centrifugation: Differential and density gradient centrifugation, sucrose density gradient, CaCl <sub>2</sub> gradient, analytical centrifugation, ultracentrifugation, marker enzymes	B.Sc.(H.) Biological Science Sem VI	Analytical Techniques in Plant Sciences

	<b>Practicals:</b>	Mock Practical exam and Revision	B.Sc.(P.) Life Sciences Sem VI	Economic Botany and Plant Biotechnology
		e-diary submissions mock practical and revision	B.Sc. m(P.) Life Sciences Sem VI	Intellectual Property Rights
	<b>Tutorials:</b>			

## Teaching plan

Name: Dr. Pooja Gokhale Sinha

Department: Botany

Week	Course	Subject	Topic
<b>January</b>	B.Sc. (H) Botany Sem IV	Ecology	<ul style="list-style-type: none"> <li>• Community Dynamics</li> <li>• Introduction to community</li> <li>• Description of community characters</li> <li>• Analytical and synthetic characters</li> </ul>
	B.Sc. (H) Botany Sem VI	Industrial and Environmental Microbiology	<ul style="list-style-type: none"> <li>• Prevalence of microbes in air, water and soil</li> <li>• Types and functions of Fermenters</li> <li>• Functions of fermenters in industrial microbiology</li> </ul>
<b>February</b>	B.Sc. (H) Botany Sem IV	Ecology	<ul style="list-style-type: none"> <li>• Laws of ecology,</li> <li>• Law of minimum</li> <li>• Law of tolerance</li> </ul>
	B.Sc. (H) Botany Sem VI	Industrial and Environmental Microbiology	<ul style="list-style-type: none"> <li>• Methods of Waste water treatment</li> <li>• Mechanisms to isolate microbes from air water and soil</li> </ul>
<b>March</b>	B.Sc. (H) Botany Sem IV	Ecology	<ul style="list-style-type: none"> <li>• Population ecology: Introduction</li> <li>• Types of population pyramids</li> <li>• Population interactions</li> <li>• Survivorship curves</li> </ul>
	B.Sc. (H) Botany Sem VI	Industrial and Environmental Microbiology	<ul style="list-style-type: none"> <li>• Role of microbes in industrial purposes</li> <li>• Microbes in enzymes, medicines etc</li> <li>• Processes in industrial microbiology</li> </ul>

<b>April</b>			
	B.Sc. (H) Botany Sem IV	Ecology	<ul style="list-style-type: none"> <li>• Concept of climax in succession</li> <li>• Theories of succession in a community</li> </ul>
	B.Sc. (H) Botany Sem VI	Industrial and Environmental Microbiology	<ul style="list-style-type: none"> <li>• Environmental microbiology: Microbes in Air, soil and water</li> <li>• Recapitulation</li> </ul>



## SEMESTER WISE TEACHING PLAN (2018-2019)

### SRI VENKATESWARA COLLEGE

Name of the Faculty: Neeti Mehla

Department: Botany

Semester: II/IV/VI

Academic Year – 2018-2019

Month		Topics	Course	Paper Code/Name
JANUARY	<b>Theory</b>	<ul style="list-style-type: none"> <li>Spices: General account with special reference to clove and black pepper (Botanical name, family, part used, morphology and uses)</li> <li>Central Dogma and Genetic Code -Key experiments establishing-The Central Dogma,Genetic code (salient features &amp; experiments that deciphered the correlation between mRNA codon and amino acid).</li> <li>Importance of water, water potential and its components, pathway of water movement</li> </ul>	BSc. Life Sciences VI Sem  Bsc. Botany (H) IV Sem  BSc.Life Sciences IV Sem	Economic Botany and Plant Biotechnology  Molecular Biology  Plant Physiology and Metabolism
	<b>Practicals</b>	<ul style="list-style-type: none"> <li>Familiarization with basic equipment in tissue culture. Study of economically important plants - Black pepper, Clove and Tea through specimens and sections</li> <li>Preparation of LB medium and raising E. coli</li> <li>Study of experiments establishing nucleic acid as genetic material (Avery et al, Griffith's, Hershey &amp; Chase's and Fraenkel &amp; Conrat's experiments) through photographs</li> <li>DNA isolation from cauliflower heads</li> <li>Determination of osmotic potential of plant cell sap by plasmolytic method.</li> <li>To study the effect of the light intensity on transpiration by excised twig.</li> <li>To study the effect of the light intensity on transpiration by excised twig</li> </ul>	BSc. Life Sciences VI Sem  Bsc. Botany (H) IV Sem  Bsc.Life Sciences IV Sem	Economic Botany and Plant Biotechnology  Molecular Biology  Plant Physiology and Metabolism

	<b>Tutorials</b>			
FEBRUARY	<b>Theory:</b>	<p>Beverages- Tea (morphology, processing, uses) Oils and Fats- General description with special reference to groundnut.</p> <p>Mechanism of Transcription- Transcription in prokaryotes and eukaryotes; Understanding the steps in process of transcription: Initiation, Elongation and Termination. Enzymes and factors involved in transcription.</p> <p>Ascent of sap, transpiration and its significance, factors affecting transpiration, root pressure and guttation, stomatal movements – only ion theory.</p>	<p>BSc. Life Sciences VI Sem</p> <p>Bsc. Botany (H) IV Sem</p> <p>BSc. Life Sciences IV Sem</p>	<p>Economic Botany and Plant Biotechnology</p> <p>Molecular Biology</p> <p>Plant Physiology and Metabolism</p>
	<b>Practicals</b>	<ul style="list-style-type: none"> <li>• Study of economically important plants: Wheat, Gram, Soybean through specimens, sections and microchemical tests.</li> <li>• Quantification of unknown DNA by diphenylamine reagent.</li> <li>• Study of DNA replication through photographs: Modes of replication - Rolling circle, Theta and semi-discontinuous ; Semiconservative model of replication (Messelson and Stahl's experiment); Telomerase assisted end-replication of linear DNA</li> <li>• Study of structures of : tRNA (2D and 3D); prokaryotic RNA polymerase and eukaryotic RNA polymerase II through photographs.</li> <li>• Calculation of stomatal index and stomatal frequency of a mesophyte and a xerophyte.</li> <li>• To Study Hill's reaction.</li> <li>• To study the activity of catalase enzyme</li> </ul>	<p>BSc. Life Sciences VI Sem</p> <p>Bsc. Botany (H) IV Sem</p>	<p>Economic Botany and Plant Biotechnology</p> <p>Molecular Biology</p>
	<b>Tutorials:</b>			
	<b>Theory:</b>	<p>Fibre Yielding Plants General description with special reference to Cotton (Botanical name, family, part used, morphology and uses) Brief account of embryo &amp; endosperm culture with their applications.</p> <p>Split genes-concept of introns and exons, Splicing pathways, group I &amp; group II intron splicing, Spliceosome and assembly of the spliceosome machinery , Alternative splicing, Eukaryotic mRNA processing (5' cap, 3' poly A tail) ; Ribozymes, RNA Editing</p>	<p>BSc. Life Sciences VI Sem</p> <p>Bsc. Botany (H) IV Sem</p>	<p>Economic Botany and Plant Biotechnology</p> <p>Molecular Biology</p>

		Composition of phloem sap, girdling experiments, Pressure Flow Model	BSc.Life Sciences IV Sem	Plant Physiology and Metabolism
MARCH	<b>Practicals:</b>	<ul style="list-style-type: none"> <li>Study through photographs: Anther culture, somatic embryogenesis, endosperm and embryo culture; micropropagation</li> </ul>	BSc. Life Sciences VI Sem	Economic Botany and Plant Biotechnology
		<ul style="list-style-type: none"> <li>Study of the following through photographs: Assembly of Spliceosome machinery; Splicing mechanism in group I &amp; group II introns; Ribozymes and Alternative splicing</li> </ul>	Bsc. Botany (H) IV Sem	Molecular Biology
		<ul style="list-style-type: none"> <li>To study the effect of pH and enzyme concentration on the activity of Enzyme Catalase.</li> </ul>	BSc.Life Sciences IV Sem	Plant physiology and Metabolism
		<ul style="list-style-type: none"> <li>To study the effect of light intensity on O<sub>2</sub> evolution in photosynthesis.</li> </ul>		
		<ul style="list-style-type: none"> <li>To study the effect of bicarbonate concentration on O<sub>2</sub> evolution in photosynthesis.</li> <li></li> <li></li> </ul>		
<b>Tutorials:</b>				
<b>Tests:</b>				
	<b>Theory:</b>	Methods of gene transfer-Agrobacterium mediated genetic transformation. Bt Cotton and Golden Rice Direct gene transfer by electroporation	BSc. Life Sciences VI Sem	Economic Botany and Plant Biotechnology
		Translation in prokaryotes and eukaryotes; Understand the steps in process of translation - Initiation, Elongation and Termination. Enzymes and factors involved in translation. Ribosome structure and assembly (in prokaryotes and eukaryotes); charging of tRNA, aminoacyl tRNA synthetases;	Bsc. Botany (H) IV Sem	Molecular Biology
		Pressure Flow Model, phloem loading and unloading	BSc.Life Sciences IV Sem	Plant Physiology and Metabolism
APRIL	<b>Practicals:</b>	<ul style="list-style-type: none"> <li>Study of molecular techniques: PCR, Blotting techniques, AGE and PAGE</li> </ul>	BSc. Life Sciences VI Sem	Economic Botany and Plant Biotechnology
		<ul style="list-style-type: none"> <li>Understanding the mechanism of RNAi by photographs.</li> <li>Revision of DNA isolation Experiment</li> </ul>	Bsc. Botany (H) IV Sem	Molecular Biology



		<ul style="list-style-type: none"> <li>• Mock test</li> <li>• Comparison of the rate of respiration in any two parts of a plant.</li> <li>• To demonstrate the effect of Bolting</li> <li>• To study the phenomenon of seed germination (effect of light and darkness)</li> <li>• To study the effect of Auxins.</li> </ul>	BSc.Life Sciences IV Sem	Plant physiology and Metabolism
	<b>Tutorials:</b>			
	<b>Theory:</b>	<p>Direct gene transfer by Microinjection, and Microprojectile bombardment.</p> <p>Fidelity of translation; Inhibitors of protein synthesis; Post-translational modifications of proteins.</p> <p>Revision of all Topics</p>	<p>BSc. Life Sciences VI Sem</p> <p>Bsc. Botany (H) IV Sem</p> <p>BSc. Life Sciences IV Sem</p>	<p>Economic Botany and Plant Biotechnology</p> <p>Molecular Biology</p> <p>Plant Physiology and Metabolism</p>
<b>MAY</b>	<b>Practicals:</b>	<p>Mock Practical exam and Revision</p> <p>Mock Practical exam and Revision</p> <p>Demonstration of following setups 1.Suction due to transpiration 2.Separation of amino acids by paper chromatography</p>	<p>BSc. Life Sciences VI Sem</p> <p>Bsc. Botany (H) IV Sem</p> <p>BSc.Life Scieces IV Sem</p>	<p>Economic Botany and Plant Biotechnology</p> <p>Molecular Biology</p> <p>Plant physiology and Metabolism</p>
	<b>Tutorials:</b>			

**CHEMISTRY TEACHING  
PLAN**

**ALL TEACHERS**

**2018-19- EVEN SEMESTER**



**SEMESTER WISE TEACHING PLAN**  
**SRI VENKATESWARA COLLEGE-2018-19**

Name of the Faculty: **Dr. R.P.SINGH**      Department: **CHEMISTRY**

Semester : **II/IV/VI**

Month		Topics	Course	Paper Code/Name
JANUARY	<b>Theory</b>	Unit I: Organic spectroscopy General principles Introduction to absorption and emission spectroscopy. UV Spectroscopy: Types of electronic transitions, $\lambda_{max}$ , Chromophores and Auxochromes, Bathochromic and Hypsochromic shifts, Intensity of absorption; Application of Woodward Rules for calculation of $\lambda_{max}$ for the following systems: $\alpha,\beta$ unsaturated aldehydes, ketones, carboxylic acids and esters; Conjugated dienes: alicyclic, homoannular and heteroannular; Extended conjugated systems (aldehydes, ketones and dienes); distinction between cis and trans isomers.	B.Sc. CHEMISTRY (Hons.) III Year, Semester VI	CHEMISTRY - C XIV: ORGANIC CHEMISTRY V
	<b>Practicals</b>			
FEBRUARY	<b>Theory</b>	IR Spectroscopy: Fundamental and non-fundamental molecular vibrations; IR absorption positions of O, N and S containing functional groups; Effect of H-bonding, conjugation, resonance and ring size on IR absorptions; Fingerprint region and its significance; application in functional group analysis. NMR Spectroscopy: Basic principles of Proton Magnetic Resonance, chemical shift and factors influencing it; Spin – Spin coupling and coupling constant; Anisotropic effects in alkene, alkyne, aldehydes and aromatics, Interpretation of NMR spectra of simple compounds. Applications of IR, UV and NMR for identification of simple organic molecules.	B.Sc. CHEMISTRY (Hons.) III Year, Semester VI	Paper 22-CHHT 616: Organic Chemistry -V
	<b>Practicals:</b>	Checking the calibration of the thermometer Purification of organic compounds by crystallization using the following solvents: a. Water b. Alcohol c. Alcohol-Water Determination of the melting points of unknown organic compounds (Kjeldahl method and electrically heated melting point apparatus) Extraction of caffeine from tea leaves. Preparation of urea formaldehyde resin.	B.Sc. CHEMISTRY (Hons.) I Year, Semester II	Practical C – III
		Functional group test for nitro, amine and amide groups.	B.Sc. CHEMISTRY (Hons.) III Year, Semester VI	CHEMISTRY - C XIV: ORGANIC CHEMISTRY V

		Qualitative analysis of unknown organic compounds containing simple functional groups (alcohols, carboxylic acids, phenols, carbonyl compounds and esters)	B.Sc. CHEMISTRY (Hons.) II Year, Semester IV	Practical C – IX Lab
MARCH	<b>Theory</b>	<p>Dyes Classification, Colour and constitution; Mordant and Vat Dyes; Chemistry of dyeing; Synthesis and applications of: Azo dyes – Methyl Orange and Congo Red (mechanism of Diazo Coupling); Triphenyl Methane Dyes - Malachite Green, Rosaniline and Crystal Violet; Phthalein Dyes – Phenolphthalein and Fluorescein; Natural dyes –structure elucidation and synthesis of Alizarin and Indigotin; Edible Dyes with examples.</p> <p>Polymers Introduction and classification including di-block, tri-block and amphiphilic polymers; Number average molecular weight, Weight average molecular weight, Degree of polymerization, Polydispersity Index.</p>	B.Sc. CHEMISTRY (Hons.) III Year, Semester VI	CHEMISTRY - C XIV: ORGANIC CHEMISTRY V
	<b>Practicals</b>	<p>Effect of impurities on the melting point – mixed melting point of two unknown organic Compounds Organic Preparations (i) Bromination of acetanilide / aniline / phenol (ii) Nitration of nitrobenzene / toluene</p> <p>Qualitative analysis of unknown organic compounds containing monofunctional groups (carbohydrates, aryl halides, aromatic hydrocarbons, nitro compounds, amines and amides) and simple bifunctional groups, e.g. salicylic acid, cinnamic acid, nitrophenols etc.</p> <p>Qualitative analysis of unknown organic compounds containing simple functional groups (alcohols, carboxylic acids, phenols, carbonyl compounds and esters)</p>	<p>B.Sc. CHEMISTRY (Hons.) I Year, Semester II</p> <p>B.Sc. CHEMISTRY (Hons.) III Year, Semester VI</p> <p>B.Sc. CHEMISTRY (Hons.) II Year, Semester IV</p>	<p>Organic Chemistry-I</p> <p>CHEMISTRY - C XIV: ORGANIC CHEMISTRY V</p> <p>Practical C – IX Lab</p>
	<b>Assignment</b>		B.Sc. CHEMISTRY (Hons.) III Year, Semester VI	CHEMISTRY - C XIV: ORGANIC CHEMISTRY V
APRIL	<b>Theory</b>	<p>Polymerisation reactions - Addition and condensation - Mechanism of cationic, anionic and free radical addition polymerization; Metallocene-based Ziegler-Natta polymerisation of alkenes; Preparation and applications of plastics – thermosetting (phenol-formaldehyde, Polyurethanes) and thermo softening (PVC, polythene);</p>	B.Sc. CHEMISTRY (Hons.) III Year, Semester VI	CHEMISTRY - C XIV: ORGANIC CHEMISTRY V

	<b>Practicals:</b>	<p>Chromatography</p> <p>a.Separation of a mixture of two amino acids by ascending and circular chromatography</p> <p>b.Separation of a mixture of two sugars by ascending paper chromatography</p> <p>c.Separation of a mixture of o-and p-nitrophenol or o-and p-aminophenol by TLC</p> <p>Qualitative analysis of unknown organic compounds containing monofunctional groups (carbohydrates, aryl halides, aromatic hydrocarbons, nitro compounds, amines and amides) and simple bifunctional groups, e.g. salicylic acid, cinnamic acid, nitrophenols etc. Identification of simple organic compounds by IR spectroscopy and NMR spectroscopy (Spectra to be provided).</p> <p>Qualitative analysis of unknown organic compounds containing simple functional groups (alcohols, carboxylic acids, phenols, carbonyl compounds and esters)</p>	<p>B.Sc. CHEMISTRY (Hons.) I Year, Semester II</p> <p>B.Sc. CHEMISTRY (Hons.) III Year, Semester VI</p> <p>B.Sc. CHEMISTRY (Hons.) II Year, Semester IV</p>	<p>Organic Chemistry-I</p> <p>CHEMISTRY - C XIV: ORGANIC CHEMISTRY V</p> <p>Practical C – IX Lab</p>
	<b>Test</b>		<p>B.Sc. CHEMISTRY (Hons.) III Year, Semester VI</p>	<p>CHEMISTRY - C XIV: ORGANIC CHEMISTRY V</p>
MAY	<b>Theory:</b>	<p>Fabrics – natural and synthetic (acrylic, polyamido, polyester);</p> <p>Rubbers – natural and synthetic: Buna-S, Chloroprene and Neoprene; Vulcanization;</p> <p>Polymer additives; Introduction to liquid crystal polymers; Biodegradable and conducting polymers with examples.</p>	<p>B.Sc. CHEMISTRY (Hons.) III Year, Semester VI</p>	<p>CHEMISTRY - C XIV: ORGANIC CHEMISTRY V</p>
	<b>Practicals:</b>	<p>Practiced Detection of extra elements</p> <p>Mock Test</p> <p>Preparation of methyl orange.</p> <p>Qualitative analysis of unknown organic compounds containing simple functional groups (alcohols, carboxylic acids, phenols, carbonyl compounds and esters)</p>	<p>B.Sc. CHEMISTRY (Hons.) I Year, Semester II</p> <p>B.Sc. CHEMISTRY (Hons.) III Year, Semester VI</p> <p>B.Sc. CHEMISTRY (Hons.) II Year, Semester IV</p>	<p>Organic Chemistry-I</p> <p>CHEMISTRY - C XIV: ORGANIC CHEMISTRY V</p> <p>Practical C – IX Lab</p>



**SEMESTER WISE TEACHING PLAN  
SRI VENKATESWARA COLLEGE**

Name of the Faculty: Dr Mercy Jacob

Department: Chemistry

Semester : II/IV/VI

Month		Topics	Course	Paper Code/Name
JANUARY	<b>Theory</b>	Coordination Chemistry: IUPAC nomenclature of coordination compounds, isomerism in coordination compounds, stereochemistry of complexes with 4 and 6 coordination numbers. Chelate effect, polynuclear complexes, Labile and inert complexes.	B.Sc. (H) Chemistry II <sup>nd</sup> Year, Semester - IV (2020)	CHEMISTRY – C VIII: INORGANIC CHEMISTRY – III Coordination Chemistry
	<b>Practicals</b>	Inorganic Preparations: i. Tetraamminecopper (II) sulphate, ii. Acetylacetonate complexes of Cu <sup>2+</sup>	B.Sc. (H) Chemistry II <sup>nd</sup> Year, Semester - IV	CHEMISTRY – C VIII: INORGANIC CHEMISTRY – III Coordination Chemistry
		Qualitative semimicro analysis of mixtures containing 3 anions and 3 cations	B.Sc. (H) Chemistry III <sup>rd</sup> Year, Semester - VI	INORGANIC CHEMISTRY IV
	<b>Tutorials</b>			
FEBRUARY	<b>Theory:</b>	Werner's theory, valence bond theory (inner and outer orbital complexes), electroneutrality principle and back bonding, Crystal field theory	B.Sc. (H) Chemistry II <sup>nd</sup> Year, Semester - IV (2020)	CHEMISTRY – C VIII: INORGANIC CHEMISTRY – III Coordination Chemistry
	<b>Practicals</b>	Preparation of (iv) Potassium tri(oxalato)ferrate(III) Estimation of nickel (II) using Dimethylglyoxime (DMG).	B.Sc. (H) Chemistry II <sup>nd</sup> Year, Semester - IV	CHEMISTRY – C VIII: INORGANIC CHEMISTRY – III Coordination Chemistry

		Qualitative semimicro analysis of mixtures containing 3 anions and 3 cations Mixtures preferably contain one interfering anion	B.Sc. (H) Chemistry III <sup>rd</sup> Year, Semester - VI	INORGANIC CHEMISTRY IV
	<b>Tutorials:</b>			
	<b>Assignment:</b>	Coordination chemistry and chemistry of s block elements	B.Sc. (H) Chemistry II <sup>nd</sup> Year, Semester - IV (2020)	CHEMISTRY – C VIII: INORGANIC CHEMISTRY – III Coordination Chemistry
MARCH	<b>Theory:</b>	Measurement of $10 Dq$ ( $\Delta_o$ ). CFSE in weak and strong fields, pairing energies, factors affecting the magnitude of $10 Dq$ ( $\Delta_o$ , $\Delta t$ ). Octahedral vs. tetrahedral coordination	B.Sc. (H) Chemistry II <sup>nd</sup> Year, Semester - IV (2020)	CHEMISTRY – C VIII: INORGANIC CHEMISTRY – III Coordination Chemistry
	<b>Practicals:</b>	Estimation of copper as $CuSCN$ Preparation of Tetraamminecarbonatocobalt (III) nitrate	B.Sc. (H) Chemistry II <sup>nd</sup> Year, Semester - IV	CHEMISTRY – C VIII: INORGANIC CHEMISTRY – III Coordination Chemistry
		Qualitative semimicro analysis of mixtures containing 3 anions and 3 cations Mixtures preferably contain one interfering anion	B.Sc. (H) Chemistry III <sup>rd</sup> Year, Semester - VI	INORGANIC CHEMISTRY IV
	<b>Tutorials:</b>			
	<b>Test</b>	Coordination Chemistry and transition elements	B.Sc. (H) Chemistry II <sup>nd</sup> Year, Semester - IV	CHEMISTRY – C VIII: INORGANIC CHEMISTRY – III Coordination Chemistry
APRIL	<b>Theory:</b>	Tetragonal distortions from octahedral geometry Jahn-Teller theorem, square planar geometry. Qualitative aspect of Ligand field and MO Theory	B.Sc. (H) Chemistry II <sup>nd</sup> Year, Semester - IV (2020)	CHEMISTRY – C VIII: INORGANIC CHEMISTRY – III Coordination Chemistry

	<b>Practicals:</b>	Estimation of iron as $\text{Fe}_2\text{O}_3$ by precipitating iron as $\text{Fe}(\text{OH})_3$ .	B.Sc. (H) Chemistry II <sup>nd</sup> Year, Semester - IV	CHEMISTRY – C VIII: INORGANIC CHEMISTRY – III Coordination Chemistry
		Mixtures preferably contain one interfering anion and combination of anions	B.Sc. (H) Chemistry III <sup>rd</sup> Year, Semester - VI	INORGANIC CHEMISTRY IV
	<b>Tutorials:</b>			
MAY	<b>Theory:</b>			
	<b>Practicals:</b>			
	<b>Tutorials:</b>			





**SEMESTER WISE TEACHING PLAN  
SRI VENKATESWARA COLLEGE**

**Name of the Faculty: Dr. Vibha Saxena**

**Department: Chemistry**

**Semester : II/IV/VI**

Month		Topics	Course	Paper Code/Name
JANUARY	<b>Theory</b>	Basic principles involved in analysis of cations and anions.	B.Sc(H) Chemistry III year	<b>CHEMISTRY - CXIII: INORGANIC CHEMISTRY – IV Organometallic Chemistry &amp; Bio-inorganic Chemistry</b>
		General properties of elements of 3d series with special reference to electronic configuration, variable valency, colour.	BSc(P) Life science III year	<b>DSE1: Chemistry of d-block elements, Quantum chemistry and spectroscopy</b>
	<b>Practicals</b>	Qualitative semi-micro analysis of mixtures containing 3 anions and 3 cations. Emphasis should be given to the	B.Sc(H) Chemistry III year	<b>CHEMISTRY - CXIII: INORGANIC CHEMISTRY – IV Organometallic Chemistry &amp; Bio-inorganic Chemistry</b>
		Semi-micro qualitative analysis of mixture of two cations and two anions	BSc(P) Life science II year	<b>Chemistry Practical</b>
	<b>Tutorials</b>	NA	NA	NA
FEBRUARY	<b>Theory:</b>	Solubility products, common ion effect. Principles involved in separation of cations into groups and choice of group reagents	B.Sc(H) Chemistry III year	<b>CHEMISTRY - CXIII: INORGANIC CHEMISTRY – IV Organometallic Chemistry &amp; Bio-inorganic Chemistry</b>

	Brief discussion with examples of types of ligands, denticity and concept of chelate. IUPAC system of nomenclature of coordination compounds (mononuclear and	BSc(P) Life science III year	<b>DSE1: Chemistry of d-block elements, Quantum chemistry and spectroscopy</b>
<b>Practicals:</b>	Qualitative semi-micro analysis of mixtures containing 3 anions and 3 cations. Emphasis should be given to the understanding of the	B.Sc(H) Chemistry III year	<b>CHEMISTRY - CXIII: INORGANIC CHEMISTRY – IV Organometallic Chemistry &amp; Bio-inorganic Chemistry</b>
	Semi-micro qualitative analysis of mixture of two cations and two anions	BSc(P) Life science II year	<b>Chemistry Practical</b>
<b>Tutorials:</b>	NA	NA	NA

	<b><u>Assignment :</u></b>	<b>Organometallic Chemistry &amp; Bio-inorganic Chemistry Assignment</b>	B.Sc(H) Chemistry III year	<b>CHEMISTRY - CXIII: INORGANIC CHEMISTRY – IV Organometallic Chemistry &amp; Bio-inorganic Chemistry</b>
MARCH	<b>Theory:</b>	Interfering anions (fluoride, borate, oxalate and phosphate),	B.Sc(H) Chemistry III year	<b>CHEMISTRY - CXIII: INORGANIC CHEMISTRY – IV Organometallic Chemistry &amp; Bio-inorganic Chemistry</b>
		<b>Bonding in coordination compounds</b> Valence Bond Theory (VBT): Salient features of theory, concept of inner and outer orbital complexes of	BSc(P) Life science III year	<b>DSE1: Chemistry of d-block elements, Quantum chemistry and spectroscopy</b>
	<b>Practicals:</b>	Qualitative semi-micro analysis of mixtures containing 3 anions and 3 cations. Emphasis should be given to the	B.Sc(H) Chemistry III year	<b>CHEMISTRY - CXIII: INORGANIC CHEMISTRY – IV Organometallic Chemistry &amp; Bio-inorganic Chemistry</b>
		Semi-micro qualitative analysis of mixture of two cations and two anions	BSc(P) Life science II year	<b>Chemistry Practical</b>
	<b>Tutorials:</b>	NA	NA	NA
	<b><u>Test</u></b>	<b>Organometallic Chemistry &amp; Bio-inorganic Chemistry Test</b>	B.Sc(H) Chemistry III year	<b>CHEMISTRY - CXIII: INORGANIC CHEMISTRY – IV Organometallic Chemistry &amp; Bio-inorganic Chemistry</b>
	APRIL	<b>Theory:</b>	need to remove them after Group II and methods of removal. Analysis of insoluble substances.	B.Sc(H) Chemistry III year
		<b>Crystal Field Theory</b> Splitting of d orbitals in octahedral symmetry. Crystal field effects for weak and strong fields. Crystal field stabilization energy (CFSE), concept of pairing energy. Factors	BSc(P) Life science III year	<b>DSE1: Chemistry of d-block elements, Quantum chemistry and spectroscopy</b>

	<b>Practicals:</b>	Qualitative semi-micro analysis of mixtures containing 3 anions and 3 cations. Emphasis should be given to the understanding of the	B.Sc(H) Chemistry III year	<b>CHEMISTRY - CXIII: INORGANIC CHEMISTRY – IV Organometallic Chemistry &amp; Bio-inorganic Chemistry</b>
		Semi-micro qualitative analysis of mixture of two cations and two anions	BSc(P) Life science II year	<b>Chemistry Practical</b>
	<b>Tutorials:</b>			



**SEMESTER WISE TEACHING PLAN**  
**SRI VENKATESWARA COLLEGE**

Name of the Faculty: Dr. Sharda Pasricha      Department: CHEMISTRY

Semester: VI

Month		Topics	Course	Paper Code/Name
January	<b>Theory</b>	<p><b>Carbohydrates</b> Occurrence, classification and their biological importance. Correlation of configuration.</p> <p>Monosaccharides: Constitution and absolute configuration of glucose and fructose, epimers and anomers, mutarotation, determination of ring size of glucose and fructose, Haworth projections and conformational structures; Interconversions of aldoses and ketoses; Killiani- Fischer synthesis and Ruff degradation; Disaccharides – Structure elucidation of maltose, lactose and sucrose. (14 lectures)</p>	B.Sc. CHEMISTRY (Hons.) III Year, Semester VI	CHEMISTRY - C XIV: ORGANIC CHEMISTRY V
	<b>Practical</b>	<p>Qualitative analysis of unknown organic compounds containing monofunctional groups (carbohydrates, aryl halides, aromatic hydrocarbons)</p> <p>1. Qualitative analysis of unknown organic compounds containing simple functional groups (alcohols, carboxylic acids, phenols, carbonyl compounds and esters)</p>	B.Sc. CHEMISTRY (Hons.) III Year, Semester VI	CHEMISTRY PRACTICAL –CC-XIV LAB: Organic Chemistry V
		<p>1. <b>Organic Preparations</b> (i) Bromination of acetanilide / aniline / phenol (ii) Nitration of nitrobenzene / toluene.</p>	B.Sc. CHEMISTRY (Hons.) II <sup>nd</sup> Year, Semester IV	CHEMISTRY PRACTICAL –CC-IX LAB: Organic Chemistry III
		B.Sc. CHEMISTRY (Hons.) I <sup>st</sup> Year, Semester II	CHEMISTRY PRACTICAL –CC-III LAB: Organic Chemistry I	

February	<b>Theory:</b>	<p><b>Carbohydrates</b> Polysaccharides – Elementary treatment of starch, cellulose and glycogen. (2 Lectures)</p> <p><b>Organic Spectroscopy</b> General principles Introduction to absorption and emission spectroscopy. UV Spectroscopy: Types of electronic transitions, <math>\lambda_{max}</math>, Chromophores and Auxochromes, Bathochromic and Hypsochromic shifts, Intensity of absorption; Application of Woodward Rules for calculation of <math>\lambda_{max}</math> for the following systems: <math>\alpha,\beta</math>-unsaturated aldehydes, ketones, carboxylic acids and esters; Conjugated dienes: alicyclic, homoannular and heteroannular; Extended conjugated systems (aldehydes, ketones and dienes); distinction between cis and trans isomers.(5 lectures)</p> <p><b>Dyes</b> Classification, Colour and constitution; Mordant and Vat Dyes; Chemistry of dyeing; Synthesis and applications of: Azo dyes – Methyl orange; Triphenyl methane dyes Malachite green and Rosaniline ; Phthalein Dyes – Phenolphthalein; Natural dyes – structure elucidation and synthesis of Alizarin and Indigotin; Edible Dyes with examples.(4 lectures)</p> <p><b>IR Spectroscopy:</b> Fundamental and non-fundamental molecular vibrations; IR absorption. Effect of H-bonding, conjugation, resonance and ring size on IR absorptions; Fingerprint region and its significance. IR absorption positions of O, N and S containing functional groups; application in functional group analysis.( 6 Lectures)</p>	B.Sc. CHEMISTRY (Hons.) III Year, Semester VI	CHEMISTRY - C XIV: ORGANIC CHEMISTRY V
	<b>Practical:</b>	<p>Qualitative analysis of unknown organic compounds containing monofunctional groups (nitro compounds, amines and amides) and simple bifunctional groups, e.g. salicylic acid, cinnamic acid, nitrophenols etc.</p> <p>1.Functional group test for nitro, amine and amide groups. 2. Qualitative analysis of unknown organic compounds containing simple functional groups (alcohols, carboxylic acids, phenols, carbonyl compounds and esters)</p>	<p>B.Sc. CHEMISTRY (Hons.) III Year, Semester VI</p> <p>B.Sc. CHEMISTRY (Hons.) II<sup>nd</sup> Year, Semester IV</p>	<p>CHEMISTRY PRACTICAL –CC-XIV LAB: Organic Chemistry V</p> <p>CHEMISTRY PRACTICAL –CC-IX LAB: Organic Chemistry III</p>

		<p>1. Purification of organic compounds by crystallization using the following solvents: a. Water b. Alcohol c. Alcohol-Water</p> <p>2. Determination of the melting points of unknown organic compounds (Kjeldahl method and electrically heated melting point apparatus)</p> <p>3. Effect of impurities on the melting point – mixed melting point of two unknown organic compounds</p> <p>4. Determination of boiling point of liquid compounds. (boiling point lower than and more than 100 °C by distillation and capillary method)</p>	<p>B.Sc. CHEMISTRY (Hons.) I<sup>st</sup> Year, Semester II</p>	<p>CHEMISTRY PRACTICAL –CC-III LAB: Organic Chemistry I</p>
March	<b>Theory:</b>	<p><b>NMR Spectroscopy</b> Basic principles of Proton Magnetic Resonance, chemical shift and factors influencing it; Spin – Spin coupling and coupling constant; Anisotropic effects in alkene, alkyne, aldehydes and aromatics, Interpretation of NMR spectra of simple compounds. Applications of IR, UV and NMR for identification of simple organic molecules. (8 lectures)</p>	<p>B.Sc. CHEMISTRY (Hons.) III Year, Semester VI</p>	<p>CHEMISTRY - C XIV: ORGANIC CHEMISTRY V</p>

	<b>Practical:</b>	<p>1.Extraction of caffeine from tea leaves. 2.Preparation of urea formaldehyde resin.</p> <p>1. Qualitative analysis of unknown organic compounds containing simple functional groups (alcohols, carboxylic acids, phenols , carbonyl compounds and esters)</p> <p>1.Detection of extra elements 2. Chromatography a. Separation of a mixture of two amino acids by ascending and horizontal paper chromatography.</p>	<p>B.Sc. CHEMISTRY (Hons.) III Year, Semester VI</p> <p>B.Sc. CHEMISTRY (Hons.) II<sup>nd</sup> Year, Semester IV</p> <p>B.Sc. CHEMISTRY (Hons.) I<sup>st</sup> Year, Semester II</p>	<p>CHEMISTRY PRACTICAL –CC-XIV LAB: Organic Chemistry V</p> <p>CHEMISTRY PRACTICAL –CC-IX LAB: Organic Chemistry III</p> <p>CHEMISTRY PRACTICAL –CC-III LAB: Organic Chemistry I</p>
	<b><u>Assignment 1</u></b> <b><u>(8 marks)</u></b> <b><u>Crossword</u></b> <b><u>( 2 Marks)</u></b>	<p>Last date of submission:23.03.20 Topic: Carbohydrates</p> <p>Last date of submission:22.03.20 Topic: IR Spectroscopy</p>	B.Sc. CHEMISTRY (Hons.) III Year, Semester VI	
April	<b>Theory:</b>	<p><b>Polymers</b> Introduction and classification including di-block, tri-block and amphiphilic polymers; Polymerization reactions - Addition and condensation - Mechanism of cationic, anionic and free radical addition polymerization; Metallocene-based Ziegler-Natta polymerization of alkenes; Preparation and applications of plastics – thermosetting (phenol-formaldehyde, Polyurethanes) and thermos softening (PVC, polythene); Fabrics – natural and synthetic (acrylic, polyamido, polyester); Rubbers – natural and synthetic: Buna-S, Chloroprene and Neoprene; Vulcanization; Polymer additives; Introduction to; Biodegradable and conducting polymers with examples. ( 8 lectures)</p>	B.Sc. CHEMISTRY (Hons.) III Year, Semester VI	CHEMISTRY - C XIV: ORGANIC CHEMISTRY V



		<p>Any Pending Work from Previous Month</p> <p>Revision and Discussion of Previous year papers.</p>		
	<b>Practical:</b>	<ol style="list-style-type: none"> <li>1. Preparation of methyl orange</li> <li>2. Identification of simple organic compounds by IR spectroscopy and NMR spectroscopy (Spectra to be provided).</li> <li>3. Mock Practical Exam</li> </ol>	<p>B.Sc. CHEMISTRY (Hons.) III Year, Semester VI</p>	<p>CHEMISTRY PRACTICAL –CC-XIV LAB: Organic Chemistry V</p>
		<ol style="list-style-type: none"> <li>1. Qualitative analysis of unknown organic compounds containing simple functional groups (alcohols, carboxylic acids, phenols, carbonyl compounds and esters)</li> <li>2. Mock Practical Exam</li> </ol>	<p>B.Sc. CHEMISTRY (Hons.) II<sup>nd</sup> Year, Semester IV</p>	<p>CHEMISTRY PRACTICAL –CC-IX LAB: Organic Chemistry III</p>
		<p>Chromatography</p> <ol style="list-style-type: none"> <li>1. Separation of a mixture of two sugars by ascending paper chromatography</li> <li>2. Separation of a mixture of o- and p-nitrophenol or o- and p-aminophenol by thin layer chromatography (TLC)</li> <li>3. Mock Practical exam</li> </ol>	<p>B.Sc. CHEMISTRY (Hons.) I<sup>st</sup> Year, Semester II</p>	<p>CHEMISTRY PRACTICAL –CC-III LAB: Organic Chemistry I</p>



**SEMESTER WISE TEACHING PLAN 2018-19 even sem**  
**SRI VENKATESWARA COLLEGE**

**Name of the Faculty: Dr. Shefali Shukla**

**Department: Chemistry**

**Semester: II/IV/VI**

Month		Topic	Course	Paper
January	<b>Theory:</b>	Hybridization, Shapes of molecules <i>Electronic Displacements</i> Homolytic and Heterolytic fission Electrophiles and Nucleophiles; Free radicals and Carbenes. Introduction to types of organic reactions  <b>Stereoisomerism:</b> Fischer, Newmann and Sawhorse Projection formulae and their interconversions; Geometrical isomerism: cis-trans, syn-anti and E/Z notations with C.I.P rules.	B. Sc. (H) Chemistry I year, Semester II	Organic Chemistry I: Basics and Hydrocarbons
	<b>Practicals:</b>	Checking the calibration of the thermometer Purification of organic compounds by crystallization using the following solvents: a. Water b. Alcohol c. Alcohol-Water Determination of the melting points of unknown organic compounds (Kjeldahl method and electrically heated melting point apparatus)	B. Sc. (H) Chemistry I year, Semester II	B. Sc. (H) Chemistry I year, Semester II Practical C – III
		Determination of heat capacity of calorimeter. Determination of enthalpy of neutralization of hydrochloric acid with sodium hydroxide.	B. Sc. (P) Life Sciences I year, Semester II	Practical CHEMISTRY –Core Paper-2 Course Title: Chemical Energetics, Equilibria and Functional Group Organic Chemistry-I
	<b>Tutorials:</b>	NA	NA	NA
February	<b>Theory:</b>	Optical Activity, Specific Rotation, Chirality/Asymmetry, Enantiomers, Molecules with two or more chiral-centres, Distereoisomers, meso structures, Racemic mixture	B. Sc. (H) Chemistry I year, Semester II	Organic Chemistry I: Basics and Hydrocarbons

		and their resolution. Relative and absolute configuration: D/L and R/S designations. Conformational analysis of alkanes: Relative stability and Energy diagrams. Types of cycloalkanes and their relative stability, Baeyer strain theory : Chair, Boat and Twist boat forms of cyclohexane with energy diagrams ; Relative stability of mono substituted cycloalkanes		
	<b>Practicals:</b>	Effect of impurities on the melting point – mixed melting point of two unknown organic Compounds Organic Preparations (i) Bromination of acetanilide / aniline / phenol (ii) Nitration of nitrobenzene / toluene	B. Sc. (H) Chemistry I year, Semester II	B. Sc. (H) Chemistry I year, Semester II Practical C – III
		Determination of integral enthalpy of solution of salts (KNO <sub>3</sub> , NH <sub>4</sub> Cl). Determination of enthalpy of hydration of copper sulphate. Benzoylation of amines/phenols. Oxime of aldehydes and ketones.	B. Sc. (P) Life Sciences I year, Semester II	Practical CHEMISTRY –Core Paper-2 Course Title: Chemical Energetics, Equilibria and Functional Group Organic Chemistry-I
	<b>Tutorials:</b>	NA	NA	NA
	<b>Assignment</b>	Basic concepts of Organic Chemistry, Stereochemistry	B. Sc. (H) Chemistry I year, Semester II	Organic Chemistry I:Basics and Hydrocarbons
March	<b>Theory:</b>	General methods of preparation, physical and chemical properties of alkenes and alkynes, Mechanism of E1, E2, E1cb reactions. Saytzeff and Hofmann eliminations. Electrophilic additions their mechanisms (Markownikoff/ Anti Markownikoff addition), mechanism of oxymercuration-demercuration, hydroboration-oxidation, ozonolysis, reduction (catalytic and chemical), syn and anti-	B. Sc. (H) Chemistry I year, Semester II	Organic Chemistry I:Basics and Hydrocarbons

		hydroxylation(oxidation). 1,2- and 1,4-addition reactions in conjugated dienes and Diels-Alder reaction; Allylic and benzylic bromination and mechanism, e.g. propene, 1-butene, toluene, ethyl benzene.		
	<b>Practicals:</b>	<p>Chromatography</p> <p>a. Separation of a mixture of two amino acids by ascending and circular chromatography</p> <p>b. Separation of a mixture of two sugars by ascending paper chromatography</p> <p>c. Separation of a mixture of o- and p-nitrophenol or o- and p-aminophenol by TLC</p> <p>Determination of boiling point of liquid compounds. (boiling point lower than and more than 100 °C by distillation and capillary method)</p> <p>Detection of extra elements</p>	B. Sc. (H) Chemistry I year, Semester II	B. Sc. (H) Chemistry I year, Semester II Practical C – III
		<p>Preparation of buffer solutions: (i) Sodium acetate-acetic acid or (ii) Ammonium chloride-ammonium acetate. Measurement of the pH of buffer solutions and comparison of the values with theoretical values.</p> <p>2,4-dinitrophenylhydrazone of aldehydes and ketones</p>	B. Sc. (P) Life Sciences I year, Semester II	Practical CHEMISTRY –Core Paper-2 Course Title: Chemical Energetics, Equilibria and Functional Group Organic Chemistry-I
	<b>Tutorials:</b>	NA	NA	NA
	<b>Test</b>	Basic concepts, Stereochemistry, Alkene- Preparation , Electrophilic addition reactions	B. Sc. (H) Chemistry I year, Semester II	Organic Chemistry I: Basics and Hydrocarbons
April	<b>Theory:</b>	<p>Reactions of alkynes; acidity, electrophilic and nucleophilic additions, hydration to form carbonyl compounds, Alkylation of terminal alkynes.</p> <p>Concept of Aromaticity, Huckel's rule, aromatic character of arenes, cyclic carbocations and carbanions with suitable examples and heterocyclic compounds with suitable examples. Electrophilic</p>	B. Sc. (H) Chemistry I year, Semester II	Organic Chemistry I: Basics and Hydrocarbons

		aromatic substitution: halogenation, nitration, sulphonation, Friedel Crafts alkylation/ acylation with their mechanism. Directing effects of groups in electrophilic substitution.		
	<b>Practicals:</b>	Detection of extra elements Practice class	B. Sc. (H) Chemistry I year, Semester II	B. Sc. (H) Chemistry I year, Semester II Practical C – III
		Bromination of phenol/aniline Semicarbazone of aldehydes and ketones	B. Sc. (P) Life Sciences I year, Semester II	Practical CHEMISTRY –Core Paper-2 Course Title: Chemical Energetics, Equilibria and Functional Group Organic Chemistry-I
	<b>Tutorials:</b>	NA	NA	NA



SEMESTER WISE TEACHING PLAN (2018-2019)

SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Pragya Gahlot

Department: Chemistry

Semester: II/IV/VI

Month		Topics	Course	Paper Code/Name
JANUARY	<b>Theory</b>	Chemical Kinetics: Order and molecularity of a reaction, rate laws in terms of the advancement of a reaction, differential and integrated form of rate expressions up to second order reactions,	B.Sc. (Hons.) Chemistry Semester IV	Course-X Practical Physical Chemistry-IV
		Kinetic theory of the gas :- postulates of kinetic theory of gases and derivation of real gases, from ideal behavior, compressibility factor, cause of deviation, Vander wall equation of state for real gases. Boyle temperatures, critical phenomenon, critical constants and their calculations. From vander walls equation, Andrew isothermal of CO <sub>2</sub> ,	GE 4 Chemistry	Matter, kinetics theory of gas, chemical kinetics.
	<b>Practicals</b>	Conductometry: Determination of cell constant Determination of conductivity, molar conductivity, degree of dissociation and dissociation constant of a weak acid. Perform the following conductometric titrations: i. Strong acid vs. strong base	B.Sc. (Hons.) Chemistry Semester IV	Course-X Practical Physical Chemistry-IV Lab
		1.Preparations: Mechanism of various reactions involved to be discussed. Recrystallisation, determination of melting point and calculation of quantitative yields to be done. 2.Bromination of Phenol/Aniline 3.Determination of heat capacity of calorimeter for different volumes. 4. Determination of enthalpy of neutralization of hydrochloric acid with sodium hydroxide.	GE-II	CHEMISTRY LAB: CHEMICAL ENERGETICS, EQUILIBRIA & FUNCTIONAL ORGANIC CHEMISTRY
	Small programs for mathematical	B.Sc. (Hons.)	CHEMISTRY-DSE:	

		computations in BASIC language. Roots of equations: (e.g. volume of gas using van der Waals equation and comparison with ideal gas, pH of a weak acid).	Chemistry sem VI	APPLICATIONS OF COMPUTERS IN CHEMISTRY
	<b>Tutorials</b>			
FEBRUARY	<b>Theory:</b>	experimental methods of the determination of rate laws, kinetics of complex reactions (integrated rate expressions up to first order only): (i) Opposing reactions (ii) parallel reactions and (iii) consecutive reactions and their differential rate equations (steady-state approximation in reaction mechanisms) (iv) chain reactions	B.Sc. (Hons.) Chemistry Semester IV	Course-X Practical Physical Chemistry-IV
		Maxwell bolt many distribution laws of molecular velocity and molecular energies (graphical representation) and their importance. Temperatures dependence of these distributions, most probable, average and root mean square velocity, collision cross section, collision number, collision frequency,	GE 4 Chemistry	Matter, kinetics theory of gas, chemical kinetics.
	<b>Practicals:</b>	Conductometric titration Weak acid vs. strong base Mixture of strong acid and weak acid vs. strong base Strong acid vs. weak base	B.Sc. (Hons.) Chemistry Semester IV	Course-X Practical Physical Chemistry-IV Lab
		5. Benzoylation of amines/phenols 6. Oxime and 2,4 dinitrophenylhydrazone of aldehyde/ketone 7. Determination of enthalpy of ionization of acetic acid. 8. Determination of integral enthalpy of solution of salts KNO <sub>3</sub>	GE-II	CHEMISTRY LAB: CHEMICAL ENERGETICS, EQUILIBRIA & FUNCTIONAL ORGANIC CHEMISTRY
		Probability distributions (gas kinetic theory) and mean values. Matrix operations.	B.Sc. (Hons.) Chemistry sem VI	
	<b>Tutorials:</b>			

	<b>Assignment :</b>			
MARCH	<b>Theory:</b>	Temperature dependence of reaction rates; Arrhenius equation; activation energy. Collision	B.Sc. (Hons.) Chemistry Semester IV	Course-X Practical Physical Chemistry-IV

		theory of reaction rates, Lindemann mechanism, qualitative treatment of the theory of absolute reaction rates.		
		Collisions diameter and mean free path of molecules, viscosity of gases and effect of temperature and pressure on coefficient of viscosity.	GE 4 Chemistry	Matter, kinetics theory of gas, chemical kinetics.
	<b>Practicals:</b>	Study the kinetics of the following reactions. 7. Iodide-persulphate reaction (i) Initial rate method; (ii) Integrated rate method Acid hydrolysis of methyl acetate with hydrochloric acid.	B.Sc. (Hons.) Chemistry Semester IV	Course-X Practical Physical Chemistry-IV Lab
		9. Determination of integral enthalpy of solution of salts NH <sub>4</sub> Cl. 10. Determination of enthalpy of hydration of copper sulphate.	GE-II	CHEMISTRY LAB: CHEMICAL ENERGETICS, EQUILIBRIA & FUNCTIONAL ORGANIC CHEMISTRY
		Acid hydrolysis of methyl acetate with hydrochloric acid.  Saponification of ethyl acetate.	B.Sc. (Hons.) Chemistry sem IV	
	<b>Tutorials:</b>			
	<b>Test</b>			
APRIL	<b>Theory:</b>	<b>Catalysis:</b> Types of catalyst, specificity	B.Sc. (Hons.) Chemistry	Course-X Practical



	and selectivity, mechanisms of catalyzed reactions at solid surfaces. Enzyme catalysis, Michaelis-Menten mechanism, acid-base catalysis.	Semester IV	Physical Chemistry-IV
	Surface tension and its determination using stalgamometer, viscosity of a liquid and determination of coefficient of viscosity of a liquid.	GE 4 Chemistry	Matter, kinetics theory of gas, chemical kinetics.
<b>Practicals:</b>	Saponification of ethyl acetate. Comparison of the strengths of HCl and H <sub>2</sub> SO <sub>4</sub> by studying kinetics of hydrolysis of methyl acetate.	B.Sc. (Hons.) Chemistry Semester IV	Course-X Practical Physical Chemistry-IV Lab
	11. Study of the solubility of benzoic acid in water and determination of <i>H</i> . 12. Measurement of pH of different solutions 13. Preparation of buffer solutions: (i) Sodium acetate-acetic acid (ii) Ammonium chloride-ammonium hydroxide 14. Systematic Qualitative organic analyses of organic compounds possessing monofunctional groups	GE-II	CHEMISTRY LAB: CHEMICAL ENERGETICS, EQUILIBRIA & FUNCTIONAL ORGANIC CHEMISTRY

		and preparation of one suitable derivative.		
		Graphic programs related to Chemistry problems. <i>e.g.</i> van der Waals isotherm, Compressibility versus pressure curves, Maxwell distribution curves, concentration-time Graph, pH metric titration curve, conductometric titration curves, Lambert Beer's law graph, s, p, d orbital shapes, radial distribution curves, etc.	B.Sc. (Hons.) Chemistry sem VI	
	<b>Tutorials:</b>			



**SEMESTER WISE TEACHING PLAN  
SRI VENKATESWARA COLLEGE**

Name of the Faculty: **Dr. Vinita Kapoor**

Department:

**Chemistry**

Month		Topics	Course	Paper Code/Name
JAN	<b>Theory</b>	Basic Computer system, Introduction	B.Sc. (Hons.) Chemistry sem VI	<b>CHEMISTRY-DSE: APPLICATIONS OF COMPUTERS IN CHEMISTRY</b>
	<b>Theory</b>	Review of thermodynamics and the Laws of Thermodynamics.	GE-II	GE: CHEMICAL ENERGETICS, EQUILIBRIA & FUNCTIONAL ORGANIC CHEMISTRY I
	<b>Practicals</b>	(a) Determination of heat capacity of a calorimeter for different volumes using (i) change of enthalpy data of a known system (method of back calculation of heat capacity of calorimeter from known enthalpy of solution of sulphuric acid or enthalpy of neutralization), and (ii) heat gained equal to heat lost by cold water and hot water respectively  (b) Determination of enthalpy of neutralization of hydrochloric acid with sodium hydroxide. (c) Determination of the enthalpy of ionization of ethanoic acid.	B.Sc. (Hons.) Chemistry sem II	CC-IV: Physical chemistry-II

	<b>Practicals</b>	1. Semi-micro qualitative analysis of mixtures 2. Determination of the surface tension of a liquid or a dilute solution using a stalagmometer.	BSc (P) Life Sci. Semester IV	CHEMISTRY OF S- AND P-BLOCK ELEMENTS, STATES OF MATTER & CHEMICAL KINETICS
	<b>Practicals</b>	1. Determination of heat capacity of calorimeter for different volumes. 2. Determination of Enthalpy of neutralization of hydrochloric acid with sodium hydroxide. 3. Determination of enthalpy of ionization of acetic acid.	BSc (P) Life Sci. Semester II	CHEMICAL ENERGETICS, EQUILIBRIA & FUNCTIONAL ORGANIC CHEMISTRY I
<b>Month</b>		<b>Topics</b>	<b>Course</b>	<b>Paper Code/Name</b>
FEB	<b>Theory</b>	Computer Programming Language- QBASIC, (for solving some of the basic and in turn complicated chemistry problems).	B.Sc. (Hons.) Chemistry sem VI	<b>CHEMISTRY-DSE: APPLICATIONS OF COMPUTERS IN CHEMISTRY</b>
	<b>Theory</b>	<b>Chemical Energetics</b>	GE-II	GE: CHEMICAL ENERGETICS, EQUILIBRIA & FUNCTIONAL ORGANIC CHEMISTRY I

	<b>Practicals</b>	(d) Determination of integral enthalpy (endothermic and exothermic) solution of salts. (e) Determination of basicity of a diprotic acid by the thermochemical method in terms of the changes of temperatures observed in the graph of temperature versus time for different additions of a base. Also calculate the enthalpy of neutralization of the first step.	B.Sc. (Hons.) Chemistry sem II	CC-IV: Physical chemistry-II
	<b>Practicals</b>	3. Semi-micro qualitative analysis of mixtures 4. Study of the variation of surface tension of a detergent solution with concentration. 5. Determination of the relative and absolute viscosity of a liquid or dilute solution using an Ostwald's viscometer.	BSc (P) Life Sci. Semester IV	CHEMISTRY OF S- AND P-BLOCK ELEMENTS, STATES OF MATTER & CHEMICAL KINETICS
	<b>Practicals</b>	4. Preparations: Mechanism of various reactions involved to be discussed. Recrystallisation, determination of melting point and calculation of quantitative yields to be done. (a) Bromination of Phenol/Aniline (b) Benzoylation of amines/phenols (c) Oxime and 2,4 dinitrophenylhydrazone of aldehyde/ketone	BSc (P) Life Sci. Semester II	CHEMICAL ENERGETICS, EQUILIBRIA & FUNCTIONAL ORGANIC CHEMISTRY I
Month		Topics	Course	Paper Code/Name

MARCH	<b>Theory</b>	QBASIC commands, programs for Chemistry problems  Numerical methods	B.Sc. (Hons.) Chemistry sem VI	<b>CHEMISTRY-DSE: APPLICATIONS OF COMPUTERS IN CHEMISTRY</b>
	<b>Theory</b>	<b>Chemical Energetics</b> Continued..	GE-II	GE: CHEMICAL ENERGETICS, EQUILIBRIA & FUNCTIONAL ORGANIC CHEMISTRY I
	<b>Practicals</b>	(f) Determination of enthalpy of hydration of salt. G) Determination of integral enthalpy (endothermic and exothermic) solution of salts.	B.Sc. (Hons.) Chemistry sem II	CC-IV: Physical chemistry-II
	<b>Practicals</b>	6. Semi-micro qualitative analysis of mixtures 7. Study of the variation of viscosity of an aqueous solution with concentration of solute	BSc (P) Life Sci. Semester IV	CHEMISTRY OF S- AND P-BLOCK ELEMENTS, STATES OF MATTER & CHEMICAL KINETICS
	<b>Practicals</b>	2. Systematic Qualitative organic analyses of organic compounds possessing monofunctional groups ( Alcohols, Phenols, Carbonyl,- COOH) and preparation of one suitable derivative. 4.Determination of integral enthalpy of solution of salts (KNO <sub>3</sub> , NH <sub>4</sub> Cl). 5.Determination of enthalpy of hydration of copper sulphate. a)Measurement of pH of different solutions like aerated drinks, fruit juices, shampoos and soaps (use dilute solutions of soaps and shampoos to prevent damage to the glass electrode) using pH-meter.	BSc (P) Life Sci. Semester II	CHEMICAL ENERGETICS, EQUILIBRIA & FUNCTIONAL ORGANIC CHEMISTRY I

Month		Topics	Course	Paper Code/Name
APRIL	<b>Theory</b>	Numerical methods	B.Sc. (Hons.) Chemistry sem VI	<b>CHEMISTRY-DSE: APPLICATIONS OF COMPUTERS IN CHEMISTRY</b>
	<b>Theory</b>	Third law and its applications	GE-II	GE: CHEMICAL ENERGETICS, EQUILIBRIA & FUNCTIONAL ORGANIC CHEMISTRY I
	<b>Practicals</b>	Determination of enthalpy of hydration of salt.  Determination of integral enthalpy (endothermic and exothermic) solution of salts	B.Sc. (Hons.) Chemistry sem II	CC-IV: Physical chemistry-II
	<b>Practicals</b>	8. Semi-micro qualitative analysis of mixtures 9. Semi-micro qualitative analysis of mixtures	BSc (P) Life Sci. Semester IV	CHEMISTRY OF S- AND P-BLOCK ELEMENTS, STATES OF MATTER & CHEMICAL KINETICS
	<b>Practicals</b>	b)Preparation of buffer solutions: (i)Sodium acetate-acetic acid (ii)Ammonium chloride-ammonium hydroxide Measurement of the pH of buffer solutions and comparison of the values with theoretical values	BSc (P) Life Sci. Semester II	CHEMICAL ENERGETICS, EQUILIBRIA & FUNCTIONAL ORGANIC CHEMISTRY I



**SEMESTER WISE TEACHING PLAN  
SRI VENKATESWARA COLLEGE**

**Name of the Faculty:** Dr. Shikha Gulati      **Department:** Chemistry

**Semester:** VI

Month		Topics	Course	Paper Code/Name
JANUARY	<b>Theory</b>	<b>Organometallic Compounds</b> Definition and classification of organometallic compounds on the basis of bond type. Concept of hapticity of organic ligands. Metal carbonyls: 18 electron rule, electron count of mononuclear, polynuclear and substituted metal carbonyls of 3d series. General methods of preparation (direct combination, reductive carbonylation, thermal and photochemical decomposition) of mono and binuclear carbonyls of 3d series.	B.Sc. (Hons.) Chemistry III Year	C XIII: INORGANIC CHEMISTRY IV
	<b>Practicals</b>	<b>Gravimetric Analysis:</b> i. Estimation of nickel (II) using Dimethylglyoxime (DMG). <b>Inorganic Preparations:</b> i. Tetraamminecopper (II) sulphate, $[\text{Cu}(\text{NH}_3)_4]\text{SO}_4 \cdot \text{H}_2\text{O}$ ii. Acetylacetonate complexes of $\text{Cu}^{2+}/\text{Fe}^{3+}$	B.Sc. (Hons.) Chemistry II Year	C VIII: INORGANIC CHEMISTRY III



		(i) Paper chromatographic separation of $\text{Co}^{2+}$ and $\text{Ni}^{2+}$ . (ii) Separation and identification of the amino acids present in the given mixture by paper chromatography. Reporting the $R_f$ values.	B.Sc. (Hons.) Chemistry III Year	DSE LAB: ANALYTICAL METHODS IN CHEMISTRY
	<b>Tutorials</b>	NA	NA	NA

FEBRUARY	<b>Theory:</b>	<p>Structures of mononuclear and binuclear carbonyls of Cr, Mn, Fe, Co and Ni using VBT. <math>\pi</math>-acceptor behaviour of CO (MO diagram of CO to be discussed), synergic effect and use of IR data to explain extent of back bonding.</p> <p>Zeise's salt: Preparation and structure, evidences of synergic effect and comparison of synergic effect with that in carbonyls.</p> <p>Metal Alkyls: Important structural features of methyl lithium (tetramer) and trialkyl aluminium (dimer), concept of multicentre bonding in these compounds.</p> <p>Ferrocene: Preparation and reactions (acetylation, alkylation, metallation, Mannich Condensation).</p> <p>Structure and aromaticity.</p> <p>Comparison of aromaticity and reactivity with that of benzene.</p> <p><b>Catalysis by Organometallic Compounds</b></p> <p>Study of the following industrial processes and their mechanism:</p> <ol style="list-style-type: none"> <li>1. Alkene hydrogenation (Wilkinson's Catalyst)</li> <li>2. Synthetic gasoline (Fischer Tropsch reaction)</li> <li>3. Polymerisation of ethene using Ziegler-Natta catalyst</li> </ol>	B.Sc. (Hons.) Chemistry III Year	C XIII: INORGANIC CHEMISTRY IV
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	<b>Practicals:</b>	ii. Estimation of copper as CuSCN iii. Estimation of iron as Fe <sub>2</sub> O <sub>3</sub> by precipitating iron as Fe(OH) <sub>3</sub> . <b>Inorganic Preparations:</b>  iii. Tetraamminecarbonatocobalt (III) nitrate iv. Potassium tri(oxalato)ferrate(III)	B.Sc. (Hons.) Chemistry II Year	C VIII: INORGANIC CHEMISTRY III
		(i) To separate a mixture of Ni <sup>2+</sup> & Fe <sup>2+</sup> by complexation with DMG and extracting the Ni <sup>2+</sup> - DMG complex in chloroform, and determine its concentration by	B.Sc. (Hons.) Chemistry III Year	DSE LAB: ANALYTICAL METHODS IN CHEMISTRY
	<b>Tutorials:</b>	NA	NA	NA

	<b>Assignment :</b>	Organometallics and Bioinorganic Chemistry	B.Sc. (Hons.) Chemistry III Year	C XIII: INORGANIC CHEMISTRY IV
MARCH	<b>Theory:</b>	<p><b>Bioinorganic Chemistry:</b> Metal ions present in biological systems, classification of elements according to their action in biological system. Geochemical effect on the distribution of metals. Sodium / K-pump, carbonic anhydrase and carboxypeptidase. Excess and deficiency of some trace metals. Toxicity of metal ions (Hg, Pb, Cd and As), reasons for toxicity, Use of chelating agents in medicine, Cisplatin as an anti-cancer drug. Iron and its application in bio-systems, Haemoglobin, Myoglobin; Storage and transfer of iron.</p>	B.Sc. (Hons.) Chemistry III Year	C XIII: INORGANIC CHEMISTRY IV
	<b>Practicals:</b>	<p>Estimation of Al(III) by precipitating with oxine and weighing as Al(oxine)<sub>3</sub> (aluminium oxinate). <b>Properties of Complexes</b> i. Measurement of 10 Dq by spectrophotometric method</p>	B.Sc. (Hons.) Chemistry II Year	C VIII: INORGANIC CHEMISTRY III
		<p>(iii) Estimation of calcium, magnesium (iv) Qualitative detection of nitrate, phosphate</p>	B.Sc. (Hons.) Chemistry III Year	DSE LAB: ANALYTICAL METHODS IN CHEMISTRY

	<b>Tutorials:</b>	NA	NA	NA
	<b>Test</b>	Organometallics and Bioinorganic Chemistry	B.Sc. (Hons.) Chemistry III Year	C XIII: INORGANIC CHEMISTRY IV
APRIL	<b>Theory:</b>	<p><b>Catalysis by Organometallic Compounds</b>  Study of the following industrial processes and their mechanism:</p> <ol style="list-style-type: none"> <li>1. Alkene hydrogenation (Wilkinson's Catalyst)</li> <li>2. Synthetic gasoline (Fischer Tropsch reaction)</li> <li>3. Polymerisation of ethene using Ziegler-Natta catalyst</li> </ol>	B.Sc. (Hons.) Chemistry III Year	C XIII: INORGANIC CHEMISTRY IV
	<b>Practicals:</b>	<ol style="list-style-type: none"> <li>ii. Verification of spectrochemical series.</li> <li>iii. Synthesis of ammine complexes of Ni(II) and its ligand exchange reactions (e.g. bidentate ligands like acetylacetonone, DMG, glycine) by substitution method.</li> </ol>	B.Sc. (Hons.) Chemistry II Year	C VIII: INORGANIC CHEMISTRY III
		Spectrophotometry Verification of Lambert-Beer's law and determination of concentration of a coloured species (CuSO <sub>4</sub> , KMnO <sub>4</sub> )	B.Sc. (Hons.) Chemistry III Year	DSE LAB: ANALYTICAL METHODS IN CHEMISTRY

	<b>Tutorials:</b>	NA	NA	NA
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**SEMESTER WISE TEACHING PLAN**  
**SRI VENKATESWARA COLLEGE**

Name of the Faculty: Deepti Sharma

Department: Chemistry

Semester : IV/ V

Month		Topics	Course	Paper Code/Na
JANUARY	<b>Theory</b>	Nitrogen Containing Functional Groups	<b>B.Sc.(H) Chemistry Semester IV</b>	<b>Organic Chemistry III</b>
	<b>Practicals</b>	1. Functional group test for nitro, amine and amide groups	<b>B.Sc.(H) Chemistry Second Year Semester IV</b>	<b>Organic Chemistry III</b>
		2. Qualitative analysis of unknown organic compounds containing simple functional groups	<b>B.Sc.(H) Chemistry Second Year Semester IV</b>	<b>Pesticide Chemistry</b>
FEBRUARY	<b>Theory</b>	Nitrogen Containing Functional Groups cont. Polynuclear Hydrocarbons.	<b>B.Sc.(H) Chemistry Semester IV</b>	<b>Organic Chemistry III</b>
	<b>Practicals:</b>	1. Practiced qualitative analysis of unknown organic compounds containing simple functional groups	<b>B.Sc.(H) Chemistry Second Year Semester IV</b>	<b>Organic Chemistry III</b>
		1. Preparation of simple organophosphates.	<b>B.Sc.(H) Chemistry Second Year Semester IV</b>	<b>Pesticide Chemistry</b>

	<b><u>Assignment</u></b> :	Given Assignment for Nitrogen containing functional group and polynuclear hydrocarbons		
MARCH	<b>Theory:</b>	Heterocyclic Compounds, Terpenes	<b>B.Sc.(H) Chemistry Semester IV</b>	<b>Organic Chemistry III</b>
	<b>Practicals:</b>	1. Practiced qualitative analysis of unknown organic compounds containing simple functional groups  1. Students did market survey of different pesticides	<b>B.Sc.(H) Chemistry Second Year Semester IV</b>	<b>Organic Chemistry III</b>  <b>Pesticide Chemistry</b>
	<b><u>Test</u></b>	Syllabus included Nitrogen containing compounds, polynuclear hydrocarbons.	<b>B.Sc.(H) Chemistry Second Year Semester IV</b>	<b>Organic Chemistry III</b>
APRIL	<b>Theory:</b>	Alkaloids	<b>B.Sc.(H) Chemistry Semester IV</b>	<b>Organic Chemistry III</b>
	<b>Practicals:</b>	1. Practiced qualitative analysis of unknown organic compounds containing simple functional groups. 2. Mock Test  Final Practical Examination.	<b>B.Sc.(H) Chemistry Second Year Semester IV</b>  <b>B.Sc.(H) Chemistry Second Year Semester IV</b>	<b>Organic Chemistry III</b>  <b>Pesticide Chemistry</b>



MAY	<b>Theory:</b>			
	<b>Practicals:</b>			
	<b>Tutorials:</b>			



**SEMESTER WISE TEACHING PLAN**  
**SRI VENKATESWARA COLLEGE-2018-19 (even)**

Name of the Faculty: Dr. POOJA

Department: CHEMISTRY

Semester: II/IV/VI

Month		Topics	Course	Paper Code/Name
JANUARY	Theory	General introduction to pesticides (natural and synthetic), benefits and adverse effects, changing concepts of pesticides, structure activity relationship	B.Sc. CHEMISTRY (Hons.) II Year, Semester IV	SEC 11: PESTICIDE CHEMISTRY
		Application of visible, ultraviolet and Infrared spectroscopy in organic molecules.	B.Sc. Life Sciences (Hons.) III Year, Semester VI	ORGANOMETALLICS, BIOINORGANIC CHEMISTRY, POLYNUCLEAR HYDROCARBONS AND UV, IR SPECTROSCOPY
	Practicals	To calculate acidity in given sample of pesticide formulations as per BIS specifications.	B.Sc. CHEMISTRY (Hons.) II Year, Semester IV	SEC 11: PESTICIDE CHEMISTRY PRACTICALS
		Functional group test for nitro, amine and amide groups.	B.Sc. CHEMISTRY (Hons.) II Year, Semester IV	CC-IX: ORGANIC CHEMISTRY PRACTICALS
		Systematic Qualitative Organic Analysis of Organic Compounds possessing monofunctional groups (-COOH, alcoholic, phenolic, carbohydrates, aldehydic, ketonic, amide, nitro, Amines) and preparation of one derivative.	B.Sc. Life Science (prog.) III Year, Semester VI	ORGANOMETALLICS, BIOINORGANIC CHEMISTRY, POLYNUCLEAR HYDROCARBONS AND UV, IR SPECTROSCOPY Practical
		Extraction of caffeine from tea leaves. Preparation of urea formaldehyde resin.	B.Sc. CHEMISTRY (Hons.) III Year, Semester VI	CC-XIV: ORGANIC CHEMISTRY PRACTICALS

FEBRUARY	<b>Theory:</b>	<p>synthesis and technical manufacture and uses of representative pesticides in the following classes: Organochlorines (DDT, Gammexene).</p> <p>Electromagnetic radiations, electronic transitions, <math>\lambda_{max}</math> &amp; <math>\epsilon_{max}</math>, m chromophore, auxochrome, bathochromic and hypsochromic shifts. Application of electronic spectroscopy and Woodward rules for calculating <math>\lambda_{max}</math> of conjugated dienes and <math>\epsilon_{max}</math> of unsaturated compounds.</p>	<p>B.Sc. CHEMISTRY (Hons.) II Year, Semester IV</p> <p>B.Sc. Life Sciences (prog.) III Year, Semester VI</p>	<p>SEC 11: PESTICIDE CHEMISTRY</p> <p>ORGANOMETALLICS, BIOINORGANIC CHEMISTRY, POLYNUCLEAR HYDROCARBONS AND UV, IR SPECTROSCOPY</p>
	<b>Practicals:</b>	<p>To calculate alkalinity in given sample of pesticide formulations as per BIS specifications.</p> <p>Qualitative analysis of unknown organic compounds containing simple functional groups (Alcohols, carboxylic acids, phenols, carbonyl compounds and esters)</p> <p>Systematic Qualitative Organic Analysis of Organic Compounds possessing monofunctional groups (-COOH, alcoholic, phenolic, carbohydrates, aldehydic, ketonic, amide, nitro, Amines) and preparation of one derivative.</p> <p>Qualitative analysis of unknown organic compounds containing monofunctional groups (carbohydrates, aryl halides, aromatic hydrocarbons, nitro compounds, amines and amides) and</p>	<p>B.Sc. CHEMISTRY (Hons.) II Year, Semester IV</p> <p>B.Sc. CHEMISTRY (Hons.) II Year, Semester IV</p> <p>B.Sc. Life Science (prog.) III Year, Semester VI</p> <p>B.Sc. CHEMISTRY (Hons.) III Year, Semester VI</p>	<p>SEC 11: PESTICIDE CHEMISTRY PRACTICALS</p> <p>CC-IX: ORGANIC CHEMISTRY PRACTICALS</p> <p>ORGANOMETALLICS, BIOINORGANIC CHEMISTRY, POLYNUCLEAR HYDROCARBONS AND UV, IR SPECTROSCOPY Practical</p> <p>CC-XIV: ORGANIC CHEMISTRY PRACTICALS</p>

MARCH	<b>Theory:</b>	<p>synthesis and technical manufacture and uses of representative pesticides in the following classes: Organophosphates (Malathion, Parathion), Carbamates (Carbofuran and carbaryl).</p> <p>Infrared radiation and types of molecular vibrations, functional group and fingerprint region.</p>	<p>B.Sc. CHEMISTRY (Hons.) II Year, Semester IV</p> <p>B.Sc. Life Sciences (prog.) III Year, Semester VI</p>	<p>SEC 11: PESTICIDE CHEMISTRY</p> <p>ORGANOMETALLICS, BIOINORGANIC CHEMISTRY, POLYNUCLEAR HYDROCARBONS AND UV, IR SPECTROSCOPY</p>
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<b>Practicals:</b>	Preparation of phenylethylamine thiocarbamate as organic pesticide.	B.Sc. CHEMISTRY (Hons.) II Year, Semester IV	SEC 11: PESTICIDE CHEMISTRY PRACTICALS
	Qualitative analysis of unknown organic compounds containing simple functional groups (Alcohols, carboxylic acids, phenols, carbonyl compounds and esters)	B.Sc. CHEMISTRY (Hons.) I Year, Semester IV	CC-IX: ORGANIC CHEMISTRY PRACTICALS
	Systematic Qualitative Organic Analysis of Organic Compounds possessing monofunctional groups (-COOH, alcoholic, phenolic, carbohydrates, aldehydic, ketonic, amide, nitro, Amines) and preparation of one derivative.	B.Sc. Life Science (prog.) III Year, Semester VI	ORGANOMETALLICS, BIOINORGANIC CHEMISTRY, POLYNUCLEAR HYDROCARBONS AND UV, IR SPECTROSCOPY Practical
	Qualitative analysis of simple bifunctional groups, e.g. salicylic acid, cinnamic acid, nitrophenols etc. Identification of simple organic compounds by IR spectroscopy and NMR spectroscopy (Spectra to be provided).	B.Sc. CHEMISTRY (Hons.) III Year, Semester VI	CC-XIV: ORGANIC CHEMISTRY PRACTICALS
<b>Assignment :</b>	To solve last 4 semesters Pesticides chemistry question papers.	B.Sc. CHEMISTRY (Hons.) II Year, Semester IV	SEC 11: PESTICIDE CHEMISTRY
	To solve last 3 years CBCS organic question papers.	B.Sc. Life Sciences, III Year, Semester VI	ORGANOMETALLICS, BIOINORGANIC CHEMISTRY, POLYNUCLEAR HYDROCARBONS AND UV, IR SPECTROSCOPY

APRIL	<b>Theory:</b>	Synthesis and technical manufacture and uses of representative pesticides in the following classes: Quinones (Chloranil), Anilides (Alachlor and Butachlor).	B.Sc. CHEMISTRY (Hons.) II Year, Semester IV	SEC 11: PESTICIDE CHEMISTRY
		IR spectra of alkalis, alkenes and simple alcohols (inter and intramolecular hydrogen bonding), aldehydes, ketones, carboxylic acids and their derivatives (effect of substitution on -C=O stretching absorptions).	B.Sc. Life Sciences (prog.) III Year, Semester VI	ORGANOMETALLICS, BIOINORGANIC CHEMISTRY, POLYNUCLEAR HYDROCARBONS AND UV, IR SPECTROSCOPY
	<b>Practicals:</b>	Practice exercise.	B.Sc. CHEMISTRY (Hons.) II Year, Semester IV	SEC 11: PESTICIDE CHEMISTRY PRACTICALS
		Practice exercise.	B.Sc. CHEMISTRY (Hons.) II Year, Semester IV	CC-IX: ORGANIC CHEMISTRY PRACTICALS
		Practice exercise.	B.Sc. Life Science (prog.) III Year, Semester VI	ORGANOMETALLICS, BIOINORGANIC CHEMISTRY, POLYNUCLEAR HYDROCARBONS AND UV, IR SPECTROSCOPY Practical
Practice exercise.	B.Sc. CHEMISTRY (Hons.) III Year, Semester VI	CC-XIV: ORGANIC CHEMISTRY PRACTICALS		

	<b><u>Test</u></b>	Upto organophosphates as pesticides.  Aromatic Hydrocarbon	B.Sc. CHEMISTRY (Hons.) II Year, Semester IV  B.Sc. CHEMISTRY (Hons.) I Year, Semester II	SEC 11: PESTICIDE CHEMISTRY  CHEMISTRY – CIII: ORGANIC CHEMISTRY - I Basics and Hydrocarbons
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**SEMESTER WISE TEACHING PLAN**  
**Academic year 2018-2019 (Even Semester)**  
**SRI VENKATESWARA COLLEGE**

Name of the Faculty: Ms. Laishram Saya Devi

Department: CHEMISTRY

Semester: II/IV/VI

Month		Topics	Course	Paper Code/Name
JANUARY	<b>Theory</b>	<p><b>CONDUCTANCE:</b>            Quantitative aspects of Faraday's laws of electrolysis Arrhenius theory of electrolytic dissociation. Conductivity, equivalent and molar conductivity and their variation with dilution for weak and strong electrolytes. Molar conductivity at infinite dilution. Kohlrausch law of independent migration of ions. Debye-Hückel-Onsager equation, Wien effect, Debye-Falkenhagen effect.</p> <p><b>CHEMICAL EQUILIBRIUM:</b>            Free energy change in a chemical reaction, Thermodynamic derivation of the law of chemical equilibrium, distinction between <math>G</math> and <math>G_0</math>, Le Chatelier's principle, relationships between <math>K_p</math>, <math>K_c</math> and <math>K_x</math> for reactions involving ideal gases.</p>	<p>B.Sc.(H)            CHEMISTRY            Semester IV</p> <p>B.Sc (P) Life            Sciences            Semester II</p>	<p>C X: PHYSICAL CHEMISTRY            IV</p> <p>CHEMICAL ENERGETICS,            EQUILIBRIA AND            FUNCTIONAL GROUP            ORGANIC CHEMISTRY-I</p>
	<b>Practical</b>	<p>Determination of cell constant Determination of conductivity, molar conductivity, degree of dissociation and dissociation constant of a weak acid.            Perform the following conductometric titrations:            (I) Strong acid vs. strong base</p> <p>1.Introductory class            2. Viscosity measurement (use of organic solvents excluded).            (a) Determination of the relative and absolute viscosity of a liquid or dilute solution using an Ostwald's viscometer.            (b)Study of the variation of viscosity of an aqueous solution with concentration of solute.</p>	<p>B.Sc. (H)            CHEMISTRY            Semester IV</p> <p>B.Sc (P) Life            Sciences            Semester IV</p> <p>B.Sc (P) Life            Sciences            Semester II</p> <p>B.Sc (P) Life            Sciences            Semester IV</p>	<p>C X: PHYSICAL CHEMISTRY            IV  <b>LAB</b></p> <p>CHEMISTRY OF s- AND p-            BLOCK ELEMENTS, STATES            OF MATTER &amp; CHEMICAL            KINETICS</p> <p>CHEMICAL ENERGETICS,            EQUILIBRIA AND            FUNCTIONAL GROUP            ORGANIC CHEMISTRY-I</p> <p>SEC</p>
FEBRUARY	<b>Theory</b>	<p><b>CONDUCTANCE:</b>            Walden's rules. Ionic velocities, mobilities and their determinations, transference numbers and their relation to ionic mobilities, determination</p>	<p>B.Sc.(H)            CHEMISTRY            Semester IV</p>	<p>C X: PHYSICAL CHEMISTRY            IV</p>



		<p>of transference numbers using Hittorf and Moving Boundary methods. Applications of conductance measurement: (i) degree of dissociation of weak electrolytes, (ii) ionic product of water (iii) solubility and solubility product of sparingly soluble salts, (iv) conductometric titrations, and (v) hydrolysis constants of salts</p> <p><b>IONIC EQUILIBRIA:</b> Strong, moderate and weak electrolytes, degree of ionization, factors affecting degree of ionization, Ostwald's dilution law, ionization constant and ionic product of water, ionization of weak acids and bases, pH scale, common ion effect, salt hydrolysis-calculation of hydrolysis constant,</p>	B.Sc (P) Life Sciences Semester II	CHEMICAL ENERGETICS, EQUILIBRIA AND FUNCTIONAL GROUP ORGANIC CHEMISTRY-I
	<b>Practical</b>	<p>Conductometric titrations: (I)Weak acid vs. strong base (II)Mixture of strong acid and weak acid vs. strong base Study of kinetics of Acid hydrolysis of methyl acetate with hydrochloric acid. Saponification of ethyl acetate</p> <p>Semi-micro qualitative analysis of mixtures (two anions and two cations and excluding insoluble salts)</p>	<p>B.Sc. (H) CHEMISTRY Semester IV</p> <p>B.Sc (P) Life Sciences Semester IV</p> <p>B.Sc (P) Life Sciences Semester II</p> <p>B.Sc (P) Life Sciences Semester IV</p>	<p>C X: PHYSICAL CHEMISTRY IV <b>LAB</b></p> <p>CHEMISTRY OF s- AND p-BLOCK ELEMENTS, STATES OF MATTER &amp; CHEMICAL KINETICS</p> <p>CHEMICAL ENERGETICS, EQUILIBRIA AND FUNCTIONAL GROUP ORGANIC CHEMISTRY-I</p> <p><b>SEC</b></p>
<b>MARCH</b>	<b>Theory</b>	<p><b>PHOTOCHEMISTRY:</b> Characteristics of electromagnetic radiation, Lambert-Beer's law and its limitations, physical significance of absorption coefficients. Laws, of photochemistry, quantum yield, actinometry.</p> <p><b>IONIC EQUILIBRIA:</b> degree of hydrolysis and pH for different salts. Buffer solutions, Henderson-Hasselbach equation.Solubility and solubility product of sparingly soluble salts – applications of solubility product principle</p>	<p>B.Sc.(H) CHEMISTRY Semester IV</p> <p>B.Sc (P) Life Sciences Semester II</p>	<p>C X: PHYSICAL CHEMISTRY IV</p> <p>CHEMICAL ENERGETICS, EQUILIBRIA AND FUNCTIONAL GROUP ORGANIC CHEMISTRY-I</p>

	<b>Practical</b>	<p>Comparison of the strengths of HCl and H<sub>2</sub>SO<sub>4</sub> by studying kinetics of hydrolysis of methyl acetate.</p> <p>Surface tension measurement (use of organic solvents excluded). Determination of the surface tension of a liquid or a dilute solution using a stalagmometer.</p>	<p>B.Sc. (H) CHEMISTRY Semester IV</p> <p>B.Sc (P) Life Sciences Semester IV</p> <p>B.Sc (P) Life Sciences Semester II</p> <p>B.Sc (P) Life Sciences Semester IV</p>	<p>C X: PHYSICAL CHEMISTRY IV <b>LAB</b></p> <p>CHEMISTRY OF s- AND p-BLOCK ELEMENTS, STATES OF MATTER &amp; CHEMICAL KINETICS</p> <p>CHEMICAL ENERGETICS, EQUILIBRIA AND FUNCTIONAL GROUP ORGANIC CHEMISTRY-I</p> <p>SEC</p>
<b>APRIL</b>	<b>Theory</b>	<p><b>PHOTOCHEMISTRY:</b> examples of low and high quantum yields, photochemical equilibrium and the differential rate of photochemical reactions, photosensitised reactions, quenching. Role of photochemical reactions in biochemical processes, photo stationary states, chemiluminescence.</p> <p><b>Revision and solving previous years question papers</b></p>	<p>B.Sc.(H) CHEMISTRY Semester IV</p> <p>B.Sc (P) Life Sciences Semester II</p>	<p>C X: PHYSICAL CHEMISTRY IV</p> <p>CHEMICAL ENERGETICS, EQUILIBRIA AND FUNCTIONAL GROUP ORGANIC CHEMISTRY-I</p>
	<b>Practical</b>			



SEMESTER WISE TEACHING PLAN  
SRI VENKATESWARA COLLEGE

Academic year 2018-2019 (Even)

Name of the Faculty: Dr. Rekha Yadav

Department: Chemistry

Semester: II/IV/VI

Month		Topics	Course	Paper Code/Name
JAN	Theory	<b>Chemical Thermodynamics:</b> Intensive and extensive variables; state and path functions; isolated, closed and open systems. <b>First law:</b> Concept of heat, Q, work, W, internal energy, U, and statement of first law; enthalpy, H Relation between heat capacities, calculations of Q, W, $\Delta U$ and $\Delta H$ for reversible, irreversible. Free expansion of gases (ideal and van der Waals) under isothermal and adiabatic conditions.	B.Sc. (Hons.) Chemistry Semester II	CHEMISTRY - C IV: PHYSICAL CHEMISTRY II
	Practicals	I. Separation Techniques Chromatography: (a) Separation of mixtures (i) Paper chromatographic separation of $\text{Co}^{2+}$ and $\text{Ni}^{2+}$ . (ii) Separation and identification of the amino acids present in the given mixture by paper chromatography. Reporting the $R_f$ values.	B.Sc. (Hons.) Chemistry Semester VI	PRACTICALS- DSE LAB: ANALYTICAL METHODS IN CHEMISTRY

	Practicals	<b>Conductometry:</b> 1. Determination of cell constant 2. Determination of conductivity, molar conductivity, degree of dissociation and dissociation constant of a weak acid. 3. Perform the following conductometric titrations: i. Strong acid vs. strong base	B.Sc. (Hons.) Chemistry Semester IV	Course-X Practical Physical Chemistry-IV Lab
	Practicals	10. Semi-micro qualitative analysis of mixtures 11. Determination of the surface tension of a liquid or a dilute solution using a stalagmometer.	BSc (P) Life Sci. Semester IV	CHEMISTRY OF S- AND P-BLOCK ELEMENTS, STATES OF MATTER & CHEMICAL KINETICS
	Practicals	1. Determination of heat capacity of calorimeter for different volumes. 2. Determination of Enthalpy of neutralization of hydrochloric acid with sodium hydroxide. 3. Determination of enthalpy of ionization of acetic acid.	BSc (P) Life Sci. Semester II	CHEMICAL ENERGETICS, EQUILIBRIA & FUNCTIONAL ORGANIC CHEMISTRY I
Month		Topics	Course	Paper Code/Name

FEB	Theory	<p><b>Second Law:</b> Concept of entropy; thermodynamic scale of temperature, statement of the second law of thermodynamics. Calculation of entropy change for reversible and irreversible processes.</p> <p><b>Third Law:</b> Statement of third law, concept of residual entropy, calculation of absolute entropy of molecules. Free Energy Functions: Gibbs and Helmholtz energy; variation of S, G, A with T, V, P; Free energy change and spontaneity. Relation between Joule-Thomson coefficient and other thermodynamic parameters; inversion temperature; Gibbs-Helmholtz equation; Maxwell relations; thermodynamic equation of state.</p>	B.Sc. (Hons.) Chemistry Semester II	CHEMISTRY - C IV: PHYSICAL CHEMISTRY II
	Practicals	<p>II. Solvent Extractions: (i) To separate a mixture of Ni<sup>2+</sup> &amp; Fe<sup>2+</sup> by complexation with DMG and extracting the Ni<sup>2+</sup>- DMG complex in chloroform, and determine its concentration by spectrophotometry. Analysis of soil: (i) Determination of pH of soil. (ii) Total soluble salt (iii) Estimation of calcium, magnesium</p>	B.Sc. (Hons.) Chemistry Semester VI	PRACTICALS- DSE LAB: ANALYTICAL METHODS IN CHEMISTRY

	Practicals	Conductometric titration 4. Weak acid vs. strong base 5. Mixture of strong acid and weak acid vs. strong base 6. Strong acid vs. weak base	B.Sc. (Hons.) Chemistry Semester IV	Course-X Practical Physical Chemistry-IV Lab
	Practicals	12. Semi-micro qualitative analysis of mixtures 13. Study of the variation of surface tension of a detergent solution with concentration. 14. Determination of the relative and absolute viscosity of a liquid or dilute solution using an Ostwald's viscometer.	BSc (P) Life Sci. Semester IV	CHEMISTRY OF S- AND P-BLOCK ELEMENTS, STATES OF MATTER & CHEMICAL KINETICS
	Practicals	4. Preparations: Mechanism of various reactions involved to be discussed. Recrystallisation, determination of melting point and calculation of quantitative yields to be done. (a) Bromination of Phenol/Aniline (b) Benzoylation of amines/phenols (c) Oxime and 2,4 dinitrophenylhydrazone of aldehyde/ketone	BSc (P) Life Sci. Semester II	CHEMICAL ENERGETICS, EQUILIBRIA & FUNCTIONAL ORGANIC CHEMISTRY I
Month		Topics	Course	Paper Code/Name

MARCH	Theory	<p><b>Systems of Variable Composition:</b> Partial molar quantities, dependence of thermodynamic parameters on composition; Gibbs Duhem equation, chemical potential of ideal mixtures, change in thermodynamic functions in mixing of ideal gases.</p> <p><b>Chemical Equilibrium:</b> Criteria of thermodynamic equilibrium, degree of advancement of reaction, chemical equilibria in ideal gases. Thermodynamic derivation of relation between Gibbs free energy of reaction and reaction quotient. Equilibrium constants and their quantitative dependence on temperature, pressure and concentration ( Le Chatelier Principle, Quantitatively)).</p>	B.Sc. (Hons.) Chemistry Semester II	CHEMISTRY - C IV: PHYSICAL CHEMISTRY II
	Practicals	<p>(iv) Qualitative detection of nitrate, phosphate Ion exchange: (i) Determination of exchange capacity of cation exchange resins and anion exchange resins. (ii) Separation of amino acids from organic acids by ion exchange chromatography.</p>	B.Sc. (Hons.) Chemistry Semester VI	PRACTICALS- DSE LAB: ANALYTICAL METHODS IN CHEMISTRY

	Practicals	Study the kinetics of the following reactions. 7. Iodide-persulphate reaction (i) Initial rate method; 8. (ii) Integrated rate method 9. Acid hydrolysis of methyl acetate with hydrochloric acid.	B.Sc. (Hons.) Chemistry Semester IV	Course-X Practical Physical Chemistry-IV Lab
	Practicals	15. Semi-micro qualitative analysis of mixtures 16. Study of the variation of viscosity of an aqueous solution with concentration of solute 8. Study the kinetics of the following reactions. Initial rate method: Iodide-persulphate reaction	BSc (P) Life Sci. Semester IV	CHEMISTRY OF S- AND P-BLOCK ELEMENTS, STATES OF MATTER & CHEMICAL KINETICS
	Practicals	2. Systematic Qualitative organic analyses of organic compounds possessing monofunctional groups (Alcohols, Phenols, Carbonyl, -COOH) and preparation of one suitable derivative. 4. Determination of integral enthalpy of solution of salts (KNO <sub>3</sub> , NH <sub>4</sub> Cl). 5. Determination of enthalpy of hydration of copper sulphate. a) Measurement of pH of different solutions like aerated drinks, fruit juices, shampoos and soaps (use dilute solutions of soaps and shampoos to prevent damage to the glass electrode) using pH-meter.	BSc (P) Life Sci. Semester II	CHEMICAL ENERGETICS, EQUILIBRIA & FUNCTIONAL ORGANIC CHEMISTRY I
Month		Topics	Course	Paper Code/Name



APRIL	Theory	<p>Free energy of mixing and spontaneity. equilibrium between ideal gases and a pure condensed phase.</p> <p><b>Solutions and Colligative Properties:</b> Dilute solutions; lowering of vapour pressure, Raoult's and Henry's Laws and their applications. Thermodynamic derivation using chemical potential to derive relations between the four colligative properties [(i) relative lowering of vapour pressure, (ii) elevation of boiling point, (iii) Depression of freezing point, (iv) osmotic pressure] and amount of solute. Applications in calculating molar masses of normal, dissociated and associated solutes in solution</p>	B.Sc. (Hons.) Chemistry Semester II	CHEMISTRY - C IV: PHYSICAL CHEMISTRY II
	Practicals	<p>III Spectrophotometry</p> <p>Verification of Lambert-Beer's law and determination of concentration of a coloured species <math>\text{CuSO}_4</math></p> <p>Verification of Lambert-Beer's law and determination of concentration of a coloured species <math>\text{KMnO}_4</math></p>	B.Sc. (Hons.) Chemistry Semester VI	PRACTICALS- DSE LAB: ANALYTICAL METHODS IN CHEMISTRY

	Practicals	10. Saponification of ethyl acetate. 11. Comparison of the strengths of HCl and H <sub>2</sub> SO <sub>4</sub> by studying kinetics of hydrolysis of methyl acetate.	B.Sc. (Hons.) Chemistry Semester IV	Course-X Practical Physical Chemistry-IV Lab
	Practicals	Integrated rate method: 9. Acid hydrolysis of methyl acetate with hydrochloric acid. 10. Saponification of ethyl acetate. 11. Compare the strengths of HCl and H <sub>2</sub> SO <sub>4</sub> by studying kinetics of hydrolysis of methyl acetate	BSc (P) Life Sci. Semester IV	CHEMISTRY OF S- AND P-BLOCK ELEMENTS, STATES OF MATTER & CHEMICAL KINETICS
	Practicals	b) Preparation of buffer solutions: (i) Sodium acetate-acetic acid (ii) Ammonium chloride-ammonium hydroxide Measurement of the pH of buffer solutions and comparison of the values with theoretical values	BSc (P) Life Sci. Semester II	CHEMICAL ENERGETICS, EQUILIBRIA & FUNCTIONAL ORGANIC CHEMISTRY I



**SEMESTER WISE  
TEACHING PLAN-2018-2019  
EVEN SEMESTER  
SRI VENKATESWARA COLLEGE**

**Name of the Faculty: Dr. Rangarajan T. M.**

**Department: Chemistry**

**Semester: II/IV/VI**

Month		Topic	Course	Paper
January	<b>Theory:</b>	I. Structure & aromatic character of Benzene and its preparation. Electrophilic substitution reactions and side chain oxidation. II. Haloalkanes preparation and their nucleophilic substitution reactions with mach and specific examples	B. Sc. (P) Life Science-I year And B.Sc (H) Generic Elective Semester-II	Chemical energetics, Equilibria and Functional Group Organic Chemistry-I
	<b>Practicals:</b>	Calibration of thermometer, purification of organic compounds and determination of melting and effect of impurities.	B.Sc. (H) Chemistry, I Year, Semester – II	CHEMISTRY PRACTICAL – C III: Organic Chemistry I
	<b>Practicals:</b>	Preparation of talcum powders and shampoo	B.Sc. (P) Life Science - III year, Semester VI, SEC	CHEMISTRY OF COSMETICS & PERFUMES
	<b>Practicals:</b>	Determination of heat capacity of calorimeter and oxime of cyclohexanone preparation	B.Sc (H) Generic Elective Semester-II	Chemical energetics, Equilibria and Functional Group Organic Chemistry-I (PRACTICALS)
	<b>Tutorials:</b>	NA	NA	NA
February	<b>Theory:</b>	II. Preparations and nucleophilic substitution reactions of haloarenes. Relative reactivity and strength of C-X bonds. III. Preparations of alcohols and their reactions.	B. Sc. (P) Life Science-I year And B.Sc (H) Generic Elective Semester-II	Chemical energetics, Equilibria and Functional Group Organic Chemistry-I
	<b>Practicals:</b>	Determination of boiling point of liquids. Detection of extra elements.	B.Sc. (H) Chemistry, I Year, Semester – II	CHEMISTRY PRACTICAL – C III: Organic Chemistry I
		Preparation of enamels and hair removals.	B.Sc. (P) Life Science - III year, Semester VI, SEC	CHEMISTRY OF COSMETICS & PERFUMES
		Determination of enthalpy of neutralization and Benzoylation of anilines and phenols.	B.Sc (H) Generic Elective Semester-II	Chemical energetics, Equilibria and Functional Group Organic Chemistry-I (PRACTICALS)
<b>Tutorials:</b>	NA	NA	NA	
March	<b>Theory:</b>	III. Diols oxidation and pinacol-pinacolone rearrangement. Phenols: acidity, preparations and their reactions. Ethers.	B. Sc. (P) Life Science-I year And B.Sc (H) Generic Elective	Chemical energetics, Equilibria and Functional Group Organic Chemistry-I

		Williamson's ether synthesis and cleavage of ether bonds.	Semester-II	
	<b>Practicals:</b>	Detection of extra elements. Chromatographic separations of amino acids and nitration of nitrobenzene.	B.Sc. (H) Chemistry, I Year, Semester – II	CHEMISTRY PRACTICAL – C III: Organic Chemistry I
		Preparation of face cream and nail polish.	B.Sc. (P) Life Science - III year, Semester VI, SEC	CHEMISTRY OF COSMETICS & PERFUMES
		Determination of integral enthalpy of salts (KNO <sub>3</sub> , NH <sub>4</sub> Cl), bromination of aniline and preparation of semicarbazone.	B.Sc (H) Generic Elective Semester-II	Chemical energetics, Equilibria and Functional Group Organic Chemistry-I (PRACTICALS)
	<b>Tutorials:</b>	NA	NA	NA
	<b>Assignment</b>	<b>Assignment-I</b>	B. Sc. Life Science- I year and B.Sc (H) Generic Elective Semester-I	Chemical energetics, Equilibria and Functional Group Organic Chemistry-I
April	<b>Theory:</b>	IV. Preparation of aldehydes and ketones and their nucleophilic addition and addition-elimination reactions.	B. Sc. (P) Life Science-I year And B.Sc (H) Generic Elective Semester-II	Chemical energetics, Equilibria and Functional Group Organic Chemistry-I
	<b>Practicals:</b>	Detection of extra elements, chromatographic separation of sugars and bromination of aniline.	B.Sc. (H) Chemistry, I Year, Semester – II	CHEMISTRY PRACTICAL – C III: Organic Chemistry I
		Preparation of nail polish remover and mock test.	B.Sc. (P) Life Science - III year, Semester VI, SEC	CHEMISTRY OF COSMETICS & PERFUMES
		Determination of enthalpy of hydration of copper sulphate and preparation of 2,4-dinitrophenylhydrazone of aldehyde.	B.Sc (H) Generic Elective Semester-II	Chemical Energetics, Equilibria and Functional Group Organic Chemistry-I (PRACTICALS)
<b>Tutorials:</b>	NA	NA	NA	
	<b>Test</b>	Test - I	B. Sc. Life Science-I year And B.Sc (H) Generic Elective Semester-I	Chemical Energetics, Equilibria and Functional Group Organic Chemistry-I

**TEACHING PLAN**  
**(2018-19) Even semester**  
**SRI VENKATESWARA COLLEGE**

**Name of the Faculty:** DR. DEVENDRA KUMAR VERMA      **Department:** Chemistry

**Semester:** II/IV/VI

Month		Topics	Course	Paper Code/Name
JANUARY	<b>Theory</b>	Introduction: Introduction to Analytical Chemistry and its interdisciplinary nature. Concept of sampling. Importance of accuracy, precision and sources of error in analytical measurements. Presentation of experimental data and results, from the point of view of significant figures.	B.Sc Life Science III year (SEC)	BASIC ANALYTICAL CHEMISTRY
		Introduction: Introduction to Analytical Chemistry and its interdisciplinary nature. Concept of sampling. Importance of accuracy, precision and sources of error in analytical measurements. Presentation of experimental data and results, from the point of view of significant	B.Sc Life Science II year (SEC) batch 2	BASIC ANALYTICAL CHEMISTRY
		Section A: Physical Chemistry-1 (30 Lectures) Unit 1. Chemical Thermodynamics What is thermodynamics? State of a system, state variables, intensive and extensive variables, concept of heat and work, thermodynamic equilibrium, thermodynamic properties, various types of systems and processes. First Law of thermodynamics.	B.Sc Life Science I year	CHPT 202- Chemistry-2 (Thermodynamics, Equilibria & Functional Group Organic Chemistry-1)
		Chemical Energetics Review of thermodynamics and the Laws of Thermodynamics. Important principles and definitions of thermochemistry. Concept of standard state and standard	GE 2 Chemistry	CHEMICAL ENERGETICS, EQUILIBRIA & FUNCTIONAL ORGANIC CHEMISTRY I

	<b>Practicals</b>	Section B: Physical Chemistry (I) Surface tension measurement (use of organic solvents excluded). a) Determination of the surface tension of a liquid or	GE IV	Chemistry of S- And P-Block Elements, States of Matter & Chemical Kinetics
		Section B: Physical Chemistry (I) Surface tension measurement (use of organic solvents excluded) a) Determination of the surface tension of a liquid or a dilute solution using a <del>calorimeter</del>	B.Sc Life Science II Year	CHPT 404: Chemistry-4 (Chemistry of s & p block elements, States of Matter and Phase Equilibrium)
		Estimation of Calcium and Magnesium ions as Calcium carbonate by complexometric titration.	B.Sc (H) Chemistry III year	Basic Analytical Chemistry
		Thermochemistry: (a) Determination of heat capacity of a calorimeter for different volumes using (i) change of enthalpy data of a known system (method of back calculation of heat capacity of calorimeter from known enthalpy of solution of sulphuric acid or enthalpy of	B.Sc (H) Chemistry I year	Chemistry - C IV: Physical chemistry II
	<b>Tutorials</b>			
FEBRUARY	<b>Theory:</b>	Analysis of soil: Composition of soil, Concept of pH and pH measurement, Complexometric titrations, Chelation, Chelating agents, use of indicators a. Determination of pH of soil samples. b. Estimation of Calcium and Magnesium ions as Calcium carbonate by complexometric titration.	B.Sc Life Science III year (SEC)	BASIC ANALYTICAL CHEMISTRY

	Analysis of soil: Composition of soil, Concept of pH and pH measurement, Complexometric titrations, Chelation, Chelating agents, use of indicators a. Determination of pH of soil samples. b. Estimation of Calcium and Magnesium ions as Calcium carbonate by complexometric titration.	B.Sc Life Science II year (SEC) batch 2	BASIC ANALYTICAL CHEMISTRY
	Calculation of work (w), heat (q), changes in internal energy ( $\Delta U$ ) and enthalpy ( $\Delta H$ ) for expansion or compression of ideal gases under isothermal and adiabatic conditions for both reversible and irreversible processes. Calculation of w, q, $\Delta U$ and $\Delta H$ for processes involving changes in physical states. Important principles and definitions of thermochemistry. Concept of standard state and standard enthalpies of formations, integral and differential enthalpies of solution and dilution. Calculation of bond energy, bond dissociation energy and resonance energy from thermochemical data. Statement of Third Law of thermodynamics and calculation of absolute entropies of substances. Chemical Equilibrium: Free energy change in a chemical reaction.	B.Sc Life Science I year	CHPT 202- Chemistry-2 (Thermodynamics, Equilibria & Functional Group Organic Chemistry-1)
	Statement of Third Law of thermodynamics and calculation of absolute entropies of substances. Chemical Equilibrium: Free energy change in a chemical reaction.	GE 2 Chemisty	CHEMICAL ENERGETICS, EQUILIBRIA & FUNCTIONAL ORGANIC CHEMISTRY I
<b>Practicals</b> :	b) Study of the variation of surface tension of a detergent solution with concentration. (II) Viscosity measurement (use of organic solvents)	GE IV	Chemistry of S- And P-Block Elements, States of Matter & Chemical Kinetics

		b) Study of the variation of surface tension of a detergent solution with concentration. (II) Viscosity measurement (use of organic solvents excluded) a) Determination of the relative and absolute viscosity of a liquid or dilute solution using an Ostwald's viscometer	B.Sc Life Science II Year	CHPT 404: Chemistry-4 (Chemistry of s & p block elements, States of Matter and Phase Equilibrium)
		Determination of pH of soil samples	B.Sc (H) Chemistry III year	Basic Analytical Chemistry
		(b) Determination of enthalpy of neutralization of hydrochloric acid with sodium hydroxide. (c) Determination of the enthalpy of ionization of ethanoic acid.	B.Sc (H) Chemistry I year	Chemistry - C IV: Physical chemistry II
	<b>Tutorials:</b>			
	<b><u>Assignment :</u></b>			
MARCH	<b>Theory:</b>	Analysis of water: Definition of pure water, sources responsible for contaminating water, water sampling methods, water purification methods. a. Determination of pH, acidity and alkalinity of a water sample. b. Determination of dissolved oxygen (DO) of a water sample.	B.Sc Life Science III year (SEC)	BASIC ANALYTICAL CHEMISTRY
		Analysis of water: Definition of pure water, sources responsible for contaminating water, water sampling methods, water purification methods. a. Determination of pH, acidity and alkalinity of a water sample. b. Determination of dissolved oxygen (DO) of a water	B.Sc Life Science II year (SEC) batch 2	BASIC ANALYTICAL CHEMISTRY



	<p>Various statements of Second Law of thermodynamics, concept of entropy, Gibbs free energy and Helmholtz energy, Calculations of entropy change and free energy change for reversible and irreversible processes under isothermal and adiabatic conditions. Criteria of spontaneity. Gibbs – Helmholtz equation. Maxwell’s relations. Statement of Third Law of thermodynamics and calculation of absolute entropies of substances.</p>	B.Sc Life Science I year	CHPT 202- Chemistry-2 (Thermodynamics, Equilibria & Functional Group Organic Chemistry-1)
	<p>Thermodynamic derivation of the law of chemical equilibrium. Distinction between <math>G</math> and <math>G_0</math>,</p>	GE 2 Chemistry	CHEMICAL ENERGETICS, EQUILIBRIA & FUNCTIONAL ORGANIC CHEMISTRY I
<b>Practicals</b> :	<p>b) Study of the variation of viscosity of an aqueous solution with concentration of solute. (III) Chemical</p>	GE IV	Chemistry of S- And P-Block Elements, States of Matter & Chemical Kinetics
	<p>b) Study of the variation of viscosity of an aqueous solution with concentration of solute. (III) Phase equilibria a) Construction of the phase diagram of a binary system (simple eutectic) using</p>	B.Sc Life Science II Year	CHPT 404: Chemistry-4 (Chemistry of s & p block elements, States of Matter and Phase Equilibrium)

		Determination of pH, acidity and alkalinity of a water sample. Determination of dissolved oxygen (DO) of a water sample	B.Sc (H) Chemistry III year	Basic Analytical Chemistry
		(d) Determination of integral enthalpy (endothermic and exothermic) solution of salts. (e) Determination of basicity of a diprotic acid by the thermochemical method in	B.Sc (H) Chemistry I year	Chemistry - C IV: Physical chemistry II
	<b>Tutorials:</b>			
	<b>Test</b>			
APRIL	<b>Theory:</b>	Suggested Instrumental demonstrations: a. Estimation of macro nutrients: Potassium, Calcium, Magnesium in soil samples by flame photometry. b. Spectrophotometric determination of Iron in Vitamin / Dietary Tablets. c. Spectrophotometric Identification and Determination of Caffeine and Benzoic Acid in Soft Drink.	B.Sc Life Science III year (SEC)	BASIC ANALYTICAL CHEMISTRY
		Suggested Instrumental demonstrations: a. Estimation of macro nutrients: Potassium, Calcium, Magnesium in soil samples by flame photometry. b. Spectrophotometric determination of Iron in Vitamin / Dietary Tablets. c. Spectrophotometric Identification and Determination of Caffeine and	B.Sc Life Science II year (SEC) batch 2	BASIC ANALYTICAL CHEMISTRY
		Unit 2. Chemical Equilibrium Free energy change in a chemical reaction. Thermodynamic derivation of the law of chemical equilibrium. Distinction between $\Delta G$ and $\Delta G^\ominus$ , Le Chatelier's principle. Relationships between $K_p$ , $K_c$ and $K_x$ for reactions involving ideal gases.	B.Sc Life Science I year	CHPT 202- Chemistry-2 (Thermodynamics, Equilibria & Functional Group Organic Chemistry-1)

		Le Chatelier's principle. Relationships between $K_p$ , $K_c$ and $K_x$ for reactions involving ideal gases.	B.Sc Life Science I year	CHPT 202- Chemistry-2 (Thermodynamics, Equilibria & Functional Group Organic
	<b>Practicals :</b>	2. Integrated rate method: a. Acid hydrolysis of methyl acetate with hydrochloric acid. b. Saponification of ethyl acetate. c. Compare the strengths of HCl and H <sub>2</sub> SO <sub>4</sub> by studying kinetics of hydrolysis of methyl acetate.	GE IV	Chemistry of S- And P-Block Elements, States of Matter & Chemical Kinetics
		b) Determination of the critical solution temperature and composition of the phenol water system and study of the effect of	B.Sc Life Science II year	CHPT 404: Chemistry-4 (Chemistry of s & p block elements, States of Matter and Phase Equilibrium)
		Paper chromatographic separation of mixture of metal ion (Ni <sup>2+</sup> and Co <sup>2+</sup> ).	B.Sc (H) Chemistry III year	Basic Analytical Chemistry
		(f) Determination of enthalpy of hydration of salt.	B.Sc (H) Chemistry I year	Chemistry - C IV: Physical chemistry II
	<b>Tutorials:</b>			
MAY	<b>Theory:</b>			

	<b>Practicals:</b>			
	<b>Tutorials:</b>			



**SEMESTER WISE TEACHING PLAN  
SRI VENKATESWARA COLLEGE**

**Name of the Faculty: Dr. Akanksha Gupta**

**Department: Chemistry**

**Semester : II/IV/VI**

Month		Topics	Course	Paper Code/Name
JANUARY	<b>Theory</b>	Transition Elements: General group trends with special reference to electronic configuration, colour, variable valency, magnetic properties (no temperature dependence), catalytic properties, and ability to form complexes. Latimer diagrams of Mn, Fe and Cu in acidic and basic media, differences between the first, second and	B.Sc. (H) Chemistry II <sup>nd</sup> Year, Semester - IV	CHEMISTRY – C VIII: INORGANIC CHEMISTRY – III Coordination Chemistry
		Optical methods of analysis: Origin of spectra, interaction of radiation with matter, fundamental laws of spectroscopy and selection rules, introduction of UV-Visible Spectrometry	B.Sc. (H) Chemistry III <sup>rd</sup> Year, Semester - VI	DSE: Analytical Methods in Chemistry
		Metallurgy: General Principles of Metallurgy Chief modes of occurrence of metals based on standard electrode potentials. Ellingham diagrams for reduction of metal oxides using carbon as reducing agent.	B.Sc. Life Sciences II <sup>nd</sup> Year, Semester - IV	CC-IV Chemistry of <i>s</i> -and <i>p</i> -block elements, States of matter and Chemical Kinetics
	<b>Practicals</b>	Inorganic Preparations: i. Tetraamminecopper (II) sulphate, ii. Acetylacetonate complexes of Cu <sup>2+</sup>	B.Sc. (H) Chemistry II <sup>nd</sup> Year, Semester - IV	CHEMISTRY – C VIII: INORGANIC CHEMISTRY – III Coordination Chemistry
		Qualitative semimicro analysis of mixtures containing 3 anions and 3 cations	B.Sc. (H) Chemistry III <sup>rd</sup> Year, Semester - VI	INORGANIC CHEMISTRY IV
	Preparation (i) tetraamminecopper (II) sulphate (ii) potassium trioxalatoferrate trihydrate	B.Sc. Life Sciences III <sup>rd</sup> Year, Semester - VI	Organometallics, bioinorganic chemistry, polynuclear hydrocarbons and uv, ir spectroscopy	
	<b>Tutorials</b>			

FEBRUARY	<b>Theory:</b>	Chemistry of Cr, Mn, Fe and Co in various oxidation states with special reference to following compounds Potassium dichromate, potassium permanganate, potassium ferrocyanide, potassium ferricyanide, sodium nitroprusside and sodium cobaltinitrite.	B.Sc. (H) Chemistry II <sup>nd</sup> Year, Semester - IV	CHEMISTRY – C VIII: INORGANIC CHEMISTRY – III Coordination Chemistry
		Basic principles of instrumentation (choice of source, monochromator and detector) for single and double beam instrument; Transmittance. Absorbance and Beer-Lambert law Thermal methods of analysis: Theory of thermogravimetry (TG) and basic principle of instrumentation of thermal analyser	B.Sc. (H) Chemistry III <sup>rd</sup> Year, Semester - VI	DSE: Analytical Methods in Chemistry
		Hydrometallurgy with reference to cyanide process for silver and gold. Methods of purification of metals (Al, Pb, Ti, Fe, Cu, Ni): electrolytic, oxidative refining, van Arkel-de Boer process and Mond's process.	B.Sc. Life Sciences II <sup>nd</sup> Year, Semester - IV	CC-IV Chemistry of <i>s</i> - and <i>p</i> -block elements, States of matter and Chemical Kinetics
	<b>Practicals:</b>	(iv) Potassium tri(oxalato)ferrate(III) Estimation of nickel (II) using Dimethylglyoxime (DMG).	B.Sc. (H) Chemistry II <sup>nd</sup> Year, Semester - IV	CHEMISTRY – C VIII: INORGANIC CHEMISTRY – III Coordination Chemistry
		Qualitative semimicro analysis of mixtures containing 3 anions and 3 cations Mixtures preferably contain one interfering anion	B.Sc. (H) Chemistry III <sup>rd</sup> Year, Semester - VI	INORGANIC CHEMISTRY IV
		Qualitative Organic Analysis of Organic Compounds possessing monofunctional groups (-COOH, alcoholic, ketonic, amides)	B.Sc. Life Sciences III <sup>rd</sup> Year, Semester - VI	Organometallics, bioinorganic chemistry, polynuclear hydrocarbons and uv, ir spectroscopy
	<b>Tutorials:</b>			
	<b>Assignment :</b>	Coordination Chemistry and transition elements	B.Sc. (H) Chemistry II <sup>nd</sup> Year, Semester - IV	CHEMISTRY – C VIII: INORGANIC CHEMISTRY – III Coordination Chemistry
	UV visible, Electroanalytical techniques	B.Sc. (H) Chemistry III <sup>rd</sup> Year, Semester - VI	DSE: Analytical Methods in Chemistry	

		Chemistry of s and p block elements	B.Sc. Life Sciences II <sup>nd</sup> Year, Semester - IV	CC-IV Chemistry of s- and p-block elements, States of matter and Chemical Kinetics
MARCH	<b>Theory:</b>	Lanthanoids and Actinoids electronic configuration, oxidation states, colour, spectral and magnetic properties. Lanthanoid contraction (causes and effects) separation of lanthanoids by ion exchange method. Inorganic Reaction Mechanism: Introduction to inorganic reaction mechanisms	B.Sc. (H) Chemistry II <sup>nd</sup> Year, Semester - IV	CHEMISTRY – C VIII: INORGANIC CHEMISTRY – III Coordination Chemistry
		Separation techniques: Techniques for quantitative estimation of Ca and Mg from their mixture. Solvent extraction: Classification, principle and efficiency of the technique. Mechanism of extraction: extraction by solvation and chelation, Technique of extraction: batch, continuous and counter current extractions	B.Sc. (H) Chemistry III <sup>rd</sup> Year, Semester - VI	DSE: Analytical Methods in Chemistry
		Compounds of s- and p-Block Elements: Structure, bonding and their important properties like oxidation/reduction, acidic/basic nature of the following compounds and their applications in industrial and environmental chemistry. Hydrides of nitrogen (NH <sub>3</sub> , N <sub>2</sub> H <sub>4</sub> , N <sub>3</sub> H, NH <sub>2</sub> OH), Oxoacids of P	B.Sc. Life Sciences II <sup>nd</sup> Year, Semester - IV	CC-IV Chemistry of s- and p-block elements, States of matter and Chemical Kinetics
	<b>Practicals:</b>	Estimation of copper as CuSCN Preparation of Tetraamminecarbonatocobalt (III) nitrate	B.Sc. (H) Chemistry II <sup>nd</sup> Year, Semester - IV	CHEMISTRY – C VIII: INORGANIC CHEMISTRY – III Coordination Chemistry
		Qualitative semimicro analysis of mixtures containing 3 anions and 3 cations Mixtures preferably contain one interfering anion	B.Sc. (H) Chemistry III <sup>rd</sup> Year, Semester - VI	INORGANIC CHEMISTRY IV

		Qualitative Organic Analysis of Organic Compounds possessing monofunctional groups (-COOH, alcoholic, ketonic, amides, carbohydrates, nitro, amines, phenolic) and preparation of their derivatives	B.Sc. Life Sciences III <sup>rd</sup> Year, Semester - VI	Organometallics, bioinorganic chemistry, polynuclear hydrocarbons and uv, ir spectroscopy
	<b>Tutorials:</b>			
	<b>Test</b>	Coordination Chemistry and transition elements	B.Sc. (H) Chemistry II <sup>nd</sup> Year, Semester - IV	CHEMISTRY – C VIII: INORGANIC CHEMISTRY – III Coordination Chemistry
	<b>Test</b>	UV visible, thermal method of analysis and Qualitative and quantitative aspects of analysis	B.Sc. (H) Chemistry III <sup>rd</sup> Year, Semester - VI	DSE: Analytical Methods in Chemistry
	<b>Test</b>	Chemistry of s and p block elements	B.Sc. Life Sciences II <sup>nd</sup> Year, Semester - IV	CC-IV Chemistry of s- and p-block elements, States of matter and Chemical Kinetics
APRIL	<b>Theory:</b>	Substitution reactions in square planar complexes, Trans- effect, theories of trans-effect. Thermodynamic and Kinetic stability	B.Sc. (H) Chemistry II <sup>nd</sup> Year, Semester - IV	CHEMISTRY – C VIII: INORGANIC CHEMISTRY – III Coordination Chemistry
		Qualitative and quantitative aspects of solvent extraction: extraction of metal ions from aqueous solution, extraction of organic species from the aqueous and nonaqueous media.	B.Sc. (H) Chemistry III <sup>rd</sup> Year, Semester - VI	DSE: Analytical Methods in Chemistry
		Oxoacids of S and Cl Halides and oxohalides: $PCl_3$ , $PCl_5$ , $SOCl_2$ and $SO_2Cl_2$	B.Sc. Life Sciences II <sup>nd</sup> Year, Semester - IV	CC-IV Chemistry of s- and p-block elements, States of matter and Chemical Kinetics
	<b>Practicals:</b>	Estimation of iron as $Fe_2O_3$ by precipitating iron as $Fe(OH)_3$ .	B.Sc. (H) Chemistry II <sup>nd</sup> Year, Semester - IV	CHEMISTRY – C VIII: INORGANIC CHEMISTRY – III Coordination Chemistry



		Mixtures preferably contain one interfering anion and combination of anions	B.Sc. (H) Chemistry III <sup>rd</sup> Year, Semester - VI	INORGANIC CHEMISTRY IV
		Qualitative Organic Analysis of Organic Compounds possessing monofunctional groups (-COOH, alcoholic, ketonic, amides, carbohydrates, nitro, amines, phenolic) and preparation of their derivatives Separation of mixtures by chromatography: Measure the R <sub>f</sub> value in each case. Paper chromatographic separation of Ni <sup>2+</sup> or Co <sup>2+</sup>	B.Sc. Life Sciences III <sup>rd</sup> Year, Semester - VI	Organometallics, bioinorganic chemistry, polynuclear hydrocarbons and uv, ir spectroscopy
	<b>Tutorials:</b>			
MAY	<b>Theory:</b>			
	<b>Practicals:</b>			
	<b>Tutorials:</b>			

**SEMESTER WISE  
TEACHING PLAN  
SRI VENKATESWARA COLLEGE**

**Name of the Faculty: Mr Harshvardhan Meena**  
**Department: Chemistry**

**Semester : II/IV/VI**

Month		Topics	Course	Paper Code/Name
JANUARY	<b>Theory</b>	<b>Qualitative and quantitative aspects of analysis:</b> Sampling, evaluation of analytical data,	B.Sc. (Hons) Chemistry III year	DSE: ANALYTICAL METHODS IN CHEMISTRY
		General Principles of Metallurgy Chief modes of occurrence of metals based on standard electrode potentials.	GE-IV	CHEMISTRY OF S- AND P-BLOCK ELEMENTS, STATES OF MATTER & CHEMICAL KINETICS
	<b>Practicals</b>	(i) Paper chromatographic separation of $\text{Co}^{2+}$ and $\text{Ni}^{2+}$ . (ii) Separation and identification of the	B.Sc. (Hons) Chemistry III year	DSE: ANALYTICAL METHODS IN CHEMISTRY
		Determination of pH of soil samples. b. Estimation of Calcium and Magnesium complexometric titration	BSc. (P) Life Science II Year	Skill Enhancement Course <b>BASIC ANALYTICAL CHEMISTRY</b>
		Semi-micro qualitative analysis of mixtures using $\text{H}_2\text{S}$ or any other scheme- not more than four ionic species (two anions and two cations and excluding insoluble salts) out of the following: Cations : $\text{NH}_4^+$ , $\text{Pb}^{2+}$ , $\text{Bi}^{3+}$	GE-IV	CHEMISTRY OF S- AND P-BLOCK ELEMENTS, STATES OF MATTER & CHEMICAL KINETICS

		Semi-micro qualitative analysis of mixtures using H <sub>2</sub> S or any other scheme- not more than four ionic species (two anions and two cations and excluding insoluble salts)	B.Sc. (P) Life Science II year	CC-IV CHEMISTRY OF S- AND P-BLOCK ELEMENTS, STATES OF MATTER & CHEMICAL KINETICS
	<b>Tutorials</b>	NA	NA	NA
FEBRUARY	<b>Theory:</b>	errors, accuracy and precision, methods of their expression, normal law of distribution of indeterminate errors, statistical test of data; F, Q and t test, rejection of data, and confidence intervals.	B.Sc. (Hons) Chemistry III year	DSE: ANALYTICAL METHODS IN CHEMISTRY
		Ellingham diagrams for reduction of metal oxides using carbon as reducing agent. Hydrometallurgy with reference to cyanide process for silver and gold, Methods of purification of metals (Al, Pb, Ti, Fe, Cu, Ni, Zn).		
	<b>Practicals:</b>	(i) To separate a mixture of Ni <sup>2+</sup> & Fe <sup>2+</sup> by complexation with DMG and extracting the Ni <sup>2+</sup> -DMG complex in chloroform, and determine its concentration by spectrophotometry. Analysis of soil: (i) Determination of pH of soil. (ii) Total soluble salt	B.Sc. (Hons) Chemistry III year	DSE: ANALYTICAL METHODS IN CHEMISTRY
		Determination of pH, acidity and alkalinity of a water sample. b. Determination of dissolved oxygen (DO) of a water sample. Paper chromatographic separation of mixture of metal ion (Ni <sup>2+</sup> and Co <sup>2+</sup> ).	B.Sc. (P) Life Science II Year	Skill Enhancement Course <b>BASIC ANALYTICAL CHEMISTRY</b>

	I)Surface tension measurement (use of organic solvents excluded). a)Determination of the surface tension of a liquid or a dilute solution using a	GE-IV	CHEMISTRY OF S- AND P-BLOCK ELEMENTS, STATES OF MATTER & CHEMICAL KINETICS
	Determination of the surface tension of a liquid or a dilute solution using a stalagmometer. b)Study of the variation of surface tension of a detergent solution with concentration. (II)Viscosity measurement (use of organic solvents excluded). Chemical Kinetics	B.Sc. (P) Life Science II year	CC-IV CHEMISTRY OF S- AND P-BLOCK ELEMENTS, STATES OF MATTER & CHEMICAL KINETICS
<b>Tutorials:</b>	NA	NA	NA

	<b><u>Assignment :</u></b>			
MARCH	<b>Theory:</b>	confidence intervals. Chromatography: Classification, principle and efficiency of the technique. Mechanism of separation: adsorption, partition & ion exchange.	B.Sc. (Hons) Chemistry III year	DSE: ANALYTICAL METHODS IN CHEMISTRY
		Electrolytic, oxidative refining, van Arkel-de Boer process and Mond's process.	GE-IV	CHEMISTRY OF S- AND P-BLOCK ELEMENTS, STATES OF MATTER & CHEMICAL KINETICS
	<b>Practicals:</b>	(iii) Estimation of calcium, magnesium (iv) Qualitative detection of nitrate, phosphate	B.Sc. (Hons) Chemistry III year	DSE: ANALYTICAL METHODS IN CHEMISTRY
		Determination of ion exchange capacity of anion / cation exchange resin (using batch procedure if use of column is not feasible).	BSc. (P) Life Science II Year	Skill Enhancement Course <b>BASIC ANALYTICAL CHEMISTRY</b>
		b) Study of the variation of viscosity of an aqueous solution with concentration of solute. (III) Chemical Kinetics Study the kinetics of the following reactions. 1. Initial rate method:	GE-IV	CHEMISTRY OF S- AND P-BLOCK ELEMENTS, STATES OF MATTER & CHEMICAL KINETICS

		Semi-micro qualitative analysis of mixtures using H <sub>2</sub> S or any other scheme- not more than four ionic species (two anions and two cations and excluding insoluble salts)	B.Sc. (P) Life Science II year	CC-IV CHEMISTRY OF S- AND P-BLOCK ELEMENTS, STATES OF MATTER & CHEMICAL KINETICS
	<b>Tutorials:</b>	NA	NA	NA
	<b>Test</b>			
APRIL	<b>Theory:</b>	Development of chromatograms: frontal, elution and displacement methods.	B.Sc. (Hons) Chemistry III year	DSE: ANALYTICAL METHODS IN CHEMISTRY
		Hydrides of nitrogen (NH <sub>3</sub> , N <sub>2</sub> H <sub>4</sub> , N <sub>3</sub> H, NH <sub>2</sub> OH) Oxoacids of P, S and Cl. Halides and oxohalides: PCl <sub>3</sub> , PCl <sub>5</sub> , SOCl <sub>2</sub> and SO <sub>2</sub> Cl <sub>2</sub>	GE-IV	CHEMISTRY OF S- AND P-BLOCK ELEMENTS, STATES OF MATTER & CHEMICAL KINETICS
	<b>Practicals:</b>	Spectrophotometry Verification of Lambert-Beer's law and determination of concentration of a coloured species (CuSO <sub>4</sub> , KMnO <sub>4</sub> )	B.Sc. (Hons) Chemistry III year	DSE: ANALYTICAL METHODS IN CHEMISTRY
		Revision	B.Sc. (P) Life Science II Year	Skill Enhancement Course <b>BASIC ANALYTICAL CHEMISTRY</b>

	<p>Integrated rate method:  a. Acid hydrolysis of methyl acetate with hydrochloric acid.  b. Saponification of ethyl acetate.  c. Compare the strengths of HCl and H<sub>2</sub>SO<sub>4</sub> by</p>	GE-IV	CHEMISTRY OF S- AND P-BLOCK ELEMENTS, STATES OF MATTER & CHEMICAL KINETICS
	Chemical Kinetics	B.Sc. (P) Life Science II year	CC-IV CHEMISTRY OF S- AND P-BLOCK ELEMENTS, STATES OF MATTER & CHEMICAL KINETICS
<b>Tutorials:</b>	NA	NA	NA



**SEMESTER WISE TEACHING PLAN**  
**SRI VENKATESWARA COLLEGE**  
**(2018-19) Even Semester**

**Name of the Faculty: Dr. S Venkat Kumar**

**Department: Commerce**

**Semester: VI**

Month	Type of Class	Topics	Course	Paper Code/Name
<b>January 2019</b>	<b>Theory</b>	Organisational Behaviour: Concepts, determinants, Challenges and opportunities; Contributing disciplines of OB; Organisational behaviour models	B.Com.VI	BC 6.2 (e): Organisational Behaviour
	<b>Tutorials</b>	Unit-1 Overview of organisational behaviour	B.Com.VI	BC 6.2 (e): Organisational Behaviour
<b>February 2019</b>	<b>Theory</b>	Personality-Type A and B, Big Five Personality types, Factors influencing personality, values and attitudes, concept and types of values, terminal and instrumental value, component of attitude, Job related attitudes.	B.Com.VI	BC 6.2 (e): Organisational Behaviour
	<b>Tutorials</b>	Unit-II: Individual behaviour	B.Com.VI	BC 6.2 (e): Organisational Behaviour
<b>March 2019</b>	<b>Theory</b>	Learning-concept, theories and reinforcement; perception and emotions, perceptual process, importance, factors influencing perception, emotional intelligence	B.Com.VI	BC 6.2 (e): Organisational Behaviour
	<b>Tutorials</b>	Unit-III Group decision-making and communication	B.Com.VI	BC 6.2 (e): Organisational Behaviour
	<b>Assignment</b>	Assignment on topics covered	B.Com.VI	BC 6.2 (e): Organisational Behaviour
<b>April 2019</b>	<b>Theory</b>	Concept and nature of decision-making process, Individual versus group decision-making. Communication and feedback, Transactional analysis, Johari Window	B.Com.VI	BC 6.2 (e): Organisational Behaviour
	<b>Tutorials</b>	Unit-III Group decision-making and communication	B.Com.VI	BC 6.2 (e): Organisational Behaviour
	<b>Test</b>	As per college schedule from the syllabus covered.	B.Com.VI	BC 6.2 (e): Organisational Behaviour





**SEMESTER WISE TEACHING PLAN**  
**SRI VENKATESWARA COLLEGE**  
**(2018-19) Even Semester**

**Name of the Faculty: Dr. S Venkat Kumar**

**Department: Commerce**

**Semester: VI**

<b>Month</b>	<b>Type of Class</b>	<b>Topics</b>	<b>Course</b>	<b>Paper Code/Name</b>
<b>JANUARY 2019</b>	<b>Theory</b>	<ol style="list-style-type: none"><li>1. An introduction to international business: Globalisation and its growing importance in world economy; Impact of globalization; international business contrasted with domestic business – complexities of international business; Modes of entry into international business; International business environment: National and foreign environments and their components – economic, cultural, and political-legal environments; Theories of international trade – an overview; WTO –its objectives, principles, Organization structure and functioning; UNCTAD, World Bank, and IMF</li><li>2. An overview of Business Environment: Type of environment – internal, external, micro and macro environment; competitive structure of industries, environmental analysis and strategic management; managing diversity; scope of business, characteristics of business; objectives and uses of study; process and limitations of environmental analysis; nature of economic environment; economic factors –growth strategy, basic economic system.</li></ol>	B.Com. (Hons) - VI	BCH 6.4: DSE International Business
	<b>Tutorials</b>	<ol style="list-style-type: none"><li>1. An introduction to international business: Globalisation and its growing importance in world economy; Impact of globalization; international business contrasted with domestic business – complexities of international</li></ol>	B.Com. (Hons) - VI	BCH 6.4: DSE International Business

		business; Modes of entry into international business; 2. An overview of Business Environment: Type of environment – internal, external, micro and macro environment; competitive structure of industries, environmental analysis and strategic management; managing diversity;		
<b>FEBURARY 2019</b>	<b>Theory</b>	1. Global trading environment –recent trends in world trade in goods and services; Trends in India’s foreign trade; Commercial policy instruments – tariff and non-tariff measures; Balance of payment account and its components; Commodity and other trading agreements; Regional economic cooperation; Forms of regional groupings; Integration efforts among countries in Europe, North America and Asia; International Financial environment: International financial system and institutions; 2. Economic planning, Economic policies – New Industrial policy, FEMA, Monetary and fiscal policies; Consumer Protection Act and Competition Law; Liberalization, Privatization and Globalization of Indian Economy: Trends and Issues;	B.Com. (Hons) - VI	BCH 6.4: DSE International Business
	<b>Tutorials</b>	1. Regional economic cooperation; Forms of regional groupings; Integration efforts among countries in Europe, North America and Asia; International Financial environment: International financial system and institutions; 2. FEMA, Monetary and fiscal policies; Consumer Protection Act and Competition Law;	B.Com. (Hons) - VI	BCH 6.4: DSE International Business
<b>Month</b>	<b>Type of Class</b>	<b>Topics</b>	<b>Course</b>	<b>Paper Code/Name</b>
<b>MARCH 2019</b>	<b>Theory</b>	1. Foreign exchange markets and risk management; Foreign investments – types and flows; Foreign investment in India perspective; Organisational structure for international business operations; Key Issues involved in making international production, finance, marketing and human resource decisions; international business negotiations; Developments and issues in international business: outsourcing and its potentials for India;	B.Com. (Hons) - VI	BCH 6.4: DSE International Business

		<p>Strategic alliances, mergers and acquisitions; role of IT in international business; international business and ecological considerations.</p> <p>2. Nature and impact of culture on business, culture and globalization, social responsibilities of business, social audit, business ethics and corporate governance, demographic environment, population size, migration and ethnic aspects, birth rate, death rate and age structure</p>		
	<b>Tutorials</b>	<p>1. Strategic alliances, mergers and acquisitions; role of IT in international business; international business and ecological considerations.</p> <p>2. demographic environment, population size, migration and ethnic aspects, birth rate, death rate and age structure</p>	B.Com. (Hons) - VI	BCH 6.4: DSE International Business
	<b>Assignment</b>	1. Topics allotment for making the assignments.	B.Com. (Hons) - VI	BCH 6.4: DSE International Business
	<b>Test</b>	1. Test would be conducted on the concerned subject after mid-semester break.	B.Com. (Hons) - VI	BCH 6.4: DSE International Business
<b>APRIL 2019</b>	<b>Theory</b>	<p>1. Foreign Trade promotion measures and organizations in India; Special economic zones (SEZs) and 100% export oriented units (EOUs); Measures for promoting foreign investments into and from India; Indian joint ventures and acquisitions abroad; Financing of foreign trade and payment terms.</p> <p>2. Functions of state, economic roles of government, government and legal environment; the constitutional environment, rationale and extent of state intervention.</p>	B.Com. (Hons) - VI	BCH 6.4 DSE International Business
	<b>Tutorials</b>	<p>1. Foreign Trade promotion measures and organizations in India; Special economic zones (SEZs) and 100% export oriented units (EOUs); Measures for promoting foreign investments into and from India; Indian joint ventures and acquisitions abroad; Financing of foreign trade and payment terms.</p> <p>2. Functions of state, economic roles of government, government and legal environment; the constitutional environment, rationale and extent of state intervention.</p>	B.Com. (Hons) - VI	BCH 6.4: DSE International Business





**SEMESTER WISE TEACHING PLAN**  
**SRI VENKATESWARA COLLEGE**  
**(2018-19) (Even Semester)**

**Name of the Faculty: Ms. Sunita Chhabra**

**Department: Commerce**

**Semester: IV/VI**

Month	Type of Class	Topics	Course	Paper Code/Name
<b>JANUARY 2019</b>	<b>Theory</b>	1. Meaning, elements, determinants and importance of entrepreneurship and creative behaviour. Entrepreneurship and creative response to the society's problems at work, dimensions of entrepreneurship; entrepreneurship, technopreneurship, cultural entrepreneurship, international entrepreneurship and social entrepreneurship. Types of business entities- MSMEs, the contemporary role models in Indian business, conflict in family business and its resolution etc. 2. Nature and importance of personal selling, difference between personal selling, salesmanship and sales management, myths of selling, relationship marketing and role of personal selling, features of a good salesman, types of selling situations, types of salespersons, career opportunities in selling, measures for making selling an attractive career.	1. B.Com (H)- II 2. B.Com (P)- III	1. BCH 4.5 (a) SEC: Entrepreneurship 2. BC 6.3: Personal Selling and Salesmanship
	<b>Tutorials</b>	1. Unit-1 2. Unit-1	1. B.Com (H)- I (A+B) 2. B.Com (P)- I	1. BCH 2.2 : Business Laws 2. BC 2.2: Business Laws
Month	Type of Class	Topics	Course	Paper Code/Name
<b>FEBURARY 2019</b>	<b>Theory</b>	1. Public and private system of stimulation, support and sustainability of entrepreneurship, requirement, availability and access to finance, marketing assistance, technology and industrial accommodation, role of industries associations and self-help groups, the concept, role and functions of business incubators, angel investors, venture capital	1. B.Com (H)- II 2. B.Com (P)- III	1. BCH 4.5 (a) SEC: Entrepreneurship 2. BC 6.3: Personal Selling and Salesmanship

		and private equity fund. 2. Theories of selling: traditional and modern, AIDAS Model of selling, problem solving approach, right set of circumstances theory and modern sales approaches.		
	<b>Tutorials</b>	1. Unit-II 2. Unit-II	1. B.Com (H)- I (A+B) 2. B.Com (P)- I	1. BCH 2.2 : Business Laws 2. BC 2.2: Business Laws
<b>Month</b>	<b>Type of Class</b>	<b>Topics</b>	<b>Course</b>	<b>Paper Code/Name</b>
<b>MARCH 2019</b>	<b>Theory</b>	1. Sources of business ideas and tests of feasibility. Significance of writing the business plan/project proposal, contents of business plan/project proposal, designing business processes, location, layout, operation, planning and control, preparation of project report, project submission, presentation and appraisal thereof by external agencies. 2. Buying motives, concept of motivation, Maslow need theory, dynamic nature of motivation, buying motives and their uses in personal selling; selling process- prospecting and qualifying; pre-approach, presentation and demonstration; handling of objections and complaints, closing the sale, follow up and dealing customer concerns and complaints.	1. B.Com (H)- II 2. B.Com (P)- III	1. BCH 4.5 (a) SEC: Entrepreneurship 2. BC 6.3: Personal Selling and Salesmanship
	<b>Tutorials</b>	1. Unit-III&IV 2. Unit-III&IV	1. B.Com (H)- I (A+B) 2. B.Com (P)- I	1. BCH 2.2 : Business Laws 2. BC 2.2: Business Laws
	<b>Assignment</b>	1. Topics allotment for making the assignments. 2. Topics allotment for making the assignments.	1. B.Com (H)- II 2. B.Com (P)- III	1. BCH 4.5 (a) SEC: Entrepreneurship 2. BC 6.3: Personal Selling and Salesmanship
	<b>Test</b>	1. Test would be conducted on the concerned subject after mid-semester break. 2. Test would be conducted on the concerned subject after mid-semester break.	1. B.Com (H)- II 2. B.Com (P)- III	1. BCH 4.5 (a) SEC: Entrepreneurship 2. BC 6.3: Personal Selling and Salesmanship
<b>Month</b>	<b>Type of Class</b>	<b>Topics</b>	<b>Course</b>	<b>Paper Code/Name</b>

<b>APRIL 2019</b>	<b>Theory</b>	<ol style="list-style-type: none"> <li>1. Mobilizing resources for start-up. Accommodation and utilities. Preliminary contacts with the vendors, suppliers, bankers, principal customers, contract management: basic start-up problems.</li> <li>2. Sales reports and documents, sales manual, order book, cash memo, tour diary, daily and periodical reports and ethical aspects of selling.</li> </ol>	<ol style="list-style-type: none"> <li>1. B.Com (H)- II</li> <li>2. B.Com (P)- III</li> </ol>	<ol style="list-style-type: none"> <li>1. BCH 4.5 (a) SEC: Entrepreneurship</li> <li>2. BC 6.3: Personal Selling and Salesmanship</li> </ol>
	<b>Tutorials</b>	<ol style="list-style-type: none"> <li>1. Unit-V</li> <li>2. Unit-V</li> </ol>	<ol style="list-style-type: none"> <li>1. B.Com (H)- I (A+B)</li> <li>2. B.Com (P)- I</li> </ol>	<ol style="list-style-type: none"> <li>1. BCH 2.2 : Business Laws</li> <li>2. BC 2.2: Business Laws</li> </ol>



**SEMESTER WISE TEACHING PLAN**  
**SRI VENKATESWARA COLLEGE**

**Name of the Faculty: Dr. Mamta Arora**

**Department: Commerce**

**Semester: II/IV/VI**

Month		Topics	Course	Paper Code/Name
JANUARY 2019	<b>Theory</b>	Unit 1: Matrices & Determinants	B.COM (H) – Sem IV	<b>Business Mathematics BCH 4.2</b>
FEBRUARY 2019	<b>Theory</b>	Unit 2: Basic calculus – Application of differentiation  Unit 4: Mathematics of Finance	B.COM (H) – Sem IV	<b>Business Mathematics BCH 4.2</b>
	<b><u>Assignment</u></b>	Unit 1 and 4	B.COM (H) – Sem IV	<b>Business Mathematics BCH 4.2</b>
MARCH 2019	<b>Theory</b>	Unit 3: Advance Calculus – Application of partial differentiation	B.COM (H) – Sem IV	<b>Business Mathematics BCH 4.2</b>
	<b><u>Test</u></b>	Unit 1, 2 and 3 (application of partial differentiation)	B.COM (H) – Sem IV	<b>Business Mathematics BCH 4.2</b>
APRIL 2019	<b>Theory</b>	Unit 3: Advance Calculus – Application of integration  Unit 5: LPP	B.COM (H) – Sem IV	<b>Business Mathematics BCH 4.2</b>





**SEMESTER WISE TEACHING PLAN**  
**SRI VENKATESWARA COLLEGE**  
**2018-19 Even Semester**

**Name of the Faculty:** Dr. Shruti Mathur

**Department:** Commerce

**Semester :** VI

Month		Topics	Course	Paper Code/Name
JANUARY	<b>Theory</b>	<b>Unit 1: The Investment Environment</b> - The investment decision process, Types of Investments – Commodities, Real Estate and Financial Assets, the Indian securities market, the market participants and trading of securities, security market indices, sources of financial information, Concept of return and risk, Impact of Taxes and Inflation on return	B.Com H Sem VI	DSE-Fundamentals of Investment
	<b>Tutorials</b>	1). Discussion on IPO/FPO, Book building. Understanding SENSEX, NIFTY. Practice numerical on calculation of risk and return	B.Com (H) Sem VI &	DSE: Fundamentals of Investment
FEBRUARY	<b>Theory:</b>	<b>Unit 2: Fixed Income Securities</b> - Bond features, types of bonds, estimating bond yields, Bond Valuation, types of bond risks, default risk and credit rating. <b>Unit 3: Approaches to Equity Analysis:</b> Valuation of Equity Shares using various models. Introductions to Fundamental Analysis	Bcom H Sem VI	DSE: Fundamentals of Investment

	<b>Tutorials:</b>	Numerical and Presentations: Calculating Bond Yields analyzing the company's performances using various ratios and historical records.	1) BCom H Sem VI &	DSE: Fundamentals of Investment
	<b><u>Assignment:</u></b>	Assignment & presentation on any topic selected by the student from the syllabus	BCom H Sem VI	DSE: Fundamentals of Investment
MARCH	<b>Theory:</b>	<b>Unit 3: Approaches to Equity Analysis:</b> Technical Analysis and Efficient Market Hypothesis, <b>Unit 4: Portfolio Analysis and Financial Derivatives:</b> Portfolio and Diversification, Portfolio Risk and Return	BCom H Sem VI	DSE: Fundamentals of Investment
	<b>Tutorials:</b>	Presentations and Numericals on : Equity Valuation and Portfolio Risk and Return. Including Markowitz model, CAPM etc	1) BCom H Sem VI	DSE: Fundamentals of Investment
	<b><u>Test</u></b>	Fixed Income Securities ; Approaches to Equity Analysis; The Investment Environment	BCom H Sem VI	DSE: Fundamentals of Investment

APRIL	<b>Theory:</b>	<b>Unit 4: MF &amp; Financial Derivatives:</b> Mutual funds. Introduction to Financial Derivatives- Forward, Futures & Options, Financial Derivatives Markets in India. <b>Unit 5: Investor Protection</b> – Role of SEBI & stock exchanges in investor protection, investor grievances and their redressal system, insider trading, investors’ awareness and activism.	BCom H Sem VI	DSE: Fundamentals of Investment
	<b>Tutorials:</b>	1) Presentation, and Discussion on MFs, Derivatives and Investor Protection.	1) BCom H Sem VI	DSE: Fundamentals of Investment



**SEMESTER WISE TEACHING PLAN**  
**SRI VENKATESWARA COLLEGE**  
**2018-19 Even Semester**

**Name of the Faculty:** Dr. Shruti Mathur

**Department:** Commerce

**Semester :** VI

Month		Topics	Course	Paper Code/Name
JANUARY	<b>Theory</b>	<b>UNIT 4:</b> <b>Motivation:</b> <ul style="list-style-type: none"> <li>• Meaning and Importance</li> <li>• Equity Theory</li> <li>• Vroom valence Expectancy Theory</li> <li>• Ken Thomas Intrinsic Motivation</li> <li>• Mc Cleland's theory</li> <li>• Motivation and Organisational Effectiveness</li> </ul>	BCom P	<b>PAPER BC 6.2 (e)</b> <b>ORGANISATIONAL BEHAVIOUR</b>
	<b>Tutorials</b>	Case studies/ presentations etc on topics covered	BCom P	<b>PAPER BC 6.2 (e)</b> <b>ORGANISATIONAL BEHAVIOUR</b>
FEBRUARY	<b>Theory:</b>	<b>Unit 5: Leadership Power and Conflict:</b> <ul style="list-style-type: none"> <li>• Meaning and Concept of leadership</li> <li>• Trait theory</li> <li>• Transformational and transactional leadership</li> <li>• Charismatic Leadership</li> </ul>	BCom P	<b>PAPER BC 6.2 (e)</b> <b>ORGANISATIONAL BEHAVIOUR</b>

	<b>Tutorials:</b>	Case studies/ presentations etc on topics covered	BCom P	<b>PAPER BC 6.2 (e) ORGANISATIONAL BEHAVIOUR</b>
	<b><u>Assignment:</u></b>	On various topics assigned to students	BCom P	<b>PAPER BC 6.2 (e) ORGANISATIONAL BEHAVIOUR</b>
MARCH	<b>Theory:</b>	<b>Unit 5: Leadership Power and Conflict:</b> <ul style="list-style-type: none"> <li>• Power and Conflict</li> <li>• Power tactics</li> <li>• Sources of conflict</li> <li>• Conflict resolution strategies</li> </ul> <b>Unit 6: Dynamics of OB:</b> <ul style="list-style-type: none"> <li>• Organisation culture and conflict</li> <li>• Concept and determinants of OC</li> </ul>	BCom P	<b>PAPER BC 6.2 (e) ORGANISATIONAL BEHAVIOUR</b>
	<b>Tutorials:</b>	Case studies/ presentations etc on topics covered	BCom P	<b>PAPER BC 6.2 € ORGANISATIONAL BEHAVIOUR</b>
	<b><u>Test</u></b>	Unit 4-5	Bcom P	<b>PAPER BC 6.2 € ORGANISATIONAL BEHAVIOUR</b>
APRIL	<b>Theory:</b>	<b>Unit 6: Dynamics of OB:</b> <ul style="list-style-type: none"> <li>• Organisational change – Importance , Managing change</li> <li>• Individual and Orgnisational factors of stress</li> <li>• Management of Stress</li> </ul>	BCom P	<b>PAPER BC 6.2 (e) ORGANISATIONAL BEHAVIOUR</b>
	<b>Tutorials:</b>	Revision of concepts and discussions	BCom P	<b>PAPER BC 6.2 (e) ORGANISATIONAL BEHAVIOUR</b>



**SEMESTER WISE TEACHING PLAN**  
**SRI VENKATESWARA COLLEGE**  
**2018-19 Even Semester**

Name of the Faculty: **Dr. Shruti Mathur**

Department: **Commerce**

Semester : **IV**

**BCom(H) (sem 4 B)**

Month		Topics	Course	Paper Code/Name
JANUARY	<b>Theory</b>	<ul style="list-style-type: none"> <li>Sources of business ideas and tests of feasibility.</li> <li>Significance of writing the business plan/project proposal,</li> </ul>	BCom(H) 4 B	BCH 4.5 (a) SEC: Entrepreneurship
	<b>Tutorials</b>	-----NA	NA	NA
FEBRUARY	<b>Theory:</b>	<ul style="list-style-type: none"> <li>contents of business plan/project proposal,</li> <li>designing business processes, location, layout, operation, planning and control,</li> </ul>	BCom(H) 4 B	BCH 4.5 (a) SEC: Entrepreneurship
	<b>Tutorials:</b>	NA	NA	NA
	<b><u>Assignment:</u></b>	Assignment on topics allotted	BCom(H) 4 B	BCH 4.5 (a) SEC: Entrepreneurship
MARCH	<b>Theory:</b>	<ul style="list-style-type: none"> <li>Designing business processes, location, layout, operation, planning and control,</li> <li>Preparation of project report</li> </ul>	BCom(H) 4 B	BCH 4.5 (a) SEC: Entrepreneurship
	<b>Tutorials:</b>	NA	BCom(H) 4 B	BCH 4.5 (a) SEC: Entrepreneurship
	<b><u>Test</u></b>	Test on Topics covered	BCom(H) 4 B	BCH 4.5 (a) SEC: Entrepreneurship

APRIL	<b>Theory:</b>	<ul style="list-style-type: none"> <li>• project submission,</li> <li>• presentation and appraisal thereof by external agencies.</li> </ul>	BCom(H) 4 B	BCH 4.5 (a) SEC: Entrepreneurship
	<b>Tutorials:</b>	NA	NA	NA



**SEMESTER WISE TEACHING PLAN  
SRI VENKATESWARA COLLEGE**

**Name of the Faculty: Ms Pooja Jain**

**Department: Commerce**

**Semester: II/IV/VI**

<b>Month</b>	<b>Type of Class</b>	<b>Topics</b>	<b>Course</b>	<b>Paper Code/Name</b>
<b>JANUARY</b>	<b>Theory</b>	<p><b>1. Unit I:</b> Nature and Scope, Difference between cost accounting and management accounting, cost control, cost reduction, cost management, difference between cost control, cost reduction and cost management.</p> <p><b>Unit IV:</b> a. Absorption versus variable costing: Distinctive features and income determination. b. Cost-Volume-Profit Analysis: Break-even analysis- algebraic and graphic methods. Contribution / sales ratio, key factor. Margin of safety. Angle of incidence. Determination of cost indifference point.</p> <p><b>2. Unit I:</b> Univariate Analysis: Measures of Central Tendency including A.M., G.M., H.M., Median, Partition values and Mode and Measures of Variation including Range, Q.D. and M.D. Measures of Variation continues including variance and S.D.</p>	<p><b>1. B.Com. VI</b> <b>2. B.Com. II</b></p>	<p><b>1. BC 6.1 Management Accounting</b> <b>2. BC 2.3 Business Mathematics and Statistics</b></p>
	<b>Practicals</b>	Introduction to excel and Mathematics of Finance	<b>B.Com. (Hons) – IV B</b>	<b>BCH 4.2 B.Mathematics</b>
	<b>Tutorials</b>	<p>1. Basics and significance of Management Accounting will be discussed. Practical problems will be discussed related to following topics: a. Absorption versus variable costing: Distinctive features and income determination.</p> <p>2. Practical problems will be discussed related to following topics: AM, GM, HM, Median and Mode</p>	<p><b>1. B.Com. VI</b> <b>2. B.Com. II</b></p>	<p><b>1. BC 6.1 Management Accounting</b> <b>2. BC 2.3 Business Mathematics and Statistics</b></p>
<b>Month</b>	<b>Type of Class</b>	<b>Topics</b>	<b>Course</b>	<b>Paper Code/Name</b>



<b>FEBRUARY</b>	<b>Theory</b>	<p><b>1. Unit II:</b> Budgeting and budgetary control: Concept of budget and budgetary control, objectives, merits, and limitations, Budget administration, Functional budgets, Fixed and flexible budgets, Zero base budget, Programme and performance budgets.</p> <p><b>Unit VI:</b> Responsibility Accounting: Concept, Significance, Different Responsibility Centers, Divisional Performance Measurement – Financial Measures.</p> <p><b>2. Unit II:</b> Bivariate Analysis: Simple Linear Correlation Analysis including meaning, Karl Pearsons and Spearman’s correlation and Simple Linear Regression Analysis: Regression equations and estimation and Relationship between correlation and regression.</p>	<p><b>1. B.Com. VI</b> <b>2. B.Com. II</b></p>	<p><b>1. BC 6.1 Management Accounting</b> <b>2. BC 2.3 Business Mathematics and Statistics</b></p>
	<b>Practicals</b>	<p>Excel projects of Mathematics of finance-FV-annuity &amp; Lump sum, PV-annuity &amp; Lump sum Excel project: Graphical solutions of LPP Problems on Mathematics of Finance</p>	<b>B.Com. (Hons) – IV B</b>	<b>BCH 4.2 B.Mathematics</b>
	<b>Tutorials</b>	<p>1. Practical problems will be discussed related to following topics: a. Cost-Volume-Profit Analysis: Break-even analysis- algebraic and graphic methods. Contribution / sales ratio, key factor. Margin of safety. Angle of incidence. Determination of cost indifference point. b. Budgeting and budgetary control: Budget administration, Functional budgets, Fixed and flexible budgets</p> <p>2. Practical problems will be discussed related to following topics: SD, Variance, Correlation, Regression</p>	<p><b>1. B.Com. VI</b> <b>2. B.Com. II</b></p>	<p><b>1. BC 6.1 Management Accounting</b> <b>2. BC 2.3 Business Mathematics and Statistics</b></p>
	<b>Assignment</b>	1. One home assignment will be given from the	<b>1. B.Com. VI</b>	<b>1. BC 6.1</b>

		topic: Absorption and variable Costing and CVP analysis. 2. Assignment on: Univariate Analysis	<b>2. B.Com. II</b>	<b>Management Accounting</b> <b>2. BC 2.3 Business Mathematics and Statistics</b>
<b>Month</b>	<b>Type of Class</b>	<b>Topics</b>	<b>Course</b>	<b>Paper Code/Name</b>
<b>MARCH</b>	<b>Theory</b>	<b>1.Unit V:</b> Decision making: Costs for decision making, variable costing and differential analysis as aids in making decisions – fixation of selling price, exploring new markets, make or buy, product mix, operate or shut down, sell or process further <b>2.Unit III:</b> Time based data: Index Numbers including construction of Index Numbers-Simple and Weighted, Tests of adequacy and Construction of consumer price indices.	<b>1. B.Com. VI</b> <b>2. B.Com. II</b>	<b>1. BC 6.1 Management Accounting</b> <b>2. BC 2.3 Business Mathematics and Statistics</b>
	<b>Practicals</b>	Excel Projects :LLP graphical solution and simplex using ‘solver-in’ in excel Problems on Mathematics of Finance	<b>B.Com. (Hons) – IV B</b>	<b>BCH 4.2 B.Mathematics</b>
	<b>Tutorials</b>	Practical questions and Presentation will be taken from the following topics: 1. Decision making: Costs for decision making, variable costing and differential analysis as aids in making decisions – fixation of selling price, exploring new market 2. Practical problems will be taken from index numbers	<b>1. B.Com. VI</b> <b>2. B.Com. II</b>	<b>1. BC 6.1 Management Accounting</b> <b>2. BC 2.3 Business Mathematics and Statistics</b>
	<b>Test</b>	Class Test will be conducted in the middle of the month from these topics: 1.Nature and scope of management accounting Absorption and variable costing C-V-P Analysis Budgetary Control 2. Univariate Analysis and Bivariate Analysis <b>Practical exam in B.Mathematics</b>	<b>1. B.Com. VI</b> <b>2. B.Com. II</b>	<b>1. BC 6.1 Management Accounting</b> <b>2. BC 2.3 Business Mathematics and Statistics</b>

<b>Month</b>	<b>Type of Class</b>	<b>Topics</b>	<b>Course</b>	<b>Paper Code/Name</b>
<b>APRIL</b>	<b>Theory</b>	<p><b>1. Unit III:</b> Standard costing and variance analysis: Meaning of standard cost and standard costing: advantages, limitations and applications, Variance analysis – material, labour, overhead and sales variances, Disposition of variances, Control ratios.</p> <p><b>2. Unit III:</b> Time Series Analysis including meaning, components and trend analysis: moving average and least squares method.</p>	<p><b>1. B.Com. VI</b> <b>2. B.Com. II</b></p>	<p><b>1. BC 6.1 Management Accounting</b> <b>2. BC 2.3 Business Mathematics and Statistics</b></p>
	<b>Practicals</b>	Problems on Mathematics of Finance	<b>1. B.Com. (Hons) – IV B</b>	<b>BCH 4.2 B.Mathematics</b>
	<b>Tutorials</b>	<p>1. Practical questions and Presentation will be taken from the following topics:</p> <p>a. Decision making: make or buy, product mix, operate or shut down, sell or process further</p> <p>b Standard costing and variance analysis: Meaning of standard cost and standard costing: advantages, limitations and applications, Variance analysis – material, labour, overhead and sales variances, Disposition of variances, Control ratios.</p> <p>Miscellaneous questions will be discussed from examination point of view.</p> <p>2. Practical problems will be taken from time series analysis</p>	<p><b>1. B.Com. VI</b> <b>2. B.Com. II</b></p>	<p><b>1. BC 6.1 Management Accounting</b> <b>2. BC 2.3 Business Mathematics and Statistics</b></p>



**SEMESTER WISE TEACHING PLAN  
SRI VENKATESWARA COLLEGE**

**Name of the Faculty: Dr. Sindhu Mani Bag**

**Department: Commerce**

**Semester: II/IV/VI**

Month	Type of Class	Topics	Course	Paper Code/Name
<b>JANUARY-2019</b>	<b>Theory</b>	1. Introduction, meaning and features, Administration of company laws, kinds of companies. 2. Introduction, meaning and features, Administration of company laws, kinds of companies. 3. <b>The Indian Contract Act 1872:</b> (a) Meaning, characteristics and kinds. (b) Essentials of a valid contracts- offer and acceptance, consideration, contractual capacity. 4. Introduction: meaning objectives, element of cost classification of cost etc.	1. B.Com. (Hons) – IIA 2. B.Com (Hons)-IIB 3. B.Com (p) –II 4. B.Com(H)-IVB	1.BCH 2.3: Corporate Laws 2.BCH 2.3: Corporate Laws. 3. BC-2.2: Business Laws 4. BCH-4.1: Cost Accounting
	<b>Tutorials</b>	1. Case laws of characteristics of company and types of company presented by the students. 2. Case laws of characteristics of company and types of company presented by the students. 3. Case laws of offer & acceptance and consideration presented by students. 4. Practice of cost sheet	1. B.Com. (Hons) – IIA 2.B.Com. (Hons) – IIB 3. B.Com(P)-II 4. B.Com(H)-IVB	1. BCH 2.3: Corporate Laws 2. BCH 2.3: Corporate Laws. 3. BC-2.2: Business Laws 4. BCH-4.1: Cost Accounting
Month	Type of Class	Topics	Course	Paper Code/Name
<b>FEBRUARY-2019</b>	<b>Theory</b>	1. Formation of companies, Memorandum of Association. 2. Formation of companies, Memorandum of Association. 3. <b>The Indian contract Act 1872:</b> free consent, legality of objects, void agreements, discharge of contracts- modes of discharge including breach and its remedies, contingent contracts. quasi contracts, contract of indemnity and guarantee, contract of bailment and contract of Agency.	1. B.Com. (Hons) – IIA 2. B.Com (Hons)-IIB 3. B.Com (p)-II	1. BCH 2.3: Corporate Laws 2. BCH 2.3: Corporate Laws. 3. BC-2.2: Business Laws

		4. Material: materials/ inventory control, storage and Issue of materials, Method of pricing of materials Issues	4. B.Com(H)-IVB	4. BCH-4.1: Cost Accounting
	<b>Tutorials</b>	1. Case laws of Formation of company and Memorandum of Association presented by the students. 2. Case laws of Formation of company and Memorandum of Association presented by the students. 3. case laws of free consent, legality of object void agreement. 4. Student practicing of problem of material issue	1. B.Com. (Hons) – IIA 2. B.Com. (Hons) – IIB 3. B.Com (P)-II 4. B.Com(H)-IVB	1. BCH -2.3 Corporate Laws 2. BCH- 2.3:Corporate Laws 3. BC-2.2: Business Laws 4. BCH-4.1:Cost Accounting
<b>Month</b>	<b>Type of Class</b>	<b>Topics</b>	<b>Course</b>	<b>Paper Code/Name</b>
<b>MARCH-2019</b>	<b>Theory</b>	1. Articles of Associations, Prospectus 2. Articles of Associations, Prospectus  <b>3. The sales of goods Act, 1930:</b> the contract of sale, meaning and difference between sale and agreement to sell, conditions and warranties, transfer of ownerships in goods including sale by non-owners, performance of contract of sale unpaid seller: meaning and rights of unpaid seller against the goods and the buyer.. <b>The Limited Liability Partnership, 2008:</b> Salient features of LLP, difference between LLP and Partnership, LLP and Company, change of name, partners and their relations. <b>4.Labour:</b> Accounting and control of labour cost, time keeping and time booking, concept and treatment of Idle time over time labour turn over and fringe benefits.	1. B.Com. (Hons) – IIA 2. B.Com. (Hons) – IIB  3. B.Com (p)-II  4. B.COM(H)-IVB	1.BCH 2.3:Corporate Laws 2.BCH 2.3:CorporateLaws.  3. BC-2.2: Business Laws  4. BCH-4.1: Cost Accounting

	<b>Tutorials</b>	<ol style="list-style-type: none"> <li>1. Case laws of Articles of Association and Prospectus presented by the students.</li> <li>2. Case laws of Articles of Association and Prospectus presented by the students.</li> <li>3. Case laws of quasi contracts, contract of indemnity and guarantee, contract of bailment and contract of Agency.</li> <li>4. Student practicing of problem of labour</li> </ol>	<ol style="list-style-type: none"> <li>1. B.Com. (Hons) – IIA</li> <li>2. B.Com. (Hons) – IIB</li> <li>3. B.Com. (P) - II</li> <li>4. B.COM(H)-IVB</li> </ol>	<ol style="list-style-type: none"> <li>1. BCH 2.3: Corporate Laws</li> <li>2. BCH 2.3: Corporate Laws.</li> <li>3. BC-2.2: Business Laws</li> <li>4. BCH-4.1: Cost Accounting</li> </ol>
	<b>Assignment</b>	<ol style="list-style-type: none"> <li>1. Topic allotment for 1<sup>st</sup> assignment &amp; collect it and topic allotment for 2<sup>nd</sup> assignment (sharing with Mr. Ajit Singh).</li> <li>2. Topics allotment and collect of 1<sup>st</sup> Assignment and Topic allotment for 2<sup>nd</sup> Assignment (sharing with Mr. Ajit Singh).</li> <li>3. Topic allotment for 1<sup>st</sup> assignment &amp; collect it and topic allotment for 2<sup>nd</sup> assignment.</li> <li>4. Topic allotment for 1<sup>st</sup> assignment &amp; collect it and topic allotment for 2<sup>nd</sup> assignment (sharing with Mrs. Shilpa).</li> </ol>	<ol style="list-style-type: none"> <li>1. B.Com. (Hons) – IIA</li> <li>2. B.Com. (Hons) – IIB</li> <li>3. B.Com (P)-II</li> <li>4. B.COM(H)-IVB</li> </ol>	<ol style="list-style-type: none"> <li>1. BCH 2.3: Corporate Laws</li> <li>2. BCH 2.3: Corporate Laws.</li> <li>3. BC-2.2: Business Laws</li> <li>4. BCH-4.1: Cost Accounting</li> </ol>
<b>Month</b>	<b>Type of Class</b>	<b>Topics</b>	<b>Course</b>	<b>Paper Code/Name</b>
<b>APRIL-2019</b>	<b>Theory</b>	<ol style="list-style-type: none"> <li>1. Shares and Share Capital</li> <li>2. Shares and Share Capital</li> <li>3. <b>The Limited Liability Partnership, 2008:</b> Extent and limitation of liability of LLP and partners, whistle blowing, taxation of LLP, conversion of LLP. winding up and dissolution. <b>The Information Technology Act 2000:</b> definition under the Act, Digital signature, electronic governance, attribution, acknowledgement, and dispatch of electronic records, regulation of certifying authorities, digital signature certificate, duties</li> </ol>	<ol style="list-style-type: none"> <li>1. B.Com. (Hons) – IIA</li> <li>2. B.Com (Hons) -IIB</li> <li>3. B.Com (P)-II</li> </ol>	<ol style="list-style-type: none"> <li>1. BCH 2.3: Corporate Laws</li> <li>2. BCH 2.3: Corporate Laws.</li> <li>3. BC-2.2: Business Laws</li> </ol>

		of subscribers, penalties and adjudication, appellate tribunal, offences. 4. Overhead: Classification and Allocation.	4. B.COM(H)-IVB	4. BCH-4.1: Cost Accounting
	<b>Tutorials</b>	<ol style="list-style-type: none"> <li>1. Group discussion on Shares and share Capital.</li> <li>2. Group discussion on Shares and Share Capital.</li> <li>3. Discussion on winding up of LLP-2008.</li> <li>4. Student practice problem part of materials and labour.</li> </ol>	<ol style="list-style-type: none"> <li>1. B.Com. (Hons) - IIA</li> <li>2. B.Com. (Hons) – IIB</li> <li>3. B.Com (P) – II</li> <li>4. B.COM(H)-IVB</li> </ol>	<ol style="list-style-type: none"> <li>1.BCH 2.3:Corporate Laws</li> <li>2.BCH 2.3:Corporate Laws</li> <li>3. BC-2.2: Business Laws</li> <li>4, BCH-4.1: Cost Accounting</li> </ol>
	<b>Test</b>	<ol style="list-style-type: none"> <li>1. Notification of date schedule for the conduct of the Internal Examination.</li> <li>2. Notification of date schedule for the conduct of the Internal Examination.</li> <li>3. Notification of date schedule for the conduct of the Internal Examination.</li> <li>4. Notification of date schedule for the conduct of the Internal Examination.</li> </ol>	<ol style="list-style-type: none"> <li>1. B.Com. (Hons) - IIA</li> <li>2. B.Com. (Hons) – IIB</li> <li>3. B.Com (P) - II</li> <li>4. B.COM(H)-IVB</li> </ol>	<ol style="list-style-type: none"> <li>1.BCH 2.3:Corporate Laws</li> <li>2.BCH 2.3:CorporateLaws</li> <li>3.BC-2.2:Business Laws</li> <li>4. BCH-4.1: Cost Accounting</li> </ol>
	<b>Test</b>	<ol style="list-style-type: none"> <li>1. conduct internal Examination of</li> <li>2. conduct internal Examination</li> <li>3. conduct internal Examination</li> <li>4. Conduct Internal Examination</li> </ol>	<ol style="list-style-type: none"> <li>1. B.Com. (Hons) - IIA</li> <li>2. B.Com. (Hons) – IIB</li> <li>3. B.Com (P) - II</li> <li>4. B.COM(H)-IVB</li> </ol>	<ol style="list-style-type: none"> <li>1.BCH 2.3:Corporate Laws</li> <li>2. BCH 2.3:Corporate laws</li> <li>3. BC-2.2: Business laws</li> <li>4, BCH-4.1: Cost Accounting</li> </ol>



**SEMESTER WISE TEACHING PLAN**  
**SRI VENKATESWARA COLLEGE**  
**2018-19 (Even-Semester)**

**Name of the Faculty: Dr. Vinod Kumar**  
**Department: Commerce**  
**Course: B.Com (H)/B.Com**  
**Semester: IV/VI**

Month	Type of Class	Topics	Course	Paper Code/Name
JANUARY 2019	Theory	<ol style="list-style-type: none"><li>1. An introduction to international business: Globalisation and its growing importance in world economy; Impact of globalization; international business contrasted with domestic business – complexities of international business; Modes of entry into international business; International business environment: National and foreign environments and their components – economic, cultural, and political-legal environments; Theories of international trade – an overview; WTO –its objectives, principles, Organization structure and functioning; UNCTAD, World Bank, and IMF</li><li>2. Objectives of Project Planning: Introduction, objectives and process of project planning, monitoring and control of investment projects (this includes checking the planned activity), relevance of social cost benefit analysis (objectives and significance of social cost benefit analysis, identification of investment opportunities) includes sources of identification of investment opportunities, pre-feasibility studies (project life cycle).</li></ol>	<ol style="list-style-type: none"><li>1. B.Com. (Hons) - VI</li><li>2. B.Com - VI</li></ol>	<ol style="list-style-type: none"><li>1. DSE BCH 6.4- (c): International Business</li><li>2. Generic Elective BC 6.4 (b): Project Management</li></ol>
	Practicals	<ol style="list-style-type: none"><li>1. Word: Working with word document, Inserting,</li></ol>	<ol style="list-style-type: none"><li>1. B.Com. (Hons.) - IV</li></ol>	<ol style="list-style-type: none"><li>1. BCH 4.3: Computer</li></ol>



		filling and formatting a table, Mail Merge including linking with Access Database, Creating Macros – sending E-mail from word Import/Export of files; converting word document to web document, PDF files; Hyperlinks; OLE security features in MS-Word – protection of documents- password for documents – checking for viruses in macros, referencing, creating bibliography, manage sources and citations, review documents.		Applications in Business
	<b>Tutorials</b>	<ol style="list-style-type: none"> <li>1. An introduction to international business: Globalisation and its growing importance in world economy; Impact of globalization; international business contrasted with domestic business – complexities of international business; Modes of entry into international business;</li> <li>2. Objectives of Project Planning: Introduction, objectives and process of project planning, monitoring and control of investment projects (this includes checking the planned activity), relevance of social cost benefit analysis (objectives and significance of social cost benefit analysis, identification of investment opportunities) includes sources of identification of investment opportunities, pre-feasibility studies (project life cycle).</li> </ol>	<ol style="list-style-type: none"> <li>1. B.Com. (Hons) - VI</li> <li>2. B.Com. - VI</li> </ol>	<ol style="list-style-type: none"> <li>1. DSE BCH 6.4- (c): International Business</li> <li>2. Generic Elective BC 6.4 (b): Project Management</li> </ol>
<b>Month</b>	<b>Type of Class</b>	<b>Topics</b>	<b>Course</b>	<b>Paper Code/Name</b>
<b>FEBURARY 2019</b>	<b>Theory</b>	<ol style="list-style-type: none"> <li>1. Global trading environment –recent trends in world trade in goods and services; Trends in India’s foreign trade; Commercial policy instruments – tariff and non-tariff measures; Balance of payment account and its components; Commodity and other trading agreements; Regional economic cooperation; Forms of regional groupings;</li> </ol>	<ol style="list-style-type: none"> <li>1. B.Com. (Hons) - VI</li> <li>2. B.Com. - VI</li> </ol>	<ol style="list-style-type: none"> <li>1. DSE BCH 6.4- (c): International Business</li> <li>2. Generic Elective BC 6.4 (b): Project Management</li> </ol>

		<p>Integration efforts among countries in Europe, North America and Asia; International Financial environment: International financial system and institutions;</p> <p>2. Technical feasibility, Marketing feasibility and Technical feasibility and estimation of cost and demand analysis and commercial viability (this includes various methods such as qualitative methods like jury of executive method and Delphi method and time series methods like trend projection method, chain ratio, consumption level method, basics of econometric, regression methods, etc.) cost of projects, techniques of risk analysis, (measurement of risk- standard deviation, co-variance, range, coefficient of correlation, SWOT analysis, sensitivity analysis, scenario analysis, decision tree etc.) (only theoretical an conceptual) collaboration arrangement (it includes merger, acquisition, amalgamation, joint venture, takeover, PPP, turnkey, financial planning) (only conceptual part), overview of projected cash flow, balance sheet, budget, sources of funds (short term and long term), loan syndication (background knowledge only) tax consideration (recent provisions announced by government) in project preparation and legal aspects) (it includes exempted project incomes and deduction available and basic legal aspects of patents, trademarks, copyright, design act etc.)</p>		
	<b>Practicals</b>	<p>1. PowerPoint: preparing presentations, slides, handouts, speaker's notes – outlines – media clips – charts- graphs, adding the transitions to the slide show – special effects in detail – setting slide</p>	1. B.Com. (Hons.): IV	1. BCH 4.3: Computer Applications in Business

		timings; Spreadsheet: creating a work book, rearranging worksheet, organizing charts and graphs, ranges and functions & formulae; mathematical, statistical, financial functions such as NPV, future value, IRR, EMI, compounding yearly, periodic and monthly, auto calculate using names in a formula		
	<b>Tutorials</b>	<ol style="list-style-type: none"> <li>1. Regional economic cooperation; Forms of regional groupings; Integration efforts among countries in Europe, North America and Asia; International Financial environment: International financial system and institutions;</li> <li>2. Technical feasibility, Marketing feasibility and Technical feasibility and estimation of cost and demand analysis and commercial viability</li> </ol>	<ol style="list-style-type: none"> <li>1. B.Com. (Hons) - VI</li> <li>2. B.Com. - VI</li> </ol>	<ol style="list-style-type: none"> <li>1. DSE BCH 6.4- (c): International Business</li> <li>2. Generic Elective BC 6.4 (b): Project Management</li> </ol>
<b>Month</b>	<b>Type of Class</b>	<b>Topics</b>	<b>Course</b>	<b>Paper Code/Name</b>
<b>MARCH 2019</b>	<b>Theory</b>	<ol style="list-style-type: none"> <li>1. Foreign exchange markets and risk management; Foreign investments – types and flows; Foreign investment in India perspective; Organisational structure for international business operations; Key Issues involved in making international production, finance, marketing and human resource decisions; international business negotiations; Developments and issues in international business: outsourcing and its potentials for India; Strategic alliances, mergers and acquisitions; role of IT in international business; international business and ecological considerations.</li> <li>2. Business criterion of growth (elementary) liquidity and profitability (this included liquidity ratio i.e. current ratio and liquid ratio and profitability ratio) (numerical question of liquidity ratio).</li> </ol>	<ol style="list-style-type: none"> <li>1. B.Com. (Hons) - VI</li> <li>2. B.Com. - VI</li> </ol>	<ol style="list-style-type: none"> <li>1. DSE BCH 6.4- (c): International Business</li> <li>2. Generic Elective BC 6.4 (b): Project Management</li> </ol>
	<b>Practicals</b>	<ol style="list-style-type: none"> <li>1. Spreadsheet: Formula editing, consolidation of data &amp; data analysis- sorting list, filter &amp; more filtering techniques – consolidate data in multiple worksheets</li> </ol>	<ol style="list-style-type: none"> <li>1. B.Com. (Hons.) - IV</li> </ol>	<ol style="list-style-type: none"> <li>1. BCH 4.3: Computer Applications in Business</li> </ol>

		– what if analysis, goal seek, scenario manager, solver, lookup function – sub totals, nested – if, statistical analysis, data validation & protection – create a drop-down list from a range of cells – apply data validation to cells – copy data validation setting, remove data validation – find cell that have data validation protect cell data , using password to protect sheet and workbook – use validation to create dependent list, pivot table reports & pivot chart reports		
	<b>Tutorials</b>	<ol style="list-style-type: none"> <li>1. Strategic alliances, mergers and acquisitions; role of IT in international business; international business and ecological considerations.</li> <li>2. Business criterion of growth (elementary) liquidity and profitability (this included liquidity ratio i.e. current ratio and liquid ratio and profitability ratio) (numerical question of liquidity ratio).</li> </ol>	<ol style="list-style-type: none"> <li>1. B.Com. (Hons) - VI</li> <li>2. B.Com. - VI</li> </ol>	<ol style="list-style-type: none"> <li>1. DSE BCH 6.4- (c): International Business</li> <li>2. Generic Elective BC 6.4 (b): Project Management</li> </ol>
	<b>Assignment</b>	<ol style="list-style-type: none"> <li>1. Topics allotment for making the assignments.</li> <li>2. Topics allotment for making the assignments.</li> <li>3. Topics for making workbook on computer.</li> </ol>	<ol style="list-style-type: none"> <li>1. B.Com. (Hons) - VI</li> <li>2. B.Com. – VI</li> <li>3. B. Com. (Hons) - IV</li> </ol>	<ol style="list-style-type: none"> <li>1. DSE BCH 6.4- (c): International Business</li> <li>2. Generic Elective BC 6.4 (b): Project Management</li> <li>3. BCH 4.3: Computer Applications in Business</li> </ol>
	<b>Test</b>	<ol style="list-style-type: none"> <li>1. Test would be conducted on the concerned subject after mid-semester break.</li> <li>2. Test would be conducted on the concerned subject after mid-semester break.</li> </ol>	<ol style="list-style-type: none"> <li>1. B.Com. (Hons) - VI</li> <li>2. B.Com. - VI</li> </ol>	<ol style="list-style-type: none"> <li>1. DSE BCH 6.4- (c): International Business</li> <li>2. Generic Elective BC 6.4 (b): Project Management</li> </ol>
<b>Month</b>	<b>Type of Class</b>	<b>Topics</b>	<b>Course</b>	<b>Paper Code/Name</b>
<b>APRIL 2019</b>	<b>Theory</b>	1. Foreign Trade promotion measures and organizations in India; Special economic zones (SEZs) and 100% export oriented units (EOUs); Measures for promoting foreign investments into	<ol style="list-style-type: none"> <li>1. B.Com. (Hons) - VI</li> <li>2. B.Com. - VI</li> </ol>	<ol style="list-style-type: none"> <li>1. DSE BCH 6.4- (c): International Business</li> <li>2. Generic Elective BC 6.4 (b): Project Management</li> </ol>

		<p>and from India; Indian joint ventures and acquisitions abroad; Financing of foreign trade and payment terms.</p> <p>2. Social cost benefit analysis in public and private sectors (UNIDO approach i.e. United Nations Industrial Development organization approach and L-M approach i.e. I.M.D. Little and Mirrless Approach), investment criterion and choice of techniques, theoretical aspects of shadow prices and social discount rate, and issues in project planning and management i.e. PERT and CPM.</p>		
	<b>Practicals</b>	1. Practice on MS Word, MS PowerPoint, MS Excel, MS Access	1. B.Com. (Hons.) - IV	1. BCH 4.3: Computer Applications in Business
	<b>Tutorials</b>	<p>1. Foreign Trade promotion measures and organizations in India; Special economic zones (SEZs) and 100% export oriented units (EOUs); Measures for promoting foreign investments into and from India; Indian joint ventures and acquisitions abroad; Financing of foreign trade and payment terms.</p> <p>2. Social cost benefit analysis in public and private sectors (UNIDO approach i.e. United Nations Industrial Development organization approach and L-M approach i.e. I.M.D. Little and Mirrless Approach), investment criterion and choice of techniques, theoretical aspects of shadow prices and social discount rate, and issues in project planning and management i.e. PERT and CPM.</p>	<p>1. B.Com. (Hons) - VI</p> <p>2. B.Com. - VI</p>	<p>1. DSE BCH 6.4- (c): International Business</p> <p>2. Generic Elective BC 6.4 (b): Project Management</p>



**SEMESTER WISE TEACHING PLAN**  
**SRI VENKATESWARA COLLEGE**

**Name of the Faculty: Dr. Neha Singhal**

**Department: Commerce**

**Semester : IV/VI**

Month		Topics	Course	Paper Code/Name
<b>JANUARY</b>	<b>Theory</b>	1. An Introduction to Entrepreneurship. 2. Types of Business Entities. 3. Introduction, Types of Audit, Audit Planning and Documentation, Internal Control System, Evidence in Auditing, Vouching, Verification of Assets, Verification of Liabilities, Appointment and Removal of Auditor, Rights and Duties of a Company Auditor, Auditor's Report, Liabilities of Auditor.	1) B.com (H)-IV 2) B.Com (H)-VI	1. BCH-4.5(a) Entrepreneurship 2. BCH-6.1-Auditing and CG
	<b>Practical</b>	1. Mathematics of Finance	1.B.com (H)-IV	1. BCH-4.2-Busines Mathematics
	<b>Tutorials</b>	1. Appointment and Removal of Auditor, Rights and Duties of a Company Auditor, Liabilities of Auditor.	1. B.Com(H)-IV 2. B.Com (H)-VI	1. BCH-6.1-Auditing and CG
<b>FEBRUARY</b>	<b>Theory:</b>	1. Entrepreneurial Sustainability. 2. Business Plan Preparations. 3. Cost Audit, Tax Audit, management Audit and EDP Auditing. 4. Corporate Governance 5. Major Corporate Failures	1) B.com (H)- IV 2) B.Com (H)- VI	1. BCH-4.5(a) Entrepreneurship 2. BCH-6.1-Auditing and CG
	<b>Practical:</b>	1. Mathematics of Finance 2. Linear Programming	1.B.com (H)-IV	1. BCH-4.2- Business Mathematics

	<b>Tutorials:</b>	1. Major Corporate Failures	1.B.Com(H)-IV 2. B.Com (H)-VI	1. BCH-6.1-Auditing and CG
	<b>Test</b>	1. Test from Chapter- Types of Entrepreneur, MSME, Managerial and Entrepreneurship and Entrepreneurial Sustainability 2. Test from Chapter- Appointment and Removal of an Auditor, Rights and Duties of Auditor, Liabilities of an Auditor, Theories and Models of CG, Insider Trading,	1. B.com (H)-IV 2. B.Com (H)-VI	1. BCH-4.5(a) Entrepreneurship 2. BCH-6.1-Auditing and CG
	<b>Assignment</b>	1. Assignment form Chapter – Types of Entrepreneur and MSME. 2. Assignment from Chapter- Appointment and Removal of an Auditor, Rights and Duties of Auditor and Vouching.	1) B.Com-IV 2) B.Com (H)-VI	1. BCH-4.5(a) Entrepreneurship 2. BCH-6.1-Auditing and CG
<b>MARCH</b>	<b>Theory</b>	1. Business Plan Preparations. 2. Start up Issues. 3. Business Ethics	1) B.com (H)-IV 2) B.Com (H)-VI	1. BCH-4.5(a) Entrepreneurship 2. BCH-6.1-Auditing and CG
	<b>Practical</b>	1. Mathematics of Finance 2. Linear Programming	1.B.com (H)-IV	1. BCH-4.2-Busines Mathematics
	<b>Tutorials</b>	1. Business Ethics	1. B.Com(H)-IV 2. B.Com (H)-VI	1. BCH-6.1-Auditing and CG
<b>APRIL</b>	<b>Theory</b>	1. Business Plan Preparations. 2. Start up Issues. 3. Corporate Social Responsibility	1) B.com (H)-IV 2) B.Com (H)-VI	1. BCH-4.5(a) Entrepreneurship 2. BCH-6.1-Auditing and CG

	<b>Practical</b>	<ol style="list-style-type: none"> <li>1. Mathematics of Finance</li> <li>2. Linear Programming</li> </ol>	1.B.com (H)-IV	1. BCH-4.2-Busines Mathematics
	<b>Tutorials</b>	<ol style="list-style-type: none"> <li>1. Corporate Social Responsibility</li> </ol>	<ol style="list-style-type: none"> <li>1) B.com (H)-IV</li> <li>2) B.Com (H)-VI</li> </ol>	1. BCH-6.1-Auditing and CG





**SEMESTER WISE TEACHING PLAN**  
**SRI VENKATESWARA COLLEGE**

**Name of the Faculty: Shilpa**

**Department: Commerce**

**Semester: II/IV/VI**

Month		Topics	Course	Paper Code/Name
JANUARY 2019	<b>Theory</b>	1.Holding companies 2.Banking companies 3.Issue,Forfeiture& Reissue of shares	B.Com(H) Semester II(B)	BCH2.2 / Corporate Accounting
		1.Unit Costing 2 .Job Costing 3.Contract Costing	B.Com(H) Semester IV(B)	BCH4.1/ Cost Accounting
		Job Costing	B.Com(H) Semester IV (A)	BCH4.1/ Cost Accounting
		Holding Company	B.Com(P) Semester IV	BC4.2/Corporate Accounting
	<b>Practicals</b>	Payroll Statement Depriciation	B.Com(H) Semester IV (A+B)	BCH4.3/Computer Applications in Business
	<b>Tutorials</b>	Doubt Clearing Session	B.Com(H) Semester II(B)	BCH2.2 / Corporate Accounting
FEBRUARY 2019	<b>Theory:</b>	1 Amalgamation 2 Internal Reconstruction 3Redemption of Preference Shares	B.Com(H) Semester II(B)	BCH2.2 / Corporate Accounting
		1Process Costing 2 Service Costing	B.com(H) Semester IV(B)	BCH4.1/ Cost Accounting
		Contract Costing	B.com(H) Semester IV(A)	BCH4.1/ Cost Accounting
		Final Accounts of Companies	B.Com(P) Semester IV	BC4.2/Corporate Accounting
	<b>Practicals:</b>	Loan Sheet Regression Ratio Analysis	B.Com(H) Semester IV (A+B)	BCH4.3/Computer Applications in Business
	<b>Tutorials:</b>	Doubt Clearing Session	B.Com(H) Semester II(B)	BCH2.2 / Corporate Accounting

	<b><u>Assignment :</u></b>	Amalgamation and Internal Reconstruction	B.Com(H) Semester II(B)	BCH2.2 / Corporate Accounting
		Evaluate the budget estimate of a trip and segregate various sets of costs involved in it .	B.com(H) Semester IV(B)	BCH4.1/ Cost Accounting
MARCH 2019	<b>Theory:</b>	1Cash Flow Statement 2Financial Statements of Companies 3 Valuation of Goodwill &Shares	B.Com(H) Semester II(A)	BCH2.2 / Corporate Accounting
		1Integral &Non-Integral systems 2Reconcilliation of Cost and Financial Statements	B.com(H) Semester IV(B)	BCH4.1/ Cost Accounting
		Contract Costing ABC method	B.com(H) Semester IV(A)	BCH4.1/ Cost Accounting
		Valuation of goodwill	B.Com(P) Semester IV	BC4.2/Corporate Accounting
	<b>Practicals:</b>	Capital Budgeting Solver Frequency Caat Tools What if analysis	B.Com(H) Semester IV (A+B)	BCH4.3/Computer Applications in Business
	<b>Tutorials:</b>	Doubt Clearing Session	B.Com(H) Semester II(B)	BCH2.2 / Corporate Accounting
	<b><u>Test</u></b>	Holding Company And Cash Flow Statement	B.Com(H) Semester II(B)	BCH2.2 / Corporate Accounting
		Service Costing,Contract Costing &Reconcilliation of Financial statements	B.com(H) Semester IV(B)	BCH4.1/ Cost Accounting
		Training and Development		
APRIL 2019	<b>Theory:</b>	1Buy-Back of shares 2Issue &Redemption of Debentures	B.Com(H) Semester II(A)	BCH2.2 / Corporate Accounting
		1.Capacity Level Cost 2Treatment of certain items in Costing 3ABC costing	B.com(H) Semester IV(B)	BCH4.1/ Cost Accounting
		Service Costing	B.com(H) Semester IV(B)	BCH4.1/ Cost Accounting
		Valuation of shares	B.Com(P) Semester IV	BC4.2/Corporate Accounting

<b>Practicals:</b>	Test for the work book preparation	B.Com(H) Semester IV (A+B)	BCH4.3/Computer Applications in Business
<b>Tutorials:</b>	Doubt Clearing Session	B.Com(H) Semester II(B)	BCH2.2 / Corporate Accounting



**SEMESTER WISE TEACHING PLAN**  
**SRI VENKATESWARA COLLEGE**

**Name of the Faculty: Dr. Arpita Kaul**  
**Semester: II, IV & VI (2018-19)**

**Department: Commerce**

Month		Topics	Course	Paper Code/Name
JAN 2019	<b>Theory</b>	AMALGAMATION, INTERNAL RECONSTRUCTION	B.Com H II	BCH 2.2 CORPORATE ACCOUNTING
		Business Incubators, Angel Investors, Venture capital, private equity	B.COM H IV	BCH 4.5 (a) Entrepreneurship
	<b>Practicals</b>	INTEREST, SIMPLE INTEREST, COMPUND INTEREST	B.Com H IV	BCH4.2 BUSINESS MATHEMATICS
	<b>Tutorials</b>	Taking doubts and practice questions on amalgamation and internal reconstruction	B.Com H IV	BCH 2.2 corporate accounting
FEBRUARY 2019	<b>Theory:</b>	HOLDING, VALUATION OF GOODWILL	B.Com H II	BCH 2.2 corporate accounting
		Business Plans	B.Com H IV	BCH 4.5 (a) Entrepreneurship
	<b>Practicals:</b>	PRESENT VALUE, FUTURE VALUE, EQUATION OF VALUE	B.Com H IV	BCH 4.2 Business Mathematics
	<b>Tutorials:</b>	Taking doubts and practice questions on holding and goodwill	B.Com H II	BCH 2.2 corporate accounting

<b>MARCH</b>	<b>Theory</b>	VALUATION OF SHARES, CASH FLOW, REDEMPTION OF PREFERENCE SHARE  Mobilizing resources for start up	B.Com H II  B.Com H IV	BCH 2.2 corporate accounting  BCH 4.5 (a) Entrepreneurship
	<b>Practicals</b>	ANNUTIES , LPP Using solver	B.Com H II	BCH 4.2 Business Mathematics
	<b>Tutorial</b>	Taking doubts and practice questions on valuation of shares, cash flow, redemption of share	B.Com H II	BCH 2.2 corporate accounting
	<b>Assignment</b>	Question on holding  Presentations by groups on paytm, uber, ola, business plan, skill India, make India etc	B.Com H II  B.Com H IV	BCH 2.2 Corporate Accounting  BCH 4.5 (a) Entrepreneurship
<b>APRIL</b>	<b>Theory:</b>	BANKING, FINAL ACCOUNT, REDEMPTION OF DEBENTURES  Preliminary contracts, Start up problems	B.Com H II  B.Com H IV	BCH 2.2 corporate accounting  BCH 4.5 (a) Entrepreneurship
	<b>Tutorials:</b>	Doubts and practice questions on banking, final accounts and redemption of debentures	B.Com H	BCH 2.2 corporate accounting
	<b>TEST</b>	After mid term break, in the second week of March		



**SEMESTER WISE TEACHING PLAN**  
**2019-2020**  
**SRI VENKATESWARA COLLEGE**

Name of the Faculty: Dr. Ajit Singh

Department: Commerce

Semester : II/IV

Month		Topics	Course	Paper Code/Name
JANUARY-2019	<b>Theory</b>	<b>1. Introduction, meaning &amp; features, Administration of company laws, Kinds of companies.</b>  <b>2. Introduction to computer.</b>	1. B.Com (H)-II  2. B.Com(H)-IV	<b>1. BH 2.3: Corporate Laws</b>  <b>2. BCH 4.3 Computer Application In Business.</b>
	<b>Tutorials /Practical:</b>	1. Case laws presented by the Students.  2. Introduction to HTML	1. B.Com (H)-II  2. B.Com (P)-IV	<b>1. BH 2.3: Corporate Laws</b>  <b>2.BC 4.4: E-Commerce</b>
FEBRUARY	<b>Theory:</b>	1. Formation of company, Memorandum, Association & Articles of Association.  2. Computer Networks.	1. B.Com (H)-II  2. B.Com(H)-IV	<b>1. BH 2.3: Corporate Laws</b>  <b>2. BCH 4.3 Computer Application In Business.</b>
	<b>Tutorials/Practical:</b>	1. Case laws presented by the Students.  2. Practical Question on HTML	1. B.Com (H)-II  2. B.Com(P)-IV	<b>1.BH 2.3: Corporate Laws</b>  <b>2.BC 4.4: E-Commerce</b>
	<b>Assignment</b>	Assignment and Presentation Given to the students.	1. B.Com (H)-II  2. B.Com(H)-IV	<b>1. BH 2.3: Corporate Laws</b>  <b>2. BCH 4.3 Computer Application In Business.</b>
MARCH	<b>Theory:</b>	1.Prospectus, Share and share capital, Members and Shareholders, Director and Key Managerial personnel, Shareholders Meeting. 2.Introduction to Operating Systems. Database System.	1. B.Com (H)-II  2. B.Com(H)-IV	<b>1. BH 2.3: Corporate Laws</b>  <b>2. BCH 4.3 Computer Application In Business.</b>

	<b>Tutorials/Practical:</b>	1. Case laws presented by the Students. & Case Studies Discussed.  2. Creating Hypertext Links.	1. B.Com (H)-II  2. B.Com(P)-IV	<b>1. BH 2.3: Corporate Laws.</b>  <b>2. BC 4.4: E-Commerce</b>
	<b><u>Test</u></b>	Time schedule decided for conduct of Internal exam on 3 <sup>rd</sup> week of March.	1. B.Com (H)-II  2. B.Com(H)-IV	<b>1. BH 2.3: Corporate Laws</b>  <b>2. BCH 4.3 Computer Application In Business.</b>
APRIL	<b>Theory:</b>	1.Accounts and Audit, Dividend provisions, Winding up of Companies, The Depository System.  2.CAATS & Revision	1. B.Com (H)-II  2. B.Com(H)-IV	<b>1. BH 2.3: Corporate Laws</b>  <b>2. BCH 4.3 Computer Application In Business.</b>
	<b>Tutorials/Practical:</b>	1.Case Studies discussed. 2. Creating Forums Through HTML.	1. B.Com (H)-II  2. B.Com(P)-IV	<b>1. BH 2.3: Corporate Laws.</b>  <b>2. BC 4.4: E-Commerce</b>



**SEMESTER WISE TEACHING PLAN**  
**SRI VENKATESWARA COLLEGE**  
 2018-2019 Even Semester

**Name of the Faculty:** Priyanka  
**Commerce**

**Department:**

**Semester : II/IV**

Month		Topics	Course	Paper Code/Name
JANUARY	<b>Theory</b>	1. (i)Introduction- meaning , objectives, cost concepts and classification, and role of a cost accountant in an organization. (ii) Elements of cost : Material and labour- FIFO, LIFO, Weighted Average, Treatment of material losses, and Accounting and control of labour cost. 2. Matrices types and applications of Matrices	1. B.com(H) IV semester 2. B.com II sem	1. <b>cost accounting</b> 2. <b>Business Mathematics and statistics</b>
	<b>Tutorials /Practical:</b>	Problems related with above topics		
FEBRUARY	<b>Theory:</b>	1. (i) Overheads- Classification ,allocation, apportionment, absorption of overhead. (ii) contract costing (iii)Reconciliation of cost and financial accounts 2. Differentiation –concepts and rules of differentiation	1. B.com (H) IV sem 2. B.com II sem	1 Cost accounting 2 Business mathematics and statistics



	<b>Tutorials/Practical:</b>			
	<b><u>Assignment</u></b>	1. Assignment from labour costing and introduction of costing		
MARCH	<b>Theory:</b>	1. (i) Process costing (ii) service costing (iii) unit or job costing 2. (i) Application of differentiation (ii) simple and compound interest	1. B.com (h) IV sem 2. B.com II sem	1. Cost accounting 2. Business mathematics and statistics
	<b>Tutorials/Practical:</b>	Problems related with above topics		
	<b><u>Test</u></b>	1. Test from overhead, material costing and contract costing 2. Test from application of matrices	1. B.com (H) IV sem 2. B.com II sem	1. Cost accounting 2. Business mathematics and statistics
APRIL	<b>Theory:</b>	1. (i) Integral and non integral system (ii) Revision 2. (i) nominal, effective and compounding and discounting of a sum using different types of differentiation (ii) Revision	1. B.com(H) IV sem 2. B.com II sem	1. Cost accounting 2. Business Mathematics and statistics
	<b>Tutorials/Practical:</b>	Problems related with above topics.		



**SEMESTER WISE TEACHING PLAN (2018-19, EVEN SEMESTER)**

**SRI VENKATESWARA COLLEGE**

**Name of the Faculty: Ms. Simranjeet Kaur**

**Department: Commerce**

**Semester: II/IV/VI**

Month	Type of Class	Topics	Course	Paper Code/Name
January	Theory	<p>1.Introduction, Rationale for GST, GST Council, GST network, taxable event- “supply”, state compensation mechanism, registration.</p> <p>2.Types of investment, market participants, stock exchanges in india,sources of financial information, buying and selling of stocks, use of limit order and market order, role of stock exchanges</p> <p>3. Introduction to HTML, Creating and viewing a webpage, tags and elements</p> <p>4.Competition law:Objective, purpose and sailent features, agreements having adverse impact on competition:abuse of dominant position</p>	<p>1.B.Com. (Hons) – VI</p> <p>2. B.Com (Hons)-II GE</p> <p>3. B.Com –IV</p> <p>4.B.Com (Hons.)-VI</p>	<p>1.BCH 6.2 Goods and Services Tax (GST) &amp; Customs Law</p> <p>2.BCH 2.4(b) Investing in Stock Markets (GE)</p> <p>3. BC 4.4(a) E-Commerce</p> <p>4.BCH 6.4 DSE Group B Consumer Affairs and Customer Care</p>
	Tutorials	Out of the topics covered in the class to be issued to the students for discussion and analytical thinking on it.	<p>1.B.Com. (Hons) – VI</p> <p>2. B.Com (Hons)-II GE</p>	<p>1.BCH 6.2 Goods and Services Tax (GST) &amp; Customs Law</p> <p>2.BCH 2.4(b) Investing in Stock Markets (GE)</p>

	<b>Assignment -I</b>	Topics allotment for making the assignments.	1.B.Com. (Hons) – VI 2. B.Com (Hons)-II GE	1.BCH 6.2 Goods and Services Tax (GST) & Customs Law  2.BCH 2.4(b) Investing in Stock Markets (GE)
<b>Month</b>	<b>Type of Class</b>	<b>Topics</b>	<b>Course</b>	<b>Paper Code/Name</b>
<b>February</b>	<b>Theory</b>	1.Place of supply, time of supply, exemption of GST, valuation of GST.  2.Online trading of stocks, risk:valuation and mitigation,analysis of the company:ratio analysis,assessing quality of management using financial and non-financial data,PEG ratio, Price revenue ratio,simple moving average, charts for technical analysis.  3. HTML Attributes, text formatting, images.  4.Regulation of combination, criteria for determining :appreciable adverse impact on competition” and “dominant position”, relevant geographical market factors, complaints and procedures.	1.B.Com. (Hons) – VI 2. B.Com (Hons)-II GE 3. B.Com –IV 4.B.Com (Hons.)-VI	1.BCH 6.2 Goods and Services Tax (GST) & Customs Law  2.BCH 2.4(b) Investing in Stock Markets (GE)  3. BC 4.4(a) E-Commerce  4.BCH 6.4 DSE Group B Consumer Affairs and Customer Care

	<b>Tutorials</b>	Out of the topics covered in the class to be issued to the students for discussion and analytical thinking on it.	1. B.Com. (Hons) – VI 2. B.Com (Hons)-II GE	1.BCH 6.2 Goods and Services Tax (GST) & Customs Law  2.BCH 2.4(b) Investing in Stock Markets (GE)
	<b>Assignment- II</b>	Topics allotment for making the assignments.	1. B.Com. (Hons) – VI 2. B.Com (Hons)-II GE	1.BCH 6.2 Goods and Services Tax (GST) & Customs Law  2.BCH 2.4(b) Investing in Stock Markets (GE)
<b>Month</b>	<b>Type of Class</b>	<b>Topics</b>	<b>Course</b>	<b>Paper Code/Name</b>
<b>March</b>	<b>Theory</b>	1.Composition levy scheme,input tax credit, payment of taxes, doctrine of unjust enrichment, Procedures: tax invoice, audit in GST, assessment.  2.background on mutual funds, advantages, motives, NAV, Types of mutual funds, factors affecting choice of mutual funds, CRISIL.  3.hypertext links, links, tables.  4.Consumer movement in India, recent developments in consumer protection in India, citizens charter, product testing, evolution of consumer movement	1.B.Com. (Hons) – VI 2. B.Com (Hons)-II GE  3. B.Com –IV 4.B.Com (Hons.)-VI	1.BCH 6.2 Goods and Services Tax (GST) & Customs Law  2.BCH 2.4(b) Investing in Stock Markets (GE)  V  3. BC 4.4(a) E-Commerce

				4.BCH 6.4 DSE Group B Consumer Affairs and Customer Care
	<b>Tutorials</b>	Out of the topics covered in the class to be issued to the students for discussion and analytical thinking on it.	1.B.Com. (Hons) – VI 2. B.Com (Hons)-II GE	1.BCH 6.2 Goods and Services Tax (GST) & Customs Law  2.BCH 2.4(b) Investing in Stock Markets (GE)
	<b>Test</b>	Test would be conducted on the concerned subject after mid-semester break.	1.B.Com. (Hons) – VI 2. B.Com (Hons)-II GE 3. B.Com –IV  4.B.Com (Hons.)-VI	1.BCH 6.2 Goods and Services Tax (GST) & Customs Law  2.BCH 2.4(b) Investing in Stock Markets (GE)  3. BC 4.4(a) E- Commerce  4.BCH 6.4 DSE Group B Consumer Affairs and Customer Care

Month	Type of Class	Topics	Course	Paper Code/Name
<b>April &amp; May</b>	<b>Theory</b>	<p>1.Special provisions: Anti-Profiteering, avoidance of dual control, e-way bills, zero rated supply,offences and penalties, Customs law:basic concepts, types, valuation, baggage rules and exemptions.</p> <p>2. Understanding derivatives: futures, options, trading in futures, put and call options, commodities, currency derivatives and its trading.</p> <p>3.forms, frames, cascading style sheets.</p> <p>4.Industry regulators: banking, telecommunications, insurance, food items, electricity supply, civil aviation</p>	<p>1.B.Com. (Hons) – VI</p> <p>2. B.Com (Hons)-II GE</p> <p>3. B.Com -IV</p> <p>4.B.Com (Hons.)-VI</p>	<p>1.BCH 6.2 Goods and Services Tax (GST) &amp; Customs Law</p> <p>2.BCH 2.4(b) Investing in Stock Markets (GE)</p> <p>3. BC 4.4(a) E-Commerce</p> <p>4.BCH 6.4 DSE Group B Consumer Affairs and Customer Care</p>
	<b>Tutorials</b>	Out of the topics covered in the class to be issued to the students for discussion and analytical thinking on it.	<p>1.B.Com. (Hons) – VI</p> <p>2. B.Com (Hons)-II GE</p>	<p>1.BCH 6.2 Goods and Services Tax (GST) &amp; Customs Law</p> <p>2.BCH 2.4(b) Investing in Stock Markets (GE)</p>





**SEMESTER WISE TEACHING PLAN**  
**SRI VENKATESWARA COLLEGE**  
**Department of Commerce (Year 2018-19)**  
**TEACHING PLAN**

Name of the Faculty: Mr. Aashish Jain

Department: Commerce

Semester: II/IV/VI

Month	Type of Class	Topics	Course	Paper Code/Name
JANUARY	Theory	<b>Goods &amp; Service Tax</b> a) Constitutional framework of Indirect Taxes before GST, Concept of VAT: Meaning, Variants of VAT and Methods of VAT; Major defects in the structure of Indirect Taxes prior to GST. b) Rationale of GST; Structure of GST (SGST, CGST, UTGST & IGST); GST Council; GST Network; State Compensation Management & Registration <b>Cost Accounting</b> c) Objectives & Advantages of Cost Accounting d) Cost concepts & classifications e) Preparation of Cost Sheet f) Material / Inventory control techniques g) Methods of material issues – FIFO, LIFO, Average, Weighted Average	1. B.Com – (H) III Semester-VI 2. B.Com(H) – II Semester-IV	1. BCH 6.2: Goods & Service Tax 2. BCH 4.1 : Cost Accounting
	Practical	<b>E – Commerce</b> 1. Introduction of HTML 2. Creating Tables 3. Creating Forms	B.Com II (Semester – III)	BC 4.4(a) : E – Commerce
Month	Type of Class	Topics	Course	Paper Code/Name
FEBRUARY	Theory	<b>Goods &amp; Service Tax</b> 1) Supply of GST (Taxable Event) 2) Place of GST (Within State & Inter – State) 3) Time of Supply (Forward Charge; Reverse Charge & Rate of Change in GST) 4) Exemptions of Supply – Goods & Services 5) Levy & Collection of GST 6) Reverse Charge Mechanism	1. B.Com – (H) III Semester-VI 2. B.Com(H) – II Semester-IV	1. BCH 6.2: Goods & Service Tax 2. BCH 4.1 : Cost Accounting



		<b>Cost Accounting</b> a) Accounting of Labour Cost b) Concept & Treatment of Idle time c) Differential Piece wage rate accounting d) Allocation & Apportionment of Absorption of overheads e) Under & Over Absorption		
	<b>Practical</b>	<b>E – Commerce</b> 1. Creating List 2. Creating Frames	B.Com II (Semester – III)	BC 4.4(a) : E – Commerce
<b>Month</b>	<b>Type of Class</b>	<b>Topics</b>	<b>Course</b>	<b>Paper Code/Name</b>
<b>MARCH</b>	<b>Theory</b>	<b>Goods &amp; Service Tax</b> a) Eligible & Ineligible Input Tax Credit b) Composition Scheme c) Composite & Mixed Supply d) Recovery of Tax Credit e) Availability of Tax Credit f) Transfer of Input Tax Credit g) Job Work <b>Cost Accounting</b> a) Unit Costing b) Job Costing	1. B.Com – (H) III Semester-VI 2. B.Com(H) – II Semester-IV	<b>1. BCH 6.2: Goods &amp; Service Tax</b> <b>2. BCH 4.1 : Cost Accounting</b>
	<b>Assignment</b>	1. Topics allotment for making the assignments from Introduction and Levy & Collection and ITC	1. B.Com – (H) III Semester-VI 2. B.Com(H) – II Semester-IV	<b>1. BCH 6.2: Goods &amp; Service Tax</b>
	<b>Test</b>	1. Test conducted on the concerned subject after mid-semester break.	1. B.Com – (H) III Semester-VI	<b>1. BCH 6.2: Goods &amp; Service Tax</b>
	<b>Practical</b>	<b>E – Commerce</b> Practice session	B.Com II (Semester – III)	BC 4.4(a) : E – Commerce

<b>Month</b>	<b>Type of Class</b>	<b>Topics</b>	<b>Course</b>	<b>Paper Code/Name</b>
<b>APRIL</b>	<b>Theory</b>	<b>GST &amp; Custom Laws</b> a) Tax Invoice, Credit & Debit Notes, Audit in GST, Self Assessment Tax, E – Way Bills, Offences & Penalties & Appeals b) Basic Concept of Custom Laws, Types of Custom Duties, Baggage Rules & Exemptions <b>Cost Accounting</b> 1. Valuation of Work – in – Process 2. Joint Product & By – Product 3. Reconciliation of Cost Accounting	1. B.Com – (H) III Semester-VI 2. B.Com(H) – II Semester-IV	1. BCH 6.2: Goods & Service Tax 2. BCH 4.1 : Cost Accounting
	<b>Practical</b>	<b>E – Commerce</b> Conducted Internal Practicals For Web Designing through HTML	B.Com II (Semester – III)	BC 4.4(a) : E – Commerce



**SEMESTER WISE TEACHING PLAN  
SRI VENKATESWARA COLLEGE**

**Name of the Faculty: Mohini Yadav**

**Department: Commerce**

**Semester: Even (AY 2018-19)**

Month		Topics	Course	Paper Code/Name
<b>January 2019</b>	<b>Theory</b>	Unit 1: Regulations of Domestic Market Unit 2: Foreign Trade Policy and Procedures	GE	BCH 2.4 b – Economics Regulation of Domestic and Foreign Exchange Markets
		Unit 1 – Matrices and Determinants	B Com I	BC2.3 - Business Mathematics & Statistics
		Unit 1	BCom(H) I (A)	BCH- 2.2 - Corporate Laws
	<b>Practical</b>	Excel	BCom(H) II (A+B)	BCH 4.3 - Computer Applications in Business Lab
	<b>Tutorials</b>	Unit 1: Regulations of Domestic Market Unit 2: Foreign Trade Policy and Procedures	GE	BCH 2.4 b – Economics Regulation of Domestic and Foreign Exchange Markets
		Unit 1 – Matrices and Determinants	B Com I	BC2.3 - Business Mathematics & Statistics
Unit 1		BCom(H) I (A)	BCH- 2.2 - Corporate Laws	
<b>February 2019</b>	<b>Theory</b>	Unit 4: Foreign Exchange Market	GE	BCH 2.4 b – Economics Regulation of Domestic and Foreign Exchange Markets
		Unit 2: Differentiations and its applications	B Com I	BC2.3 - Business Mathematics & Statistics
		Unit 1	BCom(H) I (A)	BCH- 2.2 - Corporate Laws
	<b>Tutorials</b>	Unit 4: Foreign Exchange Market	GE	BCH 2.4 b – Economics Regulation of Domestic and Foreign Exchange Markets
		Unit 2: Differentiations and its applications	B Com I	BC2.3 - Business Mathematics & Statistics
		Unit 1	BCom(H) I (A)	BCH- 2.2 - Corporate Laws
<b>Practical</b>	Excel	BCom(H) II (A+B)	BCH 4.3 - Computer Applications in Business Lab	

	<b>Assignment</b>	Unit 1: Regulations of Domestic Market Unit 2: Foreign Trade Policy and Procedures  Unit 1 and 2  Unit 1	GE  B Com I  BCom(H) I (A)	BCH 2.4 b – Economics Regulation of Domestic and Foreign Exchange Markets  BC2.3 - Business Mathematics & Statistics  BCH- 2.2 - Corporate Laws
<b>March 2019</b>	<b>Theory</b>	Unit 5: FEMA 1999  Unit 3 – Mathematics of Finance  Unit 2	GE  B Com I  BCom(H) I (A)	BCH 2.4 b – Economics Regulation of Domestic and Foreign Exchange Markets  BC2.3 - Business Mathematics & Statistics  BCH- 2.2 - Corporate Laws
	<b>Practicals</b>	Access	BCom(H) II (A+B)	BCH 4.3 - Computer Applications in Business Lab
	<b>Tutorials</b>	Unit 5: FEMA 1999  Unit 3 – Mathematics of Finance  Unit 2	GE  B Com I  BCom(H) I (A)	BCH 2.4 b – Economics Regulation of Domestic and Foreign Exchange Markets  BC2.3 - Business Mathematics & Statistics  BCH- 2.2 - Corporate Laws
	<b>Test</b>	Unit 1, 3 and 5  Unit 1 and 2  Unit 1	GE  B Com I  BCom(H) I (A)	BCH 2.4 b – Economics Regulation of Domestic and Foreign Exchange Markets  BC2.3 - Business Mathematics & Statistics  BCH- 2.2 - Corporate Laws
<b>April 2019</b>	<b>Theory</b>	Unit 3: BOP and revision  Unit 3 – Mathematics of Finance  Unit 2	GE  B Com I  BCom(H) I (A)	BCH 2.4 b – Economics Regulation of Domestic and Foreign Exchange Markets  BC2.3 - Business Mathematics & Statistics  BCH- 2.2 - Corporate Laws
	<b>Practicals</b>	Word and PPT	BCom(H) II (A+B)	BCH 4.3 - Computer Applications in Business Lab

<b>Tutorials</b>	Unit 3: BOP and revision	GE	BCH 2.4 b – Economics Regulation of Domestic and Foreign Exchange Markets
	Unit 3 – Mathematics of Finance	B Com I	BC2.3 - Business Mathematics & Statistics
	Unit 2	BCom(H) I (A)	BCH- 2.2 - Corporate Laws



**SEMESTER-WISE TEACHING PLAN  
SRI VENKATESWARA COLLEGE**

**Jan-May 2018-2019**

**Name of the Faculty: Dr. Sunita Jain**

**Department: Electronics**

**Semester: VI**

Month		Topics	Course	Paper Code/Name
JAN	<b>Theory</b>	Introduction to EM waves, concept of spherical & plane waves, reflection and transmission, total internal reflection, origin of refractive index and dispersion. Interference, division of wave front, division of amplitude. Young's double slit experiment, Newton's ring, Michelson Interferometer, and thin film. Holograph	B.Sc. (H)	CC-XIV Photonics
	<b>Practical</b>	Sem VI: To verify the law of Malus for plane polarized light To determine wavelength of sodium light using Newton's Rings. To determine wavelength of sodium light by diffraction grating. To determine the resolving power and Dispersive power of Diffraction Grating (Allotted To Different Groups)  Sem IV Introduction to lab experiments, Design of multirange voltmeter and ammeter using galvanometer	B.Sc. (H)	CC-XIV Photonics Lab  CC- X Electronic Instrumentation

FEBRUARY	<b>Theory</b>	Fresnel and Fraunhofer diffraction. Diffraction by rectangular aperture, single slit, and double slit, diffraction grating and circular aperture. Resolving and dispersive power of grating. Resolving power of telescope and microscope. Concept of Polarization. Linear circular and elliptical polarization, Malus Law, Double refraction, half and quarter wave plate.	B.Sc. (H)	CC-XIV Photonics
	<b>Practical</b>	Sem VI: To verify the law of Malus for plane polarized light To determine wavelength of sodium light using Newton's Rings. To determine wavelength of sodium light by diffraction grating. To determine the resolving power and Dispersive power of Diffraction Grating (Allotted To Different Groups)  Sem IV: Measurement of resistance & sensitivity by Wheatstone Bridge. Characteristics of Photodiode & Phototransistor.	B.Sc. (H)	CC-XIV Photonics Lab  CC-X Electronic Instrumentation Lab
	<b>Assignment</b>	Questions based on interference, diffraction and Polarization.	B.Sc. (H)	CC-XIV Photonics
MARCH	<b>Theory</b>	Liquid crystal display. Interaction of radiation and matter, Einstein coefficients, Condition for amplification, laser cavity, threshold for laser oscillation, line shape function. The semiconductor injection laser diode. LED, photodiodes and photodetectors. Quantum efficiency and responsivity	B.Sc. (H)	CC-XIV Photonics
	<b>Practical</b>	Sem VI: To determine the specific rotation of sugar solution using polarimeter. Characteristics of LEDs and Photodetector and Photodiode.  Sem IV: Measurement of capacitance by de-sautys, Characteristics of LDR	B.Sc. (H)	CC-XIV Photonics Lab  CC-X Electronic Instrumentation Lab
	<b>Mid-Term Test</b>	Questions based on interference, diffraction and polarization		

APRIL	<b>Theory</b>	T.E. and T.M. modes in symmetric slab waveguide. Wave propagation and concept of linearly polarized waves inside dielectric waveguide. Group velocity and dispersion relation. Single mode and multimode fiber. Dispersion and attenuation in optical fiber.	B.Sc. (H)	CC-XIV Photonics
	<b>Practical</b>	Sem VI: Diffraction experiments using a laser. Single slit, double slit diffraction grating and circular aperture  Sem IV: <b>Characteristics of LVDT</b>	B.Sc. (H)	CC-XIV Photonics Lab  CC X Electronic Instrumentation





## Sri Venkateswara College Semester Wise Teaching Plan

Name of Faculty : Dr. Lalita Josyula  
Course : B.Sc(Hons) / II yr

Department : Electronics  
Semester : IV / Jan-May (2018)

JANUARY / 2019	<b>Theory</b>	<b>Qualities of Measurement:</b> Specifications of instruments, their static and dynamic characteristics, Error (Gross error, systematic error, absolute error and relative error) and uncertainty analysis. Statistical analysis of data and curve fitting. <b>Basic Measurement Instruments:</b> PMMC instrument, galvanometer, DC measurement - ammeter, voltmeter, ohm meter, AC measurement, Digital voltmeter systems (integrating and non-integrating types), digital multimeters, digital frequency meter system (different modes and universal counter).	B.Sc(Hons), Electronic Science / CBCS	<b>Electronic Instrumentation</b>
	<b>Practicals</b>	1.Design of multi range ammeter and voltmeter using galvanometer. 2. Measurement of resistance by Wheatstone bridge and measurement of bridge sensitivity. 3. Measurement of Capacitance by de'Sautys. 4. Measure of low resistance by Kelvin's double bridge.		<b>Electronic Instrumentation</b>

<p>FEBRUARY/ 2019</p>	<p><b>Theory:</b></p>	<p><b>Connectors and Probes:</b> low capacitance probes, high voltage probes, current probes, identifying electronic connectors – audio and video, RF/Coaxial, USB etc.  <b>Unit-2</b> (15 Lectures)  <b>Measurement of Resistance and Impedance:</b> Low Resistance: Kelvin's double bridge method, Medium Resistance by Voltmeter Ammeter method, Wheatstone bridge method, High Resistance by Megger. A.C. bridges, Measurement of Self Inductance, Maxwell's bridge, Hay's bridge, and Anderson's bridge, Measurement of Capacitance, Schering's bridge, DeSauty's bridge, Measurement of frequency, Wien's bridge.  <b>A-D and D-A Conversion:</b> 4 bit binary weighted resistor type D-A conversion, circuit and working. Circuit of R-2R ladder. A-D conversion characteristics, successive approximation ADC. (Mention of relevant ICs for all).</p>	<p>B.Sc(Hons), Electronic Science / CBCS</p>	<p><b>Electronic Instrumentation</b></p>
	<p><b>Practicals:</b></p>	<p>5. To determine the Characteristics of resistance transducer - Strain Gauge (Measurement of Strain using half and full bridge.)  6. To determine the Characteristics of LVDT.</p>		<p><b>Electronic Instrumentation</b></p>

MARCH/2019	<b>Theory:</b>	<p><b>Oscilloscopes:</b> CRT, wave form display and electrostatic focusing, time base and sweep synchronization, measurement of voltage, frequency and phase by CRO, Oscilloscope probes, Dual trace oscilloscope, Sampling Oscilloscope, DSO and Powerscope: Block diagram, principle and working, Advantages and applications, CRO specifications (bandwidth, sensitivity, rise time).</p> <p><b>Signal Generators:</b> Audio oscillator, Pulse Generator, Function generators.</p>	B.Sc(Hons), Electronic Science / CBCS	<b>Electronic Instrumentation</b>
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<b>Practicals:</b>	<p>7. To determine the Characteristics of Thermistors and RTD.</p> <p>8. Measurement of temperature by Thermocouples and study of transducers like AD590 (two terminal temperature sensor), PT-100, J- type, K-type.</p>		<b>Electronic Instrumentation</b>
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APRIL/2019	<b>Theory:</b>	<p><b>Transducers and sensors:</b>  Classification of transducers, Basic requirement/characteristics of transducers, active &amp; passive transducers, Resistive (Potentiometer, Strain gauge – Theory, types, temperature compensation and applications), Capacitive (Variable Area Type – Variable Air Gap type – Variable Permittivity type), Inductive (LVDT ) and piezoelectric transducers. Measurement of displacement, velocity and acceleration (translational and rotational). Measurement of pressure (manometers, diaphragm, bellows), Measurement of temperature (RTD, thermistor, thermocouple, semiconductor IC sensors), Light transducers (photoresistors, photovoltaic cells, photodiodes).</p>	B.Sc(Hons), Electronic Science / CBCS	<b>Electronic Instrumentation</b>
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<p><b>Practicals:</b></p>	<p>9. To study the Characteristics of LDR, Photodiode, and Phototransistor:            (i) Variable Illumination.            (ii) Linear Displacement.            10. Characteristics of one Solid State sensor/ Fiber optic sensor</p>		<p><b>Electronic Instrumentation</b></p>
<p><b><u>Written Test :</u></b></p>			



**SEMESTER WISE TEACHING PLAN**  
**SRI VENKATESWARA COLLEGE**  
**Academic Session 2018-2019 (Even Semester)**

**Name of the Faculty** : **Dr Nutan Joshi**  
**Department** : **Electronics**

**Semester:** **Theory** : **B.Sc(H) Electronics, Sem IV (CBCS)**

**Practical** : **B.Sc(H) Electronics Sem IV (CBCS)**  
**B.Sc(H) Electronics Sem II (CBCS)**  
**B.Sc(H) Electronics Sem VI (CBCS)**

Month		Topics	Course	Paper Code/Name
JANUARY	<b>Theory</b>	Basic Operational Amplifier: Concept of differential amplifiers (Dual input balanced and unbalanced output), constant current bias, current mirror, cascaded differential amplifier stages with concept of level translator, block diagram of an operational amplifier (IC 741) Op-Amp parameters: input offset voltage, input offset current, input bias current, differential input resistance, input capacitance, offset voltage adjustment range, input voltage range, common mode rejection ratio, slew rate, supply voltage rejection ratio.	B.Sc.(Hons) Electronics, Sem IV	Core-Course-VIII/ Operational Amplifiers and Applications
	<b>Practical</b>	Study of op-amp characteristics: CMRR and Slew rate. Designing of an amplifier of given gain for an inverting and non-inverting configuration using an opamp. Designing of analog adder and subtractor circuit. Designing of an integrator using op-amp for a given specification and study its frequency response.	B.Sc.(Hons) Electronics, Sem IV	Core-Course-VIII/ Operational Amplifiers and Applications Lab
		Introduction to lab experiments , Study of the I-V Characteristics of Diode – Ordinary and Zener Diode,I-V Characteristics of CE configuration of BJT ,I-V Characteristics of the Common Base Configuration of BJT and obtain $r_i$ , $r_o$ , $\alpha$ ., Study of Hall Effect , Solar Cell <b>(Different Experiments allotted to different groups)</b>  Program to determine : The phasor of forward propagating field The instantaneous field of a plane wave The phase constant, phase velocity, electric field intensity and intrinsic ratio	B.Sc.(Hons) Electronics, Sem II          B.Sc.(Hons.) Electronics Sem VI	Core-Course-III/ Semiconductor Devices          DSE : Transmission Lines, Antenna, Wave Propagation Lab
FEBRUARY	<b>Theory</b>	Op-Amp Circuits: Open and closed loop configuration, Frequency response of an op-amp in open loop and closed loop configurations, Inverting, Non-	B.Sc.(Hons) Electronics, Sem IV	Core-Course-VIII/ Operational Amplifiers and Applications

		<p>inverting, Summing and difference amplifier, Integrator, Differentiator, Voltage to current converter, Current to voltage converter.</p> <p>Comparators: Basic comparator, Level detector, Voltage limiters, Schmitt Trigger.</p>		
	<b>Practical</b>	<p>Designing of a differentiator using op-amp for a given specification and study its frequency response.</p> <p>Designing of a First Order Low-pass filter using op-amp.</p> <p>Designing of a First Order High-pass filter using op-amp</p> <p>Designing of a RC Phase Shift Oscillator using op-amp.</p> <p>Study of IC 555 as an astable multivibrator.</p> <p>Study of IC 555 as monostable multivibrator.</p> <p>Designing of Fixed voltage power supply using IC regulators using 78 series and 79 series</p> <p><b>(Different Experiments allotted to different groups)</b></p> <p>Study of the I-V Characteristics of Diode – Ordinary and Zener Diode, I-V Characteristics of CE configuration of BJT , I-V Characteristics of the Common Base Configuration of BJT and obtain <math>r_i</math>, <math>r_o</math>, <math>\alpha</math>., Study of Hall Effect, I-V Characteristics of the UJT, I-V Characteristics of the SCR , Solar Cell</p> <p><b>(Different Experiments allotted to different groups)</b></p> <p>Program to determine :</p> <p>The phasor of forward propagating field</p> <p>The instantaneous field of a plane wave</p> <p>The phase constant, phase velocity, electric field intensity and intrinsic ratio</p> <p>The skin depth,, loss, tangent and wave velocity</p> <p>The characteristic impedance, the phase constant and phase velocity</p> <p>The output power and attenuation coefficient</p>	<p>B.Sc.(Hons) Electronics, Sem IV</p> <p>B.Sc.(Hons) Electronics, Sem II</p> <p>B.Sc.(Hons.) Electronics Sem VI</p>	<p>Core-Course-VIII/ Operational Amplifiers and Applications Lab</p> <p>Core-Course-III/ Semiconductor Devices</p> <p>DSE : Transmission Lines, Antenna, Wave Propagation Lab</p>
	<b>Assignment</b>	As per the syllabus covered		
MARCH	<b>Theory</b>	<p>Signal generators: Phase shift oscillator, Wein bridge oscillator, Square wave generator, triangle wave generator, saw tooth wave generator, and Voltage controlled oscillator(IC 566).</p> <p>Multivibrators (IC 555): Block diagram, Astable and monostable multivibrator circuit, Applications of Monostable and Astable multivibrators.</p> <p>Phase locked loops (PLL): Block diagram, phase detectors,</p>	B.Sc.(Hons) Electronics, Sem IV	Core-Course-VIII/ Operational Amplifiers and Applications
	<b>Practical</b>	<p>Designing of a differentiator using op-amp for a given specification and study its frequency response.</p> <p>Designing of a First Order Low-pass filter using op-amp.</p> <p>Designing of a First Order High-pass filter</p>	B.Sc.(Hons) Electronics, Sem IV	Core-Course-VIII/ Operational Amplifiers and Applications Lab

		<p>using op-amp          Designing of a RC Phase Shift Oscillator using op-amp.          Study of IC 555 as an astable multivibrator.          Study of IC 555 as monostable multivibrator.          Designing of Fixed voltage power supply using IC regulators using 78 series and 79 series  <b>(Different Experiments allotted to different groups)</b></p> <p>Study of the I-V Characteristics of Diode – Ordinary and Zener Diode, I-V Characteristics of CE configuration of BJT , I-V Characteristics of the Common Base Configuration of BJT and obtain <math>r_i</math>, <math>r_o</math>, <math>\alpha</math>, I-V Characteristics of the SCR , Study of Hall Effect, I-V Characteristics of the UJT , Solar Cell , I-V Characteristics of the JFET , MOSFET  <b>(Different Experiments allotted to different groups)</b></p> <p>Program to find:          The skin depth, loss, tangent and wave velocity          The characteristic impedance, the phase constant and phase velocity          The output power and attenuation coefficient          The power dissipated in the lossless transmission line          The total loss in lossy lines          To find the load impedance of a slotted line</p>	<p>B.Sc.(Hons) Electronics, Sem II</p> <p>B.Sc.(Hons.) Electronics Sem VI</p>	<p>Core-Course-III/ Semiconductor Devices</p> <p>DSE : Transmission Lines, Antenna, Wave Propagation Lab</p>
	<b>Mid Term Test</b>	As per the syllabus covered		
APRIL	Theory	<p>IC565.          Fixed and variable IC regulators: IC 78xx and IC 79xx -concepts only, IC LM317- output voltage equation          Signal Conditioning circuits: Sample and hold systems, Active filters: First order low pass and high pass          butterworth filter, Second order filters, Band pass filter, Band reject filter, All pass filter, Log and antilog amplifiers.</p>	B.Sc.(Hons) Electronics, Sem IV	Core-Course-VIII/ Operational Amplifiers and Applications
	Practical	<p>Designing of a differentiator using op-amp for a given specification and study its frequency response.          Designing of a First Order Low-pass filter using op-amp.          Designing of a First Order High-pass filter using op-amp          Designing of a RC Phase Shift Oscillator using op-amp.          Study of IC 555 as an astable multivibrator.          Study of IC 555 as monostable multivibrator.          Designing of Fixed voltage power supply using IC regulators using 78 series and 79 series  <b>(Different Experiments allotted to different groups)</b>          Study of the I-V Characteristics of Diode – Ordinary and Zener Diode, I-V Characteristics</p>	<p>B.Sc.(Hons) Electronics, Sem IV</p> <p>B.Sc.(Hons)</p>	<p>Core-Course-VIII/ Operational Amplifiers and Applications Lab</p> <p>Core-Course-III/</p>







**SEMESTER WISE TEACHING PLAN  
SRI VENKATESWARA COLLEGE**

**January to April, 2019**

**Name of the Faculty:** Dr.Neeru Kumar

**Department:** Electronics

**Semester:** Six

<b>Month</b>		<b>Topics</b>	<b>Course</b>	<b>Paper Code/Name</b>
<b>January</b>	<b>Theory:</b>	Electronic communication: Block diagram of an electronic communication system, electromagnetic spectrum-band designations and applications, need for modulation, concept of channels and base-band signals. Amplitude Modulation, modulation index and frequency spectrum. Generation of AM, Amplitude Demodulation (diode detector), Concept of Double side band suppressed carrier, Single side band suppressed carrier.	<b>B.Sc. Electronics</b>	<b>CC XIII/Communication Electronics</b>
	<b>Practicals:</b>	<b>Sem VI:</b> 1.Study of Amplitude Modulation 2. Study of Amplitude Demodulation 3. Study of Frequency Modulation  <b>Sem IV:</b> 1. Study of op-amp characteristics: CMRR and Slew rate. 2. Designing of an amplifier of given gain for an inverting and non-inverting configuration using an opamp.		<b>CC XIII/Communication Electronics</b>  <b>CCVIII/ Operational Amplifiers and Applications Lab</b>
	<b>Tutorials:</b>			

<b>Feburary</b>	<b>Theory:</b>	Other forms of AM (Pilot Carrier Modulation, Vestigial Side Band modulation, Independent Side Band Modulation). Block diagram of AM Transmitter and Receiver Angle modulation: Frequency and Phase modulation, modulation index and frequency spectrum, equivalence between FM and PM, Generation of FM (direct and indirect methods), FM detector (PLL). Block diagram of FM Transmitter and Receiver Comparison between AM, FM and PM.	<b>B.Sc. Electronics</b>	<b>CC XIII/Communication Electronics</b>
	<b>Practicals:</b>	<b>Sem VI:</b> 1. Study of Frequency Demodulation 2. Study of Pulse Amplitude Modulation 3. AM Transmitter/Receiver  <b>Sem IV:</b> 1. Designing of an integrator using op-amp for a given specification and study its frequency response. 2. Designing of a differentiator using op-amp for a given specification and study its frequency response.		<b>CC XIII/Communication Electronics</b>  <b>CCVIII/ Operational Amplifiers and Applications Lab</b>
	<b>Tutorials:</b>			
	<b>Assignment</b>			
<b>March</b>	<b>Theory:</b>	Pulse Analog Modulation: Channel capacity, Sampling theorem, PAM, PDM, PPM modulation and detection techniques, Multiplexing, TDM and FDM. Pulse Code Modulation: Need for digital transmission, Quantizing, Uniform and Nonuniform	<b>B.Sc. Electronics</b>	<b>CC XIII/Communication Electronics</b>

		Quantization, Quantization Noise, Companding, Coding, Decoding, Regeneration.		
	<b>Practicals:</b>	<b>Sem VI:</b> 1. Study of Pulse Width Modulation 2. Study of Pulse Position Modulation 3. Study of Pulse Code Modulation  <b>Sem IV:</b> 1. Designing of a First Order Low-pass filter using op-amp. 2. Designing of a First Order High-pass filter using op-amp. 3. Designing of a RC Phase Shift Oscillator using op-amp.		<b>CC XIII/Communication Electronics</b>  <b>CCVIII/ Operational Amplifiers and Applications Lab</b>
	<b>Tutorials:</b>			
	<b><u>Mid Term Test</u></b>			
<b>April</b>	<b>Theory</b>	Digital Carrier Modulation Techniques: Block diagram of digital transmission and reception, Information capacity, Bit Rate, Baud Rate and M-ary coding. Amplitude Shift Keying (ASK), Frequency Shift Keying (FSK), Phase Shift Keying (PSK), Binary Phase Shift Keying (BPSK) and Quadrature Phase Shift Keying (QPSK)	<b>B.Sc. Electronics</b>	<b>CC XIII/Communication Electronics</b>

<p><b>Practicals:</b></p>	<p><b>Sem VI:</b>  1.Study of Amplitude Shift Keying  2. Study of Phase Shift Keying,  3. Study of Frequency Shift Keying.</p> <p><b>Sem IV:</b>  1. Study of IC 555 as an astable multivibrator.  2. Study of IC 555 as monostable multivibrator.  3. Designing of Fixed voltage power supply using IC regulators using 78 series and 79 series.</p>		<p><b>CC XIII/Communication Electronics</b></p> <p><b>CCVIII/ Operational Amplifiers and Applications Lab</b></p>
<p><b>Tutorials:</b></p>			



**SEMESTER WISE TEACHING PLAN**  
**SRI VENKATESWARA COLLEGE**  
**Academic Session 2018-2019 (Even Semester)**

**Name of the Faculty** : **Mr Hari Singh**  
**Department** : **Electronics**

**Semester: Theory** : **B.Sc (H) Electronics, Semester II**

**Practical** : **B.Sc (H) Electronics, Semester II**  
**B.Sc (H) Electronics, Semester IV**

Month		Topics	Course	Paper Code/ Name
JANUARY	<b>Theory</b>	Mechanical Properties of Materials: Elastic and Plastic Deformations, Hooke's Law, Elastic Moduli, Brittle, and Ductile Materials, Tensile Strength, Theoretical and Critical Shear Stress of Crystals, Strengthening Mechanisms, Hardness, Creep, Fatigue, Fracture.  Thermal Properties: Brief Introduction to Laws of Thermodynamics, Concept of Entropy, Concept of Phonons.	B.Sc.(Hons) Electronics, Semester II	Core-Course-IV/ Applied Physics
	<b>Practical</b>	To determine Young's modulus of a wire by optical lever method. To determine the modulus of rigidity of a wire by Maxwell's needle. To determine the elastic constants of a wire by Searle's method. To measure the resistivity of a Ge crystal with temperature by Four-Probe method from room temperature to 200 °C. To determine the value of Boltzmann Constant by studying forward characteristics of diode. To determine the value of Planck's constant by using LEDs of at least 4 different wavelengths. To determine e/m of electron by Bar Magnet or by Magnetic Focusing. To determine study the variation of Thermo-emf of a Thermocouple with difference of temperature of its two junctions using a Null Method. And also calibrate the Thermocouple in a specified temperature range. <b>(Different Experiments allotted to different groups)</b>  Generation of Signals: Continuous Time Generation of Signals: Discrete Time. Time Shifting and Time Scaling of Signals.	B.Sc.(Hons) Electronics, Semester II	Core-Course-IV/ Applied Physics Lab
			B.Sc.(Hons) Electronics, Semester IV	Core-Course-IX/ Signals and Systems Lab
FEBRUARY	<b>Theory</b>	Heat Capacity, Debye's Law, Lattice Specific Heat, Electronic Specific Heat, Specific Heat Capacity for Si and GaAs, Thermal Conductivity, Thermoelectricity, Seebeck Effect, Thomson Effect, Peltier Effect	B.Sc.(Hons) Electronics, Semester II	Core-Course-IV/ Applied Physics

		Electric and Magnetic Properties: Conductivity of metals, Ohm's Law, relaxation time, collision time and mean free path, electron scattering and resistivity of metals, heat developed in current carrying conductor, Superconductivity.		
	<b>Practical</b>	To determine Young's modulus of a wire by optical lever method. To determine the modulus of rigidity of a wire by Maxwell's needle. To determine the elastic constants of a wire by Searle's method. To measure the resistivity of a Ge crystal with temperature by Four-Probe method from room temperature to 200 °C. To determine the value of Boltzmann Constant by studying forward characteristics of diode. To determine the value of Planck's constant by using LEDs of at least 4 different wavelengths. To determine e/m of electron by Bar Magnet or by Magnetic Focusing. To determine study the variation of Thermoe-mf of a Thermocouple with difference of temperature of its two junctions using a Null Method. And also calibrate the Thermocouple in a specified temperature range. <b>(Different Experiments allotted to different groups)</b>  Convolution Solution of Difference Equation. Step and Impulse Response	B.Sc.(Hons) Electronics, Semester II	Core-Course-IV/ Applied Physics Lab
	<b>Assignment</b>	As per the syllabus covered	B.Sc.(Hons) Electronics, Semester IV	Core-Course-IX/ Signals and Systems Lab
<b>MARCH</b>	<b>Theory</b>	Classification of Magnetic Materials, Origin of Magnetic moment, Origin of dia, para, ferro and antiferro magnetism and their comparison, Ferrimagnetic materials, Saturation Magnetisation and Curie temperature, Magnetic domains, Concepts of Giant Magnetic Resistance (GMR), Magnetic recording.  Quantum Physics: Inadequacies of Classical physics. Compton's effect, Photo-electric Effect, Wave-particle duality,	B.Sc.(Hons) Electronics, Semester II	Core-Course-IV/ Applied Physics
	<b>Practical</b>	To determine Young's modulus of a wire by optical lever method. To determine the modulus of rigidity of a wire by Maxwell's needle. To determine the elastic constants of a wire by Searle's method. To measure the resistivity of a Ge crystal with temperature by Four-Probe method from room temperature to 200 °C. To determine the value of Boltzmann Constant by studying forward characteristics of diode. To determine the value of Planck's constant by using LEDs of at least 4 different wavelengths. To determine e/m of electron by Bar Magnet	B.Sc.(Hons) Electronics, Semester II	Core-Course-IV/ Applied Physics Lab

		<p>or by Magnetic Focusing.</p> <p>To determine study the variation of Thermo-emf of a Thermocouple with difference of temperature of its two junctions using a Null Method. And also calibrate the Thermocouple in a specified temperature range.</p> <p><b>(Different Experiments allotted to different groups)</b></p> <p>Laplace Transform and Fourier Transform of continuous time signals. Generation of Fourier Series through Simulink.</p>	B.Sc.(Hons) Electronics, Semester IV	Core-Course-IX/ Signals and Systems Lab
	<b>Mid Term Test</b>	As per the syllabus covered		
APRIL	<b>Theory</b>	<p>De Broglie waves. Basic postulates and formalism of quantum mechanics: probabilistic interpretation of waves, conditions for physical acceptability of wave functions. Schrodinger wave equation for a free particle and in a force field (1 dimension), Boundary and continuity conditions. Operators in Quantum Mechanics, Conservation of probability, Time-dependent form, Linearity and superposition, Operators, Time independent one dimensional Schrodinger wave equation, Stationary states, Eigen-values and Eigen functions. Particle in a one-dimensional box, Extension to a three dimensional box, Potential barrier problems, phenomenon of tunneling. Kronig Penney Model and development of band structure. Spherically symmetric potentials, the Hydrogen-like atom problem.</p>	B.Sc.(Hons) Electronics, Semester II	Core-Course-IV/ Applied Physics
	<b>Practical</b>	<p>To determine Young's modulus of a wire by optical lever method.</p> <p>To determine the modulus of rigidity of a wire by Maxwell's needle.</p> <p>To determine the elastic constants of a wire by Searle's method.</p> <p>To measure the resistivity of a Ge crystal with temperature by Four-Probe method from room temperature to 200 °C.</p> <p>To determine the value of Boltzmann Constant by studying forward characteristics of diode.</p> <p>To determine the value of Planck's constant by using LEDs of at least 4 different wavelengths.</p> <p>To determine e/m of electron by Bar Magnet or by Magnetic Focusing.</p> <p>To determine study the variation of Thermo-emf of a Thermocouple with difference of temperature of its two junctions using a Null Method. And also calibrate the Thermocouple in a specified temperature range.</p> <p><b>(Different Experiments allotted to different groups)</b></p> <p>Using Simulink for designing systems through transfer function.</p>	B.Sc.(Hons) Electronics, Semester II	Core-Course-IV/ Applied Physics Lab
			B.Sc.(Hons) Electronics,	Core-Course-IX/ Signals and



		Design of Low Pass, High Pass, Band Pass Filters and studying the Frequency Response.	Semester IV	Systems Lab
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**IQAC,SRI VENKATESWARA COLLEGE**

**SEMESTER WISE TEACHING PLAN**

**Name of the Faculty: Shubhra Gupta**

**Department: Electronics**

**Semester: Theory : BSc(Hons) Electronics Semester II  
BSc(Hons) Electronics Semester VI**

**Practicals : BSc(Hons) Electronics Semester II  
BSc(Hons) Electronics Semester VI**

Month		Topics	Course	Paper Code/Name
JANUARY	<b>Theory:</b>	<b>SEM II : Unit 1 :</b> Semiconductor Basics: Introduction to Semiconductor Materials, Crystal Structure, Planes and Miller Indices, Energy Band in Solids, Concept of Effective Mass, Density of States, Carrier Concentration at Normal Equilibrium in Intrinsic Semiconductors, Derivation of Fermi Level for Intrinsic & Extrinsic Semiconductors, Donors, Acceptors, Dependence of Fermi Level on Temperature and Doping Concentration, Temperature Dependence of Carrier Concentrations. Carrier Transport Phenomena: Carrier Drift, Mobility, Resistivity, Hall Effect, Diffusion Process, Einstein Relation, Current Density Equation, Carrier injection, Generation And Recombination Processes, Continuity Equation.  Unit 2 : P-N Junction Diode: Formation of Depletion Layer	Bsc (Hons) Electronics	CC III : Semiconductor Devices
		<b>SEM VI : Unit 1 :</b> Introduction to Control Systems: Open loop and Closed loop control systems, block diagram representation & signal flow graph, Reduction Technique, Mason's Gain Formula. Effect of feedback on control systems.	Bsc (Hons) Electronics	DSE 3 : Control System

	<b>Practicals:</b>	<b>SEM II :</b> Introduction to lab experiments , Study of the I-V Characteristics of Diode – Ordinary and Zener Diode,I-V Characteristics of CE configuration of BJT ,I-V Characteristics of the Common Base Configuration of BJT and obtain $r_i$ , $r_o$ , $\alpha$ ., Study of Hall Effect , Solar Cell(Alloted To Different Groups)  <b>SEM VI :</b> Transfer function, Pole zero graph, Time response analysis of control systems	Bsc (Hons) Electronics	CC III Lab: Semiconductor Devices  DSE 3 Lab :Control Systems
	<b>Tutorials:</b>			
FEBRUARY	<b>Theory:</b>	<b>SEM II :</b> Unit 2 :Space Charge at a Junction, Derivation of Electrostatic Potential Difference at Thermal Equilibrium, Depletion Width and Depletion Capacitance of an Abrupt Junction. Concept of Linearly Graded Junction, Derivation of Diode Equation and I-V Characteristics. Zener and Avalanche Junction Breakdown Mechanism.Tunnel diode, varactor diode, solar cell: circuit symbol, characteristics, applications  Unit 3 : Bipolar Junction Transistors (BJT): PNP and NPN Transistors, Basic Transistor Action, Emitter Efficiency , Base Transport Factor, Current Gain  <b>SEM VI :</b> Unit 1(contd) :Mathematical modeling of physical systems (Electrical, Mechanical and Thermal),Derivation of transfer function, Armature controlled and field controlled DC servomotors  Unit 4 : State Space Analysis: Definitions of state, state variables, state space representation of systems,	Bsc (Hons) Electronics	CC III : Semiconductor Devices  DSE 3 :Control Systems
	<b>Practicals:</b>	<b>SEM II :</b> Study of the I-V Characteristics of Diode – Ordinary and Zener Diode,I-V Characteristics of CE configuration of BJT ,I-V Characteristics of the Common Base Configuration of BJT and obtain $r_i$ , $r_o$ , $\alpha$ ., Study of Hall Effect, I-V Characteristics of the UJT, I-V Characteristics of the SCR , Solar Cell (Alloted To Different Groups)  <b>SEM VI :</b> Simulink, siso tool, Itiviewer, steady state error evaluation	Bsc (Hons) Electronics	CC III Lab: Semiconductor Devices  DSE 3 Lab :Control Systems
	<b>Tutorials:</b>			

	<b>Assignment</b>	SEM II : Unit 1 SEM VI : Unit 4	Bsc (Hons) Electronics CC III : Semiconductor Devices DSE 3 :Control Systems
MARCH	<b>Theory:</b>	SEM II : Unit 4 : Power Devices: UJT, Basic construction and working, Equivalent circuit, intrinsic Standoff Ratio, Characteristics and relaxation oscillator-expression. SCR, Construction, Working and Characteristics, Triac, Diac, IGBT Field Effect Transistors: JFET, Construction, Idea of Channel Formation, Pinch-Off and Saturation Voltage, Current-Voltage Output Characteristics.	Bsc (Hons) Electronics CC III : Semiconductor Devices
		SEM VI : Unit 4 : Solution of time invariant Unit : 3 Logarithmic plots (Bode Plots), gain and phase margins	Bsc (Hons) Electronics DSE 3 :Control Systems
	<b>Practicals:</b>	SEM II : Study of the I-V Characteristics of Diode – Ordinary and Zener Diode, I-V Characteristics of CE configuration of BJT , I-V Characteristics of the Common Base Configuration of BJT and obtain $r_i$ , $r_o$ , $\alpha$ , I-V Characteristics of the SCR , Study of Hall Effect, I-V Characteristics of the UJT , Solar Cell , I-V Characteristics of the JFET , MOSFET (Alloted To Different Groups)	Bsc (Hons) Electronics CC III Lab: Semiconductor Devices  DSE 3 Lab :Control Systems
		SEM VI : P, PI, PD and PID controller design Automatic PID controller DC motor speed and position control, AC servomotor	
<b>Tutorials:</b>			
	<b>Mid Term Test</b>	SEM II : Unit 1 and Unit 2 SEM VI : Unit 1 and Unit 2	Bsc (Hons) Electronics CC III : Semiconductor Devices DSE 3 :Control Systems

APRIL	<b>Theory</b>	<p><b>SEM II</b> : Unit 4: MOSFET, types of MOSFETs, Circuit symbols, Working and Characteristic curves of Depletion type MOSFET (both N channel and P Channel ) Enhancement type MOSFET (both N channel and P channel). Complimentary MOS (CMOS), MESFET, Circuit symbols, Basic constructional features, Operation and Applications.</p> <p>Unit 3: Energy Band Diagram of Transistor in Thermal Equilibrium, Quantitative Analysis of Static Characteristics (Minority Carrier Distribution and Terminal Currents), Base-Width Modulation, Modes of operation, Input and Output Characteristics of CB, CE and CC Configurations. Metal Semiconductor Junctions: Ohmic and Rectifying Contacts.</p>	Bsc (Hons) Electronics	CC III : Semiconductor Devices
		<p><b>SEM VI</b> : Unit 4 Concept of compensation, Lag, Lead and Lag-Lead networks. homogeneous state equation, state transition matrix and its properties.</p>	Bsc (Hons) Electronics	DSE 3 :Control Systems
	<b>Practicals:</b>	<p><b>SEM II</b> : Study of the I-V Characteristics of CE configuration of BJT ,I-V Characteristics of the Common Base Configuration of BJT and obtain <math>r_i</math>, <math>r_o</math>, <math>\alpha</math>, I-V Characteristics of the SCR, Study of Hall Effect, I-V Characteristics of the UJT , Solar Cell , I-V Characteristics of the JFET , MOSFET (Alloted To Different Groups)</p> <p><b>SEM VI</b> : Frequency response of Lead and Lag networks , nyquist criterion , State space analysis.</p>	Bsc (Hons) Electronics	<p>CC III Lab: Semiconductor Devices</p> <p>DSE 3 Lab :Control Systems</p>
	<b>Tutorials:</b>			



**IQAC, SRI VENKATESWARA COLLEGE**

**SEMESTER WISE TEACHING PLAN**

**Jan-May 2019**

**Name of the Faculty: Dr. Rakhi Narang**  
**Department: Electronics**

**Semester: II/IV/VI**

Month		Topics	Course	Paper Code/Name
January	<b>Theory:</b>	<p><b>Sem IV:</b> Continuous and discrete time signals, Transformation of the independent variable, Exponential and sinusoidal signals, Impulse and unit step functions, Continuous-Time and Discrete-Time Systems, Basic System Properties. Discrete time LTI systems, the Convolution Sum.</p> <p><b>Sem VI:</b> Introduction to control systems: Open loop and Closed loop control systems, Time domain performance criteria, transient response of first, second &amp; higher order systems, steady state errors and static error constants, Performance indices.</p>	<p>B.Sc. Electronics</p> <p>B.Sc. Electronics</p>	<p>Core course-IX Signals and Systems</p> <p>DSE: Control Systems</p>
	<b>Practicals:</b>	<p><b>Sem IV:</b></p> <ol style="list-style-type: none"> <li>1. Generation of Signals: continuous time</li> <li>2. Generation of Signals: discrete time</li> <li>3. Time shifting and time scaling of signals.</li> </ol> <p><b>Sem VI:</b> Transfer function, Pole zero graph</p> <p><b>Sem VI</b> <b>Program</b> to determine the phasor of forward propagating field  <b>Program</b> to determine the instantaneous field of a plane wave  <b>Program</b> to find the Phase constant, Phase velocity, Electric Field Intensity and Intrinsic ratio</p>	<p>B.Sc. Electronics</p> <p>B.Sc. Electronics</p> <p>B.Sc. Electronics</p>	<p>Core course-IX Signals and Systems Lab</p> <p>DSE: Control Systems Lab</p> <p>DSE: Transmission Lines, Antenna, Wave Propagation</p>
February	<b>Theory:</b>	<p><b>Sem IV:</b> Continuous time LTI systems, the Convolution integral. Properties of LTI systems, Commutative, Distributive, Associative. LTI systems with and without memory, Invariability, Causality, Stability, Unit Step response. Differential and Difference equation formulation, Block diagram representation of first order systems</p> <p><b>Sem VI:</b> Time domain performance criteria, transient response of first, second &amp; higher order systems. Basic Control Actions: Proportional, integral and Derivative controls, PID. <b>Concept of Stability:</b> Asymptotic stability and conditional stability, Routh – Hurwitz criterion, relative stability analysis.</p>	<p>B.Sc. Electronics</p> <p>B.Sc. Electronics</p>	<p>Core course-IX Signals and Systems</p> <p>DSE: Control Systems</p>

	<b>Practicals:</b>	<p><b>Sem IV:</b> 1. Convolution 2. Solution of Difference equation. 3. Step and impulse response</p> <p><b>Sem VI:</b> Simulink, siso tool, Itiviewer, steady state error evaluation, P, PI, PD and PID controller design, Automatic PID controller, stability using Routh Hurwitz criteria.</p> <p><b>Sem VI:</b>  Program to find skin depth, loss tangent and phase velocity  Program to find the characteristic impedance, the phase constant an the phase velocity  Program to find the output power and attenuation coefficient</p>	B.Sc. Electronics  B.Sc. Electronics	Core course-IX Signals and Systems Lab  DSE: Control Systems Lab  DSE: Transmission Lines, Antenna, Wave Propagation
	<b>Assignment</b>	<p><b>Sem IV:</b> Assignment based on Unit I and II</p> <p><b>Sem VI:</b> Assignment based on applications of Control systems in real time systems.</p>	B.Sc. Electronics  B.Sc. Electronics	Core course-IX Signals and Systems  DSE: Control Systems
<b>March</b>	<b>Theory:</b>	<p><b>Sem IV:</b> Laplace Transform, Inverse Laplace Transform, Properties of the Laplace Transform, Laplace Transform Pairs, Laplace Transform for signals, Laplace Transform Methods in Circuit Analysis, Impulse and Step response of RL, RC and RLC circuits. Continuous-Time periodic signals, Convergence of the Fourier series, Properties of continuous-Time Fourier series, Discrete-Time periodic signals</p> <p><b>Sem VI:</b> Root Locus plots and their applications. Correlation between time and frequency response, Polar and inverse polar plots</p>	B.Sc. Electronics  B.Sc. Electronics	Core course-IX Signals and Systems  DSE: Control Systems

	<b>Practicals:</b>	<p><b>Sem IV:</b> Laplace transform and Fourier transform of continuous time signals, generation of Fourier series through Simulink</p> <p><b>Sem VI:</b> Root Locus plot, DC motor speed and position control, AC servomotor</p> <p><b>Sem VI:</b> Program to find the power dissipated in the lossless transmission line</p> <p>Program to find the total loss in lossy lines</p> <p>Program to find the load impedance of a slotted line</p>	B.Sc. Electronics	Core course-IX Signals and Systems Lab
			B.Sc. Electronics	DSE: Control Systems Lab
			B.Sc. Electronics	DSE: Transmission Lines, Antenna, Wave Propagation
	<b>Mid Term Test</b>	Sem IV: Based on Unit 1 and 2  Sem VI: Based on Unit 1 and		
April	<b>Theory</b>	<p><b>Sem IV:</b> Properties of Discrete-Time Fourier series, Frequency-Selective filters, Simple RC highpass and lowpass filters</p> <p><b>Fourier Transform:</b> Aperiodic signals, Periodic signals, Properties of Continuous-time Fourier transform, Convolution and Multiplication Properties, Properties of Fourier transform and basic Fourier transform Pairs.</p> <p><b>Sem VI:</b> frequency domain specifications and Nyquist stability criterion, relative stability using Nyquist criterion</p>	B.Sc. Electronics	Core course-IX Signals and Systems
			B.Sc. Electronics	DSE: Control Systems
	<b>Practicals</b>	<p>Sem IV: 1. Using Simulink for designing systems through transfer function.</p> <p>2. Design of Low pass, high pass, band pass filters and studying the frequency response.</p> <p><b>Sem VI:</b> Frequency response of Lead and Lag networks , Nyquist criterion , State space analysis.</p> <p><b>Sem VI:</b> Program to find the input impedance for a line terminated with pure capacitive impedance</p> <p>Program to determine the operating range of frequency for TE<sub>10</sub> mode of air filled rectangular waveguide</p> <p>Program to determine Directivity, Bandwidth, Beamwidth of an antenna</p>	B.Sc. Electronics	Core course-IX Signals and Systems Lab
			B.Sc. Electronics	DSE: Control Systems Lab
			B.Sc. Electronics	DSE: Transmission Lines, Antenna, Wave Propagation





## SEMESTER WISE TEACHING PLAN

### SRI VENKATESWARA COLLEGE

**Academic Session (Jan-April'2019), Even Semester**

**Name of the Faculty** : **Dr. Neha Verma**

**Department** : **Electronics**

**Semester: Theory** : **B.Sc.(H) Electronics, Sem VI**  
**B.Sc.(H) Electronics, Sem IV**

**Practical** : **B.Sc.(H) Electronics, Sem IV**  
**B.Sc.(H) Electronics, Sem VI**  
**B.Sc.(H) Electronics, Sem II**

Month		Topics	Course	Paper Code/Name
JANUARY	<b>Theory</b>	<p><b>Electromagnetic Wave Propagation:</b> Propagation in Good Conductors, Skin Effect, Reflection of uniform Plane Waves at normal incidence, Plane Wave reflection at Oblique Incidence, Wave propagation in dispersive media, concept of phase velocity and group velocity.</p> <p><b>Transmission Lines:</b> Typical Transmission lines- Co-axial, Two Wire, Microstrip, Coplanar and Slot Lines, Transmission Line Parameters, Transmission Line Equations, Wave propagation in Transmission lines, lowloss, lossless line,</p> <p>Introduction, Understanding the Internet: Internet Connection Concepts What Is the Internet, Computers on the Internet Servers, Clients, and Ports, The Domain Name System and DNS Servers</p>	<p>B.Sc.(Hons) Electronics, Sem VI</p> <p>B.Sc.(Hons) Electronics, Sem IV</p>	<p>DSE/Transmission Lines, Antenna, Wave Propagation</p> <p>SEC (Internet and Java Programming)</p>
	<b>Practicals</b>	<p><b>Program</b> to determine the phasor of forward propagating field</p> <p><b>Program</b> to determine the instantaneous field of a plane wave</p> <p><b>Program</b> to find the Phase constant, Phase velocity, Electric Field Intensity and Intrinsic ratio</p> <p>The Java Environment, The Java Development Kit, The Java Virtual Machine</p> <p>To print an introductory message, Addition, Subtraction,</p>	<p>B.Sc.(Hons) Electronics, Sem VI</p> <p>B.Sc.(Hons) Electronics, Sem IV</p>	<p>DSE/ Transmission Lines, Antenna, Wave Propagation Lab</p> <p>SEC/Internet and Java Programming Lab</p>

		<p>Multiplication, and Division of two numbers using the data types, Evaluate an expression using Integer, real and mixed-mode arithmetic, programs using relational, logical, assignment, Increment, decrement, and conditional operators.</p> <p>Introduction to lab experiments , Study of the I-V Characteristics of Diode – Ordinary and Zener Diode, I-V Characteristics of CE configuration of BJT ,I-V Characteristics of the Common Base Configuration of BJT and obtain <math>r_i</math>, <math>r_o</math>, <math>\alpha</math>, Study of Hall Effect , Solar Cell (Alloted To Different Groups)</p>	B.Sc.(Hons) Electronics, Sem II	CC-III/Semiconductor Devices Lab
FEBRUARY	<b>Theory</b>	<p>Distortionless line, Input Impedence, Standing Wave Ratio ,Power. and lossy lines, Shorted Line, Open-Circuited Line, Matched Line, Smith Chart, Transmission Line Applications.</p> <p><b>Waveguides and Waveguide Devices:</b> Wave propagation in waveguides, Parallel plate waveguides,</p> <p>Telephone, Cable, and Satellite Connections Dial-Up Internet Accounts, ISDN, ADSL, and Leased Line Connections, Internet Model:TCP/IP and OSI Model, Internet Addressing: IPv4, IPv6, Physical, Logical and Port Addressing, Classful Addressing, Netid, Hostid, Subnetting and Supernetting, Hardware Requirements to Connect to the Internet. Data types:Numeric, Floating, Character, Boolean.</p>	B.Sc.(Hons) Electronics, Sem VI	DSE/ Transmission Lines, Antenna, Wave Propagation
	<b>Practicals</b>	<p>Program to find skin depth, loss tangent and phase velocity</p> <p>Program to find the characteristic impedance, the phase constant an the phase velocity</p> <p>Program to find the output power and attenuation coefficient</p>	B.Sc.(Hons) Electronics, Sem VI	DSE/ Transmission Lines, Antenna, Wave Propagation Lab
		<p>Swapping two numbers without using third variable, greatest of three numbers, Programs based on Branching, Looping. Classes, New</p>	B.Sc.(Hons) Electronics, Sem IV	SEC/Internet and Java Programming

		Operator, Dot Operator  Introduction to lab experiments , Study of the I-V Characteristics of Diode – Ordinary and Zener Diode,I-V Characteristics of CE configuration of BJT ,I-V Characteristics of the Common Base Configuration of BJT and obtain $r_i$ , $r_o$ , $\alpha$ ., Study of Hall Effect , Solar Cell (Alloted To Different Groups)	B.Sc.(Hons) Electronics, Sem II	CC-III/Semiconductor Devices Lab
MARCH	<b>Theory</b>	TEM, TM and TE modes, Rectangular waveguides, circular waveguides, Power transmission and attenuation, Rectangular cavity resonators, directional couplers, isolator, circulator.  <b>Radiation of electromagnetic waves:</b> Concept of retarded potentials, Antenna Parameters: Radiation Mechanism, Current Distribution on a Thin Wire Antenna, Radiation Pattern, Radiation Power Density, Radiation Intensity, Beamwidth, Directivity, Antenna Efficiency,  Branching, Looping. Classes, New Operator, Dot Operator, Method Declaration and Calling, Constructors, Inheritance, Super, Method Overriding Final, Finalize, Static, Package and Import Statement, Interface and Implements.	B.Sc.(Hons) Electronics, Sem VI	DSE/ Transmission Lines, Antenna, Wave Propagation
			B.Sc.(Hons) Electronics, Sem IV	SEC/ Internet and Java Programming
	<b>Practicals</b>	Program to find the power dissipated in the lossless transmission line  Program to find the total loss in lossy lines  Program to find the load impedance of a slotted line	B.Sc.(Hons) Electronics, Sem VI	DSE/ Transmission Lines, Antenna, Wave Propagation Lab
		Method Declaration and Calling, Programs based on Exception Types, Uncaught and Calling, Nested Try Statements.  Introduction to lab experiments , Study of the I-V Characteristics of Diode – Ordinary and Zener Diode,I-V Characteristics of CE configuration of BJT ,I-V Characteristics of the Common Base Configuration of BJT and obtain $r_i$ , $r_o$ , $\alpha$ ., Study of Hall Effect , Solar	B.Sc.(Hons) Electronics, Sem IV  B.Sc.(Hons) Electronics, Sem II	SEC/Internet and Java Programming  CC-III/Semiconductor Devices Lab

		Cell (Alloted To Different Groups)		
	<b>Assignment</b>	Assignment: Questions based on topics covered.	B.Sc.(Hons) Electronics, Sem VI	DSE/ Transmission Lines, Antenna, Wave Propagation Lab
	<b>Mid Term Test</b>	Test: As per the covered topics.	B.Sc.(Hons) Electronics, Sem IV	SEC/Internet and Java Programming
<b>APRIL</b>	<b>Theory</b>	Gain, Beam Efficiency, Bandwidth, Polarization, Input Impedance Antenna Radiation Efficiency, Effective Length and Equivalent Areas, Maximum Directivity and Maximum Effective Area, Friis Transmission Equation and Radar Range Equation <b>Types of Antenna:</b> Hertzian dipole, Half wave dipole, Quarter-wave dipole, Yagi-Uda, microstrip, Parabolic antenna, Helical antenna, Antenna array.  Exception Handling: Exception Types, Uncaught and Calling, Nested Try Statements, Java Thread Model, and Thread, Runnable, Thread Priorities, Synchronization, Deadlock  File: Input Stream, Output Stream, and File Stream. Applets-Tag, Order of Applet Initialization, Repainting, Sizing Graphics- Abstract Window Tool Kit Components	B.Sc.(Hons) Electronics, Sem VI  B.Sc.(Hons) Electronics, Sem IV  B.Sc.(Hons) Electronics, Sem II	DSE/ Transmission Lines, Antenna, Wave Propagation Lab  SEC/Internet and Java Programming  CC-III/Semiconductor Devices Lab
	<b>Practicals</b>	Program to find the input impedance for a line terminated with pure capacitive impedance  Program to determine the operating range of frequency for TE <sub>10</sub> mode of air filled rectangular waveguide  Program to determine Directivity, Bandwidth, Beamwidth of an antenna  Programs based on File: Input Stream, Output Stream, and File Stream. Applets-Tag, Order of Applet.  Introduction to lab experiments , Study of the I-V Characteristics of	B.Sc.(Hons) Electronics, Sem VI  B.Sc.(Hons) Electronics, Sem IV	DSE/ Transmission Lines, Antenna, Wave Propagation Lab  SEC/Internet and Java Programming

		Diode – Ordinary and Zener Diode, I-V Characteristics of CE configuration of BJT ,I-V Characteristics of the Common Base Configuration of BJT and obtain $r_i$ , $r_o$ , $\alpha$ , Study of Hall Effect , Solar Cell (Alloted To Different Groups)		
	<b>Tutorials</b>	NA	NA	NA



**SEMESTER WISE TEACHING PLAN (2018-2019)**  
**SRI VENKATESWARA COLLEGE**

**Name of the Faculty: Dr. Anita Verma**

**Department: Zoology**

**Semester: II/IV/VI**

Month		Topics	Course	Paper Code/Name
JANUARY	<b>Theory</b>	Syllabus overview. Scope of studying the course. <b>Unit 1 Movements and Bulk Transport:</b> Introduction to musculo skeletal system; Terrestrial, aquatic and aerial locomotion; Locomotory cost.	B.Sc. (Hons) Biological Science, Semester-IV	Systems Physiology (BS C-8)
		Introduction to Physiology. Scope of Studying the subject <b>Unit 2: Physiology of Respiration:</b> Histology of respiratory tract; Mechanism of respiration.	B.Sc. (Hons) Zoology, Semester-IV	Animal Physiology: Life Sustaining Systems (CC IX)
	<b>Practicals</b>	Syllabus overview, general instructions and maintenance of lab record. Effect of isotonic hypotonic hypertonic salines on erythrocytes.	B.Sc. (Hons) Biological Science, Semester-IV	Systems Physiology (BS C-8)
		Recording of blood pressure using a sphygmomanometer, Preparation of haemin and haemochromogen crystals, Enumeration of red blood cells and white blood cells using haemocytometer.	B.Sc. (Hons) Zoology, Semester-IV	Animal Physiology: Life Sustaining Systems (CC IX)
		To study different types of animal behavior such as habituation, social life, courtship behavior in insects, and parental care from short videos/movies and prepare a short report.	B.Sc (H) Biological Sciences Sem VI TBS	Animal behavior & chronobiology (DSE III)

FEBRUARY	<b>Theory:</b>	<p><b>Unit 2 Gas exchange in organism; Generation and utilization of energy:</b> Respiratory organs in aquatic and terrestrial systems; Physiology of aquatic breathing and aerial breathing; Feeding patterns, digestive tract systems.</p>	B.Sc. (Hons) Biological Science, Semester-IV	Systems Physiology (BS C-8)
		<p><b>Unit 2: Physiology of Respiration:</b> Pulmonary ventilation; Respiratory volumes and capacities.</p>	B.Sc. (Hons) Zoology, Semester-IV	Animal Physiology: Life Sustaining Systems (CC IX)
	<b>Practicals:</b>	<p>Enumeration of RBC using haemocytometer. Continous evaluation based on performance and record maintenance.</p>	B.Sc. (Hons) Biological Science, Semester-IV	Systems Physiology (BS C-8)
		<p>Examination of sections of mammalian oesophagus, stomach, duodenum, ileum, rectum liver, trachea, lung, kidney; Estimation of haemoglobin using Sahli's haemoglobinometer.</p> <p>To study nests and nesting habits of the birds and social insects. To study the behavioral responses of wood lice to dry condition. To study behavior responses of wood lice in response to humid condition.</p>	B.Sc. (Hons) Zoology, Semester-IV	Animal Physiology: Life Sustaining Systems (CC IX)
			B.Sc (H) Biological Sciences Sem VI TBS	Animal behavior & chronobiology (DSE III)

MARCH	<b>Theory:</b>	<p><b>Unit 2 Gas exchange in organism; Generation and utilization of energy:</b> Digestion of food in different animals.</p> <p><b>Unit 4 Integrative Physiology:</b> An overview of neuronal structure and function; Sensory physiology – mechanoreceptors and chemoreceptors.</p> <p><b>Unit 2: Physiology of Respiration:</b> Transport of oxygen and carbon dioxide in blood; Respiratory pigments, Dissociation curves and the factors influencing it.</p>	<p>B.Sc. (Hons) Biological Science, Semester-IV</p> <p>B.Sc. (Hons) Zoology, Semester-IV</p>	<p>Systems Physiology (BS C-8)</p> <p>Animal Physiology: Life Sustaining Systems (CC IX)</p>
	<b>Practicals:</b>	<p>Enumeration of total count of WBC using haemocytometer.</p> <p>Study of lung volumes and capacities by Spirometry; comparison of physiological and two pathological conditions (Eg Asthma, TB); Presentation of student assignment, Revision tests.</p> <p>To study geotaxis behavior in earthworm. To study the phototaxis behavior in insect larvae. Visit to Delhi Zoo/Sanjay Van.</p>	<p>B.Sc. (Hons) Biological Science, Semester-IV</p> <p>B.Sc. (Hons) Zoology, Semester-IV</p> <p>B.Sc (H) Biological Sciences Sem VI TBS</p>	<p>Systems Physiology (BS C-8)</p> <p>Animal Physiology: Life Sustaining Systems (CC IX)</p> <p>Animal behavior &amp; chronobiology (DSE III)</p>
	<b>Test</b>	<p><b>Mid-term Test:</b>Test questions in DU exam pattern of covered topics.</p> <p><b>Mid-term Test:</b>Test questions in DU exam pattern of covered topics.</p>	<p>B.Sc. (Hons) Biological Science, Semester-IV</p> <p>B.Sc. (Hons) Zoology, Semester-IV</p>	<p>Systems Physiology (BS C-8)</p> <p>Animal Physiology: Life Sustaining Systems (CC IX)</p>
	<b>Theory:</b>	<p><b>Unit 4 Integrative Physiology:</b> Thermoreceptors, photoreceptors and electroreceptors; Endocrine systems in animals and their physiological effects.</p> <p><b>Unit 2: Physiology of Respiration:</b> Carbon monoxide poisoning; Control of respiration.</p>	<p>B.Sc. (Hons) Biological Science, Semester-IV</p> <p>B.Sc. (Hons) Zoology, Semester-IV</p>	<p>Systems Physiology (BS C-8)</p> <p>Animal Physiology: Life Sustaining Systems (CC IX)</p>
APRIL				



<b>Practicals:</b>	Revision exercises and test, viva for practical exams.	B.Sc. (Hons) Biological Science, Semester-IV	Systems Physiology (BS C-8)
	Revision exercises and test, viva for practical exams.	B.Sc. (Hons) Zoology, Semester-IV	Animal Physiology: Life Sustaining Systems (CC IX)
	Project Report submission: To study behavioral activities of animals. Revision/ mock exam.	B.Sc (H) Biological Sciences Sem VI TBS	Animal behavior & chronobiology (DSE III)



**SEMESTER WISE TEACHING PLAN**  
**SRI VENKATESWARA COLLEGE**  
**Jan-April, 2018-2019 (Even Semester)**

**Name of the Faculty: Dr. Vartika Mathur**

**Department: Zoology**

**Semester: II/IV/VI –**

- **Theory & Practical: B.Sc. (H) Zoology Sem VI (Wildlife Conservation and Management)**  
**BSc (H) Biological Sciences Sem VI (Animal behavior & Chronobiology)**
- **Practical: B.Sc. (H) Zoology Sem II Non-chordata-II**

Month		Topics	Course	Paper Code/Name
January	Theory	<ul style="list-style-type: none"> <li>• <b>Introduction</b>, Values and ethics of wildlife conservation; importance of conservation</li> <li>• Faecal analysis of ungulates and carnivores: Faecal samples, slide preparation, Hair identification, Pug marks and census method.</li> </ul>	B.Sc. (Hons.) Zoology Sem VI (TZH)	Wildlife Conservation and management DSE-XI
		<ul style="list-style-type: none"> <li>• <b>Introduction, Origin and history of Ethology;</b></li> <li>• Reflexes: Types of reflexes, reflex path, characteristics of reflexes (latency, after discharge, summation, fatigue, inhibition) and its comparison with complex behavior.</li> <li>• Orientation: Primary and secondary orientation; kinesis-orthokinesis, klinokinesis; taxis-tropotaxis and klinotaxis, menotaxis (light compass orientation).</li> </ul>	B.Sc (H) Biological Sciences Sem VI TBS	Animal behavior & chronobiology (DSE III)
	Practicals	<ul style="list-style-type: none"> <li>• Identification and Study of any five endangered mammalian fauna, avian fauna, herpetofauna; Demonstration of basic equipment needed in wildlife studies use, care and maintenance (Compass, Binoculars, Spotting scope, Range Finders, Global Positioning System, Various types of Cameras and lenses)</li> <li>• Familiarization and study of animal evidences in the field; Identification of animals through pug marks, hoof marks, scats, pellet groups, nest, antlers etc.</li> </ul>	B.Sc. (Hons.) Zoology Sem VI (TZH)	Wildlife Conservation and management DSE-XI
		<ul style="list-style-type: none"> <li>• Annelids - <i>Aphrodite</i>, <i>Nereis</i>, <i>Heteronereis</i>, <i>Sabella</i>, <i>Serpula</i>, <i>Chaetopterus</i>, <i>Pheretima</i>, <i>Hirudinaria</i></li> <li>• T.S. through pharynx, gizzard, and typhlosolar intestine of earthworm</li> </ul>	B.Sc. (Hons.) Zoology Sem II FZH	Non-chordata-II CC-III

		<ul style="list-style-type: none"> <li>To study different types of animal behavior such as habituation, social life, courtship behavior in insects, and parental care from short videos/movies and prepare a short report.</li> </ul>	B.Sc (H) Biological Sciences Sem VI TBS	Animal behavior & chronobiology (DSE III)
February	Theory	<ul style="list-style-type: none"> <li>Setting back succession; Grazing logging; Mechanical treatment; Advancing the successional process; Cover construction; Preservation of general genetic diversity.</li> </ul>	B.Sc. (Hons.) Zoology Sem VI (TZH)	Wildlife Conservation and management DSE-XI
		<ul style="list-style-type: none"> <li>Insects' society; Honey bee: Society organization, polyethism, foraging, round dance, waggle dance, Experiments to prove distance and direction component of dance, earning ability in honey bee, formation of new hive/queen</li> </ul>	B.Sc (H) Biological Sciences Sem VI TBS	Animal behavior & chronobiology (DSE III)
	Practicals:	<ul style="list-style-type: none"> <li>Demonstration of different field techniques for flora and fauna PCQ, Circular, Square &amp; rectangular plots, methods for ground cover assessment</li> </ul>	B.Sc (H) Zoology Sem VI TZH	Wildlife Conservation and management DSE-XI
	<b>Non-chordata II</b>	<ul style="list-style-type: none"> <li>Molluscs - <i>Chiton, Dentalium, Pila, Doris, Helix, Unio, Ostrea, Pinctada, Sepia, Octopus, Nautilus</i></li> <li>Echinodermates - <i>Pentaceros/Asterias, Ophiura, Clypeaster, Echinus, Cucumaria</i> and <i>Antedon</i></li> </ul>	B.Sc. (Hons.) Zoology Sem II FZH	Non-chordata-II CC-III
	<ul style="list-style-type: none"> <li>To study nests and nesting habits of the birds and social insects.</li> <li>To study the behavioral responses of wood lice to dry condition.</li> <li>To study behavior responses of wood lice in response to humid condition.</li> </ul>	B.Sc (H) Biological Sciences Sem VI TBS	Animal behavior & chronobiology (DSE III)	
March	Theory	<ul style="list-style-type: none"> <li>National parks &amp; sanctuaries, Community reserve; Important features of protected areas in India; Tiger conservation - Tiger reserves in India; Management challenges in Tiger reserve.</li> </ul>	B.Sc. (Hons.) Zoology Sem VI (TZH)	Wildlife Conservation and management DSE-XI
		<ul style="list-style-type: none"> <li>Learning: Associative learning, classical and operant conditioning, Habituation, Imprinting</li> </ul>	B.Sc (H) Biological Sciences Sem V	Animal behavior & chronobiology (DSE III)
	Practical	<ul style="list-style-type: none"> <li>Trail / transect monitoring for abundance and diversity estimation of mammals and bird (direct and indirect evidences)</li> <li>Visit to Delhi Zoo/Sanjay Van</li> </ul>	B.Sc (H) Zoology Sem VI	Wildlife Conservation and management DSE-XI
		<ul style="list-style-type: none"> <li>To study geotaxis behavior in earthworm.</li> <li>To study the phototaxis behavior in insect larvae.</li> <li>Visit to Delhi Zoo/Sanjay Van</li> </ul>	B.Sc (H) Biological Sciences Sem VI TBS	Animal behavior & chronobiology (DSE III)

		<b>Non-chordata II</b> <ul style="list-style-type: none"> <li>Arthropods - <i>Limulus, Palamnaeus, Palaemon, Daphnia, Balanus, Sacculina, Cancer, Eupagurus, Scolopendra, Julus, Bombyx, Periplaneta</i>, termites and honey bees</li> <li>Onychophora - <i>Peripatus</i></li> </ul>	B.Sc. (Hons.) Zoology Sem II	Non-chordata-II CC-III
	<b>Assignment</b>	<b>Wild life conservation and management</b> Advancing and Setting back succession.	B.Sc. (Hons.) Zoology Sem VI TZH	Wildlife Conservation and management DSE-XI
		<b>Animal behavior and chronobiology</b> Topic: Animal behavior related concepts	Biological Sciences Sem VI (TBS)	Animal behavior & chronobiology (DSE III)
	<b>Mid Term Test</b>	<b>Animal behavior and chronobiology</b> Test will include all the topics covered	Biological Sciences Sem VI (TBS)	Animal behavior & chronobiology (DSE III)
		Test will include all the topics covered	B.Sc. (Hons.) Zoology Sem VI TZH	Wildlife Conservation and management DSE-XI
<b>APRIL</b>	<b>Theory:</b>	<ul style="list-style-type: none"> <li>Submission of Project report: Endangered sp. And their behavioral activities and status of conservation</li> <li>Revision</li> </ul>	B.Sc. (Hons.) Zoology Sem VI (TZH)	Wildlife Conservation and management DSE-XI
		<ul style="list-style-type: none"> <li>Revision</li> </ul>	B.Sc (H) Biological Sciences Sem VI TBS	Animal behavior & chronobiology (DSE III)
	<b>Practicals:</b>	<ul style="list-style-type: none"> <li>Revision/ mock exam</li> </ul>	B.Sc (H) Zoology Sem VI TZH	Wildlife Conservation and management DSE-XI
		<ul style="list-style-type: none"> <li>Revision/ mock exam</li> </ul>	B.Sc. (Hons.) Zoology Sem II FZH	Non-chordata-II CC-III
		<ul style="list-style-type: none"> <li>Project Report submission: To study behavioral activities of animals</li> <li>Revision/ mock exam</li> </ul>	B.Sc (H) Biological Sciences Sem VI TBS	Animal behavior & chronobiology (DSE III)



**SEMESTER WISE TEACHING PLAN**  
**SRI VENKATESWARA COLLEGE**  
**Academic Planner: Even Semester 2019 (Jan-April)**

**Name of the Faculty: Dr. Om Prakash**

**Department: Zoology**

**Semester: II/IV/VI**

Month		Topics	Course	Paper Code/Name
January	Theory	<b>Cell Biology</b> Prokaryotic and Eukaryotic cells, Virus, Viroids, Mycoplasma, Prions	B.Sc. (Hons.) Zoology Sem II TZH	CC IV
		<b>Biotechnology</b> Southern blotting	B.Sc. (Hons.) Zoology Sem VI TZH	DSE I
	Practical	<b>Cell Biology</b> Preparation of temporary stained squash of onion root tip to study various stages of mitosis <b>Repeat</b> Preparation of temporary stained squash of onion root tip to study various stages of mitosis	B.Sc. (Hons.) Zoology Sem II TZH	CC IV
		<b>Immunology</b> To perform Ouchterlony double immunodiffusion assay. ABO blood group determination.	B.Sc Life Sciences Sem VI (Two batches)	DSE Zoology 4
February	Theory	<b>Cell Biology</b> <b>Unit 5: Cytoskeleton</b> Structure and Functions: Microtubules, Microfilaments and Intermediate filaments	B.Sc. (Hons.) Zoology Sem II TZH	CC IV
		<b>Biotechnology</b> Northern blotting Western blotting	B.Sc. (Hons.) Zoology Sem VI TZH	DSE I
	Practicals:	<b>Cell Biology</b> Study of various stages of meiosis. Preparation of permanent slide to show the presence of Barr body in human female blood cells/cheek cells.	B.Sc. (Hons.) Zoology Sem II TZH	CC IV
		<b>Immunology</b> Cell counting and viability of splenocytes.  ELISA  Immunoelectrophoresis	B.Sc Life Sciences Sem VI (Two batches)	DSE Zoology 4
March	Theory	<b>Cell Biology</b> <b>Unit 7: Cell Division 8</b> Mitosis, Meiosis, Cell cycle and its regulation <b>Unit 8: Cell Signaling 4</b> GPCR and Role of second messenger (cAMP)	B.Sc. (Hons.) Zoology Sem II TZH	CC IV

		<b>Biotechnology</b> Polymerase Chain Reaction	B.Sc. (Hons.) Zoology Sem VI TZH	DSE I
	<b>Practical</b>	<b>Cell Biology</b> Preparation of permanent slide to demonstrate: i DNA by Feulgen reaction ii Mucopolysaccharides by PAS reaction	B.Sc. (Hons.) Zoology Sem II TZH	CC IV
		Study of lymphoid organs: spleen, thymus, lymph nodes.  Preparation of stained blood film.	B.Sc Life Sciences Sem VI (Two batches)	Immunology
	<b>Mid Term Test</b>	Test of Cell Biology From all units taught	B.Sc. Hons Zoology Sem II	CC IV
		Test of Animal Biotechnology From all units taught	B.Sc. Hons Zoology Sem VI	DSE I
<b>APRIL</b>	<b>Theory:</b>	<b>Cell Biology</b> <b>Unit 6: Nucleus</b> Structure of Nucleus: Nuclear envelope, Nuclear pore complex, Nucleolus Chromatin: Euchromatin and Hetrochromatin and packaging (nucleosome) <b>Unit 4: Mitochondria and Peroxisomes</b> Mitochondria: Structure, Semi-autonomous nature, Endosymbiotic hypothesis Mitochondrial Respiratory Chain, Chemiosmotic hypothesis	B.Sc. (Hons.) Zoology Sem II TZH	CC IV
		<b>Biotechnology</b> DNA Finger Printing DNA micro array	B.Sc. (Hons.) Zoology Sem VI TZH	DSE I
	<b>Practicals:</b>	<b>Cell Biology</b> Preparation of permanent slide to demonstrate: i DNA and RNA by MGP ii Proteins by Mercurobromophenol blue/ Fast Green Repetition of all experiments Conduct of Mock examination	B.Sc. (Hons.) Zoology Sem II TZH	CC IV
Revision Mock tests.		B.Sc Life Sciences Sem VI (Two batches)	DSE Zoology 4	



**SEMESTER WISE TEACHING PLAN**  
**SRI VENKATESWARA COLLEGE**  
**Academic Planner: Even Semester 2019 (Jan-April)**

**Name of the Faculty: Dr. AjaibSingh**

**Department: Zoology**

**Semester: II/IV/VI**

Month		Topics	Course	Paper Code/Name
January	Theory	Unit I: Integumentary system - structures and function of integument, derivatives of integumentary glands.	B.Sc Life Sciences Sem II	LS Core II/ Comparative Anatomy and Development Biology
		Unit 2: Carbohydrate metabolism: Glycolysis, citric acid cycle, HMP pathway, GNG, glycogenesis, glycogenolysis.	B.Sc Zoology Sem IV	CC X/ Biochemistry of metabolic processes
		Cloning vectors: plasmids, cosmids, phagemids, phage lambda, M13, BAC, YAC, MAC and expression vectors.	B.Sc Zoology Sem VI	DSE / Animal Biotechnology
	Practical	Cells of immune system: Agranulocytes : Neutrophils, basophils, Eosinophils	B.Sc Life Sciences Sem VI	DSE II/Immunology
		1. Osteology: a) Disarticulated skeleton of fowl and rabbit b) Carapace and plastron of turtle/tortoise c) Mammalian skulls: one herbivorous and one carnivorous animal	B.Sc Life Sciences Sem II	Comparative Anatomy and Development Biology
		To perform Ouchterlony double immunodiffusion assay.  ABO blood group determination.	B.Sc Life Sciences Sem VI (Two batches)	Immunology
February	Theory	Unit 2: Skeletal system- overview, jaw suspension, visceral arches	B.Sc Life Sciences Sem II	LS Core II/ Comparative Anatomy and Development Biology
		Unit 5: Oxidative phosphorylation. Redox system, ETC, inhibitors and uncouplers.	B.Sc Zoology Sem IV	CC X/ Biochemistry of metabolic processes
		Restriction enzymes, nomenclature, type II.  Construction of genomic and cDNA library. Screening by colony and plaque hybridization.	B.Sc Zoology Sem VI	DSE/ Animal biotechnology
		Cells of immune system - Granulocytes : Lymphocytes (Tcell and B cell), Monocytes	B.Sc Life Sciences Sem VI	DSE II/Immunology

	<b>Practicals:</b>	Frog - Study of developmental stages - whole mounts and sections through permanent slides - cleavage stages, blastula, gastrula, neurula, tail bud stage, tadpole external and internal gill stages	B.Sc Life Sciences Sem II	Comparative Anatomy and Development Biology
		Cell counting and viability of splenocytes. ELISA Immunoelectrophoresis	B.Sc Life Sciences Sem VI (Two batches)	Immunology
<b>March</b>	<b>Theory</b>	Unit 7: Nervous system. Comparative account of brain.	B.Sc Life Sciences Sem II	LS Core II/ Comparative Anatomy and Development Biology
		Unit 1: Catabolism vs anabolism. Compartmentalization of metabolic pathways, shuttle systems and transporters.	B.Sc Zoology Sem IV	CC X/ Biochemistry of metabolic processes
		Animal biotechnology Recombinant DNA in medicine, recombinant insulin and human growth hormone. Gene therapy.	B.Sc Zoology Sem VI	DSE
		Lymphoid organs -Thymus and Lymph Nodes - structure and function	B.Sc Life Sciences Sem VI	DSE II/Immunology
	<b>Practical</b>	Study of the different types of placental-histological sections through permanent slides or photomicrograph	B.Sc Life Sciences Sem II	Comparative Anatomy and Development Biology
		Study of lymphoid organs: spleen, thymus, lymph nodes. Preparation of stained blood film.	B.Sc Life Sciences Sem VI (Two batches)	Immunology
	<b>Mid Term Test and Assignments</b>	Test of B.sc life science II (Comparative Anatomy and dev bio). And Assignments		
		Test of B.Sc Zoology Sem IV (Biochemistry of metabolic processes) And Assignments		
		Test of B.Sc Zoology Sem VI (Animal. Biotechnology) And Assignments		
<b>APRIL</b>	<b>Theory:</b>	Unit 8: Sense organs. Types of visual receptor in man.	B.Sc Life Sciences Sem II	Core II/ Comparative Anatomy Development Biology
		Unit 1: ATP as energy currency, coupled reactions, use of reducing equivalents and cofactors. Intermediary metabolism.	B.Sc Zoology Sem IV	CC X/ Biochemistry of metabolic processes



	Animal cell culture.	B.Sc Zoology Sem VI	DSE/ Animal biotechnology
	Secondary lymphoid organs - Spleen, MALT, GALT, CALT, Peyers Patches	B.Sc Life Sciences Sem VI	DSE II/Immunology
<b>Practicals:</b>	Temporary mount of sperm (frog/rat) *(To be approved by Animal Ethical Committee of the college) 5. Study visit to a IVF centre and submission of report.	B.Sc Life Sciences Sem II	Comparative Anatomy and Development Biology
	Revision/ mock exam		
	Revision Mock tests.	B.Sc Life Sciences Sem VI (Two batches)	Immunology



**SEMESTER WISE TEACHING PLAN  
SRI VENKATESWARA COLLEGE**

**January -May 2019, (Session 2018-19)**

**Name of the Faculty: Dr. Rajendra Phartyal**

**Department: Zoology**

**Semester: IV, VI: Theory:** B.Sc. H . Biological Science Sem VI(Concepts Of Evolutionary Biology), B.Sc. (H) Zoology Sem VI (Evolutionary Biology), BSc (H) Zoology Semester IV General Elective IV(Aquatic Biology)

**Practicals:** B.Sc. H . Biological Science Sem VI(Concepts Of Evolutionary Biology), BSc (P) Life Science IV (Genetics and Evolutionary Biology), BSc (H) Biological Science Sem IV (System Physiology)

Month		Topics	Course	Paper Code/Name
JANUARY	<b>Theory:</b>	<p align="center"><b>Concepts Of Evolutionary Biology</b></p> Paleobiological – Concept of Stratigraphy and geological timescale; fossil study (types, formation and dating methods). Anatomical – Vestigial organs; Homologous and Analogous organs (concept of parallelism and convergence in evolution). Taxonomic – Transitional forms/evolutionary intermediates; living fossils. Adaptive radiation Concept of species as a real entity, Mechanisms of speciation – Allopatric; sympatric; peripatric, Patterns of speciation – Anagenesis and Cladogenesis;	B.Sc. H . Biological Science Sem VI	BS-C14 (Concepts Of Evolutionary Biology)
		<p align="center"><b>Evolutionary Biology</b></p> Evidences of Evolution: Fossil record (types of fossils, transitional forms, geological time scale Product of evolution: Micro evolutionary changes (inter-population variations, clines, races, Species concept)	B.Sc. (H) Zoology Sem VI	CC-14 (Evolutionary Biology)
		<p align="center"><b>Aquatic Biology</b></p> Brief introduction of the aquatic biomes: Freshwater ecosystem (lakes, wetlands, streams and rivers), estuaries, intertidal zones, oceanic pelagic zone, marine benthic zone and coral reefs.	BSc (H) Zoology GE IV Sem IV	GE IV (Aquatic Biology)

	<b>Practicals:</b>	<p align="center"><b>Concepts Of Evolutionary Biology</b></p> <ul style="list-style-type: none"> <li>• Study of types of fossils ( e.g. trails, casts and moulds and others) and Index fossils of Palaeozoic era</li> <li>• Vestigial, Analogous and Homologous organs using photographs, models or specimen</li> <li>• Calculations of genotypic, phenotypic and allelic frequencies from the data provided</li> <li>• Simulation experiments using coloured beads/playing cards to understand the effects of Natural Selection</li> </ul>	B.Sc. H . Biological Science Sem VI	BS-C14 (Concepts Of Evolutionary Biology)
		<p align="center"><b>Genetics and Evolutionary Biology</b></p> <p>Study of Human Karyotypes (normal and abnormal). Study of Mendelian Inheritance and gene interactions (Non Mendelian Inheritance) using suitable examples. Verify the results using Chi-square test.</p>	BSc (P) Life Science Sem IV	CC-4 (Genetics and Evolutionary Biology)
		<p align="center"><b>System Physiology</b></p> <ul style="list-style-type: none"> <li>• Syllabus overview, general instructions and maintenance of lab record.</li> <li>• Effect of isotonic hypotonic hypertonic salines on erythrocytes.</li> </ul>	BSc (H) Biological Science Sem IV	(BS C-8) Systems Physiology
FEBRUARY	<b>Theory:</b>	<p align="center"><b>Concepts Of Evolutionary Biology</b></p> <p>Phyletic Gradualism and Punctuated Equilibrium (Quantum Evolution), Basis of speciation – Isolating mechanisms Periodic extinctions , Mass-scale extinctions – Causes and events</p>	B.Sc. H . Biological Science Sem VI	BS-C14 (Concepts Of Evolutionary Biology)
		<p align="center"><b>Evolutionary Biology</b></p> <p>Isolating mechanisms, modes of speciation— allopatric, sympatric Extinctions, Back ground and mass extinctions (causes and effects), detailed example of K-T extinction</p>	B.Sc. (H) Zoology Sem VI	CC-14 (Evolutionary Biology)
		<p align="center"><b>Aquatic Biology</b></p> <p>Lakes: Origin and classification, Lake as an Ecosystem, Lake morphometry,</p>	BSc (H) Zoology GE IV Sem IV	GE IV (Aquatic Biology)
	<b>Practicals:</b>	<p align="center"><b>Concepts Of Evolutionary Biology</b></p> <ul style="list-style-type: none"> <li>• Simulation experiments using coloured beads/playing cards to understand the effects of Bottleneck effect and Founder effect</li> <li>• <b>Selection Exemplifying Adaptive strategies</b> (Colouration, Mimetic form, Co-adaptation and co-evolution; Adaptations to aquatic,</li> </ul>	B.Sc. H . Biological Science Sem VI	BS-C14 (Concepts Of Evolutionary Biology)

		fossorial and arboreal modes of life) using Specimens		
		<p><b>Genetics and Evolutionary Biology</b> Study of homology and analogy from suitable specimens/ picture. Study of fossil evidences from plaster cast models and pictures Phylogeny of horse with diagrams/ cut outs of limbs and teeth of horse ancestors</p>	BSc (P) Life Science Sem IV	CC-4 (Genetics and Evolutionary Biology)
		<p><b>System Physiology</b></p> <ul style="list-style-type: none"> <li>Enumeration of RBC using haemocytometer. Continuous evaluation based on performance and record maintenance.</li> </ul>	BSc (H) Biological Science Sem IV	(BS C-8) Systems Physiology
MARCH	<b>Theory:</b>	<p><b>Concepts Of Evolutionary Biology</b> Chemogeny – An overview of pre-biotic conditions and events; experimental proofs to abiotic origin of micro- and macro-molecules. Current concept of chemogeny – RNA first hypothesis. Biogeny – Cellular evolution based on proto-cell models (coacervates and proteinoid micro-spheres). Origin of photosynthesis – Evolution of oxygen and ozone buildup. Endosymbiotic theory – Evolution of Eukaryotes from Prokaryotes Phylogenetic – a) Fossil based – Phylogeny of horse as a model. b) Molecule based – Protein model (Cytochrome C); gene model (Globin gene family) Adaptive radiation</p>	B.Sc. H . Biological Science Sem VI	BS-C14 (Concepts Of Evolutionary Biology)
		<p><b>Evolutionary Biology</b> Life’s Beginnings: Chemogeny, RNA world, Biogeny, Origin of photosynthesis, Evolution of eukaryotes evolution of horse Adaptive radiation / macroevolution (exemplified by Galapagos finches</p>	B.Sc. (H) Zoology Sem VI	CC-14 (Evolutionary Biology)
		<p><b>Aquatic Biology</b> Physico–chemical Characteristics: Light, Temperature, Thermal stratification</p>	BSc (H) Zoology GE IV Sem IV	GE IV (Aquatic Biology)
	<b>Practicals:</b>	<p><b>Concepts Of Evolutionary Biology</b></p> <ul style="list-style-type: none"> <li>Connecting links/transitional forms -</li> <li>Living fossils</li> <li>Sampling of human height, weight and BMI for continuous variation</li> <li>Sampling for discrete characteristics (dominant vs recessive) for discontinuous variations</li> </ul>	B.Sc. H . Biological Science Sem VI	BS-C14 (Concepts Of Evolutionary Biology)
		<p><b>Genetics and Evolutionary Biology</b> Darwin’s Finches with diagrams/ cut outs of beaks of different species Study of Linkage, recombination, gene mapping using the data.</p>	BSc (P) Life Science Sem IV	CC-4 (Genetics and Evolutionary Biology)

		<p align="center"><b>System Physiology</b></p> <ul style="list-style-type: none"> <li>Enumeration of total count of WBC using haemocytometer.</li> </ul>	BSc (H) Biological Science Sem IV	(BS C-8) Systems Physiology
	<b>Assignment</b>	<b>Concepts Of Evolutionary Biology</b>	B.Sc. H . Biological Science Sem VI	BS-C14 (Concepts Of Evolutionary Biology)
	<b>TESTS</b>	<b>Evolutionary Biology</b>	B.Sc. (H) Zoology Sem VI	CC-14 (Evolutionary Biology)
		<b>Aquatic Biology</b>	BSc (H) Zoology GE IV Sem IV	GE IV (Aquatic Biology)
		<b>Concepts Of Evolutionary Biology</b>	B.Sc. H . Biological Science Sem VI	BS-C14 (Concepts Of Evolutionary Biology)
		<b>Evolutionary Biology</b>	B.Sc. (H) Zoology Sem VI	CC-14 (Evolutionary Biology)
		<b>Aquatic Biology</b>	BSc (H) Zoology GE IV Sem IV	GE IV (Aquatic Biology)
		<b>Theory</b>	<p align="center"><b>Concepts Of Evolutionary Biology</b></p> <p>Evolution and affinities of Fungi Primate characteristics and unique Hominin characteristics. Primate phylogeny leading to Hominin line. Human migration – Theories. Brief reference to molecular analysis of human origin – Mitochondrial DNA and Y-chromosome studies</p>	B.Sc. H . Biological Science Sem VI
		<p align="center"><b>Evolutionary Biology</b></p> <p>Origin and evolution of man, Unique hominin characteristics contrasted with primate characteristics, primate phylogeny from <i>Dryopithecus</i> leading to <i>Homo sapiens</i>, molecular analysis of human origin</p>	B.Sc. (H) Zoology Sem VI	CC-14 (Evolutionary Biology)
		<p align="center"><b>Aquatic Biology</b></p> <p>Dissolved Solids, Carbonate, Bicarbonates, Phosphates and Nitrates, Turbidity; dissolved gases (Oxygen, Carbon dioxide).</p>	BSc (H) Zoology GE IV Sem IV	GE IV (Aquatic Biology)
	<b>Practicals:</b>	<p align="center"><b>Concepts Of Evolutionary Biology</b></p> <ul style="list-style-type: none"> <li>Digit reduction in horse phylogeny (study from chart)</li> <li>Study of horse skull to illustrate key features in equine evolution</li> <li>Study of monkey and human skull -</li> <li>Revision and mock practical test</li> </ul>	B.Sc. H . Biological Science Sem VI	BS-C14 (Concepts Of Evolutionary Biology)
		<p align="center"><b>Genetics and Evolutionary Biology</b></p> <ul style="list-style-type: none"> <li>Revision and mock practical test</li> </ul>	BSc (P) Life Science Sem IV	CC-4 (Genetics and Evolutionary Biology)
APRIL				

<p style="text-align: center;"><b>System Physiology</b></p> <ul style="list-style-type: none"><li>• Revision exercises and test, viva for practical exams.</li></ul>	BSc (H) Biological Science Sem IV	(BS C-8) Systems Physiology
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**SEMESTER WISE TEACHING PLAN (2018-2019)**  
**SRI VENKATESWARA COLLEGE**

Name of the Faculty: Dr. Mansi Verma

Department: Zoology

Semester : II/IV/VI

Month		Topics	Course	Paper Code/Name
JANUARY	Theory:	Introduction to GMOs	B.Sc. (H) Zoology Semester VI	Animal Biotechnology
		Endomembrane System: Structure and Functions: Endoplasmic Reticulum	B.Sc. (H.) Zoology Semester II	Cell Biology
		Mendel's work on transmission of traits, Genetic Variation, Molecular basis of Genetic Information, Principles of Inheritance, Chromosome theory of inheritance, Incomplete dominance and codominance, Multiple alleles, Lethal alleles, Epistasis,	B.Sc. (H.) Life Sciences Semester IV	Genetics and Evolutionary Biology
	Practicals:	Study of Human Karyotypes (normal and abnormal). Study of Mendelian Inheritance and gene interactions (Non Mendelian Inheritance) using suitable examples. Verify the results using Chi-square test. <i>With continuous evaluation</i> Evaluation of students on their performance in	B.Sc. (H.) Life Sciences Semester IV Batch I & II	Genetics and Evolutionary Biology
		(A) Evidences of fossils 1. Study of types of fossils ( e.g. trails, casts and moulds and others) and Index fossils of Palaeozoic era 2. Connecting links/transitional forms - Eg. <i>Euglena, Neopilina, Balanoglossus, Chimaera, Tiktaalik, Archaeopteryx,</i>	B.Sc. Biological Sciences (VI Semester)	Concepts of Evolutionary Biology BS CXIV

		<p><i>Ornithorhynchus</i></p> <p>3. Living fossils - Eg. <i>Limulus, Peripatus, Latimeria, Sphaenodon</i></p> <p>4. Vestigial, Analogous and Homologous organs using photographs, models or specimen</p>		
<b>FEBRUARY</b>	Theory	Agrobacterium mediated transformation and other methods of plant transformation	B.Sc. (H) Zoology Semester VI	Animal Biotechnology
		Endomembrane System: Structure and Functions: Golgi Apparatus, Lysosomes	B.Sc. (H.) Zoology Semester II	Cell Biology
		Pleiotropy, sex linked inheritance, extra-chromosomal inheritance Linkage and crossing over, Recombination frequency as a measure of linkage intensity, two factor and three factor crosses, Interference and coincidence,	B.Sc. (H.) Life Sciences Semester IV	Genetics and Evolutionary Biology
	Practical	<p>Study of homology and analogy from suitable specimens/ pictures</p> <p>. Study of fossil evidences from plaster cast models and pictures</p> <p>Phylogeny of horse with diagrams/ cut outs of limbs and teeth of horse ancestors</p> <p><i>With continuous evaluation</i></p> <p>Evaluation of students on their performance in practical and Record</p>	B.Sc. (H.) Life Sciences Semester IV Batch I & II)	Genetics and Evolutionary Biology
	<p><b>D) Neo-Darwinian Studies</b></p> <p>1. Calculations of genotypic, phenotypic and allelic frequencies from the data provided</p> <p>2. Simulation experiments using coloured beads/playing cards to understand the effects of Selection and Genetic drift on gene frequencies</p> <p><b>(C) Selection Exemplifying</b></p>	<b>B.Sc. Biological Sciences (VI Semester)</b>	<b>Concepts of Evolutionary Biology BS CXIV</b>	



		<b>Adaptive strategies</b> (Colouration, Mimetic form, Co-adaptation and co-evolution; Adaptations to aquatic, fossorial and arboreal modes of life) using Specimens		
<b>MARC H</b>	Theory	Transgenic animals : retroviral method, microinjection, embryonic stem cells	B.Sc. (H) Zoology Semester VI	Animal Biotechnology
		Various models of plasma membrane structure Transport across membranes: Active and Passive transport, Facilitated transport	B.Sc. (H.) Zoology Semester II	Cell Biology
		Somatic cell genetics - an alternative approach to gene mapping Chromosomal Mutations: Deletion, Duplication, Inversion, Translocation, Aneuploidy and Polyploidy; Gene mutations: Induced versus Spontaneous mutations, Back versus Suppressor mutations,	B.Sc. (H.) Life Sciences Semester IV	Genetics and Evolutionary Biology
	Practical	Darwin's Finches with diagrams/ cut outs of beaks of different species Study of Linkage, recombination, gene mapping using the data. <i>With continuous evaluation</i> Evaluation of students on their performance in practical and Record	B.Sc. (H.) Life Sciences Semester IV Batch I & II)	Genetics and Evolutionary Biology
	(B) <b>Variations</b> 1. Sampling of human height, weight and BMI for continuous variation 2. Sampling for discrete characteristics (dominant vs recessive) for discontinuous variations e.g. hitch-hiker's thumb, dexterity, tongue rolling, ear lobe (data categorization into 16 groups based on the combination of 4 traits; assigning each subject to the respective group)	<b>B.Sc. Biological Sciences (VI Semester)</b>	<b>Concepts of Evolutionary Biology BS CXIV</b>	
	Assignment	Assignment of Biotechnology		

	<b>Mid Term Test</b>			
<b>APRIL</b>	Theory	Genetically modified animals and cloning, Dolly , polly Applications of transgenic plants: insect and herbicide resistant plants.	B.Sc. (H) Zoology Semester VI	Animal Biotechnology
		Cell junctions: Tight junctions, Desmosomes, Gap junctions	B.Sc. (H.) Zoology Semester II	Cell Biology
		Chromosomal mechanisms, dosage compensation	B.Sc. (H.) Life Sciences Semester IV	Genetics and Evolutionary Biology
	Practical	Revision Mock Test	B.Sc. (H.) Life Sciences Semester IV Batch I & II)	Genetics and Evolutionary Biology
<b>(E) Phylogeny</b> 1. Digit reduction in horse phylogeny (study from chart), 2. Study of horse skull to illustrate key features in equine evolution 3. Study of monkey and human skull - A comparison to illustrate common primate and unique Hominin features		<b>B.Sc. Biological Sciences (VI Semester)</b>	<b>Concepts of Evolutionary Biology BS CXIV</b>	



**SEMESTER WISE TEACHING PLAN**  
**SRI VENKATESWARA COLLEGE**  
**Academic Planner: Even Semester 2018 (Jan-April)**

**Name of the Faculty: Dr. P.Jayaraj**  
**Department: Zoology**  
**Semester: II/IV/VI**

Month		Topics	Course	Paper Code/Name
January	Theory	DEVELOPMENTAL BIOLOGY Unit 1: Introduction 4 Historical perspective and basic concepts: Phases of development, Cell-Cell interaction, Pattern formation, Differentiation and growth, Differential gene expression, Cytoplasmic determinants and asymmetric cell division	B.Sc (H) Zoology III year VI semester (TZH)	CORE COURSE XIII
		COMPARATIVE ANATOMY AND DEVELOPMENTAL BIOLOGY OF VERTEBRATES  Unit 9: Scope and History of Developmental Biology 5 hrs Concepts of Epigenesis, Preformation, Specification, Determination, Differentiation, Morphogenesis, Embryonic induction	B.Sc. Life sciences sem II (FLS)	LS Core II
		Unit 5: Basic properties and functions of cytokines, Complement system: Components and pathways.	B.Sc. Life sciences (TLS) VI semester	<b>TLS DSE II: Immunology</b>
	Practicals	DEVELOPMENTAL BIOLOGY Study of whole mounts and sections of developmental stages of frog through permanent slides: Cleavage stages, blastula, gastrula, neurula, tail-bud stage, tadpole (external and internal gill stages)	B.Sc (H) Zoology III year VI semester (TZH)	CORE COURSE XIII
		COMPARATIVE ANATOMY AND DEVELOPMENTAL BIOLOGY OF VERTEBRATES 1. Osteology: a) Disarticulated skeleton of fowl and rabbit 28  b) Carapace and plastron of turtle/tortoise c) Mammalian skulls: one herbivorous and one carnivorous animal	B.Sc. Life sciences sem II (FLS)	LS Core II
February	Theory	DEVELOPMENTAL BIOLOGY Unit 2: Early Embryonic Development Gametogenesis, Spermatogenesis, Oogenesis; Types of eggs, Egg membranes; Fertilization (External and Internal): Changes in gametes, Blocks to polyspermy; Planes and patterns of cleavage; Types of Blastula; Fate maps (including Techniques)	B.Sc (H) Zoology III year VI semester (TZH)	CORE COURSE XIII

		COMPARATIVE ANATOMY AND DEVELOPMENTAL BIOLOGY OF VERTEBRATES  Unit 10: Early Embryonic Development 12 hrs Gametogenesis: Spermatogenesis and Oogenesis in mammals; Fertilization: External (amphibians), Internal (mammals), blocking mechanisms to Polyspermy; Types and Patterns of cleavage;	B.Sc. Life sciences sem II (FLS)	LS Core II
		Unit 5: Basic properties and functions of cytokines	B.Sc. Life sciences (TLS) VI semester	<b>TLS DSE II: Immunology</b>
	<b>Practicals:</b>	DEVELOPMENTAL BIOLOGY Study of whole mounts of developmental stages of chick through permanent slides: Primitive streak (13 and 18 hours), 21, 24, 28, 33, 36, 48, 72, and 96 hours of incubation (Hamilton and Hamburger stages)	B.Sc (H) Zoology III year VI semester (TZH)	CORE COURSE XIII
		<b>Comparative anatomy and developmental biology</b> Frog - Study of developmental stages - whole mounts and sections through permanent slides - cleavage stages, blastula, gastrula, neurula, tail bud stage, tadpole external and internal gill stages.	B.Sc. Life sciences sem II (FLS)	LS Core II
		Unit 6: Immune system in health and disease 10 Gell and Coombs		
<b>March</b>	<b>Theory</b>	DEVELOPMENTAL BIOLOGY Early development of frog and chick up to gastrulation; Embryonic induction and organizers Unit 3: Late Embryonic Development 8 Fate of Germ Layers; Extra-embryonic membranes in birds. Implantation of embryo in humans, Placenta (Structure, types and functions of placenta)	B.Sc (H) Zoology III year VI semester (TZH)	CORE COURSE XIII
		<b>Comparative anatomy and developmental biology</b>  Unit 10 cont.. Types of morphogenetic movements; Early development of frog and human (up to formation of gastrula); Fate maps, Fate of germ layers	B.Sc. (Life Sciences.) Zoology Sem II FLS	LS Core II
		Unit 5 Complement system: Components and pathways.	B.Sc. Life sciences (TLS) VI semester	<b>TLS DSE II: Immunology</b>

<b>Practical</b>	DEVELOPMENTAL BIOLOGY Study of the developmental stages and life cycle of Drosophila from stock culture	B.Sc (H) Zoology III year VI semester (TZH)	CORE COURSE XIII
	<b>Comparative anatomy and developmental biology</b> <ul style="list-style-type: none"> <li>Study of the different types of placenta- histological sections through permanent slides or photomicrograph.</li> </ul>	B.Sc. Life sciences sem II (FLS)	LS core II
<b>Assignment</b>	DEVELOPMENTAL BIOLOGY To Solve and submit questionnaire for the topics covered before mid semester break	B.Sc (H) Zoology III year VI semester (TZH)	CORE COURSE XIII
	To Solve and submit questionnaire for the topics covered before mid semester break	B.Sc. Life sciences sem II (FLS)	

<b>Mid Term Test</b>	Topics covered before mid semester break and from assignment		
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<b>APRIL</b>	<b>Theory:</b> DEVELOPMENTAL BIOLOGY Unit 4: Post Embryonic Development Metamorphosis: Changes, hormonal regulations in amphibians and insects; Regeneration: Modes of regeneration, epimorphosis, morphallaxis and compensatory regeneration (with one example each); Ageing: Concepts and Theories Unit 5: Implications of Developmental Biology Teratogenesis: Teratogenic agents and their effects on embryonic development; In vitro fertilization, Stem cell (ESC), Amniocentesis	B.Sc (H) Zoology III year VI semester (TZH)	CORE COURSE XIII
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	<p><b>Comparative anatomy and developmental biology</b></p> <p>Unit 11: Late Embryonic Development 7 hrs Metamorphic events in life cycle of frog and its hormonal regulation. Implantation of embryo in human; Formation, types and functions of placenta in mammals.</p> <p>Unit 12: Applied Aspects of Developmental Biology 6 hrs Stem cells, Cloning, IVF</p>	B.Sc. Life sciences sem II (FLS)	LS Core II
	<p>Unit 6: brief description of various types of hypersensitivities, Introduction to concepts of autoimmunity and immunodeficiency,</p>	B.Sc. Life sciences (TLS) VI semester	<b>TLS DSE II: Immunology</b>
<b>Practicals:</b>	<p><b>DEVELOPMENTAL BIOLOGY</b></p> <p><b>Study of different sections of placenta (photomicrograph/ slides)</b></p> <p><b>Submission of project report on Drosophila culture/chick embryo development</b></p> <ul style="list-style-type: none"> <li>• Revision/ mock exam</li> </ul>	B.Sc (H) Zoology III year VI semester (TZH)	CORE COURSE XIII
	<p><b>Comparative anatomy and Developmental Biology</b></p> <p>Temporary mount of sperm (frog/rat) *(To be approved by Animal Ethical Committee of the college) 5. Study visit to a IVF centre and submission of report.</p> <ul style="list-style-type: none"> <li>• Revision/ mock exam</li> </ul>	B.Sc. Life sciences Sem II (FLS)	LS Core II



**SEMESTER WISE TEACHING PLAN**  
**SRI VENKATESWARA COLLEGE**  
**Jan-April, 2018-2019 (Even Semester)**

**Name of the Faculty: Dr. RIYAZ**  
**Department: Zoology**  
**Semester: II/IV/VI**

Month		Topics	Course	Paper Code/Name
	<b>Theory</b>	<b>Unit 1: Digestion and Absorption of Food</b>	B.Sc. IV SEM	GE-II, Human Physiology
		<b>Unit 5: Working of the immune system</b> Structure and functions of MHC	Life Sc. Sem-VI	DSE-II, Immunology
	<b>Practicals</b>	<b>Unit 1: Physiology of Digestion</b>	Zoo(H), SEM-IV	CC-IX- Physiology: <b>Life sustaining systems</b>
		<b>Public health &amp; Hygiene</b> <ul style="list-style-type: none"> <li>• Estimate the blood glucose level by glucometer / kit</li> <li>• To study the functioning and clinical significance of sphygmomanometer.</li> <li>• To Know your BMI</li> </ul>	B.Sc. Life Sciences Sem VI	Public health & Hygiene SEC
		COMPARATIVE ANATOMY AND DEVELOPMENTAL BIOLOGY OF VERTEBRATES 1. Osteology: a) Disarticulated skeleton of fowl and rabbit b) Carapace and plastron of turtle/tortoise c) Mammalian skulls: one herbivorous and one carnivorous animal	B.Sc. Life sciences sem II (FLS) BATCH-II	LS Core II
		COMPARATIVE ANATOMY AND DEVELOPMENTAL BIOLOGY OF VERTEBRATES 1. Osteology: a) Disarticulated skeleton of fowl and rabbit b) Carapace and plastron of turtle/tortoise c) Mammalian skulls: one herbivorous and one carnivorous animal	B.Sc. Life sciences sem II (FLS) BATCH-III	LS Core II
<b>February</b>	<b>Theory</b>	<b>Unit 3: Respiratory Physiology</b>	B.Sc. IV SEM	GE-II, Human Physiology

		exogenous and -endogenous pathways of antigen presentation and processing,	Life Sc. Sem-VI	DSE-Immunology
		<ul style="list-style-type: none"> <li><b>Unit 4: Blood</b></li> </ul>	Zoo(H),SEM-IV	CC-IX- Physiology: <b>Life sustaining systems</b>
<b>Practicals:</b>		<b>Public Health &amp; Hygiene</b> <ul style="list-style-type: none"> <li>To study the medically important organisms- Rat, Cockroach, Ants, Mosquitoes, Housefly</li> </ul>	B.Sc. Life Sciences Sem VI	Public health & Hygiene SEC
		Comparative anatomy and developmental biology Frog - Study of developmental stages - whole mounts and sections through permanent slides - cleavage stages, blastula, gastrula, neurula, tail bud stage, tadpole external and internal gill stages.	B.Sc. Life sciences sem II (FLS) BATCH-II	LS Core II
		Comparative anatomy and developmental biology Frog - Study of developmental stages - whole mounts and sections through permanent slides - cleavage stages, blastula, gastrula, neurula, tail bud stage, tadpole external and internal gill stages.	B.Sc. Life sciences sem II (FLS) BATCH-III	LS Core II
<b>March</b>	<b>Theory</b>	<ul style="list-style-type: none"> <li><b>Unit 5: Cardiovascular Physiology</b></li> <li><b>Unit 4: Renal Physiology</b></li> </ul>	B.Sc. IV SEM	GE-II, Human Physiology
		Basic properties and functions of cytokines, Complement system: Components and pathways.	Life Sc. Sem-VI	DSE-Immunology
		<ul style="list-style-type: none"> <li><b>Unit 5: Physiology of Heart</b></li> </ul>	Zoo(H),SEM-IV	CC-IX- Physiology: <b>Life sustaining systems</b>
<b>Practical</b>		<b>Public Health &amp; Hygiene</b> <ul style="list-style-type: none"> <li>To estimate the purity of water by MPN method</li> <li>To study the different Life style diseases- diabetes, Hypertension, TB, PCOD</li> </ul>	B.Sc. Life Sciences Sem VI	Public health & Hygiene SEC
		Comparative anatomy and developmental biology Unit 10 cont.. Types of morphogenetic movements; Early development of frog and human (up to formation of gastrula); Fate maps, Fate of germ layers	B.Sc. Life sciences sem II (FLS) BATCH-II	LS Core II
		Comparative anatomy and developmental biology Unit 10 cont.. Types of morphogenetic movements; Early development of frog and human (up to	B.Sc. Life sciences sem II (FLS) BATCH-	LS Core II



		formation of gastrula); Fate maps, Fate of germ layers	III		
<b><u>Assignment</u></b>	ACCORDING TO TOPICS		B.Sc. IV SEM	GE-II, Human Physiology	
	MHC AND CYTOKINES		Life Sc. Sem-VI	DSE-Immunology	
	ACCORDING TO TOPICS		Zoo(H), SEM-IV	CC-IX- Physiology: <b>Life sustaining systems</b>	
<b><u>Mid Term Test</u></b>	Test will include all the topics covered		.Sc. Life Sciences Sem VI	Public health & Hygiene SEC	
	Test will include all the topics covered		B.Sc. Life sciences sem II (FLS) BATCH-II	LS Core II	
	Test will include all the topics covered		B.Sc. Life sciences sem II (FLS) BATCH-III	LS Core II	
<b>APRIL</b>	<b>Theory:</b>	<b>Unit 6: Endocrine and Reproductive Physiology</b>	B.Sc. IV SEM	GE-II, Human Physiology	
		Revision	Zoo(H), SEM-IV	CC-IX- Physiology: <b>Life sustaining systems</b>	
	<b>Practicals:</b>	Revision/ mock exam		B.Sc. Life Sciences Sem VI	Public health & Hygiene SEC
		Comparative anatomy and developmental biology Unit 11: Late Embryonic Development 7 hrs Metamorphic events in life cycle of frog and its hormonal regulation. Implantation of embryo in human; Formation, types and functions of placenta in mammals. Unit 12: Applied Aspects of Developmental Biology 6 hrs Stem cells, Cloning, IVF		B.Sc. Life sciences sem II (FLS) BATCH-II	LS Core II
		Revision/ mock exam		B.Sc. Life sciences sem II (FLS) BATCH-III	LS Core II
		Comparative anatomy and developmental biology Unit 11: Late Embryonic Development 7 hrs Metamorphic events in life cycle of frog and its hormonal regulation. Implantation of embryo in human;		B.Sc. Life sciences sem II (FLS) BATCH-III	LS Core II

Formation, types and functions of placenta in mammals. Unit 12: Applied Aspects of Developmental Biology 6 hrs Stem cells, Cloning, IVF Revision/ mock exam		
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**SEMESTER WISE TEACHING PLAN**  
**SRI VENKATESWARA COLLEGE**  
**Jan-April, 2018-2019 (Even Semester)**

**Name of the Faculty: Dr. Vagisha Rawal**  
**Department: Zoology**  
**Semester: II/IV/VI**

Month		Topics	Course	Paper Code/Name
January	Theory	<b>Unit 7: Management of excess population</b> Bio- telemetry; Care of injured and diseased animal; Quarantine; Common diseases of wild animal	B.Sc. (Hons.) Zoology Sem VI (TZH)	Wildlife Conservation and management DSE-XI
		<b>Biological Rhythm</b> Types and characteristics of biological rhythms: Short- and Long- term rhythms; Circadian rhythms; Tidal rhythms and Lunar rhythms;	B.Sc. (H) Biological Sciences Sem VI TBS	Animal behavior & chronobiology (DSE III)
		<b>Unit 1: Introduction to Coelomates</b> Evolution of coelom and metamerism	B.Sc. (Hons.) Zoology Sem II (FZH)	Non-Chordata II CC-III
	Practicals	<b>Public health &amp; Hygiene</b> <ul style="list-style-type: none"> <li>• Estimate the blood glucose level by glucometer / kit</li> <li>• To study the functioning and clinical significance of sphygmomanometer.</li> <li>• To Know your BMI</li> </ul>	B.Sc. Life Sciences Sem VI	Public health & Hygiene SEC
		<ul style="list-style-type: none"> <li>• Annelids - <i>Aphrodite, Nereis, Heteronereis, Sabella, Serpula, Chaetopterus, Pheretima, Hirudinaria</i></li> <li>• T.S. through pharynx, gizzard, and typhlosolar intestine of earthworm</li> </ul>	B.Sc. (Hons.) Zoology Sem II FZH	Non-chordata-II CC-III
		<b>Research Methodology (SEC)</b> <ul style="list-style-type: none"> <li>• Theory and Usage of various search engines such as Pubmed, Google scholar, Scopus, Web of Science</li> </ul>	B.Sc. (H) Sem IV SZH	Research Methodology (SEC)
February	Theory	<ul style="list-style-type: none"> <li>• Habitat analysis, Physical parameters: Topography, Geology, Soil and water;</li> <li>• Biological Parameters: food, cover, forage, browse and cover estimation;</li> </ul>	B.Sc. (Hons.) Zoology Sem VI (TZH)	Wildlife Conservation and management DSE-XI

		<ul style="list-style-type: none"> <li>• Concept of synchronization and masking; Photic zeitgebers; Circannual rhythms; Role of melatonin.</li> </ul>	B.Sc. (H) Biological Sciences Sem VI TBS	Animal behavior & chronobiology (DSE III)
		<b>Arthropoda</b> <ul style="list-style-type: none"> <li>• General characteristics and Classification up to classes</li> <li>• Vision and Respiration in Arthropod</li> </ul>	B.Sc. (Hons.) Zoology Sem II FZH	Non-Chordata II CC-III
	<b>Practicals:</b>	<b>Public Health &amp; Hygiene</b> <ul style="list-style-type: none"> <li>• To study the medically important organisms- Rat, Cockroach, Ants, Mosquitoes, Housefly</li> </ul>	B.Sc. Life Sciences Sem VI	Public health & Hygiene SEC
		<b>Non-chordata II</b> <ul style="list-style-type: none"> <li>• Molluscs - <i>Chiton, Dentalium, Pila, Doris, Helix, Unio, Ostrea, Pinctada, Sepia, Octopus, Nautilus</i></li> <li>• Echinodermates - <i>Pentaceros/Asterias, Ophiura, Clypeaster, Echinus, Cucumaria</i> and <i>Antedon</i></li> </ul>	B.Sc. (Hons.) Zoology Sem II	Non-Chordata II CC-III
		<b>Research Methodology (SEC)</b> <ul style="list-style-type: none"> <li>• Types of Reference Styles, Learning usage of Endnote, Exercises related to Plagiarism</li> </ul>	B.Sc. (H) Sem IV SZH	Research Methodology (SEC)
<b>March</b>	<b>Theory</b>	<b>Management planning of wild life in protected areas</b> <ul style="list-style-type: none"> <li>• Estimation of carrying capacity; Eco tourism / wild life tourism in forests; Concept of climax persistence; Ecology of perturbation.</li> </ul>	B.Sc. (Hons.) Zoology Sem VI (TZH)	Wildlife Conservation and management DSE-XI
		<ul style="list-style-type: none"> <li>• Sexual Behaviour: Asymmetry of sex, Sexual dimorphism, Mate choice, Intra-sexual selection (male rivalry), Inter-sexual selection (female choice), Sexual conflict in parental care.</li> </ul>	B.Sc. (H) Biological Sciences Sem VI TBS	Animal behavior & chronobiology (DSE III)
		<ul style="list-style-type: none"> <li>• Metamorphosis in Insects</li> <li>• Social life in bees and termites</li> </ul>	B.Sc. (Hons.) Zoology Sem II FZH	Non-Chordata II CC-III
	<b>Practical</b>	<b>Public Health &amp; Hygiene</b> <ul style="list-style-type: none"> <li>• To estimate the purity of water by MPN method</li> <li>• To study the different Life style diseases- diabetes, Hypertension, TB, PCOD</li> </ul>	B.Sc. Life Sciences Sem VI	Public health & Hygiene SEC
		<b>Non-chordata II</b> <ul style="list-style-type: none"> <li>• Arthropods - <i>Limulus, Palamnaeus, Palaemon, Daphnia, Balanus, Sacculina, Cancer, Eupagurus, Scolopendra, Julus, Bombyx, Periplaneta</i>, termites and honey bees</li> <li>• Onychophora - <i>Peripatus</i></li> </ul>	B.Sc. (Hons.) Zoology Sem II FZH	Non-Chordata II CC-III
		<b>Research Methodology (SEC)</b> <ul style="list-style-type: none"> <li>• Hypothesis building, Role of statistics, Types of graphs and its importance in Data presentation</li> </ul>	B.Sc. (H) Sem IV SZH	Research Methodology (SEC)

<b>Assignment</b>	<b>WILD LIFE CONSERVATION AND MANAGEMENT</b> Advancing and Setting Back succession.	B.Sc. (Hons.) Zoology Sem VI (TZH)	Wildlife Conservation and management DSE-XI
	<b>Animal behavior and chronobiology</b> Topic: Animal behavior related concepts	Biological Sciences Sem VI (TBS)	
	<b>Non-chordata –II</b> <b>Onychophora</b> Water-vascular system in Asteroidea and Pearl formation in Mollusca	B.Sc. (Hons.) Zoology Sem II FZH	Non-Chordata II CC-III
<b>Mid Term Test</b>	<b>Animal behavior and chronobiology</b> Test will include all the topics covered	B.Sc. (H) Biological Sciences Sem VI TBS	Animal behavior & chronobiology (DSE III)
	Test will include all the topics covered	B.Sc. (Hons.) Zoology Sem VI TZH	Wildlife Conservation and management DSE-IV
	Test will include all the topics covered	B.Sc. (Hons.) Zoology Sem II FZH	Non-Chordata II CC-III
<b>APRIL</b>	<b>Theory:</b>		
	<b>Population estimation</b> • Population density, Natality, Birth rate, Mortality, fertility schedules and sex ratio computation;	B.Sc. (Hons.) Zoology Sem VI (TZH)	Wildlife Conservation and management DSE-IV
	Revision	B.Sc. (H) Biological Sciences Sem VI TBS	Animal behavior & chronobiology (DSE III)
	<b>Practicals:</b>		
	Revision/ mock exam	B.Sc. Life Sciences Sem VI	Public health & Hygiene SEC
	Revision/ mock exam	B.Sc. (Hons.) Zoology Sem II FZH	Non-Chordata II CC-III
Revision	B.Sc. (H) Sem IV SZH	Research Methodology (SEC)	



**SEMESTER WISE TEACHING PLAN (2018-2019)**  
**SRI VENKATESWARA COLLEGE**

**January-May, 2019**

**Name of the Faculty: Dr. Richa Misra**

**Department: Zoology**

**Semester: II, IV, VI (Even)**

Month		Topics	Course	Paper Code/Name
January	<b>Theory:</b> (1+2+1+2)	Introduction and significance of Renal Physiology, Structure of kidney and its functional unit, Glomerular Filtration, Tubular Reabsorption, Secretion,	B. Sc. (H) Zoology 2 <sup>nd</sup> year Sem IV	CC-IX:/Physiology: Life sustaining Systems
		Introduction to Research Methodology, Importance of proposals and surveys, Overview of research paper	B. Sc. (H) Zoology 2 <sup>nd</sup> year Sem IV	SEC/Research Methodology
		Introduction to Coelomates, Importance of Mollusca, General Characteristics	B. Sc. (H) Zoology 1 <sup>st</sup> year Sem I	CC-III/ Non-chordates II: Coelomates
		Introduction to Evolutionary Biology, Historical review of evolutionary concept: Lamarckism, Darwinism, Neo-Darwinism	B. Sc. (H) Zoology 3 <sup>rd</sup> year Sem VI	CC-XIV/Evolutionary Biology
	<b>Practicals:</b> (4+4+4=12)	Recording of blood pressure using a sphygmomanometer, Preparation of haemin and haemochromogen crystals, Enumeration of red blood cells and white blood cells using haemocytometer	B. Sc. (H) Zoology 2 <sup>nd</sup> year Sem IV	CC-IX/ Physiology: Life sustaining Systems
		Theory and Usage of various search engines such as Pubmed, Google scholar, Scopus, Web of Science	B. Sc. (H) Zoology 2 <sup>nd</sup> year Sem IV	SEC/ Research Methodology
		Restriction Mapping, Transformation efficiency, Introduction to Genomic DNA and plasmid DNA isolation	B. Sc. (H) Zoology 3 <sup>rd</sup> year Sem VI	DSE/ Animal Biotechnology
February	<b>Theory:</b>	Mechanism of urine formation; Regulation of water balance	B. Sc. (H) Zoology 2 <sup>nd</sup> year Sem IV	CC-IX:/Physiology: Life sustaining Systems
		Importance of Referencing and Understanding of Plagiarism, Discussion of various areas of Research, Motivation for Research	B. Sc. (H) Zoology 2 <sup>nd</sup> year Sem IV	SEC/Research Methodology
		Respiration in Mollusca, Pearl formation in Mollusca	B. Sc. (H) Zoology 1 <sup>st</sup> year Sem I	CC-III/ Non-chordates II
		Phylogeny, Molecular clock, Variations	B. Sc. (H) Zoology 3 <sup>rd</sup> year Sem VI	CC-XIV/Evolutionary Biology
	<b>Practicals:</b>	Examination of sections of mammalian oesophagus, stomach, duodenum, ileum, rectum liver, trachea, lung, kidney; Estimation of haemoglobin using Sahli's haemoglobinometer	B. Sc. (H) Zoology 2 <sup>nd</sup> year Sem IV	CC-IX/ Physiology: Life sustaining Systems
		Types of Reference Styles, Learning usage of Endnote, Exercises related to Plagiarism	B. Sc. (H) Zoology 2 <sup>nd</sup> year Sem IV	SEC/ Research Methodology
		Genomic DNA and plasmid DNA isolation, PCR, DNA Fingerprinting	B. Sc. (H) Zoology 3 <sup>rd</sup> year Sem VI	DSE/ Animal Biotechnology
March	<b>Theory:</b>	Regulation of acid-base balance, related Disorders, Cardiac cycle	B. Sc. (H) Zoology 2 <sup>nd</sup> year Sem IV	CC-IX:/Physiology: Life sustaining Systems
		Concept of Null and alternate hypothesis, Discussion about Survey topics and Proposal topics with students	B. Sc. (H) Zoology 2 <sup>nd</sup> year Sem IV	SEC/Research Methodology

		Torsion and Detorsion in Mollusca	B. Sc. (H) Zoology 1 <sup>nd</sup> year Sem I	CC-III/ Non-chordates II
		Population Genetics	B. Sc. (H) Zoology 3 <sup>rd</sup> year Sem VI	CC-XIV/Evolutionary Biology
	<b>Practicals</b>	Study of lung volumes and capacities by Spirometry; comparison of physiological and two pathological conditions (Eg Asthma, TB); Presentation of student assignment, Revision tests	B. Sc. (H) Zoology 2 <sup>nd</sup> year Sem IV	CC-IX/ Physiology: Life sustaining Systems
		Hypothesis building, Role of statistics, Types of graphs and its importance in Data presentation	B. Sc. (H) Zoology 2 <sup>nd</sup> year Sem IV	SEC/ Research Methodology
		Southern, Northern and Western Blotting, DNA sequencing, Restriction digestion	B. Sc. (H) Zoology 3 <sup>rd</sup> year Sem VI	DSE/ Animal Biotechnology
	<b>Assignment</b>	Topics for presentation assigned to students related to disorders affecting the various systems (Circulatory, Digestive, Urinary, Respiratory)	B. Sc. (H) Zoology 2 <sup>nd</sup> year Sem IV	CC-IX/ Physiology
		Assignment related to relevance of Non-chordate coelomate to scientific research	B. Sc. (H) Zoology 1 <sup>nd</sup> year Sem I	CC-III/Non-chordates II: Coelomates
		Assignment related to History of Life and major evolutionary events, latest discovery	B. Sc. (H) Zoology 3 <sup>rd</sup> year Sem VI	CC-XIV/Evolutionary Biology
	<b>Mid Term Test</b>	Test questions in DU exam pattern of covered topics	B. Sc. (H) Zoology 2 <sup>nd</sup> year Sem IV	CC-IX: Physiology
		Test questions in DU exam pattern of covered topics	B. Sc. (H) Zoology 1 <sup>nd</sup> year Sem I	CC-III/Non-chordates II: Coelomates
		Test questions in DU exam pattern of covered topics	B. Sc. (H) Zoology 3 <sup>rd</sup> year Sem VI	CC-XIV/Evolutionary Biology
April	<b>Theory:</b>	Discussion of Mid-term Test paper and previous year question papers, Revision of topics	B. Sc. (H) Zoology 2 <sup>nd</sup> year Sem IV	CC-IX:/Physiology: Life sustaining Systems
		Presentations of Research Proposal and Survey Reports	B. Sc. (H) Zoology 2 <sup>nd</sup> year Sem IV	SEC/Research Methodology
		Discussion of Mid-term Test paper and previous year question papers, Revision of topics	B. Sc. (H) Zoology 1 <sup>nd</sup> year Sem I	CC-III/ Non-chordates II
		Discussion of Mid-term Test paper and previous year question papers, Population Genetics, Revision of topics	B. Sc. (H) Zoology 3 <sup>rd</sup> year Sem VI	CC-XIV/Evolutionary Biology
	<b>Practicals:</b>	Revision exercises and test, viva for practical exams	B. Sc. (H) Zoology 2 <sup>nd</sup> year Sem IV	CC-IX: Physiology: Life sustaining Systems
		Revision exercises and test, viva for practical exams	B. Sc. (H) Zoology 2 <sup>nd</sup> year Sem IV	SEC: Research Methodology
		Revision exercises and test, viva for practical exams, checking of project report	B. Sc. (H) Zoology 3 <sup>rd</sup> year Sem VI	DSE: Animal Biotechnology



**SEMESTER WISE TEACHING PLAN (2018-19)**  
**SRI VENKATESWARA COLLEGE**

Name of the Faculty: Dr. Namita Nayyar

Department: Zoology

Semester: Even II, IV, VI

Month		Topics	Course	Paper Code/Name
January	<b>Theory:</b>	<b>Unit 6: Circulatory System</b> - General plan of circulation, evolution of heart and aortic arches	BSc. Zoology Hons. IV Sem	Comparative anatomy of Vertebrates: CCVIII
		<b>Unit 3: Communicable diseases</b> Different types of communicable diseases and their control measures — Tuberculosis,	B.Sc. Life Science VI Sem	Public Health and Hygiene SEC
		<b>Unit 4: Onychophora</b> General characteristics and Evolutionary significance	B.Sc. Zoology Hons. II Sem	Non-Chordata: Coelomates CC III
	<b>Practicals:</b>	-Study of scales of fishes -Frog osteology -Varanus osteology	BSc. Zoology Hons. IV Sem	Comparative anatomy of Vertebrates: CCVIII
		<b>Restriction mapping, Transformation efficiency, Introduction to genomic and plasmid DNA isolation.</b>	BSc. Zoology Hons. VI Sem	Animal Biotechnology DSE III
		1. Study of fossils from models/ pictures 2. Study of homology and analogy from suitable specimens	B.Sc. Zoology Hons. VI Sem	Evolutionary Biology CC XIV
February	<b>Theory:</b>	<b>Unit 6: Urinogenital System</b> - Succession of kidney, Evolution of urinogenital ducts, Types of mammalian uteri	BSc. Zoology Hons. IV Sem	Comparative anatomy of Vertebrates: CCVIII
		<b>Unit 4: Respiratory System 8</b> - Lungs and air sacs; Accessory respiratory organs		
		<b>Unit 3: Communicable diseases</b> Different types of communicable diseases and their control measures —Measles, Dengue, Leprosy	B.Sc. Life Science VI Sem	Public Health and Hygiene SEC
		<b>Unit 6: Echinodermata</b> General characteristics and Classification up to classes	B.Sc. Zoology Hons. II Sem	Non-Chordata: Coelomates CC III



	<b>Practicals:</b>	<ul style="list-style-type: none"> <li>- <b>Complete Varanus osteology</b></li> <li>- <b>Fowl osteology</b></li> <li>- <b>Rabbit osteology</b></li> <li>- <b>Carapace and plastron of turtle/tortoise</b></li> </ul>	<b>BSc. Zoology Hons. IV Sem</b>	<b>Comparative anatomy of Vertebrates: CCVIII</b>
		<ul style="list-style-type: none"> <li>- Genomic DNA, PCR, DNA Fingerprinting, Southern/ Northern Blotting.</li> </ul>	<b>BSc. Zoology Hons. VI Sem</b>	<b>Animal Biotechnology DSE III</b>
		<p>3. Study and verification of Hardy-Weinberg Law by chi square analysis</p> <p>4. Demonstration of role of natural selection in changing allele frequencies using simulation studies</p>	<b>B.Sc. Zoology Hons. VI Sem</b>	<b>Evolutionary Biology CC XIV</b>
March	<b>Theory:</b>	<p><b>Unit 2: Skeletal System</b></p> <ul style="list-style-type: none"> <li>- Overview of axial and appendicular skeleton, Jaw suspensorium, Visceral arches</li> </ul> <p><b>Unit 7: Nervous System</b></p> <ul style="list-style-type: none"> <li>- Comparative account of brain Autonomic nervous system,</li> </ul>	<b>BSc. Zoology Hons. IV Sem</b>	<b>Comparative anatomy of Vertebrates: CCVIII</b>
		<p><b>Unit 4: Life Style related Non-Communicable diseases.</b></p> <p>Different types of Life style related non-communicable diseases - Hypertension, Coronary Heart diseases, Stroke, Diabetes mellitus, Obesity and Mental ill-health - their causes and prevention through dietary and lifestyle modifications</p>	<b>B.Sc. Life Science VI Sem</b>	<b>Public Health and Hygiene SEC</b>
		<p><b>Unit 6: Echinodermata</b></p> <p>Water-vascular system in Asteroidea Larval forms in Echinodermata</p>	<b>B.Sc. Zoology Hons. II Sem</b>	<b>Non-Chordata: Coelomates CC III</b>
	<b>Practicals</b>	<ul style="list-style-type: none"> <li>- Skulls of Frog, Varanus. Fowl, Rabbit</li> <li>- Adaptations of Herbivorous and Carnivorous Skulls</li> <li>- Study of arterial and urinogenital system of rat.</li> </ul>	<b>BSc. Zoology Hons. IV Sem</b>	<b>Comparative anatomy of Vertebrates: CCVIII</b>
		<ul style="list-style-type: none"> <li>- Western Blotting, DNA Sequencing, Restriction Digestion, plasmid DNA isolation.</li> </ul>	<b>BSc. Zoology Hons. VI Sem</b>	<b>Animal Biotechnology DSE III</b>
		<p>4. Demonstration of role of genetic drift in changing allele frequencies using simulation studies</p> <p>Graphical representation and interpretation of data of height/ weight of a sample of 100 humans in relation to their age and sex.</p>	<b>B.Sc. Zoology Hons. VI Sem</b>	<b>Evolutionary Biology CC XIV</b>
<b>Assignment</b>	<ul style="list-style-type: none"> <li>- <b>Previous years question paper.</b></li> </ul>	<b>BSc. Zoology Hons. IV Sem</b>	<b>Comparative anatomy of Vertebrates: CCVIII</b>	

	<b>Assignment</b>	- Assignment on any broad unique topic from the syllabus.	<b>B.Sc. Zoology Hons. II Sem</b>	<b>Non-Chordata: Coelomates CC III</b>
	<b>Mid Term Test</b>	- Circulatory system, Urinogenital System, Respiratory System, Skeletal system.	<b>B.Sc. Zoology Hons. IV Sem</b>	<b>Comparative anatomy of Vertebrates: CCVIII</b>
		- Portion covered till Now.	<b>B.Sc. Zoology Hons. II Sem</b>	<b>Non-Chordata: Coelomates CC III</b>
<b>April</b>	<b>Theory:</b>	<b>Unit 7: Nervous System</b> - Spinal cord, Cranial nerves in mammals	<b>B.Sc. Zoology Hons. IV Sem</b>	<b>Comparative anatomy of Vertebrates: CCVIII</b>
		<b>Unit 8: Sense Organs</b> - Classification of receptors - Brief account of visual and auditory receptors in man		
		<b>Unit 5: Social health problems</b> Smoking, alcoholism, drug dependence and Acquired Immuno-Deficiency Syndromen (AIDS) - their causes, treatment and prevention		
		<b>Unit 6: Echinodermata</b> Affinities with Chordates	<b>B.Sc. Zoology Hons. II Sem</b>	<b>Non-Chordata: Coelomates CC III</b>
	<b>Practicals:</b>	- Mock exam, checking of project report, viva.	<b>B.Sc. Zoology Hons. II Sem</b>	<b>Comparative anatomy of Vertebrates: CCVIII</b>
		- Revision exercises and test, viva for pracs. Checking of project report.	<b>B.Sc. Zoology Hons. VI Sem</b>	<b>Animal Biotechnology DSE III</b>
Construction of phylogenetic trees with the help of bioinformatics tools (Clustal X, Phylip, NJ) and its interpretation. Revision exercises and test, viva for pracs.		<b>B.Sc. Zoology Hons. VI Sem</b>	<b>Evolutionary Biology CC XIV</b>	



**SEMESTER WISE TEACHING PLAN  
SRI VENKATESWARA COLLEGE**

**January-May, 2019**

**Name of the Faculty: Dr. Preeti Khandelwal**

**Department: Zoology**

**Semester: Even – II, IV and VI**

Month		Topics	Course	Paper Code/Name
January	<b>Theory:</b>	<b>Unit 2: Freshwater Biology</b> Physico-chemical Characteristics of lakes, Light, Temperature, Dissolved solids, carbonate, bicarbonate, phosphates and nitrates, Turbidity, Dissolved gases (oxygen and carbon dioxide)	B.Sc (Hons.) Semester IV	<b>GE IV/ Aquatic Biology</b>
		<b>Unit 4: Protein Metabolism</b> Catabolism of amino acids; Transamination, deamination, Urea cycle; Fate of C-skeleton of Glucogenic and Ketogenic amino acids	B.Sc (Hons.) Zoology (Semester IV, 2 <sup>nd</sup> year)	<b>CCX /Biochemistry of Metabolic Processes</b>
		<b>Unit 1: Introduction to Aquarium fish keeping</b> Potential scope of Aquarium Fish industry as a cottage industry, exotic and endemic species of Aquarium fishes	B.Sc Life Sciences Sem IV (Batch 2)	<b>SEC: Aquarium Fish keeping</b>
		<b>Unit 2: Biology of Aquarium fishes:</b> Common characters and sexual dimorphism of fresh water and Marine aquarium fishes such as guppy , molly , sword tail, gold fish		
	<b>Practical:</b>	-Biology of endemic and exotic aquarium fishes -Biology of Freshwater and marine fishes -Guidelines of aquarium -Cleaning of aquarium, siphoning	B.Sc Life Sciences Sem IV (Batch 2)	<b>SEC/ Aquarium fish keeping</b>
		Preparation of temporary stained squash of onion root tip to study various stages of mitosis <b>Repeat</b> Preparation of temporary stained squash of onion root tip to study various stages of mitosis	B.Sc. (Hons.) Zoology Sem II TZH	<b>CC IV/ Cell Biology</b>
		To perform Ouchterlony double immunodiffusion assay. ABO blood group determination.	B.Sc Life Sciences Sem VI(Batch 3)	<b>DSE /Immunology</b>
February	<b>Theory:</b>	Unit 2: Freshwater Biology Nutrient cycles in lakes – Nitrogen, Sulphur and Phosphorous. Streams- Different stages of stream development, physico-chemical environment, Adaptation of Hill Stream fishes. Unit 3: Marine Biology	B.Sc (Hons.) Semester IV	<b>GE IV/ Aquatic Biology</b>

		Salinity and Density of water, continental shelf, Adaptations of deep sea organisms, coral reefs, sea weeds.		
		<b>Unit 3: Lipid Metabolism</b> B-oxidation and $\omega$ -oxidation of saturated fatty acids with even and odd number of carbon atoms; ketogenesis	B.Sc (Hons.) Zoology (Semester IV)	<b>CCX</b> <b>/Biochemistry of Metabolic Processes</b>
		<b>Unit 2: Biology of Aquarium fishes</b> Common characters and sexual dimorphism of fresh water and Marine aquarium fishes such as angel fish, blue morph, anemone fish and butterfly fish <b>Unit 3: Food &amp; Feeding of Aquarium fishes</b> Use of live fish feed organisms, Preparation and	B.Sc Life Sciences Sem IV (Batch 2)	<b>SEC: Aquarium Fish keeping</b>
	<b>Practical</b>	Types and composition of fish feed Preparation of fish feed in the lab Setting up of an aquarium in the lab Techniques for fish handling and packaging	B.Sc Life Sciences Sem IV (Batch 2)	<b>SEC/ Aquarium fish keeping</b>
		Study of various stages of meiosis. Preparation of permanent slide to show the presence of Barr body in human female blood cells/cheek cells.	B.Sc. (Hons.) Zoology Sem II	<b>CC IV/ Cell Biology</b>
		Cell counting and viability of splenocytes. ELISA Immuno-electrophoresis	B.Sc Life Sciences Sem VI(Batch 3)	<b>DSE / Immunology</b>
March	<b>Theory:</b>	Unit 4: Management of Aquatic Resources Causes of pollution: Agricultural, Industrial, sewage, thermal and oil spills, eutrophication, Management and conservation (legislation), sewage treatment, water quality assessment: BOD and COD	B.Sc (Hons.) Semester IV	<b>GE IV/ Aquatic Biology</b>
		<b>Unit 3: Lipid Metabolism</b> Biosynthesis of Palmitic acid. <b>Unit 1: Overview of Metabolism</b> Catabolism vs Metabolism, shuttle systems and membrane transporters;	B.Sc (Hons.) Zoology (Semester IV)	<b>CCX</b> <b>/Biochemistry of Metabolic Processes</b>
		<b>Unit 4: Fish Transportation</b> Live fish transport- fish handling, packaging and forwarding techniques <b>Unit 5: Maintenance of Aquarium</b> General aquarium maintenance, budget for setting up aquarium fish farm as cottage industry	B.Sc Life Sciences Sem IV (Batch 2)	<b>SEC: Aquarium Fish keeping</b>
	<b>Practicals</b>	-Potential of aquarium fish farm as cottage industry Field trip to aquarium shop	B.Sc Life Sciences Sem IV(Batch 2)	<b>SEC/ Aquarium fish keeping</b>
		Preparation of permanent slide to demonstrate: i DNA by Feulgen reaction ii Mucopolysaccharides by PAS reaction	B.Sc. (Hons.) Zoology Sem II	<b>CCIV/ Cell Biology</b>

		Study of lymphoid organs: spleen, thymus, lymph nodes. Preparation of stained blood film.	B.Sc Life Sciences Sem VI(Batch 3)	<b>Immunology</b>
	<b>Assignment</b>	Coral Reefs, Sea weeds, Eutrophication, Sewage treatment, thermal and oil spill.	B.Sc (Hons.) Semester IV	<b>GE IV/ Aquatic Biology</b>
		Presentation on Exotic fish	B.Sc Life Sciences Sem IV(Batch 2)	<b>SEC: Aquarium Fish keeping</b>
	<b>Mid Term Test</b>	Unit: 4: Management of Aquatic resources	B.Sc (Hons.) Semester IV	<b>GE IV/ Aquatic Biology</b>
		Unit 3: Lipid Metabolism Unit 4: Protein Metabolism	B.Sc (Hons.) Zoology (Semester IV)	<b>CCX /Biochemistry of Metabolic Processes</b>
April	<b>Theory</b>	Revision	B.Sc (Hons.) Semester IV	<b>GE IV/ Aquatic Biology</b>
		<b>Revision</b>	B.Sc (Hons.) Zoology (Semester IV, 2 <sup>nd</sup> )	<b>CCX /Biochemistry of Metabolic</b>
		Revision and visit to fish farm	B.Sc Life Sciences Sem IV(Batch 2)	<b>SEC: Aquarium Fish keeping</b>
	<b>Practical</b>	- Evaluation of Practical File and Report Practice and repetition of practical Conduct of Mock examination.	B.Sc Life Sciences Sem IV(Batch 2)	<b>SEC/ Aquarium fish keeping</b>
		Preparation of permanent slide to demonstrate: i DNA and RNA by MGP ii Proteins by Mercurobromophenol blue/ Fast Green Repetition of all experiments Conduct of Mock examination	B.Sc. (Hons.) Zoology Sem II TZH	<b>CCIV/ Cell Biology</b>
		Evaluation of Practical File Practice and repetition of practical Conduct of Mock examination.	B.Sc Life Sciences Sem VI(Batch 3)	<b>DSE / Immunology</b>



**SEMESTER WISE TEACHING PLAN  
SRI VENKATESWARA COLLEGE**

**January-May, 2019**

**Name of the Faculty: Dr. Sadqua Shameem**

**Department: Zoology**

**Semester: II / IV / VI**

Month		Topics	Course	Paper Code/Name
JANUARY	<b>Theory:</b>	<b>Unit-1</b> Introduction to animal diversity, Whittaker's five kingdom classification, general features of chordates and non chordates Protista,	B.Sc. (Hons.) Biological Science Sem II	<b>BS – 4</b> BIODIVERSITY
		<b>Unit-2</b> Functioning of Excitable Tissue (Nerve and Muscle), Structure of neuron and brief introduction of neuroglia;	B.Sc. (Hons.) Sem II	<b>GE II/ HUMAN</b> PHYSIOLOGY
		<b>Unit-6</b> Major Events in History of Life Organic variations	B.Sc. Life Sciences Sem IV	<b>Core Course-IV</b> GENETICS AND EVOLUTIONARY BIOLOGY
	<b>Practicals:</b>	<b>Unit 2:</b> Historical review of evolutionary concept: Lamarckism .	B.Sc. (Hons.) Zoology Sem VI	<b>Core Course-XIV</b> EVOLUTIONARY BIOLOGY
		Study of following specimens: <i>Euglena</i> , <i>Paramecium</i> , <i>Sycon</i> , , <i>Tubipora</i> , <i>Taenia</i> , <i>Ascaris</i> <i>Aphrodite</i> , <i>Leech</i> , <i>Peripatus</i> , <i>Limulus</i> , Hermitcrab, Beetle, <i>Pila</i> , <i>Chiton</i> , <i>Dentalium</i> , <i>Octopus</i> , <i>Asterias</i>  <i>With continuous evaluation</i> Evaluation of students on their performance in practical and Record	B.Sc. (Hons.) Biological Science Sem II	<b>BS – 4</b> BIODIVERSITY
		Study of Human Karyotypes (normal and abnormal).  <i>With continuous evaluation</i> Evaluation of students on their performance in practical and Record	B.Sc. Life Sciences Sem IV (Two Batches)	<b>Core Course-IV</b> GENETICS AND EVOLUTIONARY BIOLOGY
FEBRAURY	<b>Theory:</b>	<b>Unit-1</b> Porifera, Cnidaria, Platyhelminthes, Aschelminthes,	B.Sc. (Hons.) Biological Science	<b>BS – 4</b> BIODIVERSITY

	<p>Annelida, Arthropoda, Mollusca, Echinodermata ,Classification, general features of Protochordata, Osteichthyes, Amphibia, Reptilia, Aves and Mammals. Principles of taxonomy, Linnaean system of classification, Binomial nomenclature. Species concepts</p>	Sem - II	
	<p><b>Unit-2</b> Structure of skeletal muscle; Mechanism of muscle contraction (Sliding filament theory); Propagation of nerve impulse (myelinated and non-</p>	B.Sc. (Hons.) Sem II	<b>GE II/ HUMAN PHYSIOLOGY</b>
	<p><b>Unit-7</b> Lamarckism, Darwinism, Neo-Darwinism <b>Unit-8</b> Types of fossils, Incompleteness of fossil record, Dating of fossils , Phylogeny of horse, Organic variations Isolating Mechanisms; Natural selection(Example: Industrial melanism); Types of natural selection (Directional, Stabilizing, Disruptive), Artificial selection <b>Unit-10</b> Biological species concept (Advantages and Limitations); Modes of speciation (Allopatric, Sympatric)</p>	B.Sc. Life Sciences Sem IV	<b>Core Course-IV GENETICS AND EVOLUTIONARY BIOLOGY</b>
	<p>Historical review of evolutionary concept: Darwinism, Neo-Darwinism <b>Unit-4</b> Sources of variations: Heritable variations and their role in evolution</p>	B.Sc. (Hons.) Zoology Sem VI	<b>Core Course-XIV EVOLUTIONARY BIOLOGY</b>
<b>Practicals:</b>	<p>Dissections/Virtualdemonstrationi Digestive and nervous system of Cockroach; Unstained mount of Placoid scales. -Study of following specimens: <i>Balanoglossus</i> ,<i>Amphioxus</i> <i>Petromyzon</i>, <i>Pristis</i>, <i>Hippocampus</i>, <i>Labeo</i>, <i>Ichthyophis/Uraeotyphlus</i>, <i>Salamander</i>, <i>Draco</i>,<i>Naja</i> Three common birds , Bat  -Visit to Biodiversity park  <i>With continuous evaluation</i> Evaluation of students on their performance in practical and Record.</p>	B.Sc. (Hons.) Biological Science Sem II	<b>BS – 4 BIODIVERSITY</b>

		<p>-Study of Mendelian Inheritance and gene interactions (Non Mendelian Inheritance) using suitable examples. Verify the results using Chi-square test.</p> <p>-Study of homology and analogy from suitable specimens/pictures</p> <p>-Study of fossil evidences from plaster cast models and pictures</p> <p><i>With continuous evaluation</i> Evaluation of students on their performance in practical and Record</p>	B.Sc. Life Sciences Sem IV (Two Batches)	<b>Core Course-IV</b> GENETICS AND EVOLUTIONARY BIOLOGY
	<b>Assignment</b>	Separate questions will be given to students from previous year question paper.	B.Sc. (Hons.) Biological Science Sem II	<b>BS – 4</b> BIODIVERSITY
		Separate questions will be given to students from previous year question paper.	B.Sc. (Hons.) Sem II	<b>GE II/ HUMAN</b> PHYSIOLOGY
		Separate questions will be given to students from previous year question paper.	B.Sc. Life Sciences Sem IV	<b>Core Course-IV</b> GENETICS AND EVOLUTIONARY BIOLOGY
		Separate questions will be given to students from previous year question paper.	B.Sc. Life Sciences Sem IV	<b>Core Course-XIV</b> EVOLUTIONARY BIOLOGY
MARCH	<b>Theory:</b>	Unit-2 Endemism, endemic animals; Assessment of mapping of biodiversity; GIS/Remotesensing; Biotechnology and Conservation, IUCN; Germplasm banks,	B.Sc. (Hons.) Biological Science Sem - II	<b>BS – 4</b> BIODIVERSITY
		<b>Unit-2</b> Neuromuscular Junction <b>Unit-4</b> Functional anatomy of kidney	B.Sc. (Hons.) Sem II	<b>GE II/ HUMAN</b> PHYSIOLOGY
		<b>Unit-8</b> Dating of fossils <b>Unit-11</b> Macro-evolutionary Principles (example: Darwin's Finches)	B.Sc. Life Sciences Sem IV	<b>Core Course-IV</b> GENETICS AND EVOLUTIONARY BIOLOGY
		<b>Unit-3</b> Three domains of life, neutral theory of molecular evolution, Molecular clock ,example of globin gene family	B.Sc. (Hons.) Zoology Sem VI	<b>Core Course-XIV</b> EVOLUTIONARY BIOLOGY



	<b>Practicals:</b>	To study faunal composition of water samples (Lucky drop method Study of a few endangered species of amphibians ,reptiles, birds and mammals of India.  <i>With continuous evaluation</i> Evaluation of students on their performance in practical and Record  -Submission of File and Biodiversity parks report, containing photographs with appropriate write up -Mock test	B.Sc. (Hons.) Biological Science Sem II	<b>BS – 4</b> BIODIVERSITY
		-Phylogeny of horse with diagrams/ cut outs of limbs and teeth of horse ancestors  -Darwin’s Finches with diagrams/ cut outs of beaks of different species - Study of Linkage, recombination, gene mapping using the data.  <i>With continuous evaluation</i> Evaluation of students on their performance in practical and Record -Submission of File and Geology museum report, containing photographs with appropriate write up -Mock test	B.Sc. Life Sciences Sem IV (Two Batches)	<b>Core Course-IV</b> GENETICS AND EVOLUTIONARY BIOLOGY
	<b><u>Mid Term Test</u></b>	Test questions in DU exam pattern of covered topics	B.Sc. (Hons.) Biological Science Sem - II	<b>BS – 4</b> BIODIVERSITY
		Test questions in DU exam pattern of covered topics	B.Sc. (Hons.) Sem II	<b>GE II/ HUMAN</b> PHYSIOLOGY
		Test questions in DU exam pattern of covered topics	B.Sc. Life Sciences Sem IV	<b>Core Course-IV</b> GENETICS AND EVOLUTIONARY
APRIL	<b>Theory</b>	National Parks, Botanical Gardens; Wildlife Sanctuaries, Sacred fauna  <b>Unit-4</b> Bioremediation, , Bioethics	B.Sc. (Hons.) Biological Science Sem - II	<b>BS – 4</b> BIODIVERSITY
		<b>Unit-4</b> Mechanism and regulation of urine formation	B.Sc. (Hons.) Sem II	<b>GE II/ HUMAN</b> PHYSIOLOGY

	<b>Unit-12</b> Mass extinction (Causes, Names of five major extinctions,		<b>Core Course-IV</b> GENETICS AND EVOLUTIONARY BIOLOGY
	<b>Unit-3</b> Molecular clock ,example of globin gene family	B.Sc. (Hons.) Zoology Sem VI	<b>Core Course-XIV</b> EVOLUTIONARY BIOLOGY
<b>Practicals:</b>	-Revision and Submission of File and Biodiversity parks report, containing photographs with appropriate write up	B.Sc. (Hons.) Biological Science Sem II	<b>BS – 4</b> BIODIVERSITY
	-Revision and Submission of File and Geology museum report, containing photographs with appropriate write up -Mock test	B.Sc. Life Sciences Sem IV (Two Batches)	<b>Core Course-IV</b> GENETICS AND EVOLUTIONARY BIOLOGY



**SEMESTER WISE TEACHING PLAN  
SRI VENKATESWARA COLLEGE**

January-May, 2018-2019

**Name of the Faculty: Dr. AARTI SEHERAWAT**

**Department: Zoology**

**Semester: Even (II/IV,VI)**

Month		Topics	Course	Paper Code/Name
January	<b>Theory:</b>	UNIT 1: Integumentary System - Structure of Integument - Soft Derivatives	BSc. Zoology Hons. IV Sem	Comparative anatomy of Vertebrates: CCVIII
	<b>Practicals:</b>	UNIT 7: Introduction to evolutionary theories - Lamarckism - Darwinism	BSc. Life Science IV Sem (Batch III)	Genetics and Evolutionary Biology: CCIV
		- Protein estimation by Lowry's method - Trace the labeled C atoms in TCA cycle	BSc. Zoology Hons. IV Sem	Biochemistry of Metabolic Processes: CCX
		- Study of human karyotype - Study of Homology and analogy	BSc. Life Science IV Sem (Batch III)	Genetics and Evolutionary Biology: CCIV
		- Determine the amount of dissolved Oxygen		Aquatic Biology: GEIV
		- Preparation of temporary mounts: blood film		Human Physiology: GEII
February	<b>Theory:</b>	UNIT 1: Integumentary System - Function - Hard Derivatives	BSc. Zoology Hons. IV Sem	Comparative anatomy of Vertebrates: CCVIII
		UNIT 7: Introduction to evolutionary theories - Neo-Darwinism UNIT 9: Process of evolutionary changes - Organic Variation - Natural Selection	BSc. Life Science IV Sem (Batch III)	Genetics and Evolutionary Biology: CCIV
	<b>Practicals:</b>	- Study of Biological Oxidation(SDH) - Study of enzymatic activity of Trypsin - Study of enzymatic activity of Lipase	BSc. Zoology Hons. IV Sem	Biochemistry of Metabolic Processes: CCX
	<b>Practicals:</b>	- Study of Phylogeny of horse - Study of fossil evidences - Study of Mendelian Inheritance (Chi square test)	BSc. Life Science IV Sem (Batch III)	Genetics and Evolutionary Biology : CCIV
		- Study of instruments used in Limnology - Determine the area of a lake using graphimetric and gravimetric method - Determine the amount of Turbidity,		Aquatic Biology: GEIV

		free carbon dioxide and alkalinity		
		<ul style="list-style-type: none"> <li>- Preparation of Haemin and Haemochromogen crystals</li> <li>- Estimation of haemoglobin using Sahli's haemoglobinometer</li> </ul>		<b>Human Physiology: GEII</b>
March	<b>Theory:</b>	<b>UNIT 3: Digestive System</b> <ul style="list-style-type: none"> <li>- Comparative account of alimentary canal</li> <li>- Associated glands (liver, pancreas, gall bladder)</li> </ul>	<b>BSc. Zoology Hons. IV Sem</b>	<b>Comparative anatomy of Vertebrates: CCVIII</b>
		<b>UNIT 9: Process of evolutionary changes</b> <ul style="list-style-type: none"> <li>- Isolating mechanism</li> <li>- Artificial Selection</li> </ul>	<b>BSc. Life Science IV Sem (Batch III)</b>	<b>Genetics and Evolutionary Biology: CCIV</b>
	<b>Practicals</b>	<ul style="list-style-type: none"> <li>- To perform Acid Phosphatase assay</li> <li>- To perform Alkaline Phosphatase assay</li> <li>- To perform SGPT</li> <li>- To perform SGOT</li> </ul>	<b>BSc. Zoology Hons. IV Sem</b>	<b>Biochemistry of Metabolic Processes: CCX</b>
		<ul style="list-style-type: none"> <li>- Study of Darwin Finches</li> <li>- Study of linkage, recombination and gene mapping</li> </ul>	<b>BSc. Life Science IV Sem (Batch III)</b>	<b>Genetics and Evolutionary Biology : CCIV</b>
		<ul style="list-style-type: none"> <li>- Study of Macrophytes, phytoplanktons and zooplanktons</li> <li>- Visit to a sewage treatment plant and report submission</li> </ul>		<b>Aquatic Biology: GEIV</b>
		<ul style="list-style-type: none"> <li>- Study of permanent histological slides</li> <li>- Preparation of temporary mounts: Neurons</li> </ul>		<b>Human Physiology: GEII</b>
	<b>Assignment</b>	<ul style="list-style-type: none"> <li>- Comparative account of Hard derivatives of integument</li> <li>- Comparative account of Soft derivatives of integument</li> <li>- Structure and function of Eye or Ear</li> </ul>	<b>BSc. Zoology Hons. IV Sem</b>	<b>Comparative anatomy of Vertebrates: CCVIII</b>
	<b>Assignment</b>	<ul style="list-style-type: none"> <li>- Mendelian Crosses, gene interaction</li> <li>- Deviations of Mendel's ratio</li> </ul>	<b>BSc. Life Science IV Sem (Batch III)</b>	<b>Genetics and Evolutionary Biology: CCIV</b>
	<b>Mid Term Test</b>	<b>UNIT 1: INTEGUMENTARY SYSTEM</b>	<b>BSc. Zoology Hons. IV Sem</b>	<b>Comparative anatomy of Vertebrates: CCVIII</b>
April	<b>Theory:</b>	<b>UNIT 3: Digestive System</b> <ul style="list-style-type: none"> <li>- Comparative account</li> <li>- Dentition</li> </ul>	<b>BSc. Zoology Hons. IV Sem</b>	<b>Comparative anatomy of Vertebrates: CCVIII</b>
		<b>UNIT 12: Extinction</b> <ul style="list-style-type: none"> <li>- Mass extinction</li> <li>- K-T extinction</li> </ul>	<b>BSc. Life Science IV Sem (Batch III)</b>	<b>Genetics and Evolutionary Biology: CCIV</b>
	<b>Practicals:</b>	<ul style="list-style-type: none"> <li>- Mock Test</li> <li>- Revision</li> </ul>	<b>BSc. Zoology Hons. IV Sem</b>	<b>Biochemistry of Metabolic Processes: CCX</b>

		<ul style="list-style-type: none"> <li>- <b>Mock Test</b></li> <li>- <b>Revision</b></li> <li>- <b>Practice of Numericals</b></li> </ul>	<b>BSc. Life Science</b> <b>IV Sem</b> <b>(Batch III)</b>	<b>Genetics and</b> <b>Evolutionary</b> <b>Biology : CCIV</b>
		<ul style="list-style-type: none"> <li>- <b>Mock Test</b></li> <li>- <b>Revision</b></li> </ul>		<b>Aquatic Biology:</b> <b>GEIV</b>
		<ul style="list-style-type: none"> <li>- <b>Mock Test</b></li> <li>- <b>Revision</b></li> </ul>		<b>Human</b> <b>Physiology: GEII</b>

**SEMESTER WISE TEACHING PLAN (2018-19)****EVEN SEMESTER****SRI VENKATESWARA COLLEGE****Name of the Faculty: Geeta Jayaram Sodhi****Department: Sociology****Semester: II**

Month		Topic(s)	Course	Paper Code/Name
JAN	<b>Theory</b>	1. Plurality of the Sociological Perspective 2. Functionalism	Core Course-03	Introduction to Sociology II
	<b>Practical</b>	NA	NA	NA
	<b>Tutorial</b>	Plurality of the Sociological Perspective with regard to Theory and Research	Core Course-03	Introduction to Sociology II
FEB	<b>Theory</b>	1. Interpretive Sociology 2. Interactionism	Core Course-03	Introduction to Sociology II
	<b>Practical</b>	NA	NA	NA
	<b>Tutorial</b>	Functionalist Perspective of Society	Core Course-03	Introduction to Sociology II
MARCH	<b>Theory</b>	1. Conflict Theory 2. Feminist Theory	Core Course-03	Introduction to Sociology II

	<b>Practical</b>	NA	NA	NA
	<b>Tutorial</b>	Interpretive Sociology	Core Course-03	Introduction to Sociology II
	<b><u>Assignment</u></b> <b>Mid Sem Exam</b>	Examine the Functionalist perspective of Society Topics 1 and 2	Core Course-03	Introduction to Sociology II
APRIL	<b>Theory</b>	1. Structuralism	Core Course-03	Introduction to Sociology II
	<b>Practical</b>	NA	NA	NA
	<b>Tutorial</b>	Feminist Perspective	Core Course-03	Introduction to Sociology II



SEMESTER WISE TEACHING PLAN (2018-19)

EVEN SEMESTER

SRI VENKATESWARA COLLEGE

Name of the Faculty: Geeta Jayaram Sodhi

Department: Sociology

Semester: IV

Month		Topics	Course	Paper Code/Name
JAN	<b>Theory</b>	1. Sociological Research 2. Objectivity in Social sciences	Core Course 4	Methods of Sociological Enquiry
	<b>Practical</b>	NA	NA	NA
	<b>Tutorial</b>	What is Sociological Research ?	Core Course 4	Methods of Sociological Enquiry
FEBRUARY	<b>Theory</b>	1. Reflexivity 2. Comparative Method	Core Course 4	Methods of Sociological Enquiry
	<b>Practical</b>	NA	NA	NA
	<b>Tutorial</b>	Comparative Method	Core Course 4	Methods of Sociological Enquiry



MARCH	<b>Theory</b>	1. Ethnographic Method 2. Theory and Research	Core Course 4	Methods of Sociological Enquiry
	<b>Practical</b>	NA	NA	NA
	<b>Tutorial</b>	Ethnographic Method	Core Course 4	Methods of Sociological Enquiry
	<b><u>Assignment</u></b> <b><u>Mid SemExam</u></b>	What is the nature of Sociological Research? Topics 1.1 and 1.2	Core Course 4	Methods of Sociological Enquiry
APRIL	<b>Theory</b>	Constructing the Object of Research	Core Course 4	Methods of Sociological Enquiry
	<b>Practical</b>	NA	NA	NA
	<b>Tutorial</b>	Quantitative and Qualitative Methods in Research	Core Course 4	Methods of Sociological Enquiry



## SEMESTER WISE TEACHING PLAN (2018-19)

### EVEN SEMESTER

### SRI VENKATESWARA COLLEGE

**Name of the Faculty: Nabanipa Bhattacharjee**

**Department: Sociology**

**Semester: BA (H), Semester II**

Month		Topic(s)	Course	Paper Code/Name
JANUARY	<b>Theory</b>	India as an Object of Knowledge: A discursive discourse; nationalist discourse	Core Course 03 (C03)	Sociology of India II
	<b>Practical</b>	NA	NA	NA
	<b>Tutorial</b>	Reading Kaviraj and Srinivas on the nationalist and post-colonial discourses	Core Course 03 (C03)	Sociology of India II
FEBRUARY	<b>Theory</b>	Indological and ethnographic approaches to India including disciplinary history of Indian sociology; Sanskritization and mobility; Dalit movement.	Core Course 03 (C03)	Sociology of India II
	<b>Practical</b>	NA	NA	NA
	<b>Tutorial</b>	Conceptualizing Dalit identity and tracing the trajectory of Dalit movement in India.	Core Course 03 (C03)	Sociology of India II

MARCH	<b>Theory</b>	Mapping resistance in the contexts of women, peasant and ethnic movements in India; rise and growth of the Indian middle class.	Core Course 03 (C03)	Sociology of India II
	<b>Practical</b>	NA	NA	NA
	<b>Tutorial</b>	Discussion on ethnicity, nation and citizenship by exploration of the Assam movement.	Core Course 03 (C03)	Sociology of India II
	<b>Assignment (10 Marks)</b>	Write an essay on the Dalit movement in India (1200- 1500 words, TNR & 12 font, 1.5 space, justified)	Core Course 03 (C03)	Sociology of India II
APRIL	<b>Theory</b>	Communalism in India; the history & growth of secularism, citizenship and identity in India.	Core Course 03 (C03)	Sociology of India II
	<b>Practical</b>	NA	NA	NA
	<b>Tutorial</b>	Mapping the debates on secularism as an ideology; problems faced by Indian secularism particularly since independence.	Core Course 03 (C03)	Sociology of India II
	<b>Mid-Semester Examination (10 Marks)</b>	Two short essays (350 words each) to be attempted on peasant and women's movements in India.	Core Course 03 (C03)	Sociology of India II

MAY	<b>Theory</b>	Understanding the varieties of secularism in India.	Core Course 03 (C03)	Sociology of India II
	<b>Practical</b>	NA	NA	NA
	<b>Tutorial</b>	Revision of the entire syllabus depending on student feedback and demand.	Core Course 03 (C03)	Sociology of India II



**SEMESTER WISE TEACHING PLAN (2018-19)**

**EVEN SEMESTER**

**SRI VENKATESWARA COLLEGE**

**Name of the Faculty: Nabanipa Bhattacharjee**

**Department: Sociology**

**Semester: BA (Program), Semester VI**

Month		Topics	Course	Paper Code/Name
JANUARY	<b>Theory</b>	Introducing economic sociology; economy as an embedded process; substantivist and formalist approaches	Generic Elective 02 (GE 02)	Economy and Society
	<b>Practical</b>		NA	NA
	<b>Tutorial</b>	Discuss Karl Polanyi's contribution to economic sociology	Generic Elective 02 (GE 02)	Economy and Society
FEBRUARY	<b>Theory</b>	Functionalist approach in economic sociology; domestic mode of production; introduction to peasant economy	Generic Elective 02 (GE 02)	Economy and Society
	<b>Practical</b>	NA	NA	NA
	<b>Tutorial</b>	With reference to Marshall Sahlins define and discuss the features of domestic mode of production	Generic Elective 02 (GE 02)	Economy and Society

MARCH	<b>Theory</b>	Understanding Peasant economy with the help of Eric Wolf's work; socialist economies of eastern Europe; examining capitalism and its mode of production	Generic Elective 02 (GE 02)	Economy and Society
	<b>Practical</b>	NA	NA	NA
	<b>Tutorial</b>	Write an essay on socialist mode of production and the reasons for its failure	Generic Elective 02 (GE 02)	Economy and Society
	<b><u>Assignment (10 Marks)</u></b>	Define and discuss the domestic mode of production	Generic Elective 02 (GE 02)	Economy and Society
APRIL	<b>Theory</b>	Globalization as an economic and cultural process; Mcdonaldization as a process; cross-cultural consumption; theories of economic development	Generic Elective 02 (GE 02)	Economy and Society
	<b>Practical</b>		NA	NA
	<b>Tutorial</b>	Cross-cultural consumption is a reality in the modern world. Elaborate.	Generic Elective 02 (GE 02)	Economy and Society
	<b><u>Mid-Semester Examination (10Marks)</u></b>	Define peasant economy and discuss its specific mode of production	Generic Elective 02 (GE 02)	Economy and Society

MAY	<b>Theory</b>	Theories of development [contd.]	Generic Elective 02 (GE 02)	Economy and Society
	<b>Practical</b>	NA	NA	NA
	<b>Tutorial</b>	Revision of the entire syllabus depending on student feedback and demand.	Generic Elective 02 (GE 02)	Economy and Society



**SEMESTER WISE TEACHING PLAN (2018-19)**

**EVEN SEMESTER**

**SRI VENKATESWARA COLLEGE**

**Name of the Faculty: DR. URMI BHATTACHARYYA**

**Department: SOCIOLOGY**

**Semester: IV**

**Course Details : B. A. (Hons.) Core Course 08 – Sociology of Kinship**

Month		Topics	Course	Paper Code/Name
JANUARY	<b>Theory</b>	Key Approaches in Kinship:  Descent , Alliance, Cultural	Core Course 08	Sociology of Kinship
	<b>Practical</b>	NA	NA	NA
	<b>Tutorial</b>	Explaining kinship through the study of descent. The study of African societies by early anthropologists  Difference b/w cultural and structural approaching kinship	Core Course 08	Sociology of Kinship
FEBRUARY	<b>Theory</b>	Concepts of family, household, domestic groups	Core Course 08	Sociology of Kinship
	<b>Practical</b>	NA	NA	NA
	<b>Tutorial</b>	How did Schneider reconceptualize kinship and its meaning?  How do concepts of family and domestic cycle redefine our understanding of kinship	Core Course 08	Sociology of Kinship

MARCH	<b>Theory</b>	The anthropological definition of marriage	Core Course 08	Sociology of Kinship
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		Contemporary anthropological definitions of marriage Relatedness		
	<b>Practical</b>	NA	NA	NA
	<b>Tutorial</b>	Exploring the definition of kinship among the Nayars, Sinhalese law  Hindu marriage law  Relatedness among the Malays	Core Course 08	Sociology of Kinship
	<b><u>Assignment 01</u></b>	Write a note on the structural principles underlying African kinship systems.	Core Course 08	Sociology of Kinship
APRIL	<b>Theory</b>	Gender and kinship  Reconstructing families	Core Course 08	Sociology of Kinship
	<b>Practical</b>		NA	NA
	<b>Tutorial</b>	Interconnections of gender and kinship  How do chosen families redefine kinship	Core Course 08	Sociology of Kinship
	<b><u>Assignment 02</u></b>  <u>(in lieu of the mid-sem test)</u>	How are elements of biology and culture synthesized and reflected in kinship? Provide illustrations	Core Course 08	Sociology of Kinship
MAY	<b>Theory</b>	Questioning biological paternity/maternity with IVF	Core Course 08	Sociology of Kinship

	<b>Practical</b>	NA	NA	NA
	<b>Tutorial</b>	New reproductive technologies and the construction of identity	Core Course 08	Sociology of Kinship



**SEMESTER WISE TEACHING PLAN (2018-19)**

**EVEN SEMESTER**

**SRI VENKATESWARA COLLEGE**

**Name of the Faculty: DR. URMI BHATTACHARYYA**

**Department: SOCIOLOGY**

**Semester: VI**

**Course Details : B. A. (Hons.) DSE – Visual Culture**

Month		Topics	Course	Paper Code/Name
JANUARY	<b>Theory</b>	Introducing visual culture and the process of seeing  The Spectacles of Modernity  Critiquing the history of visual culture	DSE 07	Visual Culture
	<b>Practical</b>	NA	NA	NA
	<b>Tutorial</b>	Explaining the social construction of seeing  How have ways of seeing influenced our knowledge throughout history  Critiquing technical modernity  How can visual culture escape the dominant narrative of the West	DSE 07	Visual Culture
FEBRUARY	<b>Theory</b>	Narrative and visual forms of perception in contemporary life  Panopticism, Power and visuality  Representing Authority in Colonial India	DSE 07	Visual Culture
	<b>Practical</b>	NA	NA	NA

	<b>Tutorial</b>	Global events and local narratives  How did visibility become a source of power  What is countervisuality  How was authority symbolically represented in colonial India	DSE 07	Visual Culture
MARCH	<b>Theory</b>	State and Photographic Records  Critical Art  Representation, theatre and resistance	DSE 07	Visual Culture
	<b>Practical</b>	NA	NA	NA
	<b>Tutorial</b>	Photography, technology and truth  Problems and possibilities of critical art Carnival and theatre as subversive contexts	DSE 07	Visual Culture
	<b>Assignment 01</b>	What according to Debord is at the heart of unrealism in present-day society? Explain how it leads to a visible negation of life itself. Give your personal observations.	DSE 07	Visual Culture
APRIL	<b>Theory</b>	Visual Practices and identity formation  Everyday life and visibility Printed image and identity Globalism, visibility and identity	DSE 07	Visual Culture
	<b>Practical</b>	NA	NA	NA
	<b>Tutorial</b>	How does technology contribute to the restructuring of space and identity  How does the practice of everyday life involving tactics and strategies help in the understanding of visibility  Technologically equipped forms of visibility and the definition of the market as well as individual identity	DSE 07	Visual Culture

	<b><u>Assignment 02</u></b>  <b><u>(in lieu of the mid-sem test)</u></b>	With reference to Foucault's panopticism, write a note on the different forms of discipline as witnessed in the 18 <sup>th</sup> CE plague-stricken town and the 19 <sup>th</sup> CE panoptic establishment.	DSE 07	Visual Culture
MAY	<b>Theory</b>	Revision	DSE 07	Visual Culture
	<b>Practical</b>	NA	NA	NA
	<b>Tutorial</b>	Revision and clarification of doubts	DSE 07	Visual Culture



SEMESTER WISE TEACHING PLAN (2018-19)

EVEN SEMESTER

SRI VENKATESWARA COLLEGE

Name of the Faculty: Antasa Vairagya

Department: Sociology

Semester: IV BA (Hons)

Month		Topics	Course	Paper Code/Name
JANUARY	<b>Theory</b>	The Gendered Society; Anthropology at the Front Lines of Gender-Based Violence	Generic Elective04	Gender and Violence
	<b>Practical</b>	NA	NA	NA
	<b>Tutorial</b>	NA	NA	NA
FEBRUARY	<b>Theory</b>	Caste and Gender; Dalit Women Speak Out; Domestic Violence	Generic Elective 04	Gender and Violence
	<b>Practical</b>	NA	NA	NA
	<b>Tutorial</b>	What is gendered violence	Generic Elective 04	Gender and Violence

MARCH	<b>Theory</b>	Enforcing Cultural Codes; Variation in Sexual Violence During War; Sexual Harassment at Workplace; Rape and Sexual Assaults on Women; Rewards of Rape; Recovering Subversions	Generic Elective 04	Gender and Violence
	<b>Practical</b>	NA	NA	NA
	<b>Tutorial</b>	NA	NA	NA
	<b><u>Assignment</u></b>	On Flavia Agnes, My Story, Our Story: Building Broken Lives	Generic Elective 04	Gender and Violence
APRIL	<b>Theory</b>	The other side of silence; Only words; Violence Against Women; This thing Called Justice	Generic Elective 04	Gender and Violence
	<b>Practical</b>	NA	NA	NA
	<b>Test</b>	Enforcing Cultural Codes	Generic Elective 04	Gender and Violence



**SEMESTER WISE TEACHING PLAN (2018-19)**

**EVEN SEMESTER**

**SRI VENKATESWARA COLLEGE**

**Name of the Faculty: Antasa Vairagya**

**Department: Sociology**

**Semester: IV BA (P)**

Month		Topics	Course	Paper Code/Name
JANUARY	<b>Theory</b>	Sex, Gender and Sexuality	SEC	Gender Sensitization
	<b>Practical</b>	NA	NA	NA
	<b>Tutorial</b>	NA	NA	NA
FEBRUARY	<b>Theory</b>	Gender Rights and Law	SEC	Gender Sensitization
	<b>Practical</b>	NA	NA	NA
	<b>Tutorial</b>	What is the difference between gender and sex	SEC	Gender Sensitization



MARCH	<b>Theory</b>	Gender, Family, Community and the State	SEC	Gender Sensitization
	<b>Practical</b>	NA	NA	NA
	<b>Tutorial</b>	NA	NA	NA
	<b><u>Assignment</u></b>	On Sex, Gender and Sexuality	SEC	Gender Sensitization
APRIL	<b>Theory</b>	Intersections of Caste, Class, Religion, Region and Disability	SEC	Gender Sensitization
	<b>Practical</b>	NA	NA	NA
	<b>Test</b>	Domestic Violence	SEC	Gender Sensitization



**SEMESTER WISE TEACHING PLAN (2018-19)**

**EVEN SEMESTER**

**SRI VENKATESWARA COLLEGE**

**Name of the Faculty: Dr. Nupurnima Yadav**

**Department: Sociology**

**Semester: 6<sup>th</sup> B.A (Hons) (January-June, 2019)**

**Paper: Core course 14, Sociological Research Methods – II**

Month		Topic(s)	Course	Paper Code/Name
January	<b>Theory</b>	The Process of Social Research Introduction to the theory of Concepts and Hypothesis	Core course 14	Sociological Research Methods – II
	<b>Practical</b>	NA	NA	NA
	<b>Tutorial</b>	Students were divided into three groups, each group comprising of 20 students. They were asked to choose a topic of their choice and prepare a research report.		
February	<b>Theory</b>	Field (Issues and Context)  Survey Methods: Sampling,	Core Course-14	Sociological Research Methods – II
	<b>Practical</b>	NA	NA	NA
	<b>Tutorial</b>	The concept of field was explored and each student was advice to problematize their respective field of choice.		

March	<b>Theory</b>	Observation: Participant and non-participant. Graphical and Diagrammatic Presentation of Data(Bar diagrams, Pie-diagram, Histogram, Frequency Polygon, Smoothed frequencycurve and Ogives)	Core Course-14	Sociological Research Methods – II
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	<b>Practical</b>	NA	NA	NA
	<b>Tutorial</b>	Supervision of their Research questions and techniques of doing research. their interview schedules and questionnaires were closely		
	<b><u>Mid-Semesterexam (10)</u></b>			
April	<b>Theory</b>	Measures of Central Tendency (Simple Arithmetic Mean, Median and Mode)	Core Course-14	Sociological Research Methods – II
	<b>Practical</b>	NA	NA	NA
	<b>Tutorial</b>	Various tools from statistics were explored to ease their respective data projections.		

	<b><u>Project</u></b> <b>(10Marks)</b>			Sociological Research Methods – II
May	<b>Theory</b>	Standard Deviation, Variance and Covariance	Core Course-14	Sociological Research Methods – II
	<b>Practical</b>	NA	NA	NA
	<b>Tutorial</b>		Core Course-14	Sociological Research Methods – II



SEMESTER WISE TEACHING PLAN (2018-19)

EVEN SEMESTER

SRI VENKATESWARA COLLEGE

Name of the Faculty: Nupurnima Yadav

Department: Sociology

Semester: VI B.A(Hons) (January-June 2019) Paper: DSE

06 Indian Sociological Traditions

Month		Topics	Course	Paper Code/Name
January	<b>Theory</b>	G.S Ghurye: Caste and Race City and Civilization Radhakamal Mukerjee : Social Ecology	DSE 06	Indian Sociological Traditions
	<b>Practical</b>	NA	NA	NA
	<b>Tutorial</b>	Discussion on the respective biographies of each scholar and engaging students for their review of Ghurye and Mukerjee's work	DSE 06	Indian Sociological Traditions
February	<b>Theory</b>	Radhakamal Mukerjee : Personality, Society, Values.  D P Mukerji: Tradition and Modernity Middle Class	DSE 06	Indian Sociological Traditions
	<b>Practical</b>	NA	NA	NA

	<b>Tutorial</b>	The boundaries of contemporary middle class were explored and students were asked to reflect on how social order impinges on their individual personality and value system	DSE 06	Indian Sociological Traditions
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March	<b>Theory</b>	M.N. Srinivas: Social Change  Verrier Elwin: Tribes in India	DSE 06	Indian Sociological Traditions
	<b>Practical</b>	NA	NA	NA
	<b>Tutorial</b>	Each student was asked to locate the idea of modernity in contemporary society and juxtapose that with the tribal societies.	DSE 06	Indian Sociological Traditions
	<b><u>Assignment (10 Marks)</u></b>	Values are intrinsic as well as instrumental. Elucidate the statement through the ideas of R.K Mukerjee.		
April	<b>Theory</b>	Irawati Karve : Gender and Kinship  Leela Dube: Caste and Gender	DSE 06	Indian Sociological Traditions

	<b>Practical</b>	NA	NA	NA
	<b>Tutorial</b>	Exploring Biographies of both the scholars and how each of them contributed towards the	DSE 06	Indian Sociological Traditions
	<b><u>Mid-Semester Examination (10 Marks)</u></b>	fortification of Gender studies in India.		

May	<b>Theory</b>		DSE 06	Indian Sociological Traditions
	<b>Practical</b>	NA	NA	NA
	<b>Tutorial</b>		DSE 06	Indian Sociological Traditions







**SEMESTER WISE TEACHING PLAN  
SRI VENKATESWARA COLLEGE**

Name of the Faculty : Dr. S. Vivekananthan  
Department : Tamil  
CBCS Semester : II

Month	Theory/Practical	Topics	Course	Paper code/Name
July	Theory	Study of Important Authors: Tamil Techniques of epics and Kaviyarangam	B.A Prog Tamil DSC	62081210
August	Theory	Study of Important Authors: Tamil life of Mudiyarasan	B.A Prog Tamil DSC	62081210
September	Theory Assignment	Study of Important Authors: Tamil Creative style of Introduction of Mudiyarasan and contemporary writers Mudiyarasan	B.A Prog Tamil DSC	62081210
October	Theory Mid-Term Test	Study of Important Authors: Tamil Mudiyarasan Kaappiya Punaithiran	B.A Prog Tamil DSC	62081210
November	Theory	Study of Important Authors: Tamil Art and Ideology of Mudiyarasan	B.A Prog Tamil DSC	62081210



**SEMESTER WISE TEACHING PLAN  
SRI VENKATESWARA COLLEGE**

Name of the Faculty : Dr. S. SEENIVASAN

Department : Tamil

CBCS Semester : II

Month	Theory/Practical	Topics	Course	Paper code/Name
July	Theory	Study of Important Authors: Tamil Introduction of EVR. Periyar and contemporary Social Reformers	B.A Prog Tamil DSC	62081210
August	Theory	Study of Important Authors: Tamil Vaikkam fight	B.A Prog Tamil DSC	62081210
September	Theory Assignment	Study of Important Authors: Tamil Journalistic style of EVR Periyar Social and Political life of Periyar	B.A Prog Tamil DSC	62081210
October	Theory Mid-Term Test	Study of Important Authors: Tamil Views & Thoughts of EVR. Periyar	B.A Prog Tamil DSC	62081210
November	Theory	Study of Important Authors: Tamil Political Ideology of EVR Periyar	B.A Prog Tamil DSC	62081210



**SEMESTER WISE TEACHING PLAN  
SRI VENKATESWARA COLLEGE**

Name of the Faculty : Dr. S. Vivekananthan

Department : Tamil

CBCS Semester : IV

Month	Theory/Practical	Topics	Course	Paper code/Name
July	Theory	Study of Important Texts: Nedunalvaadai Introduction of Sangam literature	B.A Prog Tamil DSC	62081436
August	Theory	Study of Important Texts: Nedunalvaadai Introduction of Sangam Literature and Nedunalvaadai	B.A Prog Tamil DSC	62081436
September	Theory Assignment	Study of Important Texts: Nedunalvaadai Life style of Forest land (Mullai) Concept of Akam and Puram	B.A Prog Tamil DSC	62081436
October	Theory Mid-Term Test	Study of Important Texts: Nedunalvaadai Nedunalvaadai in Sangam Literature	B.A Prog Tamil DSC	62081436
November	Theory	Study of Important Texts: Nedunalvaadai Expressions of the Characters and culture, custom of the people	B.A Prog Tamil DSC	62081436



**SEMESTER WISE TEACHING PLAN**  
**SRI VENKATESWARA COLLEGE**

Name of the Faculty : Dr. S. SEENIVASAN

Department : Tamil

CBCS Semester : IV

Month	Theory/Practical	Topics	Course	Paper code/Name
July	Theory	Study of Important Texts: Kuyilpaattu Introduction of Subramania Bharathi and contemporary Poets	B.A Prog Tamil DSC	62081436
August	Theory	Study of Important Texts: Kuyilpaattu Kuyilpaattu in Barathi's Epics	B.A Prog Tamil DSC	62081436
September	Theory Assignment	Study of Important Texts: Kuyilpaattu Bharathiyin Kuyilpaattu Punaithiran. Creative Style and Techniques of Kuyilpaattu	B.A Prog Tamil DSC	62081436
October	Theory Mid-Term Test	Study of Important Texts: Kuyilpaattu Views & Description of Nature in Kuyilpaattu	B.A Prog Tamil DSC	62081436
November	Theory	Study of Important Texts: Kuyilpaattu Emotions and Expressions of Characters	B.A Prog Tamil DSC	62081436



**SEMESTER WISE TEACHING PLAN  
SRI VENKATESWARA COLLEGE**

Name of the Faculty : Dr. S. Vivekananthan

Department : Tamil

CBCS Semester : VI

Month	Theory/Practical	Topics	Course	Paper code/Name
July	Theory	Selected Texts: Poetry & Play : Kudumba Vilakku Life history of Bharathi Dasan and contemporary Poets	B.A Prog Tamil DSE	62087640
August	Theory	Selected Texts: Poetry & Play : Kudumba Vilakku Study of culture and customs of Tamils	B.A Prog Tamil DSE	62087640
September	Theory Assignment	Selected Texts: Poetry & Play : Kudumba Vilakku Kudumba Vilakku in Modern Epic	B.A Prog Tamil DSE	62087640
October	Theory Mid-Term Test	Selected Texts: Poetry & Play : Kudumba Vilakku Study of Characters in Kudumba Vilakku	B.A Prog Tamil DSE	62087640
November	Theory	Selected Texts: Poetry & Play : Kudumba Vilakku Expressions of the Women Characters	B.A Prog Tamil DSE	62087640



**SEMESTER WISE TEACHING PLAN  
SRI VENKATESWARA COLLEGE**

Name of the Faculty : Dr. S. SEENIVASAN

Department : Tamil

CBCS Semester : VI

Month	Theory/Practical	Topics	Course	Paper code/Name
July	Theory	Selected Texts: Poetry & Play : Durkkira Avalam Outline of modern street play	B.A Prog Tamil DSE	62087640
August	Theory	Selected Texts: Poetry & Play : Durkkira Avalam Durkkira Avalam in Modern Tamil Plays	B.A Prog Tamil DSE	62087640
September	Theory Assignment	Selected Texts: Poetry & Play : Durkkira Avalam Study of Characters in Durkkira avalam Character study of Durkkiran	B.A Prog Tamil DSE	62087640
October	Theory Mid-Term Test	Selected Texts: Poetry & Play : Durkkira Avalam Study of Social conflicts in Durkkira Avalam	B.A Prog Tamil DSE	62087640
November	Theory	Selected Texts: Poetry & Play : Durkkira Avalam Techniques of Tamil Play and Durkkira Avalam	B.A Prog Tamil DSE	62087640



**SEMESTER WISE TEACHING PLAN  
(2018-2019)  
SRI VENKATESWARA COLLEGE**

Name of the Faculty: **Dr. Haokam Vaiphei**  
 Department: **Political Science**  
 Even Semester: **IV/VI/II**

Name of the Paper: **Policy and Administration in India, IV SEM**

Month		Topic	Course	Paper Code/Name
<b>January</b>	<b>Theory</b>	Public Policy: 1. Definition, Characteristics and models 2. Public Policy Process in India	Honours Core Paper	<b>12321402_OC</b>
	<b>Practicals</b>			
	<b>Tutorials</b>	Public Policy		
<b>February</b>	<b>Theory</b>	Decentralization: 1. Meaning Significance and approaches and types 2. Local Self-government in India: Rural-Urban		
	<b>Practicals</b>			
	<b>Tutorials</b>	Decentralization		
	<b>Assignment</b>	Administration of various states and issues of Public Policy		
<b>March</b>	<b>Theory</b>	Budget: 1. Concept and Significance of Budget 2. Budget cycle in India 3. Various Approaches and Types of Budgeting		
	<b>Practicals</b>			
	<b>Tutorials</b>	Union Budget		
<b>April</b>	<b>Theory</b>	Citizen and Administration Interface 1. Public Service Delivery 2. Redressal of Public Grievances: RTI, Lokpal, Citizen's Charter and E-Governance 3. Social Welfare Administration: Concept and Approaches of Social Welfare & Social Welfare Policies		
	<b>Practicals</b>			
	<b>Tutorials</b>	E-Charter		
	<b>Test</b>	Presentations of Projects		
<b>May</b>	<b>Theory</b>	Social Welfare Policies Right to Education		
	<b>Practicals</b>			
	<b>Tutorials</b>	Various Schemes		

Name of the Paper: **Your Laws and Your Rights (SEC) IV SEM**

Month		Topic	Course	Paper Code/Name
<b>January</b>	<b>Theory</b>	Rule of Law and the Criminal Justice system in India	Honours SEC Paper	<b>12323901_OC</b>

	<b>Practicals</b>			
	<b>Tutorials</b>	Criminal Justice		
<b>February</b>	<b>Theory</b>	Laws Relating to Criminal Justice Administration in India		
	<b>Practicals</b>			
	<b>Tutorials</b>			
	<b>Assignment</b>	<b>Any one:</b> Reservation system in India Surveillance and Privacy in India Racism in India Capital Punishment in India Safety of Women in India		
<b>March</b>	<b>Theory</b>	How to file a complaint, First Information Report (FIR) Detention, arrest and bail		
	<b>Practicals</b>			
	<b>Tutorials</b>	FIR		
<b>April</b>	<b>Theory</b>	<b>Gender:</b> the protection of women against domestic violence, rape and sexual harassment <b>Caste:</b> laws abolishing untouchability and providing protection against atrocities		
	<b>Practicals</b>			
	<b>Tutorials</b>	Domestic Violence		
	<b>Test</b>	Presentations		
<b>May</b>	<b>Theory</b>	Class: laws concerning minimum wages d. Disability and equality of participation and opportunity		
	<b>Practicals</b>			
	<b>Tutorials</b>	Affirmative Action in India		

Name of the Paper: **Colonialism and Nationalism in India (DSE) VI SEM**

Month		Topic	Course	Paper Code/Name
<b>January</b>	<b>Theory</b>	<b>Colonialism &amp; Nationalism:</b> a. Main perspectives on colonialism: Liberalism, Marxism, Postcolonialism b. Approaches to the study of nationalism in India: Nationalist, Imperialist, Marxist, and Subaltern interpretations	Honours DSE Paper	<b>12327905</b>
	<b>Practicals</b>			
	<b>Tutorials</b>	Subaltern Approach		
<b>February</b>	<b>Theory</b>	<b>Colonial Rule in India and its impact:</b> a. Constitutional developments and the colonial state b. <b>Colonial ideology of civilizing mission:</b> Utilitarians and Missionaries c. Impact on agriculture, land relations, industry and ecology		
	<b>Practicals</b>			
	<b>Tutorials</b>	Civilizing Mission		
	<b>Assignment</b>	Write an essay on your idea of India Minimum word limit: 1300		
<b>March</b>	<b>Theory</b>	<b>Reform and Resistance:</b> a. The 1857 rebellion b. Major social and religious movements c. Education and the rise of the new middle class		



	<b>Practicals</b>			
	<b>Tutorials</b>	Rise of Middle Class		
<b>April</b>	<b>Theory</b>	<b>Nationalist Politics and Expansion of its Social Base</b> a. Phases of the Nationalist Movement: Liberal constitutionalist, Swadeshi and the Radicals, Formation of the Muslim League b. Gandhi and mass mobilization: Non-cooperation, Civil Disobedience, and Quit India Movements c. Socialist alternatives: Congress socialists, Communists d. Communalism in Indian Politics e. The two-nation theory, negotiations over partition		
	<b>Practicals</b>			
	<b>Tutorials</b>			
	<b>Test</b>	Presentations of Assignments		
<b>May</b>	<b>Theory</b>	Social Movements a. The Women's Question: participation in the national movement and its impact b. The Caste Question: anti-Brahmanical Politics c. Peasant, Tribals, and Workers movements		
	<b>Practicals</b>			
	<b>Tutorials</b>	Women empowerment		

Name of the Paper: **Public Opinion & Survey Research BA (P) SEM-IV AECC**

Month		Topic	Course	Paper Code/Name
<b>January</b>	<b>Theory</b>	Introduction to the course lectures Definition and characteristics of public opinion, conceptions and characteristics, debates about its role in a democratic political system, uses for opinion poll	BA (P) SEC Paper	Public Opinion & Survey Research
	<b>Practicals</b>			
	<b>Tutorials</b>			
<b>February</b>	<b>Theory</b>	<b>Measuring Public Opinion with Surveys:</b> Representation and sampling What is sampling? Why do we need to sample? Sample design. Sampling error and non-response		
	<b>Practicals</b>			
	<b>Tutorials</b>			
	<b>Assignment</b>	<b>Any topic on Unit I, II &amp; III</b>		
<b>March</b>	<b>Theory</b>	<b>Types of sampling:</b> Non random sampling (quota, purposive and snowball sampling); random sampling: simple and stratified		
	<b>Practicals</b>			
	<b>Tutorials</b>			
<b>April</b>	<b>Theory</b>	<b>Survey Research</b> Interviewing: Interview techniques pitfalls, different types of and forms of interview		
	<b>Practicals</b>			
	<b>Tutorials</b>			

	<b>Test</b>			
<b>May</b>	<b>Theory</b>	Questionnaire: Question wording; fairness and clarity.		
	<b>Practicals</b>			
	<b>Tutorials</b>			



(Dr. Haokam Vaiphei)  
Assistant Professor  
Department of Political Science



**SEMESTER WISE TEACHING PLAN  
(2018-2019)  
SRI VENKATESWARA COLLEGE**

Name of the Faculty: **Dr. Haokam Vaiphei**  
 Department: **Political Science**  
 Even Semester: **IV/VI/II**

Name of the Paper: **Policy and Administration in India, IV SEM**

Month		Topic	Course	Paper Code/Name
<b>January</b>	<b>Theory</b>	Public Policy: 1. Definition, Characteristics and models 2. Public Policy Process in India	Honours Core Paper	<b>12321402_OC</b>
	<b>Practicals</b>			
	<b>Tutorials</b>	Public Policy		
<b>February</b>	<b>Theory</b>	Decentralization: 1. Meaning Significance and approaches and types 2. Local Self-government in India: Rural-Urban		
	<b>Practicals</b>			
	<b>Tutorials</b>	Decentralization		
	<b>Assignment</b>	Administration of various states and issues of Public Policy		
<b>March</b>	<b>Theory</b>	Budget: 1. Concept and Significance of Budget 2. Budget cycle in India 3. Various Approaches and Types of Budgeting		
	<b>Practicals</b>			
	<b>Tutorials</b>	Union Budget		
<b>April</b>	<b>Theory</b>	Citizen and Administration Interface 1. Public Service Delivery 2. Redressal of Public Grievances: RTI, Lokpal, Citizen's Charter and E-Governance 3. Social Welfare Administration: Concept and Approaches of Social Welfare & Social Welfare Policies		
	<b>Practicals</b>			
	<b>Tutorials</b>	E-Charter		
	<b>Test</b>	Presentations of Projects		
<b>May</b>	<b>Theory</b>	Social Welfare Policies Right to Education		
	<b>Practicals</b>			
	<b>Tutorials</b>	Various Schemes		

Name of the Paper: **Your Laws and Your Rights (SEC) IV SEM**

Month		Topic	Course	Paper Code/Name
<b>January</b>	<b>Theory</b>	Rule of Law and the Criminal Justice system in India	Honours SEC Paper	<b>12323901_OC</b>

	<b>Practicals</b>			
	<b>Tutorials</b>	Criminal Justice		
<b>February</b>	<b>Theory</b>	Laws Relating to Criminal Justice Administration in India		
	<b>Practicals</b>			
	<b>Tutorials</b>			
	<b>Assignment</b>	<b>Any one:</b> Reservation system in India Surveillance and Privacy in India Racism in India Capital Punishment in India Safety of Women in India		
<b>March</b>	<b>Theory</b>	How to file a complaint, First Information Report (FIR) Detention, arrest and bail		
	<b>Practicals</b>			
	<b>Tutorials</b>	FIR		
<b>April</b>	<b>Theory</b>	<b>Gender:</b> the protection of women against domestic violence, rape and sexual harassment <b>Caste:</b> laws abolishing untouchability and providing protection against atrocities		
	<b>Practicals</b>			
	<b>Tutorials</b>	Domestic Violence		
	<b>Test</b>	Presentations		
<b>May</b>	<b>Theory</b>	Class: laws concerning minimum wages d. Disability and equality of participation and opportunity		
	<b>Practicals</b>			
	<b>Tutorials</b>	Affirmative Action in India		

Name of the Paper: **Colonialism and Nationalism in India (DSE) VI SEM**

Month		Topic	Course	Paper Code/Name
<b>January</b>	<b>Theory</b>	<b>Colonialism &amp; Nationalism:</b> a. Main perspectives on colonialism: Liberalism, Marxism, Postcolonialism b. Approaches to the study of nationalism in India: Nationalist, Imperialist, Marxist, and Subaltern interpretations	Honours DSE Paper	<b>12327905</b>
	<b>Practicals</b>			
	<b>Tutorials</b>	Subaltern Approach		
<b>February</b>	<b>Theory</b>	<b>Colonial Rule in India and its impact:</b> a. Constitutional developments and the colonial state b. <b>Colonial ideology of civilizing mission:</b> Utilitarians and Missionaries c. Impact on agriculture, land relations, industry and ecology		
	<b>Practicals</b>			
	<b>Tutorials</b>	Civilizing Mission		
	<b>Assignment</b>	Write an essay on your idea of India Minimum word limit: 1300		
<b>March</b>	<b>Theory</b>	<b>Reform and Resistance:</b> a. The 1857 rebellion b. Major social and religious movements c. Education and the rise of the new middle class		

	<b>Practicals</b>			
	<b>Tutorials</b>	Rise of Middle Class		
<b>April</b>	<b>Theory</b>	<b>Nationalist Politics and Expansion of its Social Base</b> a. Phases of the Nationalist Movement: Liberal constitutionalist, Swadeshi and the Radicals, Formation of the Muslim League b. Gandhi and mass mobilization: Non-cooperation, Civil Disobedience, and Quit India Movements c. Socialist alternatives: Congress socialists, Communists d. Communalism in Indian Politics e. The two-nation theory, negotiations over partition		
	<b>Practicals</b>			
	<b>Tutorials</b>			
	<b>Test</b>	Presentations of Assignments		
<b>May</b>	<b>Theory</b>	Social Movements a. The Women's Question: participation in the national movement and its impact b. The Caste Question: anti-Brahmanical Politics c. Peasant, Tribals, and Workers movements		
	<b>Practicals</b>			
	<b>Tutorials</b>	Women empowerment		

Name of the Paper: **Public Opinion & Survey Research BA (P) SEM-IV AECC**

Month		Topic	Course	Paper Code/Name
<b>January</b>	<b>Theory</b>	Introduction to the course lectures Definition and characteristics of public opinion, conceptions and characteristics, debates about its role in a democratic political system, uses for opinion poll	BA (P) SEC Paper	Public Opinion & Survey Research
	<b>Practicals</b>			
	<b>Tutorials</b>			
<b>February</b>	<b>Theory</b>	<b>Measuring Public Opinion with Surveys:</b> Representation and sampling What is sampling? Why do we need to sample? Sample design. Sampling error and non-response		
	<b>Practicals</b>			
	<b>Tutorials</b>			
	<b>Assignment</b>	<b>Any topic on Unit I, II &amp; III</b>		
<b>March</b>	<b>Theory</b>	<b>Types of sampling:</b> Non random sampling (quota, purposive and snowball sampling); random sampling: simple and stratified		
	<b>Practicals</b>			
	<b>Tutorials</b>			
<b>April</b>	<b>Theory</b>	<b>Survey Research</b> Interviewing: Interview techniques pitfalls, different types of and forms of interview		
	<b>Practicals</b>			
	<b>Tutorials</b>			

	<b>Test</b>			
<b>May</b>	<b>Theory</b>	Questionnaire: Question wording; fairness and clarity.		
	<b>Practicals</b>			
	<b>Tutorials</b>			



(Dr. Haokam Vaiphei)  
Assistant Professor  
Department of Political Science



**SEMESTER WISE TEACHING PLAN (2018-2019)**  
**SRI VENKATESWARA COLLEGE**

**Name of the Faculty: Dr. Kanwar Singh**

**Department: Sanskrit**

**Semester: II/IV/VI**

Month		Topics	Course	Paper Code/Name
JANUARY	<b>Theory</b>	SECTION 'A': INTRODUCTION TO INDIAN MEDICINE SYSTEM: AYURVEDA UNIT I	B.A. 2 <sup>ND</sup> YEAR (H) G.E.	GE-4 BASIC PRINCIPLES OF INDIAN MEDICINE SYSTEM (AYURVEDA)
		SECTION 'A': MAHAKAVYA AND CHARITAKAVYA	B.A. 2 <sup>ND</sup> YEAR (H)	C-9 MODERN SANSKRIT LITERATURE
		SECTION 'A': VIBHAKTYARTHA, VOICE AND KRT	B.A. 3 <sup>RD</sup> YEAR (H)	C-14 SANSKRIT COMPOSITION AND COMMUNICATION
	<b>Tutorials</b>	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN.		
FEBRUARY	<b>Theory:</b>	SECTION 'A': INTRODUCTION TO INDIAN MEDICINE SYSTEM: AYURVEDA UNIT II	B.A. 2 <sup>ND</sup> YEAR (H) G.E.	GE-4 BASIC PRINCIPLES OF INDIAN MEDICINE SYSTEM (AYURVEDA)
		SECTION 'B': GADYAKAVYA AND RUPAKA	B.A. 2 <sup>ND</sup> YEAR (H)	C-9 MODERN SANSKRIT LITERATURE
		SECTION 'B': TRANSLATION AND COMMUNICATION UNIT I	B.A. 3 <sup>RD</sup> YEAR (H)	C-14 SANSKRIT COMPOSITION AND COMMUNICATION

	<b>Tutorials:</b>	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN.		
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	<b><u>Assignment :</u></b>	ASSIGNMENTS WILL BE GIVEN REGARDING THE TOPICS.		
MARCH	<b>Theory:</b>	SECTION 'A': INTRODUCTION TO INDIAN MEDICINE SYSTEM: AYURVEDA UNIT III	B.A. 2 <sup>ND</sup> YEAR (H) G.E.	GE-4 BASIC PRINCIPLES OF INDIAN MEDICINE SYSTEM (AYURVEDA)
		SECTION 'C': GITIKAVYA AND OTHER GENRES	B.A. 2 <sup>ND</sup> YEAR (H)	C-9 MODERN SANSKRIT LITERATURE
		SECTION 'B': TRANSLATION AND COMMUNICATION UNIT II	B.A. 3 <sup>RD</sup> YEAR (H)	C-14 SANSKRIT COMPOSITION AND COMMUNICATION
	<b>Tutorials:</b>	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN.		
	<b><u>Test</u></b>	TESTS WILL BE TAKEN TIMELY.		
APRIL	<b>Theory:</b>	SECTION 'D': IMPORTANT MEDICINAL PLANTS AND THEIR BASED ON AYURVEDA	B.A. 2 <sup>ND</sup> YEAR (H) G.E.	GE-4 BASIC PRINCIPLES OF INDIAN MEDICINE SYSTEM (AYURVEDA)
		SECTION 'D': GENERAL SURVEY OF MODERN SANSKRIT LITERATURE	B.A. 2 <sup>ND</sup> YEAR (H)	C-9 MODERN SANSKRIT LITERATURE
		SECTION 'C': ESSAY	B.A. 3 <sup>RD</sup> YEAR (H)	C-14 SANSKRIT COMPOSITION AND COMMUNICATION

	<b>Tutorials:</b>	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN.		
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**SEMESTER WISE TEACHING PLAN (2018-2019)**  
**SRI VENKATESWARA COLLEGE**

**Name of the Faculty: Dr. Sunita Atal**

**Department: Sanskrit**

**Semester: II/IV/VI**

Month		Topics	Course	Paper Code/Name
JANUARY	<b>Theory</b>	SECTION-A UNIT-1 SCIENCE OF INQUIRY	B.A.(H)3 <sup>rd</sup> year	INDIAN SYSTEM OF LOGIC AND DEBATE
		SECTION-A BRIEF INTRODUCTION AND ELEMENTS OF CHHANDAHSASTRA	B.A (H)2 <sup>nd</sup> year AEEC	SANSKRIT METER AND MUSIC
FEBRUARY	<b>Theory:</b>	SECTION-A UNIT-2 METHOD OF DEBATE TYPES OF DEBATE	B.A.(H)3 <sup>rd</sup> year	INDIAN SYSTEM OF LOGIC AND DEBATE
		SECTION-C ANALYSIS OF SELECTED VEDIC METERS AND THEIR MUSICAL RENDERING	B.A (H)2 <sup>nd</sup> year AEEC	SANSKRIT METER AND MUSIC
	<b>Tutorials:</b>	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN.		

	<b><u>Assignment :</u></b>	ASSIGNMENTS WILL BE GIVEN REGARDING THE TOPICS		
MARCH	<b>Theory:</b>	SECTION-C UNIT-1 THEORY OF DEBATE	B.A.(H)3 <sup>rd</sup> year	INDIAN SYSTEM OF LOGIC AND DEBATE
		SECTION-D ANALYSIS OF SELECTED CLASSICAL METERS AND THEIR MUSICAL REMEMBERING	B.A (H)2 <sup>nd</sup> year AEEC	SANSKRIT METER AND MUSIC
	<b>Tutorials:</b>	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN.		
	<b><u>Test</u></b>	TESTS WILL BE TAKEN TIMELY		
APRIL	<b>Theory:</b>	SECTION-C UNIT-2 THEORY OF DEBATE	B.A.(H)3 <sup>rd</sup> year	INDIAN SYSTEM OF LOGIC AND DEBATE
		SECTION-A BRIF INTRODUCTION TO CHHANDAHSASTRA	B.A (H)2 <sup>nd</sup> year AEEC	SANSKRIT METER AND MUSIC
	<b>Tutorials:</b>	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN.		



**SEMESTER WISE TEACHING PLAN (2018-19)**  
**SRI VENKATESWARA COLLEGE**

**Name of the Faculty: Dr M PADMA SURESH**

**Department: ECONOMICS**

**Semester : IV , 2018-19**

MONTH		TOPICS	COURSE	PAPER CODE/NAME
JANUARY	<b>Theory</b>	Nature of research –Ch 1,2 Ranjit Kumar(RK) Formulating the research topic-Ch 4 review of literature-Ch 3(Flick) Discussion on how to choose a research topic	BA PROG SEC- Economics	Research Methodology 62273426
FEBRUARY	<b>Theory</b>	Approaches to research and research strategy-Ch 5,6,7,8,13 of RK, Research ethics-Ch 14 Submission of research proposal.		
MARCH	<b>Theory</b>	Using data-primary and secondary data, Sample selection:Ch 9,10,11,12 of RK Conduct of Practice internal test on Ch 1-8 of RK. Submission of research proposal		
APRIL	<b>Theory</b>	Analyzing data, Writing Project Report-Ch 15,16.17 of RK Submission of Project/Research Report		



**SEMESTER WISE TEACHING PLAN (2018-19)**  
**SRI VENKATESWARA COLLEGE**

**Name of the Faculty: Dr. M PADMA SURESH**

**Department: ECONOMICS**

**Semester : IV /2018-19**

MONTH		TOPICS	COURSE	PAPER CODE/NAME
JANUARY	<b>Theory</b>	Nature and scope of econometrics. Ch 1 of Gujarati, Statistical inference-normal chi - square, t and F distributions. Testing of hypothesis. Type1 and Type 2 errors, Power of a test. Two sample tests of hypothesis. Devore-Ch 7,8,9, and Gujarati-Appendix D.	BA(Hons)	Introductory Econometrics 12271403
	<b>Tutorials</b>	Problems from Gujarati and Devore and question papers		
FEBRUARY	<b>Theory:</b>	Simple linear regression-two variable case- Estimation- OLS, Testing of hypothesis, Gauss Markov Theorem. Forecasting, Scaling and units. Ch.2,3 of DG and Ch. 2 of Dougherty. Multiple Regression. Functional forms and qualitative explanatory variables- Ch4.5.6 of DG and Ch3, 5 of Dougherty Introduction to GRETL for project work.		
	<b>Tutorials:</b>	End chapter questions from Gujarati, Dougherty and question papers		

MARCH	<b>Theory:</b>	Qualitative explanatory variables contd. Violations of Classical OLS assumptions- Multicollinearity.Ch 6 and 8 of DG, Ch 3 of Dougherty		
		Using GRETL for Project work. Conduct of internal test.		
	<b>Tutorials:</b>	End chapter questions from Gujarati, Dougherty		
APRIL	<b>Theory:</b>	Violations of Classical OLS assumptions- Heteroscedasticity and Autocorrelation. Model Misspecification. Ch 9,10 and 7 of DG and Ch 7,12 and 6 of Dougherty. Submission of Project Work.		
	<b>Tutorials:</b>	End chapter exercises from Gujarati Dougherty and revision from previous question papers.		



**SEMESTER WISE TEACHING PLAN (2018-19)**  
**SRI VENKATESWARA COLLEGE**

**Name of the Faculty: Aruna Rao**

**Department: Economics**

**Semester : VI**

Month		Topics	Course	Paper Code/Name
JANUARY	<b>Theory</b>	Unit 1 & 2	B.A (H) Economics	Environmental Economics
	<b>Practical</b>			
	<b>Tutorials</b>	Assignment on unit 1 & 2		
FEBRUARY	<b>Theory:</b>	Unit 2 & 3	B.A (H) Economics	Environmental Economics
	<b>Practical:</b>			
	<b>Tutorials:</b>	Assignment on unit 2 & 3		
	<b><u>Assignment :</u></b>			
MARCH	<b>Theory:</b>	Unit 3 & 4	B.A (H) Economics	Environmental Economics
	<b>Practicals:</b>			
	<b>Tutorials:</b>	Assignment on unit 3 & 4		
	<b><u>Test</u></b>	Internal Assessment 1		



APRIL	<b>Theory:</b>	Unit 5 & 6	B.A (H) Economics	Environmental Economics
	<b>Practicals:</b>			
	<b>Tutorials:</b>	Assignment on unit 5 & 6		
MAY	<b>Theory:</b>	Unit 5 & 6	B.A (H) Economics	Environmental Economics
	<b>Practicals:</b>			
	<b>Tutorials:</b>	Assignment on unit 5 & 6		
	<b>Test :</b>	Internal Assessment 2		



**SEMESTER WISE TEACHING PLAN (2018-19)**  
**SRI VENKATESWARA COLLEGE**

**Name of the Faculty: Aruna Rao**

**Department: Economics**

**Semester : II**

Month		Topics	Course	Paper Code/Name
JANUARY	<b>Theory</b>	Unit 1	B.A (Prog)	Principles of Microeconomics II
	<b>Practicals</b>			
	<b>Tutorials</b>	Assignment on unit 1		
FEBRUARY	<b>Theory:</b>	Unit 1 & 2	B.A (Prog)	Principles of Microeconomics II
	<b>Practicals:</b>			
	<b>Tutorials:</b>	Assignment on unit 1 & 2		
	<b><u>Assignment :</u></b>			
MARCH	<b>Theory:</b>	Unit 2 & 3	B.A (Prog)	Principles of Microeconomics II
	<b>Practicals:</b>			
	<b>Tutorials:</b>	Assignment on unit 2 & 3		
	<b><u>Test</u></b>	Internal Assessment 1		

APRIL	<b>Theory:</b>	Unit 3 & 4	B.A (Prog)	Principles of Microeconomics II
	<b>Practicals:</b>			
	<b>Tutorials:</b>	Assignment on unit 3 & 4		
MAY	<b>Theory:</b>	Unit 4	B.A (Prog)	Principles of Microeconomics II
	<b>Practicals:</b>			
	<b>Tutorials:</b>	Assignment on unit 4		
	<b>Test :</b>	Internal Assessment 2		



**SEMESTER WISE TEACHING PLAN (2018-19)**  
**SRI VENKATESWARA COLLEGE**

**Name of the Faculty: KRISHNAKUMAR S (2018-19)**

**Department: ECONOMICS**

**Semester : II/IV/VI**

Month		Topics	Course	Paper Code/Name
JANUARY	<b>Theory</b>	Introduction to the Growth Theory. Neoclassical Solow model and its assumptions. Golden	BA(Hons) Sem IV	Intermediate Macroeconomics -II
	<b>Practicals</b>			
	<b>Tutorials</b>	Assignments on neoclassical Solow growth model from Mankiw workbook		
FEBRUARY	<b>Theory:</b>	Theories of consumption: absolute income hypothesis Duesenberry relative income hypothesis, Permanent Income Hypothesis, Modigliani Brumberg approach. Fisher's intertemporal model, Hall model	BA(Hons) Sem IV	Intermediate Macroeconomics -II
	<b>Practicals:</b>			
	<b>Tutorials:</b>	Economics Growth tutorials and tests . some new readings		
MARCH	<b>Theory:</b>	Theories of investment. Jorgenson's neoclassical theory of investment, Tobin's q theory, residential investment,	BA(Hons) Sem IV	Intermediate Macroeconomics -II
		Inventory management. Theories of demand for money		

	<b>Practicals:</b>			
	<b>Tutorials:</b>	Problems on inter-temporal approach. Discussion of some articles.		
	<b><u>Assignment :</u></b>	Test based on		
APRIL	<b>Theory:</b>	Critical rate of interest. Regressive expectations model. Baumol Tobin approach. Tobin's liquidity preference as behaviour towards risk. Fiscal and Monetary Policy Debt stabilization .Growth in Jones-Romer approach	BA(Hons) Sem IV	Intermediate Macroeconomics -II
	<b>Practicals:</b>			
	<b>Tutorials:</b>	Problems on debt stabilization , Taylor's rule		
	<b><u>Test</u></b>			
MAY	<b>Theory:</b>	Economics of ideas. Miscellaneous. Revision	BA(Hons) Sem IV	Intermediate Macroeconomics -II
	<b>Practicals:</b>			
	<b>Tutorials:</b>			



**SEMESTER WISE TEACHING PLAN (2018-19)**  
**SRI VENKATESWARA COLLEGE**

**Name of the Faculty: KRISHNAKUMAR S**

**Department: ECONOMICS**

**Semester : II/IV/VI**

Month		Topics	Course	Paper Code/Name
JANUARY	<b>Theory</b>	IS and LM Analysis. Goods market and assets market equilibrium	BA Programme Sem IV	Principles of Macroeconomics -II
	<b>Practicals</b>			
	<b>Tutorials</b>	IS LM numerical problems		
FEBRUARY	<b>Theory:</b>	GDP and Price Level in Short Run and Long Run	BA Programme Sem IV	Principles of Macroeconomics -II
	<b>Practicals:</b>			
	<b>Tutorials:</b>	IS LM numerical s		
MARCH	<b>Theory:</b>	Inflation and Unemployment. Phillips Curve. Vertical LRPC.	BA Programme Sem IV	Principles of Macroeconomics -II
	<b>Tutorials:</b>			
	<b>Assignment :</b>			
APRIL	<b>Theory:</b>	Balance of Payments and Exchange Rate. Nominal and real exchange rate. Purchasing Power Parity.	BA Programme Sem IV	Principles of Macroeconomics -II

	<b>Tutorials:</b>	Reading the balance of payment sheet from the Economic Survey		
	<b>Test</b>			
MAY	<b>Theory:</b>	Overview with discussion of contemporary world economy	BA Programme Sem IV	Principles of Macroeconomics -II
	<b>Tutorials:</b>			



SEMESTER-WISE TEACHING PLAN (2018-19)  
SRI VENKATESWARA COLLEGE

Name of the Faculty: N.KALITHASAMMAL

Department: Economics

SEMESTER-IV

Month		Topics	Course	Paper Name/ Code
JANUARY	<b>Theory</b>	.Population and HDI have taken along with issues of school enrolment in India.	B.A (ECO) II yr.	INDIAN ECONOMY PART II
	<b>Tutorials</b>	The basic educational trend and development and the problems of migrated people in India discussed elaborately.		
FEBRUARY	<b>Theory:</b>	International comparison is going to take along with all progress and flip sides of both countries		
	<b>Tutorials:</b>	Two different groups of students going to represent two different countries to strength their view points.		
MARCH	<b>Theory:</b>	Trends and policies of the economy and unemployment is going to explain, which is one of the major challenges of economic growth.		



	<b>Tutorials:</b>	, Inequwality and concentration of income is going to explain with some inclusive work.outs.		
	<b><u>Assignment :</u></b>	<b>Two tests are</b> going to conduct according to the given schedule.		
APRIL, MAY	<b>Theory:</b>	Institution policy frame work is going to take, structural changes are going		
	<b>Tutorials:</b>	Major features and savings and investmentrelated questions going to work out.		



SEMESTER-WISE TEACHING PLAN (2018-19)  
SRI VENKATESWARA COLLEGE

Name of the Faculty: N.KALITHASAMMAL

Department: Economics

SEMESTER-IV

Month		Topics	Course	Paper Name/
JANUARY	<b>Theory</b>	.Macroeconomics over view of India,the growth story is discussed with the view of India development report	<b>GE II yr.</b>	<b>INDIAN ECONOMY PART II</b>
	<b>Tutorials</b>	The basic educational trend and development and the problems of migrated people in India discussed elaborately.		
FEBRUARY	<b>Theory:</b>	India's dream run through EPW reading taken		
	<b>Tutorials:</b>	Two different groups of students going to debate their view points. What must be done		
MARCH	<b>Theory:</b>	Labour market and its legislation, and unemployment is going to explain,		



**SEMESTER-WISE TEACHING PLAN (2018-19)**  
**SRI VENKATESWARA COLLEGE**

**Name of the Faculty:** Meenakshi Sharma

**Department:** ECONOMICS

**COURSE:** Intermediate Microeconomics II

Month		Topics	Course	Paper
JANUARY	<b>Theory</b>	<p><b>Market Structure:</b> Monopoly Price discrimination and regulation, Two- part tariff. Welfare comparison with perfect competition. Snyder&amp; Nicholson</p> <p><b>Game Theory</b> Strategic form games with perfect information; Mixed strategy, Extensive form games, Weak &amp; strict dominance. Snyder&amp; Nicholson and Osborne.</p>	B.A (H), Economics, Semester IV	Intermediate Microeconomics II
	<b>Tutorials</b>	Market Structure (Monopoly) and	B.A (H), Economics,	Intermediate Microeconomics
FEBRUARY	<b>Theory:</b>	<p><b>Game Theory contd.</b> <b>Imperfect competition;</b> Bertrand, Cournot and Stackelberg models; Price leadership; Hotelling's beach model. Snyder&amp; Nicholson</p> <p><b>General equilibrium</b> in pure exchange and production; Fundamental welfare theorems and their implications. Hal. R. Varian &amp; Snyder&amp; Nicholson.</p>	B.A (H), Economics, Semester IV	Intermediate Microeconomics II

	<b>Tutorials:</b>	Imperfect competition and Exchange	B.A (H), Economics, Semester IV	Intermediate Microeconomics II
MARCH	<b>Theory:</b>	<b>Welfare:</b> Social welfare functions, Arrow's Impossibility Theorem, Paradox of voting, Median Voter Theorem.	B.A (H), Economics, Semester IV	Intermediate Microeconomics II
		Externality: Consumption & production externality, Property Rights and Coase Theorem, Tragedy of Commons. Hal.R. Varain	B.A (H), Economics, Semester IV	Intermediate Microeconomics II
	<b>Tutorials:</b>	Welfare and Externality.	B.A (H), Economics, Semester IV	Intermediate Microeconomics II
	<b><u>Test 1:</u></b>	Test-I Monopoly and Game Theory.	B.A (H), Economics, Semester IV	Intermediate Microeconomics II
APRIL	<b>Theory:</b>	<b>Public Goods:</b> definition & classification, efficiency criteria, free riding problem. Hal.R. Varain  <b>Asymmetric Information:</b> Market for lemons, Moral hazard, separating and pooling equilibria. Hal.R. Varain	B.A (H), Economics, Semester IV	Intermediate Microeconomics II
	<b>Tutorials:</b>	Public Goods and Asymmetric Information.	B.A (H), Economics, Semester IV	Intermediate Microeconomics II
	<b><u>Test 2</u></b>	Exchange and Welfare	B.A (H), Economics, Semester IV	

Month		Topics	Course	Paper
JANUARY	<b>Theory</b>	<p><b>Demography and Development</b></p> <p>Population Growth and Economic Development.</p> <p>The Lewis Model and the Harris Todarro Model.</p> <p><b>Land Labor and Credit Markets</b></p> <p>Overview of Rural Markets.</p>	B.A (H), Economics, Semester VI	Development Theory and Experience-II
	<b>Tutorials</b>	Demography and Development and Overview of Rural Markets.	B.A (H), Economics, Semester VI	Development Theory and Experience-II
FEBRUARY	<b>Theory:</b>	<p><b>Land, Labor and Credit Markets</b></p> <p>Land Markets, Labor Markets, Credit Markets- Debraj Ray- Chapter 12, 13 and 14</p>	B.A (H), Economics, Semester VI	Development Theory and Experience-II
	<b>Tutorials:</b>	Land, Labor And Credit Markets and Individual, Communities and Collective outcome.	B.A (H), Economics, Semester VI	Development Theory and Experience-II
	<b>Test 1</b>	<p><b>Demography and Development.:</b></p> <p>Population Growth and Economic Development ,the Lewis Model and the Harris Todarro Model.</p>	B.A (H), Economics, Semester VI	Development Theory and Experience-II

MARCH	<b>Theory:</b>	<p><b>Environment and Sustainable Development</b> A very short Introduction by Partha Deasgupta.Chapter 7 Leading Issues in Economic Development by Gerald M.Meier and James E. Rauch Chapter 10 World Bank Report 1992 from the World Bank (section 10.1) Intermediate Environmental Economics: Charles D.Kolstad, The Environment and Economics Chapter 1 and Regulating Pollution Chapter 11.</p>	B.A (H), Economics, Semester VI	Development Theory and Experience-II
	<b>Tutorials:</b>	Environment and Sustainable Development	B.A (H), Economics, Semester VI	Development Theory and Experience-II
APRIL	<b>Theory:</b>	<p><b>Globalization</b>  Abhijit Banerjee, Roland Benabou and Dilip Mookerjee, Understanding Poverty. Chapter 6 and 7.  Dani Rodrik, The Globalization Paradox, Why Global Markets, States and Democracy Can't Coexist. Chapter 4  Raghuram Rajan, Fault Lines: How Hidden Fractures Still Threaten the World Economy, 2011. Introduction to the book.</p>	B.A (H), Economics, Semester VI	Development Theory and Experience-II
	<b>Tutorials:</b>	Globalization	B.A (H), Economics, Semester VI	Development Theory and Experience-II
	<b>Test II</b>	Land , Labor and Credit and Environment and Sustainable Development	B.A (H), Economics, Semester VI	Development Theory and Experience-II



**SEMESTER-WISE TEACHING PLAN (2018-19)**  
**SRI VENKATESWARA COLLEGE**

**Name of the Faculty: Ankit Joshi**

**Department: Economics**

**Semester: II (2018- 19)**

Month		Topics	Course	Paper Code/Name
JANUARY	<b>Theory</b>	Unit- 1: Introduction to Macroeconomics and National Income Accounting	General Elective for Hons.	Introductory Macroeconomics (GE)
	<b>Practicals</b>	-		
	<b>Tutorials</b>	Unit- 1: Introduction to Macroeconomics and National Income Accounting		
FEBRUARY	<b>Theory:</b>	<b>Unit- 2: Money</b> (Mankiw: Section 4.1; Section 5.1) <b>Unit- 3: Inflation</b> (Mankiw: Section 5.2- 5.7) <b>Unit- 4: Closed Economy in Short Run</b> (Dornbush: Chapter 9, 10)	General Elective for Hons.	Introductory Macroeconomics (GE)
	<b>Practicals:</b>			
	<b>Tutorials:</b>	<b>Unit- 2: Money</b> (Mankiw: Section 4.1; Section 5.1) <b>Unit- 3: Inflation</b> (Mankiw: Section 5.2- 5.7)		
	<b><u>Assignment:</u></b>	Presentation on contemporary topics in economics		

MARCH	<b>Theory:</b>	<b>Unit- 4: Closed Economy in Short Run</b> (Dornbush: Chapter 11.1-11.3; Mankiw: Chapter 3, 10; Economic Survey: Chapter 4, 6)	General Elective for Hons.	Introductory Macroeconomics (GE)
	<b>Practicals:</b>			
	<b>Tutorials:</b>	<b>Unit- 4: Closed Economy in Short Run</b> (Dornbush: Chapter 9, 10, 11.1- 11.3)		
	<b>Test:</b>	<b>Unit- 2: Money</b> (Mankiw: Section 4.1; Section 5.1) <b>Unit- 3: Inflation</b> (Mankiw: Section 5.2- 5.7) <b>Unit- 4: Closed Economy in Short Run</b> (Dornbush: Chapter 9, 10)		
APRIL	<b>Theory:</b>	<b>Unit- 2: Money</b> (Blanchard: Chapter 4) <b>Unit – 3: Inflation</b> (Blanchard: Chapter 23; Partha Ray: Chapter 1 Partha Sen: Article on Urijit Patel Committee Report)	General Elective for Hons.	Introductory Macroeconomics (GE)
	<b>Practicals:</b>			
	<b>Tutorials:</b>	<b>Unit- 4: Closed Economy in Short Run</b> Mankiw: Chapter 3, 10 <b>Unit- 2: Money</b> (Blanchard: Chapter 4) <b>Unit – 3: Inflation</b> (Blanchard: Chapter 23; Partha Ray: Chapter 1 Partha Sen: Article on Urijit Patel Committee Report)		





**SEMESTER WISE TEACHING PLAN (2018-19)**  
**SRI VENKATESWARA COLLEGE**

**Name of the Faculty: ANKIT JOSHI**

**Department: ECONOMICS**

**Semester : VI (2018-19)**

Month		Topics	Course	Paper Code/Name
JANUARY	<b>Theory</b>	Unit 1(a): Deterministic Cash Flow Streams David G Luenberger, Chapter 2, 3 & 4	B.A. (Hons.) Economics	Financial Economics
	<b>Practicals</b>			
	<b>Tutorials</b>	Suggested problem set of Chapter 2, 3 & 4		
FEBRUARY	<b>Theory:</b>	Unit 1(b): Single Period Cash Flows David G Luenberger, Chapter 6  Unit 1(c): CAPM David G Luenberger, Chapter 7	B.A. (Hons.) Economics	Financial Economics
	<b>Practicals:</b>			
	<b>Tutorials:</b>	Suggested problem set of Chapter 6 & 7		
	<b><u>Assignment :</u></b>	Test: Uni-1		
MARCH	<b>Theory:</b>	Unit 2: Options & Derivatives Basu & Hull, Chapter 2, 3, 5, 9 & 10	B.A. (Hons.) Economics	Financial Economics

	<b>Practicals:</b>			
	<b>Tutorials:</b>	Suggested problem set of Chapter 2, 3, 5, 9 & 10, 11 Discussion on contemporary topics		
	<b><u>Test</u></b>	Test: Unit-2, chapters 2, 3, 5, 9 & 10		
APRIL	<b>Theory:</b>	Unit 2: Options & Derivatives Basu & Hull, Chapter 6, 12 Unit 3: Corporate Finance Brealy, Myers et al, Chapter 14, 16 & 17	B.A. (Hons.) Economics	Financial Economics
	<b>Practicals:</b>			
	<b>Tutorials:</b>	Discussion of past years		



**SEMESTER WISE TEACHING PLAN (2018-19)**  
**SRI VENKATESWARA COLLEGE**

**Name of the Faculty: Jitesh Rana**

**Department: Economics**

**Semester II, BA.(H) Economics**

Month		Topics	Course	Paper Code/Name
JANUARY	<b>Theory</b>	Abel Bernanke and Croushore: Ch1 & 2. Mankiw Ch4 Section 4.1.	B.A. Hons Economics	12271201: Introductory Macroeconomics
	<b>Tutorials</b>	Student doubts and Past year questions from the topics covered.		
FEBRUARY	<b>Theory:</b>	Froyen Ch4 Section 4.1, Blanchard Ch4. Mankiw Ch4 sections 4.2-4.8.	B.A. Hons Economics	12271201: Introductory Macroeconomics
	<b>Tutorials:</b>	Student doubts and Past year questions from the topics covered.		
	<b><u>Test 1:</u></b>	All topics of first 2 units.		
MARCH	<b>Theory:</b>	Blanchard Ch23. Froyen Ch3. Ch4(Sections 4.2.-4.4) Dornbusch and Fischer Ch3 and 4.	B.A. Hons Economics	12271201: Introductory Macroeconomics

	<b>Tutorials:</b>	Student doubts and Past year questions from the topics covered.		
	<b><u>Test 2:</u></b>	All topics of unit 3 and covered topics of unit 4.		
APRIL	<b>Theory:</b>	Dornbusch and Fischer Ch5 (Section 5.1-5.3).Remaining portions from Blanchard Ch23.	B.A. Hons Economics	12271201: Introductory Macroeconomics
	<b>Tutorials:</b>	Student doubts and Past year questions from the topics covered. Preparation for final exams.		

## Semester II, Generic Elective

Month		Topics	Course	Paper Code/Name
JANUARY	<b>Theory</b>	Abel Bernanke and Croushore: Ch1 & 2. Mankiw Ch4 Section 4.1.	Generic Elective	12275201: Introductory Macroeconomics
	<b>Tutorials</b>	Student doubts and Past year questions from the topics covered.		
FEBRUARY	<b>Theory:</b>	Froyen Ch4 Section 4.1, Blanchard Ch4. Mankiw Ch4 sections 4.2-4.8.	Generic Elective	12275201: Introductory Macroeconomics
	<b>Tutorials:</b>	Student doubts and Past year questions from the topics covered.		
	<b><u>Test 1:</u></b>	All topics of first 2 units.		
MARCH	<b>Theory:</b>	Blanchard Ch23. Froyen Ch3. Ch4(Sections 4.2.-4.4) Dornbusch and Fischer Ch3 and 4.	Generic Elective	12275201: Introductory Macroeconomics
	<b>Tutorials:</b>	Student doubts and Past year questions from the topics covered.		
	<b><u>Test 2:</u></b>	All topics of unit 3 and covered topics of unit 4.		

APRIL	<b>Theory:</b>	Dornbusch and Fischer Ch5 (Section 5.1-5.3).Remaining portions from Blanchard Ch23.	Generic Elective	12275201: Introductory Macroeconomics
	<b>Tutorials:</b>	Student doubts and Past year questions from the topics covered. Preparation for final exams.		



**SEMESTER WISE TEACHING PLAN (2018-19)**  
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**Name of the Faculty: Amit Kumar Jha**

**Department: ECONOMICS**

**SEM: II, B.A. (H) Economics**

Month		Topics	Course	Paper Code/Name
JANUARY	<b>Theory</b>	Linear Algebra Hammond and sydsaeter ch 12,13,14	<b>B.A. (H) Economics</b>	Mathematical methods for Economics <b>II</b>
	<b>Tutorials</b>	Last year papers, students doubt		
FEBRUARY	<b>Theory:</b>	Function of several variables Tools for comparative economics	<b>B.A. (H) Economics</b>	Mathematical methods for Economics <b>II</b>
	<b>Tutorials:</b>	Last year papers, students doubt		
MARCH	<b>Theory:</b>	Multivariable optimization Constrained optimization Hammond and sydsaeter ch 17,18	<b>B.A. (H) Economics</b>	Mathematical methods for Economics <b>II</b>
	<b>Tutorials:</b>	Last year papers, students doubt		
	<b>Test 1:</b>	On above topics		
APRIL	<b>Theory:</b>	Integration Differential equation Difference equation Hammond and sydsaeter ch 10, 20, 21	<b>B.A. (H) Economics</b>	Mathematical methods for Economics <b>II</b>
	<b>Test2</b>	Above topic		
	<b>Tutorials:</b>	Last year papers, students doubt		

**Semester : VI, B.A. (H) Economics**

Month		Topics	Course	Paper Code/Name
JANUARY	<b>Theory</b>	Topic1- Money : Functions, Measurement, Theories of money supply determination Topic 2a- Financial institutions, instruments and financial innovation BAyes and Jansen ch1,5 N jadhav ch 2 Rbi report Mishkin and eakin ch 15 M y khan ch1 Fabozzi ch 1,2	<b>B.A. (H) Economics</b>	Money and Financial markets
	<b>Tutorials</b>	Last year questions, student doubts		
FEBRUARY	<b>Theory:</b>	Topic 2b- money and capital markets, organization, structure and reforms in India, role of financial derivative and other innovation FAbozzi et al 26,27,30 My khan ch 9 Bhole ch5	<b>B.A. (H) Economics</b>	Money and Financial markets
	<b>Tutorials</b>	Last year questions, student doubts		
MARCH	<b>Theory:</b>	Topic3- interest rates determination, sources of interest rate differential Topic 4- banking system Sengupta and vardhan Rbi report Rbi bulletin oct 2012 BAyes & jansen ch 10 Rbi report	<b>B.A. (H) Economics</b>	Money and Financial markets
	<b>Tutorials</b>	Last year questions, student		
	<b>Test</b>	Above topics		



APRIL	<b>Theory:</b>	Topic 5- Central banking and monetary policy Bayes & jansen ch 19 Jadhav ch 9' My khan ch 9 Annual report of RBi	<b>B.A. (H) Economics</b>	Money and Financial markets
	<b>Tutorials/Presentation</b>	Last year questions, student doubts		



**SEMESTER WISE TEACHING PLAN (2018-2019)**  
**SRI VENKATESWARA COLLEGE**

**Name of the Faculty: Rajbir Kaur**

**Department: History**

**Semester: II, VI**

Month		Topics	Course	Paper Code/ Name
<b>JANUARY</b>	<b>Theory:</b>	I. India in the mid-18th Century: society, economy, polity and culture II. Dynamics of colonial expansion: indigenous states and Company power	B.A. (Hons.) IInd Year	Core - History of India – VI (c.1750-1857)
		I. The Guptas and Vakatakas: state and administration, economy, society, religion, art, literature, science and technology	B.A. (Prog.) Ist Year	Core – History of India, c. 300 to 1200
	<b>Tutorials:</b>	Introducing the course and its themes.		
		Discussion		
<b>FEBRUARY</b>	<b>Theory:</b>	III. Colonial state and ideology: emergence of the Company State IV. Law and education	B.A. (Hons.) IInd Year	Core - History of India – VI (c.1750-1857)
		II. Towards the early medieval: changes in society, polity, economy and culture with special reference to Pallavas, Chalukyas and Vardhanas III. Evolution of political structures of the Rastrakutas, Palas and Pratiharas; economy; religious and cultural developments	B.A. (Prog.) Ist Year	Core – History of India, c. 300 to 1200

	<b>Tutorials:</b>	Discussion with the tutorial groups on the topics already taken up in the lectures		
	<b><u>Assignment:</u></b>	Do you agree with the view that 18th century in India was a Dark Age? Discuss with reference to the recent writings. Or What were the debates surrounding 18th century India? Or Examine the ways in which the English east India Company expanded and consolidated its empire in India up to the mid 19th century.	B.A. (Hons.) IInd Year	Core - History of India – VI (c.1750-1857)
		Discuss the salient features of the administration system of the Gupta dynasty. Or Discuss the socio-economic developments during the Post-Gupta period in North India. Or Write an essay on the Tripartite struggle between the Gurjara-Pratiharas, Palas and Rashtrakutas.	B.A. (Prog.) Ist Year	Core – History of India, c. 300 to 1200
<b>MARCH</b>	<b>Theory:</b>	V. Economy and Society VI. Cultural changes, social and religious reform movements	B.A. (Hons.) IInd Year	Core - History of India – VI (c.1750-1857)
		IV. Emergence of Rajput states in Northern India; socio-economic foundations V. The Cholas: state, administration, economy and culture	B.A. (Prog.) Ist Year	Core – History of India, c. 300 to 1200
	<b>Tutorials:</b>	Discussion with regard to specific readings given for study		
		Discussion group for Hindi medium students		

	<b><u>Mid Term Test:</u></b>	Internal Class Test held on 27 <sup>th</sup> March 2018	B.A. (Hons.) IInd Year	Core - History of India – VI (c.1750-1857)
		Internal Class Test held on 28 <sup>th</sup> March 2018	B.A. (Prog.) Ist Year	Core – History of India, c. 300 to 1200
<b>APRIL</b>	<b>Theory:</b>	VII. Popular resistance	B.A. (Hons.) IInd Year	Core - History of India – VI (c.1750-1857)
		VI. The Arabs; the Ghaznavids in the Northwest; establishment of the Delhi Sultanate; overland and maritime trade	B.A. (Prog.) Ist Year	Core – History of India, c. 300 to 1200
	<b>Tutorials:</b>	Revision of the courses  Discussion on previous year's question papers		



**SEMESTER WISE TEACHING PLAN**  
**SRI VENKATESWARA COLLEGE**  
**January - April, 2019**

**Name of the Faculty: NEERAJ SAHAY**

**Department: HISTORY**

**Semester: II**

Month		Topics	Course	Paper Code/Name
JANUARY	<b>Theory:</b>	UNIT I 1. Introducing the early historical: Sources (600 BCE onwards) 2. Historiographical Trends: Early historic period with reference to state formation, literacy, forests  UNIT VI 1. Creative and Scientific Literature	B.A. (Honours) I	Core Course III, Paper- History of India-II
		UNIT I 1. Survey of the sources UNIT II 1. Gupta and The Vakatakas: Administration, state, economy, society, religion and art	B.A. (Programme) I	Core Paper II, Paper- History of India c. 300-1200
	<b>Practicals:</b>	N/A		
	<b>Tutorials:</b>	Discussion on defining concepts of early historical, sources for Early India, References and question-answer sessions	B.A. (Honours) I	Core Course III, Paper- History of India-II
Discussion of the sources, a background of Pre-Gupta situations and questions-answer sessions		B.A. (Programme) I	Core Paper II, Paper- History of India c. 300-1200	

FEBRUAR Y	<b>Theory:</b>	<p>UNIT II</p> <ol style="list-style-type: none"> <li>1. Changing Political Formations (c. 600 BCE to c. 300CE): <i>Mahajanapadas: Monarchies and Gana/samghas</i></li> <li>2. The Mauryan Empire: Political Structure</li> <li>3. Economy and Society (c.600 BCE to c. 300CE): Agrarian and Urban Economy with Reference to Indo-Roman Trade</li> </ol> <p>UNIT III</p> <ol style="list-style-type: none"> <li>1. Changes in the Post-Gupta period and characterization of early medieval period</li> </ol> <p>UNIT IV</p> <ol style="list-style-type: none"> <li>1. Vardhans, Pallavas and Chalukyas: Political and cultural developments</li> </ol>	B.A. (Honours) I	Core Course III, Paper- History of India-II
			B.A. (Programme) I	Core Paper II, Paper-History of India c. 300-1200
	<b>Practicals:</b>	N/A		
	<b>Tutorials:</b>	<p>Discussions on early historical trajectories of political, economic and social developments. Questions-answer sessions</p>	B.A. (Honours) I	Core Course III, Paper- History of India-II
<p>Discussion of Post-Gupta Developments and the theoretical models of Feudalism, Segmentary State and Integrative Polity. Questions-answer session</p>		B.A. (Programme) I	Core Paper II, Paper-History of India c. 300-1200	
MARCH	<b>Theory:</b>	<p>UNIT II</p> <ol style="list-style-type: none"> <li>1. Mauryan Polity: <i>Dhamma</i></li> <li>2. Post Mauryan Polities: Kushanas and Satavahanas</li> <li>3. Tamilakam</li> </ol> <p>UNIT III and IV</p> <ol style="list-style-type: none"> <li>1. Society(c.600 BCE-300CE) and Social Stratification 2. Gupta Polity</li> </ol> <p>UNIT V</p> <ol style="list-style-type: none"> <li>1. Palas, Pratiharas and Rashtrakutas: Introduction; tripartite conflict</li> </ol>	B.A. (Honours) I	Core Course III, Paper- History of India-II
			B.A. (Programme) I	Core Paper II, Paper-History of India c. 300-1200

	<b>Practicals:</b>	N/A		
	<b>Tutorials:</b>	Questions-answer sessions	B.A. (Honours) I	Core Course III, Paper- History of India-II
		Questions-answer sessions	B.A. (Programme) I	Core Paper II, Paper- History of India c. 300-1200
	<b><u>Assignment</u></b>	<ol style="list-style-type: none"> <li>Trace the social developments in Mauryan and Post Mauryan period</li> </ol> <p><u>Any one of the following:</u></p> <ol style="list-style-type: none"> <li>Discuss the cultural developments during Gupta and Vakataka period.</li> <li>Describe the ways in which Gupta period was a watershed between past and future polities.</li> <li>Underlining the changes that occurred in early medieval centuries, critically discuss their characterization</li> </ol>	B.A. (Honours) I  B.A. (Programme) I	Core Course III, Paper- History of India-II  Core Paper II, Paper- History of India c. 300-1200
	<b><u>Mid Term Test</u></b>			
APRIL	<b>Theory:</b>	<p>UNIT IV</p> <ol style="list-style-type: none"> <li>Defining Early Medieval</li> <li>Post Gupta polities</li> <li>Society and Economy</li> </ol> <p>UNIT V</p> <ol style="list-style-type: none"> <li>Buddhism and Jainism</li> <li>Consolidation of Brahmanical Tradition</li> <li>Puranic Hinduism</li> </ol> <p>UNIT VI</p> <ol style="list-style-type: none"> <li>Art and Architecture</li> </ol> <p>UNIT VI</p> <ol style="list-style-type: none"> <li>Emergence of Rajput States in North India; foundations</li> </ol> <p>UNIT VII</p> <ol style="list-style-type: none"> <li>Cholas State and administration, economy and culture</li> </ol> <p>UNIT VIII</p> <ol style="list-style-type: none"> <li>Arabs, Ghazanavites, trans-regional exchnage</li> </ol>	B.A. (Honours) I           B.A. (Programme) I	Core Course III, Paper- History of India-II           Core Paper II, Paper- History of India c. 300-1200







**SEMESTER WISE TEACHING PLAN**

**SRI VENKATESWARA COLLEGE**

**January-April, 2019**

**Name of the Faculty: Dr.Ningmuanching**

**Department: History**

**Semester: II and IV**

Month		Topics	Course	Paper Code/Name
January	<b>Theory:</b>	Ancient Greece and Rome (subtopics a and b) Evolution of the polis, Conflict of the Orders and The Augustan Experiment	B.A Hons. History	Social Formations and Cultural Patterns of the Ancient and Medieval World
	<b>Tutorials:</b>	Caste: Varna and Jati Class, Status and power	B.A Hons. Generic Elective	Inequality and Difference
February	<b>Theory:</b>	Slavery in Ancient Greece and Rome, Culture and Religion in Ancient Greece and Rome	B.A Hons. History	Social Formations and Cultural Patterns of the Ancient and Medieval World
	<b>Tutorials:</b>	Gender and the Household Forms of bondage: Slavery and Servitude	B.A Hons. Generic Elective	Inequality and Difference
		Quiz on selected topic	B.A Hons. History	Social Formations and Cultural Patterns of the Ancient and Medieval World
		Discussion on selected texts	B.A Hons. Generic Elective	Inequality and Difference
March	<b>Theory:</b>	Feudal Societies in Medieval Europe (8 <sup>th</sup> to 14 <sup>th</sup> Centuries)	B.A Hons. History	Social Formations and Cultural Patterns of the Ancient and Medieval World
		Race and Colonial Knowledge Tribes and Forest Dwellers	B.A Hons. Generic Elective	Inequality and Difference

		Open book test on selected theme	B.A Hons. History	Social Formations and Cultural Patterns of the Ancient and Medieval World
		Internal Test on selected topics Caste, Class, Race and Colonial Knowledge, Tribes	B.A Hons. Generic Elective	Inequality and Difference
	<b>Assignment</b>	Assignment on Political Evolution in Greece	B.A Hons. History	Social Formations and Cultural Patterns of the Ancient and Medieval World
		Written assignment submission on gender and the household	B.A Hons. Generic Elective	Inequality and Difference
April	<b>Theory</b>	Early Islamic Societies in West Asia: Transition from Tribe to State	B.A Hons. History	Social Formations and Cultural Patterns of the Ancient and Medieval World
		Social Distancing and Exclusion; Untouchability Equality and the Indian Constitution	B.A Hons. Generic Elective	Inequality and Difference
	<b>Tutorials:</b>	Discussions and presentations	B.A Hons. Generic Elective	Inequality and Difference
	<b>Mid Term Test</b>	Test on Slavery in Ancient Greece and Rome and Features of Feudalism	B.A Hons. History	Social Formations and Cultural Patterns of the Ancient and Medieval World



**SEMESTER WISE TEACHING PLAN (2018-19)**  
**SRI VENKATESWARA COLLEGE**

**Name of the Faculty:** Nuti Namita

**Department:** History

**Semester:** II/IV/VI

**Even Semester**

Month		Topics	Course	Paper Code/Name
JANUARY	<b>Theory</b>	1.Key Concepts a) Development b) Globalization International Relations Post War Treaties and UNO Decolonization (Algeria and Indonesia)	General Elective 111 Semester 2	Paper -3 Issues In the Contemporary World: 1945-2000
	<b>Theory</b>	1. Transition from Feudalism to Capitalism [a] Crisis of the Tokugawa Bakuhan System [b] The Meiji Restoration; Its nature and significance, political reorganization, military reforms, Social and Cultural reforms (Bummei Kaika), Financial reforms, educational reforms 2. Meiji Constitution	B.A(Hons.) third year V1 Semester History	DSE X11 History of Modern Japan and Korea(1868-1950s)
	<b>Tutorials</b>	<b>Discussion, Question answer session</b>		
FEBRUARY	<b>Theory:</b>	Cold War and superpower rivalries (special focus on impact on Vietnam and Afghanistan) III. States and economies [a] United Kingdom: crisis of the welfare state [b] The Soviet Union: assessing the Socialist experiment;	General Elective 111 Semester 2	Paper -3 Issues In the Contemporary World: 1945-2000
	<b>Theory</b>	Japanese Imperialism (a) China (b)Manchuria (c) Korea (iii) Democracy and Militarism/Fascism (a) Popular/People’ s Rights Movement (b) Nature of political parties (c) Rise of Militarism-Nature and significance	<b>B.A(Hons.) third year V1 Semester History</b>	<b>DSE X11 History of Modern Japan and Korea(1868-1950s)</b>
	<b>Tutorials:</b>	Assignment: GE-3 1. What id decolonization? Discuss the process in ALGERIA.		

	<b><u>Assignment:</u></b>	1. Discuss the internal and external causes for the crisis of the Tokugawa regime?		
MARCH	<b>Theory:</b>	] South Africa and Sudan: from apartheid to reconciliation IV. New social movements [a] Ecological struggles: the Chipko Movement and struggles for the Amazon [b] Race, class and gender: movements in the USA [c] Struggles for democracy and rights in Myanmar	<b>General Elective 111 Semester 2</b>	<b>Paper -3 Issues In the Contemporary World: 1945-2000</b>
	<b>Theory</b>	d) Second World War; American occupation (e) Post-War Changes II Emergence of Modern Korea (a) The old order and Institutional Decay: Joseon Korea (b) Korea's interactions with the western powers and Korea's unequal treaties with Japan	<b>B.A(Hons.) third year V1 Semester History</b>	<b>DSE X11 History of Modern Japan and Korea(1868-1950s)</b>
	<b>Tutorials:</b>	<b>Discussion, Question answer session</b>		
	<b><u>Test</u></b>	<ol style="list-style-type: none"> <li>1. Discuss the Ecological struggles in the Brazil Forests of South America</li> <li>2. Discuss the rise of Militarism in Japn?</li> </ol>		
APRIL	<b>Theory:</b>	Student movements of 1968 93 V. Aspects of culture [a] Sport culture and Nationalism/ Globalization [b] Commodity economy and consumption culture [c] Media in the digital age [d] Gender, family and sexual politics	<b>General Elective 111 Semester 2</b>	<b>Paper -3 Issues In the Contemporary World: 1945-2000</b>
	<b>Theory</b>	Attempts at social, political and economic reforms in Korea ; Japan's colonization: March First Movement and the growth of Korean nationalism; in situational transformation 1910-1945 ;Post-War Changes	<b>B.A(Hons.) third year V1 Semester History</b>	<b>DSE X11 History of Modern Japan and Korea(1868-1950s)</b>
	<b>Tutorials:</b>	Revision		

MAY	<b>Theory:</b>	EXAMS		
	<b>Practicals:</b>			
	<b>Tutorials:</b>			



**SEMESTER WISE TEACHING PLAN (2018-2019)**  
**SRI VENKATESWARA COLLEGE**

Name of the Faculty: **Rajni Chandiwal/IV**  
 Semester : **II/IV/VI**

**Department: History**

Month		Topics	Course	Paper Code/Name
JANUARY	<b>Theory-1.</b>	<ul style="list-style-type: none"> <li>• 17<sup>th</sup> Century Crises- Economic, Social and Political Dimensions,</li> <li>• The English Revolution, Major Issues, Political and intellectual Currents.</li> </ul>	Core Course	Rise of the Modern West-II/ VIII
	<b>2.</b>	<ul style="list-style-type: none"> <li>• Caste Community and Nation: Regional, Religious and Linguistic Identities, Assertions of Caste Identity- Sanskritisation and anti-Brahmanical Trends – Regional Variations.</li> <li>• Economy and Social classes- Economic Critique of Colonial Rule, Rise of Modern Industry –Emergence of Capitalist and Working Class, Famines and Their Impacts.</li> </ul>	Core Course-X	History of India VIII (1857-1950)
	<b>Practicals</b>	NA		
	<b>Tutorials</b>	<ul style="list-style-type: none"> <li>• Discussion on the theme</li> <li>• Discussion on the theme and reading of fiction of the same.</li> </ul>		

FEBRUARY	<b>Theory:</b>		
	<b>1.</b>	<ul style="list-style-type: none"> <li>• The Rise of Modern Science in Relation to the European Society from Renaissance to 17 Century., Mercantilism.</li> </ul>	
	<b>2.</b>	<ul style="list-style-type: none"> <li>• Early Nationalism: Emergence of Congress, Moderates and Extremists, Swadesi and Revolutionary Movements</li> <li>• Emergence and Social Base of Gandhian Nationalism – Intellectual Foundation of Gandhian Nationalism, Rowlett, Khilafat and Non Cooperation Movements</li> </ul>	
	<b>Practicals:</b>	NA	
	<b>Tutorials:</b>	Discussion on theme Screening a movie of the National Movement	

	<b><u>Assignment: 1</u></b>	<ul style="list-style-type: none"> <li>• 17 century Crises/Causes/Historiography/Debate</li> </ul>		
	2.	<ul style="list-style-type: none"> <li>• Non Cooperation and Anti caste Movement</li> </ul>		
MARCH	<b>Theory:</b>	<p>1</p> <ul style="list-style-type: none"> <li>• Enlightenment Ideas and its Impact</li> <li>• Mercantilism</li> </ul> <p>2.</p> <ul style="list-style-type: none"> <li>• Civil Disobedience Movements, Quit India Movements , Other Currents in Nationalism Ambedkar and Dalit Movement,</li> <li>• Singh Sabha and Akali Movement, Left Movements, Peasants and Workers, Tribal Movements, Communalism and Ideological Practices.</li> </ul>		
	<b>Practicals:</b>	NA		
	<b>Tutorials:</b>	Discussions /Presentations		
	<b><u>Test</u></b>	On the themes taught till March		
APRIL	<b>Theory:</b>	<p>1</p> <ul style="list-style-type: none"> <li>• Origin of Industrial Revolution –Divergence Debate</li> </ul> <p>2.</p> <ul style="list-style-type: none"> <li>• Partition</li> <li>• Independence and the New State</li> </ul>		



<b>Practicals:</b>	NA		
<b>Tutorials:</b>	Question Answer/Discussion		

MAY	<b>Theory:</b>	1 Revision		
		2. Revision		
	<b>Practicals:</b>	NA		
	<b>Tutorials:</b>	Revision		



**SEMESTER WISE  
TEACHING PLAN  
SRI VENKATESWARA  
January - May, 2018-19**

**Name of the Faculty:** Dr. Vandana Joshi

**Department:** History **Semester:** VI Hons and VI BAP 2018

Month		Topics	Course	Paper Code/Name
January	<b>Theory:</b>	I. Varieties of Nationalisms and the remaking of states in the 19 <sup>th</sup> and 20 <sup>th</sup> centuries [a] Intellectual currents, popular movements and the formation of national identities in Germany, Italy and the Balkans. [b] Post-Unification: problems of state building in Germany and Italy II. Tsarist Russia and the coming of the Bolshevik revolution [a] Serfdom, Populism and Social Democracy [b] The Revolution of 1905; the revolutions of 1917: origins, visions, movements	<b>BA HON Core Course XIV</b>	<b>History of Modern Europe-II</b> I.
		I. The Scientific Revolution and the Enlightenment [a] A new view of the universe and matter [b] Reflections on the scientific method [c] Hobbes, Locke and the Philosophes [d] Despotism and the limits of Enlightenment	BA Programme DSE	Cultural transformation in Early Modern Europe
	<b>Practicals:</b>			
	<b>Tutorials:</b>	Presentations		
		Presentation		

February	<b>Theory:</b>	III. Imperialism, war and crisis, c. 1880-1939 [a] Theories and mechanisms of Imperialism [b] War of 1914-18: historiographical debates; developments leading to the War; power blocs and alliances	<b>BA HON Core Course XIV</b>	<b>History of Modern Europe-II</b> I.
		II. Literacy and artistic developments [a] Literacy trends from Dante to Shakespeare [b] Art from Baroque to Rococo and Neo Classicism [c] Novels as an art form	BA Programme DSE	Cultural transformation in Early Modern Europe
	<b>Practicals:</b>			
	<b>Tutorials:</b>			
March	<b>Theory:</b>	[c] Fascism and Nazism: origins and forms; nature of the fascist state	<b>BA HON Core Course XIV</b>	<b>History of Modern Europe-II</b>
		[d] Women and the new Public Sphere III. Transitions in popular culture and mentalities c. 1550 – 1780 [a] Family and marriage patterns [b] The decline of magic, the rise of 'witch' trials	BA Programme DSE	Cultural transformation in Early Modern Europe
	<b>Practicals:</b>			

	<b>Tutorials:</b>	presentations		
	<b><u>Assignment</u></b>			
April	<b>Theory</b>	IV. Cultural and intellectual developments since c.1850 [a] Creation of a new public sphere, print culture, mass education and the extension of literacy [b] Creation of new cultural forms: romanticism to abstract art [c] Institutionalization of disciplines: history, anthropology, psychology	<b>BA HON Core Course XIV</b>	<b>History of Modern Europe-II</b>
		[c] Changing mentalities and popular protests: Jacqueries, food riots and the crowd	BA Programme DSE	Cultural transformation in Early Modern Europe
	<b>Practicals:</b>			
	<b>Tutorials:</b>			
	<b><u>Mid Term Test</u></b>			

May	<b>Theory:</b>	[d] Culture and empire: race, gender and Imperialism; Orientalism	<b>BA HON Core Course XIV</b>	<b>History of Modern Europe-II</b>
		[d] Absolutism and the peasantry in Eastern Europe	BA Programme DSE	Cultural transformation in Early Modern Europe
	<b>Practicals:</b>			
	<b>Tutorials:</b>			









**SEMESTER WISE TEACHING PLAN  
SRI VENKATESWARA COLLEGE**

**Jan.,- April 2019**

**Name of the Faculty: Dr. M. V. R. Prasada Rao**

**Department: Statistics**

**Semester: IV**

Month		Topics	Course	Paper Code/Name
January	<b>Theory:</b>	Estimation: Concepts of estimation, unbiasedness, sufficiency, consistency and efficiency. Factorization theorem. Complete statistic, Minimum variance unbiased estimator (MVUE), Rao-Blackwell and Lehmann-Scheffe theorems and their applications. Cramer-Rao inequality and MVB estimators(statement and applications)	Bachelor of Statistics ( Hons. )	STAT-C-401 Statistical Inference
	<b>Practicals:</b>	Based on estimation, Cramer-Rao inequality and MVB estimators		
	<b>Tutorials:</b>			
February	<b>Theory:</b>	Methods of Estimation: Method of moments, method of maximum likelihood estimation, method of minimum Chi-square, basic idea of Bayes estimators. Principles of test of significance: Null and alternative hypotheses	Bachelor of Statistics ( Hons. )	STAT-C-401 Statistical Inference
	<b>Practicals:</b>	Based on Methods of Estimation		
	<b>Assignment :</b>	Methods of Estimation and Concepts of estimation		
March	<b>Theory:</b>	Type-I and Type-II errors, critical region, level of significance, size and power, best critical region, most powerful test, uniformly most powerful test, Neyman Pearson Lemma (statement and applications to construct most powerful test). Likelihood ratio test, properties of likelihood ratio tests	Bachelor of Statistics (Hons.)	STAT-C-401 Statistical Inference
	<b>Practicals:</b>	Based on , most powerful test, uniformly most powerful test and Likelihood ratio test		
	<b>Tutorials:</b>			

		<b>Mid Term Test- Unit-I, Unit-II and Unit-III</b>		
April	<b>Theory</b>	Interval estimation - Confidence interval for the parameters of various distributions, Confidence interval for Binomial proportion, Confidence interval for population correlation coefficient for Bivariate Normal distribution, Pivotal quantity method of constructing confidence interval, Large sample confidence intervals.	Bachelor of Statistics ( Hons. )	STAT-C-401 Statistical Inference
	<b>Practicals:</b>	Based on Interval estimation, Confidence interval		
	<b>Tutorials:</b>	Discussion and revision		



**SEMESTER WISE TEACHING PLAN**  
**SRI VENKATESWARA COLLEGE**  
**Even Semester 2018-2019**

Name of Faculty: Dr. Veena Budhraja

Department: Statistics

Semester: II, IV, VI

Month		Topics	Course	Paper Code/Name
JANUAR Y	<b>Theory</b>	Introduction to SPSS, Use of Count, Compute, Compute with if and Rank Feature, Concept of Recode and Visual Binning, Generation of Frequency Tables, Calculate Measure of Central Tendency, Measure of Dispersion, Create graph using Legacy Dialogs and chart Builder methods	B.Sc. (H) Statistics	SEC-1: Data Analysis Using Software Packages (SPSS)
		Experimental designs: Role, historical perspective, terminology, experimental error, basic principles, uniformity trials, fertility contour maps, choice of size and shape of plots and blocks, Basic Designs: Completely Randomized Design (CRD), Randomized Block Design (RBD), Latin Square Design (LSD)-layout, model, statistical analysis, advantages and their applications, Relative efficiencies of RBD compared to CRD, LSD compared to CRD, LSD compared to RBD taking rows as blocks, LSD compared to RBD taking columns as blocks. Practical work, Missing Plot technique (for both RBD and LSD) for one missing observation only, Variance of the difference between two estimated treatment effects out of which one has the missing observation (for both RBD and LSD)	B.Sc. (H) Statistics	STAT-C-601: Design of Experiments
	<b>Practicals</b>	Draw graphs and chart, Construct frequency table using recode and visual binning, compute descriptive statistics for row and group data, coefficient of variation, skewness and kurtosis, Use of Count, compute, compute with if and rank feature	B.Sc. (H) Statistics	SEC-1: Data Analysis Using Software Packages (SPSS)
		Analysis of a CRD with equal and unequal replicates, Analysis of RBD, Analysis of LSD, Analysis of RBD with one missing observation, Analysis of LSD with one missing observation.	B.Sc. (H) Statistics	STAT-C-601: Design of Experiments
		Construction of X-bar and R chart, Construction of X-bar and s chart	B.A. (Programme)	DSE1-(i): Demography
	<b>Tutorials</b>			
February	<b>Theory</b>	Correlation Coefficient, Multiple and Partial coefficients, Fitting of Polynomial and Exponential curve, Fitting of most suitable curve, Fitting and plotting of Regression lines	B.Sc. (H) Statistics	SEC-1: Data Analysis Using Software Packages (SPSS)
		Balanced Incomplete Block Design (BIBD): parameters, relationships among its parameters, incidence matrix and its properties, Intra Block analysis, Variance of the difference between two estimated treatment effects, Relative efficiency of BIBD compared to RBD, Definition and Properties of Symmetric BIBD, Resolvable BIBD, Affine Resolvable BIBD, Construction of complimentary BIBD, Residual BIBD, Dual BIBD, Derived BIBD.	B.Sc. (H) Statistics	STAT-C-601: Design of Experiments
	<b>Practicals</b>	Calculate Correlation coefficient, Rank	B.Sc. (H)	SEC-1: Data

		correlation, Multiple and Partial correlation, Fitting of polynomials	Statistics	Analysis Using Software Packages (SPSS)
		Intra block analysis of BIBD, Intra block analysis of a symmetric BIBD.	B.Sc. (H) Statistics	STAT-C-601: Design of Experiments
	<b>Tutorials</b>			
March	<b>Theory</b>	Generation of random variable, calculations of CDF, plot the normal probability plot, Importing and exporting files, Missing Observation,	B.Sc. (Hons.) Statistics	SEC-1: Data Analysis Using Software Packages (SPSS)
		Factorial Experiments: Advantages over simple experiments, notations, concepts of main effects and interaction effects. $2^n$ Factorial Designs -Standard order for treatment combinations, Main effects and interactions, Yates' Algorithm, Design and analysis, $3^n$ Factorial Designs - Standard order for treatment combinations, Main effects and interactions, Yates' Algorithm Design and analysis ( $n=2$ ), Total and Partial confounding- Confounding $2n$ ( $n \leq 5$ ) in two blocks and four blocks, Confounding the $3n$ ( $n \leq 3$ ) in three blocks, identification of the confounded effects for both, $2^n$ ( $n \leq 5$ ) and $3^n$ ( $n \leq 3$ ) factorial designs.	B.Sc. (H) Statistics	STAT-C-601: Design of Experiments
	<b>Practicals</b>	Generation of random sample, compute CDF, CLT for binomial and Poisson Distribution, Missing Observation, fit Binomial and Poisson and Negative Binomial distribution	B.Sc. (Hons.) Statistics	SEC-1: Data Analysis Using Software Packages (SPSS)
		Analysis of $2^2$ and $2^3$ factorial in CRD, RBD and LSD, Analysis of a $3^2$ factorial in CRD and RBD, Analysis of a completely confounded two level factorial design in 2 blocks, Analysis of a completely confounded two level factorial design in 4 blocks, Analysis of a partially confounded two level factorial design.	B.Sc. (H) Statistics	STAT-C-601: Design of Experiments
	<b>Tutorials</b>			
	<b>Assignment</b>	Assignment will be based on topic specified in syllabus	B.Sc. (H) Statistics	SEC-1: Data Analysis Using Software Packages (SPSS)
		Based on problems of LSD & MSPT	B.Sc. (H) Statistics	STAT-C-601: Design of Experiments
<b>Test</b>	Test will be based on syllabus covered before midterm break	B.Sc. (H) Statistics	SEC-1: Data Analysis	

				Using Software Packages (SPSS)
			B.Sc. (H) Statistics	STAT-C-601: Design of Experiments
April	<b>Theory</b>	Statistical Inference, compute p-values, t-test, paired sample t-test, independent sample t-test chi square, comparison of several means, construction bivariate table, SRS, SS, code editing	B.Sc. (H) Statistics	SEC-1: Data Analysis Using Software Packages (SPSS)
		Analysis of a single replicate, Fractional Factorial Designs: Introduction, Concepts - Word, Defining Relation, Principal and Complementary Fractions, Aliases, Alias Structure, Resolution of a Design, Construction of Resolution III, IV and V Designs, Construction of one half and one-quarter fractions of $2^n$ ( $n \leq 5$ ).	B.Sc. (H) Statistics	STAT-C-601: Design of Experiments
	<b>Practicals</b>	Obtain sampling distribution, construct bivariate distribution, t-test, chi square, edit syntax, SRS, Stratified and systematic sample	B.Sc. (H) Statistics	SEC-1: Data Analysis Using Software Packages (SPSS)
		Analysis of a single replicate of a $2^n$ design, Analysis of one half fraction of $2^n$ factorial design, Analysis of one quarter fraction of $2^n$ factorial design.	B.Sc. (H) Statistics	STAT-C-601: Design of Experiments



**SEMESTER WISE TEACHING PLAN**  
**SRI VENKATESWARA COLLEGE**  
 Even Semester -2018-19

**Name of the Faculty:** Dr. M.K. Sukla

**Department:** Statistics

**Semester :** II/IV/VI

Month		Topics	Course	Paper
JANUARY	<b>Theory</b>	Statement of the fundamental theorem of algebra and its consequences. Relation between roots and coefficients of any polynomial equations, Solutions of cubic and biquadratic equations when some conditions on roots of equations are given. Evaluation of the symmetric polynomials and roots of cubic and biquadratic equations.	B.Sc. (H) Statistics	STAT C-202 Algebra
		General Linear Model-Definition, representations and classification, Estimability, Gauss Markov Theorem, Estimation of error variance Concepts of linear parametric functions, estimable functions, Conditions of estimability, Gauss Markov Theorem (for full rank and non-full rank cases) with proof, Concept of number of linearly independent functions, Distribution of Quadratic forms; Cochran's Theorem and associated theorems with proof	B.Sc. (H) Statistics	STAT C-402 <b>Linear Models</b>
	<b>Practicals</b>	Estimability when X is a full rank matrix, Estimability when X is not a full rank matrix, Distribution of Quadratic forms.	B.Sc. (H) Statistics	STAT C-402 <b>Linear Models</b>
	<b>Tutorials</b>			
FEBRUARY	<b>Theory:</b>	Review of algebra of matrices, theorems related to triangular, symmetric and skew symmetric matrices, idempotent matrices, Hermitian and skew Hermitian matrices, orthogonal matrices, singular and non-singular matrices and their properties. Trace of a matrix, unitary, involutory and nilpotent matrices	B.Sc. (H) Statistics	STAT C-202 Algebra
		Regression Analysis-Simple Linear Regression model, Least squares estimation of the parameters, Testing of Hypotheses, Interval estimation, Prediction, Coefficient of Determination, Regression through the origin, Multiple Linear Regression model, Estimation of model parameters, Testing of hypotheses-Global test, Test on Individual Regression Coefficients, Test for subset of Regression coefficients, Extra Sum of Squares method, Partial F test, Sequential test, Orthogonal columns of X matrix,	B.Sc. (H) Statistics	STAT C-402 <b>Linear Models</b>
	<b>Practicals:</b>	Finding inverse using Cayley Hamilton theorem, For a real Skew Symmetric matrix S, show that matrix A defined by $(I-S)(I+S)^{-1}$ is an orthogonal matrix, Reducing a Quadratic Form to its canonical form and finding its rank and index	B.Sc. (H) Statistics	STAT C-202 Algebra
		Simple Linear Regression, Multiple Regression, Tests for Linear Hypothesis, Bias in regression estimates, Lack of fit.	B.Sc. (H) Statistics	STAT C-402 <b>Linear Models</b>
	<b>Tutorials:</b>			

	<b>Assignment</b>		B.Sc. (H) Statistics	STAT C-202 Algebra
		Will be based on unsolved problems covered before midterm break	B.Sc. (H) Statistics	STAT C-402 <b>Linear Models</b>
MARCH	<b>Theory:</b>	Adjoint and inverse of a matrix and related properties.	B.Sc. (H) Statistics	STAT C-202 Algebra
		Prediction from a fitted model, Bias in regression estimates, Analysis of Variance and Covariance-Definition of fixed, random and mixed effect models, of Variance under Fixed effects model for one way classified data and two way classified data with equal number of	B.Sc. (H) Statistics	STAT C-402 <b>Linear Models</b>
	<b>Practicals:</b>	Reducing a Quadratic Form to its canonical form and finding its rank and index, Proving that a quadratic form is positive or negative definite, Finding the product of two matrices by considering partitioned matrices, Finding inverse of a matrix by partitioning, Finding Generalized inverse of a matrix and symmetric generalized inverse of a	B.Sc. (H) Statistics	STAT C-202 Algebra
		Stepwise regression procedure, Analysis of Variance of a one way classified data, Analysis of Variance of a two way classified data with one observation per cell, Analysis of Variance of a two way classified data with m (> 1) observations per cell, Analysis of Covariance of a one way classified data	B.Sc. (H) Statistics	STAT C-402 <b>Linear Models</b>
	<b>Test</b>	Will be based on Units covered before midterm break	B.Sc. (H) Statistics	STAT C-202 Algebra
			B.Sc. (H) Statistics	STAT C-402 <b>Linear</b>
	<b>Tutorials:</b>			
APRIL	<b>Theory:</b>	Definition, properties and applications of determinants for 3rd and higher orders, evaluation of determinants of order 3 and more using transformations. Symmetric and Skew symmetric determinants, Circulant determinants, Jacobi's Theorem, product of determinants. Use of determinants in solution to the system of linear equations	B.Sc. (H) Statistics	STAT C-202 Algebra
		Analysis of Covariance under fixed effects model for one way, Selection of best linear regression equation by stepwise procedure, Model Adequacy checking- Residuals and outliers, violation of assumption of Normality, Lack of fit and pure error, Polynomial models: Orthogonal Polynomials	B.Sc. (H) Statistics	STAT C-402 <b>Linear Models</b>
	<b>Practicals:</b>	Find $XGX'$ for any X of order $n \times k$ , where G is generalized inverse and show that $XGX'$ is invariant with respect to G, To find whether a given set of vectors is linearly dependent or linearly independent, Constructing an Orthonormal Basis using Gram Schmidt Orthogonalization Process	B.Sc. (H) Statistics	STAT C-202 Algebra
		Residual Analysis, Orthogonal Polynomials.	B.Sc. (H) Statistics	STAT C-402 <b>Linear</b>



**SEMESTER WISE TEACHING PLAN**  
**SRI VENKATESWARA COLLEGE**  
**January to May 2019**

**Name of the Faculty:** Akash Varshney

**Department:** Statistics

**Semester :** II/IV/VI

Month		Topics	Course	Paper
JANUARY	<b>Theory</b>	Introduction to investment and markets: Cash flows-deterministic and random, basic theory of interest, bonds and yields, term structure of interest rates, portfolio theory. Introduction to derivatives	B. Sc.(H) Statistics Sem - VI	STAT-DSE-4(A): Financial Statistics
		Statement of the fundamental theorem of algebra and its consequences. Relation between roots and coefficients or any polynomial equations. Solutions of cubic and biquadratic equations when some conditions on roots of equations are given. Evaluation of the symmetric polynomials and roots of cubic and biquadratic	B. Sc.(H) Statistics Sem - II	STAT C-202: Algebra
	<b>Practicals</b>	Practical : To compute NPV and to obtain IRR of the investments To verify “no arbitrage” principle. Interest Rates , Bond , Portfolio Return .	B. Sc.(H) Statistics Sem - VI	STAT-DSE-4(A): Financial Statistics
		Practical Based on Algebra of Matrices. For a real Skew Symmetric matrix S ,show that matrix A defined by $(I-S)(I+S)^{-1}$ is an orthogonal matrix. Inverse of a Matrix.	B. Sc.(H) Statistics Sem - II	STAT C-202: Algebra
	<b>Tutorials</b>			
FEBRUARY	<b>Theory:</b>	Tools Needed For Option Pricing: Forward contracts, spot price, forward price, future price. Call and put options, zero-coupon bonds and discount bonds, Pricing derivatives: Arbitrage relations and perfect financial markets, pricing futures, put-call parity for European and American options, relationship between strike price and option price.	B. Sc.(H) Statistics Sem - VI	STAT-DSE-4(A): Financial Statistics



		Review of algebra of matrices, Elementary Transformation, Row reduction and echelon forms, the solution of matrix equations $AX=B$ , linear independence, Applications of linear equations, inverse of a matrix.	B. Sc.(H) Statistics Sem - II	STAT C-202: Algebra
	<b>Practicals:</b>	Practical : To price future / forward contracts , Call-put parity for options . Option Price using Martingale. Practical based on different Option trading Strategies.	B. Sc.(H) Statistics Sem - VI	STAT-DSE-4(A): Financial Statistics
		Reducing a Quadratic Form to its canonical form and finding its rank and index. show that matrix A defined as $A= (I_n - X (X^T X)^{-1} X^T)$ is idempotent. Also, determine its rank and characteristic root. . Symmetric Determinants	B. Sc.(H) Statistics Sem - II	STAT C-202: Algebra
	<b>Tutorials:</b>			

	<b><u>Assignment</u></b>	<ol style="list-style-type: none"> <li>1. Assignment based on 10 different option trading strategies</li> <li>2. Assignment based on discrete and continuous Stochastic Process.</li> </ol>	B. Sc.(H) Statistics Sem - VI	STAT-DSE-4(A): Financial Statistics
		Theory of Equations :Problems and Results based Relation between roots and Coeffecients and Symmetric functions of roots of a Polynomial Equation	B. Sc.(H) Statistics Sem - II	STAT C-202: Algebra
MARCH	<b>Theory:</b>	Discrete Stochastic Processes, Binomial processes, General random walks, Geometric random walks, Binomial models Continuous time processes – Brownian motion, geometric Brownian motion, Wiener process; Introduction to stochastic calculus. Stochastic differential equations and their solutions; Itô’s lemma.	B. Sc.(H) Statistics Sem - VI	STAT-DSE-4(A): Financial Statistics
		Rank of a matrix, row-rank, column-rank, standard theorems on ranks, rank of the sum and the product of two matrices. Characteristic roots and Characteristic vector, Properties of characteristic roots, Cayley Hamilton theorem	B. Sc.(H) Statistics Sem - II	STAT C-202: Algebra
	<b>Practicals:</b>	To construct binomial trees and to evaluate options using these trees , Simulation of continuous time stochastic processes	B. Sc.(H) Statistics Sem - VI	STAT-DSE-4(A): Financial Statistics
		Finding the product of two matrices by considering partitioned matrices. Finding Generalized Inverse of a matrix and symmetric generalized inverse of a matrix. Characterstic Roots and Characterstic Vectors	B. Sc.(H) Statistics Sem - II	STAT C-202: Algebra
	<b>Tutorials:</b>			
	<b><u>Test</u></b>	Test based on Discrete and Continuous Process , Itos Lemma , Stochastic Differential Equation.	B. Sc.(H) Statistics Sem - VI	STAT-DSE-4(A): Financial Statistics
			Test Based on Theory of Equations , Characterstic Roots and Characterstic Vectors ,System of linear Equations.	B. Sc.(H) Statistics Sem - II

APRIL	<b>Theory:</b>	Intrinsic of option markets: Black-Scholes differential equation, Black-Scholes formula for European and American options, Implied volatility. Hedging portfolios: Delta, Gamma and Theta hedging.	B. Sc.(H) Statistics Sem - VI	STAT-DSE-4(A): Financial Statistics
		Vector Spaces Linear Independence and Linear Dependence of Vectors , Concept of a Basis. orthogonal transformation and their digitalization Quadratic forms, Canonical Forms, Rank and Nullity and Index	B. Sc.(H) Statistics Sem - II	STAT C-202: Algebra
	<b>Practicals:</b>	To price options using Black – Scholes formula. Application of Greeks to hedge investment portfolios.	B. Sc.(H) Statistics Sem - VI	STAT-DSE-4(A): Financial Statistics
		Reducing a Quadratic Form to its canonical form and finding its rank and index. Proving that a quadratic form is positive or negative definite.	B. Sc.(H) Statistics Sem - II	STAT C-202: Algebra
	<b>Tutorials:</b>			

MAY	<b>Theory:</b>	Binomial Model for European options: Cox-Ross-Rubinstein approach to option pricing. Discrete dividends,	B. Sc.(H) Statistics Sem - VI	STAT-DSE-4(A): Financial Statistics
	<b>Practicals:</b>	Pricing of options using discrete time models, Revision of Practical.	B. Sc.(H) Statistics Sem - VI	STAT-DSE-4(A): Financial Statistics
		Revision of Practical.	B. Sc.(H) Statistics Sem - II	STAT C-202: Algebra
	<b>Tutorials:</b>			



**SEMESTER WISE TEACHING PLAN  
SRI VENKATESWARA COLLEGE**

Even Semester -2018-19

Name of the Faculty: Dr. Dipika  
II.IV, VI

Department: Statistics

Semester:

Month		Topics	Course	Paper Code/Name
JANUARY	Theory	Probability: Introduction, random experiments, sample space, events and algebra of events. Definitions of Probability – classical, statistical, and axiomatic.	Generic Elective	STAT-GE-2: Introductory Probability
		Analysis of Variance and Covariance-Definition of fixed, random and mixed effect models	B.Sc.(H) Statistics	STAT-C-402: Linear Models
		Survival Analysis: To study various survival functions and interrelationship between them. Introduction to various survival models, Censoring Schemes: Definition of censoring. Study of Type I, Type II and progressive or random censoring with biological examples.	B.Sc.(H) Statistics	STAT-DSE-3(B): Biostatistics and Survival Analysis
	Practicals	Fitting of binomial distributions for n and $p = q = \frac{1}{2}$ given, Fitting of binomial distributions for n and p given, Fitting of binomial distributions computing mean and variance.	Generic Elective	STAT-GE-2: Introductory Probability
		Analysis of Variance of a one way classified data	B.Sc.(H) Statistics	STAT-C-402: Linear Models
	Tutorials	Estimation of survival function, Determination of death density function and hazard function, Identification of type of censoring and to estimate survival time for type I censored data.	B.Sc.(H) Statistics	STAT-DSE-3(B): Biostatistics and Survival Analysis
February	Theory	Conditional Probability, laws of addition and multiplication, independent events, theorem of total probability.	Generic Elective	STAT-GE-2: Introductory Probability
		Analysis of Variance under Fixed effects model for one way classified data	B.Sc.(H) Statistics	STAT-C-402: Linear Models
		Non parametric Methods: Actuarial and Kaplan-Meier methods for estimating survival function and variance of the Estimator, Competing Risk Theory: Introduction of various measures of competing risk theory, Estimation of probabilities of death using maximum likelihood principle and modified minimum Chi-square methods.	B.Sc.(H) Statistics	STAT-DSE-3(B): Biostatistics and Survival Analysis
	Practicals	Fitting of Poisson distributions for given value of lambda, Fitting of Poisson distributions after computing mean, Application problems based on binomial distribution, and Application problems based on Poisson distribution.	Generic Elective	STAT-GE-2: Introductory Probability
		Analysis of Variance of a one way classified data	B.Sc.(H) Statistics	STAT-C-402: Linear Models
		Identification of type of censoring and to estimate survival time for type I censored data, Identification of type of censoring and to estimate survival time for type II censored data, Identification of type of censoring and to estimate survival time for progressively type I censored data, Estimation of mean survival time and variance of the estimator for type II censored data.	B.Sc.(H) Statistics	STAT-DSE-3(B): Biostatistics and Survival Analysis
	Tutorials			

<b>March</b>	<b>Theory</b>	Bayes' theorem and its applications, Random Variables: Discrete and continuous random variables	Generic Elective	STAT-GE-2: Introductory Probability
		Analysis of Variance under Fixed effects model for two way classified data, with equal number of observations per cell	B.Sc.(H) Statistics	STAT-C-402: Linear Models
		Theory of independent and dependent risks: Bivariate normal dependent risk model., Stochastic Epidemic Models: Definition of epidemic, susceptibles and infective. Simple and general epidemic model. Duration of an epidemic.	B.Sc.(H) Statistics	STAT-DSE-3(B): Biostatistics and Survival Analysis
	<b>Practicals</b>	Problems based on area property of normal distribution, To find the ordinate for a given area for normal distribution.	Generic Elective	STAT-GE-2: Introductory Probability
		Analysis of Variance of a two way classified data .	B.Sc.(H) Statistics	STAT-C-402: Linear Models
		Estimation of mean survival time and variance of the estimator for progressively type I censored data, To estimate the survival function and variance of the estimator using Non-parametric methods with Actuarial methods, To estimate the survival function and variance of the estimator using Non-parametric method with Kaplan-Meier method.	B.Sc.(H) Statistics	STAT-DSE-3(B): Biostatistics and Survival Analysis
	<b>Tutorials</b>			
	<b>Assignment</b>	Unsolved problems from theory.	Generic Elective	STAT-GE-2: Introductory Probability
		Unsolved problems from theory.	B.Sc.(H) Statistics	STAT-C-402: Linear Models
		Unsolved problems from theory.	B.Sc.(H) Statistics	STAT-DSE-3(B): Biostatistics and Survival Analysis
	<b>Test</b>		Generic Elective	STAT-GE-2: Introductory Probability
			B.Sc.(H) Statistics	STAT-C-402: Linear Models
		Test will be based on Course Covered before midterm break	B.Sc.(H) Statistics	STAT-DSE-3(B): Biostatistics and Survival Analysis
	<b>April</b>	<b>Theory</b>	pmf, pdf, cdf. Illustrations of random variables and its properties, Expectation, variance, moments and moment generating function.	Generic Elective
Analysis of Covariance under fixed effects model for one way.			B.Sc.(H) Statistics	STAT-C-402: Linear Models
Statistical Genetics: Introduction, concepts-Genotype, Phenotype, Dominance, Recessiveness, Linkage and Recombination, Coupling and Repulsion. Mendelian laws of Heredity, Random mating, Gametic array, relation between genotypic array and gametic array under random mating. Segregation matrix. Estimating probabilities of gametes for future generations, Clinical trials: Phases of clinical drug trial. Blinding.			B.Sc.(H) Statistics	STAT-DSE-3(B): Biostatistics and Survival Analysis
<b>Practicals</b>		Application based problems using normal distribution, Fitting of normal distribution when parameters are	Generic Elective	STAT-GE-2: Introductory

		given, Fitting of normal distribution when parameters are not given.		Probability
		Analysis of Covariance of a one way classified data.	B.Sc.(H) Statistics	STAT-C-402: Linear Models
		To estimate Crude probability of death, Net-type I probability of death, Net-type II probability of death, partially crude probability of death, To estimate gene frequencies F.	B.Sc.(H) Statistics	STAT-DSE- 3(B): Biostatistics and Survival Analysis



**SRI VENKATESWARA COLLEGE**  
**SEMESTER WISE TEACHING PLAN**  
**2018-19**

**Name of the Faculty: Dr. Alok Kumar Singh**

**Department: Statistics**

**Semester: IV**

Month		Topics	Course	Paper Code/Name
January	<b>Theory:</b>	Introduction to quality dimensions of quality, Its concept, application and importance. Process and product control, Seven tools of SPC, Chance and Assignable causes of quality variation. Statistical Control Charts- Statistical basis of 3- $\sigma$ Control charts, Control charts for variables: $\bar{X}$ & R-chart, $\bar{X}$ & s-chart.	B.Sc. (Hons) Statistics	STAT-C-403: Statistical Quality Control
		Control charts for variables: X- bar and R-charts, Control charts for attributes: p and c-charts	<b>GE-IV</b>	STAT-GE-IV Applied Statistics
	<b>Practicals:</b>	Construction and interpretation of statistical control charts for X bar, R, s	B.Sc. (Hons) Statistics	
		Control charts for variables: X- bar and R-charts	<b>GE-IV</b>	
	<b>Tutorials:</b>	--		
February	<b>Theory:</b>	Rational Sub-grouping, Revised and Modified Control Limits. Control charts for attributes: np-chart, p-chart, c-chart and u-chart. Comparison between control charts for variables and control charts for attributes. Analysis of patterns on control chart, estimation of process capability. Acceptance sampling plan: Principle of acceptance sampling plans. Single and Double sampling plan	B.Sc. (Hons) Statistics	STAT-C-403: Statistical Quality Control
		Introduction to Demographic Methods, measurement of population, rates and ratios of vital events. Measurement of mortality: Crude Death Rate, Specific Death Rate.	<b>GE-IV</b>	STAT-GE-IV Applied Statistics
	<b>Practicals:</b>	Construction and interpretation of statistical control charts for n, np, c.	B.Sc. (Hons) Statistics	

		Construction and interpretation p-chart (fixed sample size) and c-chart.	<b>GE-IV</b>	
	<b>Tutorials:</b>	--		
March	<b>Theory:</b>	OC, AQL, LTPD, AOQ, AOQL, ASN, ATI functions with graphical interpretation, use and interpretation of Dodge and Romig's sampling inspection plan tables. Index Numbers: Definition, construction of index numbers and problems thereof for weighted and unweighted index numbers including Laspeyre's, Paasche's, Edgeworth-Marshall and Fisher's. Average of Price Relatives	B.Sc. (Hons) Statistics	STAT-C-403: Statistical Quality Control
	<b>Practicals:</b>	Construction of u chart, OC curve	B.Sc. (Hons) Statistics	
	<b>Tutorials:</b>	Computation of measures of mortality. Computation of measures of fertility and population growth.	<b>GE-IV</b>	
	<b><u>Assignment</u></b>	Based on Unit 1 to 3.		
April	<b>Theory</b>	Chain index numbers, conversion of fixed based to chain based index numbers and vice-versa. Criteria of Good Index Numbers. Consumer price index numbers. Base shifting, splicing and deflating of index numbers	B.Sc. (Hons) Statistics	STAT-C-403: Statistical Quality Control
	<b>Practicals:</b>	Construction of Various type of Index Numbers.		
	<b>Tutorials:</b>			





**SEMESTER WISE TEACHING PLAN  
SRI VENKATESWARA COLLEGE**

**Jan.-April, 2019**

**Name of the Faculty: Dr. Ramesh Kumar**

**Department: Statistics**

**Semester: IV & VI**

Month		Topics	Course	Paper Code/Name	
January	Theory:	Bivariate Normal Distribution (BVN): p.d.f. of BVN,	Bachelor of Statistics (Hons.)	STAT-C-602 Multivariate Analysis and Nonparametric Methods	
		Methods of Estimation: Method of moments, :Method of maximum likelihood			
	Practicals:	Economic Time Series: Components of time series, Decomposition of time series- Additive and multiplicative model with their merits and demerits. Illustrations of time series. Measurement Practical based on Bivariate Normal Distribution (BVN), marginal and conditional p.d.f. of BVN, Practical based on Method of moments, :Method of maximum likelihood estimation			STAT-C-401 Statistical Inference GE-IV Applied Statistics
	Tutorials:	Discuss problems related to theory			
February	Theory:	Properties of BVN, marginal and conditional p.d.f. of BVN.	Bachelor of Statistics (Hons.)	STAT-C-602 Multivariate Analysis and Nonparametric Methods STAT-C-401 Statistical Inference GE-IV Applied Statistics	
		Methods of Estimation: Method of minimum Chi-square, basic idea of Bayes estimators			
		method of semi-averages and method of least squares (linear, quadratic and modified exponential).Measurement of seasonal variations by method of ratio to trend.			
	Practicals:	Principal Components Analysis and Factor Analysis			
		Practical based on Bivariate Normal Distribution (BVN), marginal and conditional p.d.f. of BVN Practical based on Method of minimum Chi-square,			
March	Theory:	Multivariate Normal distribution and its properties. Sampling distribution for mean vector and variance- covariance matrix		STAT-C-602 Multivariate Analysis and Nonparametric Methods	

		Interval estimation - Confidence interval for the parameters of various distributions, Confidence interval for Binomial proportion.  Demographic Methods: Introduction, measurement of population, rates and ratios of vital events. Measurement of mortality	Bachelor of Statistics (Hons.)	STAT-C-401 Statistical Inference GE-IV Applied Statistics
	Practicals:	Practical based on Multivariate Normal distribution Practical based on Confidence interval for the parameters of various distributions		
	<u>Assignment</u>	Assignment related to Bivariate Normal Distribution and Multivariate Normal distribution		STAT-C-602 Multivariate Analysis and Nonparametric Methods
		<u>Mid Term Test</u> based on Unit-I and Unit-II		STAT-C-602 Multivariate Analysis and Nonparametric
April	Theory	Multiple and partial correlation coefficient and their properties. Introduction to Discriminant Analysis, Principal Components Analysis and Factor Analysis	Bachelor of Statistics (Hons.)	STAT-C-602 Multivariate Analysis and Nonparametric Methods
		Confidence interval for population correlation coefficient for Bivariate Normal distribution, Pivotal quantity method of constructing confidence interval, Large sample confidence intervals.  CDR, SDR (w.r.t. Age and sex), IMR, Standardized death rates. Life (mortality) tables: definition of its main functions and uses. Measurement of fertility and reproduction: CBR, GFR, and TFR. Measurement of population growth: GRR, NRR.		STAT-C-401 Statistical Inference  GE-IV Applied Statistics
	Practicals:	Practical based on , Principal Components Analysis and Factor Analysis Practical based on Confidence interval		STAT-C-602 Multivariate Analysis and Nonparametric Methods
		Practical based on Confidence interval		STAT-C-401 Statistical Inference