



SRI VENKATESWARA COLLEGE

2017-18

EVEN SEMESTER

TEACHING PLANS



**SEMESTER WISE
TEACHING PLAN
SRI VENKATESWARA COLLEGE 2017-
2018**

Name of the Faculty: Dr Deepika Singh
political science

Department:

Semester : IV (Even)

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

Month		Topics	Course	Paper Code/Name
JANUARY	Theory	APPROACHES TO STUDYING COMPARATIVE POLITICS; A. Political culture B. New institutionalism	B A HONOURS	: POLITICAL PROCESSES AND INSTITUTIONS IN COMPARATIVE PERSPECTIVE
	Practicals			
	Tutorials			
FEBRUARY	Theory:	ELECTORAL SYSTEM; A)DEFINITIONS AND PROCEDURES; TYPES OF ELECTION SYSTEM (first past the post, proportional representation, mixed representation) Party system Historical context of emergence of the party system		

	Practicals:			
	Tutorials:			

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

	Practicals:	
	Tutorials:	Discussion on Federalism

MAY	Theory:	DEBATES AROUND TERRITORIAL DIVISION
	Practicals:	
	Tutorials:	Discussion on territorial division



**SEMESTER WISE
TEACHING PLAN (2017-2018)
SRI VENKATESWARA COLLEGE**

Name of the Faculty: **Dr. Deepika Singh**
 Department: **Political Science**
 Even Semester: **VI**

Name of the Paper: **Citizenship in Globalised world**

Month		Topic	Course	Paper Code/Name
January	Theory	Classical conceptions of citizenship	Honours discipline paper	Citizenship in Globalised world
	Practicals			
	Tutorials			
February	Theory	The Evolution of Citizenship and the Modern State		
	Practicals			
	Tutorials	Discussion on citizenship		
	Assignment	Relation between state and citizenship		
March	Theory	Citizenship and Diversity Citizenship beyond the Nation-state: Globalization and global justice		

	Practicals			
	Tutorials	Discussion on globalisation		
April	Theory	The idea of cosmopolitan citizenship		
	Practicals			
	Tutorials	Concept of cosmopolitan		
	Test	Presentations of Projects		
May	Theory	The idea of cosmopolitan citizenship		
	Practicals			
	Tutorials			

(Dr. Deepika Singh)
Assistant Professor
Department of Political Science



**SEMESTER WISE TEACHING
PLAN (2017-2018)
SRI VENKATESWARA COLLEGE**

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

Department:

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

Month		Topics	Course	Paper Code/Name
JANUARY	Theory	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
	Practicals			
	Tutorials	determinants		
FEBRUARY	Theory:	India's relations with USA and USSR		
	Practicals:			
	Tutorials:	INDO SOVIET TREATY		

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

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



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)-IVth

Month		Topics	Course	Paper Code/Name
January	Theory:	Laws, Rights and duties. Written and Unwritten Constitution. Institutions of representative democracy	B.A (H)	Your Laws, Your Rights
	Tutorials:			

February	Theory:	Rule of law and the Criminal Justice System in India	B.A (H)	Your Laws, Your Rights
		Criminal Procedure and Human Rights in India		
	Human Rights and Criminal Justice in India Equality and non-discrimination- Gender, Caste, Class and religion			
	Tutorials:			
March	Theory:		B.A (H)	Your Laws, Your Rights
	Tutorials:			
Assignment	Discuss the concept of Rule of law and its relation with the criminal Justice System in India			
	Examine the legal and constitutional measures adopted to protect the rights of the Scheduled Castes and Scheduled Tribes in India			
April	Theory		B.A (H)	Your Laws, Your Rights

	Tutorials:	Assess the functioning of RTI in strengthening democracy in India Examine the provisions related to filing FIR and complain in India		
	<u>Mid Term Test</u>	Discuss the laws related to the protection of the rights of the persons with disabilities. Discuss the characteristics of MNREGA and its employment opportunities in India		
May	Theory:	Redistribution, recognition and livelihood, Traditional rights of forest dwellers and the issue of women's property rights, Gender Study Group, The Law on Atrocities Against Scheduled Castes and Scheduled Tribes	B.A (H)	Your Laws, Your Rights



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	Theory:	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	
	Tutorials:	Understanding of socio – economic and political problems of marginalized groups in society such as women, dalits, minorities and adivasis			
February	Theory:	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	

	Tutorials:	Understand the impact of globalisation-Economic, political and Social Human right in Globalisation		
March	Theory:	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 Workers, Consumer Rights, Human Rights Movement in India	B.A (P)	Human Rights, Gender and Environment
	Tutorials:	Indian Constitution-NHRC and Human Rights		
	Assignment	<p>What do understand by the term social inequality? Discuss the various forms of inequality in the form of class and gender on Human Rights</p> <p>Discuss the constitutional provisions to protect the Human Rights in India.</p> <p>Discuss the role and significant contributions of Universal Declaration on Human Rights.</p>		
		<p>Discuss the role of various institutions of India to protect the Women's right.</p> <p>What do you understand by the term Sustainable Development? Discuss the various initiative undertaken in the world.</p>		
April	Theory	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

	Tutorials:	Women Institutions in India Women in Legislature Women in India		
	Mid Term Test	<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 affecting 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	Theory:	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
	Tutorials:	Human and Environment Change in the environment Environmental Rights		

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SEMESTER WISE TEACHING PLAN

SRI VENKATESWARA COLLEGE

January-June, 2018



Name of the Faculty: Dr SANTOSH KUMAR SINGH

Department: POLITICAL SCIENCE

Semester: B.A (H)-VIth

Month		Topics	Course	Paper Code/Name
January	Theory:	Understanding modern political philosophy Theory vs Philosophy, Science vs Philosophy Modernity and Its Discourses	B.A (H)	Modern Political Philosophy/Paper XIII
		Knowledge vs Ideas Forms vs Ideas Metaphysics		
	Tutorials:	Relationship between science and Philosophy. Political Science as Science Political Science and Philosophy		
February	Theory:	Rousseau's Philosophy-State, Social Contract, General Will, Government		Modern Political Philosophy/Paper XIII
	Tutorials:	State birth Vs Contractarian Thinkers Rousseau as a Thinker Comparison between Hobbes, Locke and Rousseau. Social Contract in Philosophy		
March	Theory:	Mary Wollstonecraft and Feminism, On Rousseau's Education, Rights, Women and paternalism		Modern Political Philosophy/Paper XIII
	Tutorials:	Mary Wollstonecraft's contributions in the modern political philosophy. Mary as Feminist Thinker, Mary and Mill		

	Assignment	<p>Critically examine the contributions of Immanuel Kant in the Enlightenment tradition in modern political philosophy.</p> <p>What is 'Modernity'? Examine the role of the enlightenment tradition in enriching the modern political philosophy</p>		
April	Theory	<p>J S Mill on Representative Government Liberty, Expression and Women. Marx Philosophy, State, Class, Revolution, Marx and Modernity, Marx and Science,</p>		Modern Political Philosophy/Paper XIII
	Tutorials:	<p>Where there is no common power, there is no law where no law, there is no justice (Hobbes). In the light of this discuss Hobbes's</p> <p>The theory of Social Contract as developed by Hobbes has its own problems. What main problems do you see in it?</p>		
	Mid Term Test	<p>Why is Karl Marx regarded as the founder of scientific socialism? Would you describe him as evolutionary or revolutionary socialist?</p> <p>Rousseau's theory of General Will "is a strange mixture of utopian idealism and plain common sense." Discuss Rousseau's political philosophy was so vogue that it could hardly be said to point in any specific direction' (Sabine). How Far do you agree with it?</p>		
May	Theory:	<p>Alexandra Kollontai Bolshevik Feminism, Woman Question, Social Democracy and the Women's Question, Lonely Struggle of the Woman who defied Lenin ,</p>		Modern Political Philosophy/Paper XIII

	Tutorials:	<p>Discuss the views of J S Mill for securing Individual liberty in modern state. Is it correct to say that he was prophet of an empty liberty?</p> <p>What are the dangers of representative government, according to J S Mill? What safeguards against these dangers does he prescribe?</p> <p>“Rousseau’s political philosophy was so vague that it could hardly be said to point in any specific direction” (Sabine). How far do you agree with it?</p> <p>“I found the Hegelian dialectics standing on its head. I put it down on its feet” (Karl Marx). Critically examine the statement, Did Karl Marx succeed in his attempt?</p> <p>Critically analyse the ‘Women’s Question’ in Alexandra Kollontai’s philosophy</p>		



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)-IVth

Month		Topics	Course	Paper Code/Name	
January	Theory:	Laws, Rights and duties. Written and Unwritten Constitution. Institutions of representative democracy	B.A (H)	Your Laws, Your Rights	
	Tutorials:				
February	Theory:	Rule of law and the Criminal Justice System in India Criminal Procedure and Human Rights in India Human Rights and Criminal Justice in India	B.A (H)	Your Laws, Your Rights	

		Equality and non-discrimination- Gender, Caste, Class and religion		
	Tutorials:			
March	Theory:	Equality and non-discrimination Gender 9M), Caste: Rishabh Rajput Class: Middle	B.A (H)	Your Laws, Your Rights
	Tutorials:			
	Assignment	Discuss the concept of Rule of law and its relation with the criminal Justice System in India Examine the legal and constitutional measures adopted to protect the rights of the Scheduled Castes and Scheduled Tribes in India		
April	Theory		B.A (H)	Your Laws, Your Rights
	Tutorials:	Assess the functioning of RTI in strengthening democracy in India Examine the provisions related to filing FIR and complain in India		

	<u>Mid Term Test</u>	Discuss the laws related to the protection of the rights of the persons with disabilities. Discuss the characteristics of MNREGA and its employment opportunities in India		
May	Theory:	Redistribution, recognition and livelihood, Traditional rights of forest dwellers and the issue of women's property rights, Gender Study Group, The Law on Atrocities Against Scheduled Castes and Scheduled Tribes	B.A (H)	Your Laws, Your Rights



**SEMESTER WISE TEACHING
PLAN (2017-2018)
SRI VENKATESWARA COLLEGE**

Name of the Faculty: Namita Pandey

Department: Political Science

Semester : II/IV/VI

Month		Topics	Course	Paper Code/Name	
JANUARY	Theory	Globalisation - Concepts and Perspectives: Understanding globalisation and its alternative perspectives with reference to hyperglobalists, skeptics and transformational debate. Political: Debates on Sovereignty and Territoriality Global Economy - Its significance. Anchors of Global Economy: A critical analysis of the working of World Bank, IMF, WTO, Transnational Corporations	BA(Hons) Pol. Sc. 4th Semester	Global Politics	
	Practicals				
	Tutorials	Discussion on Robert Keohane, Susan Strange, Concept of Sovereignty			
FEBRUARY	Theory:	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			

	Practicals:			
	Tutorials:	Discussion on Samuel Huntington's Clash of Civilization and Benjamin Barber's Article on Mcworld vs Jihad		

	<u>Assignment</u> :	Define Globalisation; Discuss Alternative perspectives of Globalization
MARCH	Theory:	Contemporary Global Issues Ecological Issues Proliferation of Nuclear Weapons International Terrorism, Non-State Actors and State Terrorism; Post 9-11 developments
	Practicals:	
	Tutorials:	Discussion of Non Proliferation Treaty and its impact.
	<u>Test</u>	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	Theory:	Migration: Definition and nature of international migration Human Security - Difference between traditional and human security; Components of Human Security

	Practicals:	
	Tutorials:	Presentation on Food Insecurity in India

MAY	Theory:	Global Shifts: Power and Governance
	Practicals:	
	Tutorials:	Discussion on Major Shifts in the nature of power and governance post 1990



**SEMESTER WISE TEACHING
PLAN (2017-2018)
SRI VENKATESWARA COLLEGE**

Name of the Faculty: Namita Pandey

Department: Political Science

Semester : II/IV/VI

Month		Topics	Course	Paper Code/Name
JANUARY	Theory	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
	Practicals			
	Tutorials	Discussion on Politics among Nations by Hans. J Morgenthau		
FEBRUARY	Theory:	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		
	Practicals:			

	Tutorials:	Discussion on the causes and consequences of the Second World War as Hitlers War		
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	<u>Assignment :</u>	Discuss the Feminist Perspective of International Relations
MARCH	Theory:	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
	Practicals:	
	Tutorials:	Discussion on Different Phases of Cold War
	<u>Test</u>	Discuss Political Realism of Hans. J Morgenthau Critically examine Wallersteins World Systems Theory
APRIL	Theory:	Collapse of Soviet Union: Causes and Consequences End of Cold War Post Cold War World Era Emerging Centres of Power (EU, China & Japan)
	Practicals:	

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

Department of Mathematics
Sri Venkateswara College
Even Semester Teaching Plan (Jan-April 2017)

MS. SHAKUNTLA WADHWA

Month		Topics	Course	Paper Code/Name
Jan	Theory	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

	Tutorials:	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
	Practicals	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 course of cold pills. (c) Limited growth of population (with and without harvesting).	B.Sc(H) Maths Sem-II A	Differential Equations
	Practicals	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	Theory	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

Tutorials:	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
Practicals	4. (a) Predatory-prey model (basic volterra model, with density dependence, effect of DDT, two prey one predator). (b) Epidemic model of influenza (basic epidemic model, contagious for life, disease with carriers). (c) Battle model (basic battle model, jungle warfare, long range weapons). 5. Plotting of recursive sequences, and study the convergence. 6. Find a value that will make the following inequality holds for all $m > n$.	B.Sc(H) Maths Sem-II A	Differential Equations
Practicals	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
Test	To take class test related to syllabus and lab test related to above Practicals.	B.Sc(H) Maths Sem-II A/IVB	ODE/PDE

March	Theory	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
	Tutorials:	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
	Practicals	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 plotting the ratio of n th and $(n+1)$ th term of the given series of positive terms.	B.Sc(H) Maths Sem-II A	Differential Equations

	Practicals	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 pointwise convergence.	B.Sc(H) Maths Sem-IV B	C8 Partial Differential Equations
	Assignments	To give assignment related to syllabus		
	Test	To take internal test related to syllabus And internal lab test related to above Practicals.	B.Sc(H) Maths Sem-IV B/IIA	PDE/ODE
April	Theory	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
	Tutorials:	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

Practicals	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
Practicals	Discuss the uniform convergence of sequence of functions with various examples and to revise whole syllabus.	B.Sc(H) Maths Sem-IV B	C8 Partial Differential Equations
Test	To take test related to syllabus And internal lab related to above Practicals.	B.Sc(H) Maths Sem-IV B	PDE/ODE

Dr. R. K. BUDHRAJA

Month		Topics	Course	Paper Code/Name
JANUARY	Theory	Rings: Definition, examples & its properties, Subrings. Integral domains & Fields. Characteristic of ring.	B.Sc.(Hons) Maths II Year, Sem IV, Sec A	C 10 / Ring Theory & Linear Algebra – I
	Practicals	<ol style="list-style-type: none"> Plotting of recursive sequences. Study the convergence of sequences through plotting. 	B.Sc.(Hons) Maths II Year, Sem II, Sec B	C4/ Differential Equations
	Tutorials	Discussion of examples and exercises from Chapters 12 & 13. Doubts of the students, if any, are to be taken.	B.Sc.(Hons) Maths II Year, Sem IV	C 10 / Ring Theory & Linear Algebra – I
FEBRUARY	Theory	Ideals & ideal generated by a subset of a ring Factor Rings. Prime & Maximal ideals. Ring Homomorphisms & its properties, Isomorphism theorems I, II & III, Field of Quotients.	B.Sc.(Hons) Maths II Year, Sem IV, Sec A	C 10 / Ring Theory & Linear Algebra – I
	Practicals	<ol style="list-style-type: none"> Verify Bolzano Weierstrass theorem through plotting of sequences and hence identify convergent subsequences from the plot. Study the convergence/divergence of infinite series by plotting their sequences of partial sum. 	B.Sc.(Hons) Maths II Year, Sem II, Sec B	C4/ Differential Equations
	Tutorials	Discussion of examples and exercises from Chapters 14 & 15. Doubts of the students, if any, are to be taken.	B.Sc.(Hons) Maths II Year, Sem IV	C 10 / Ring Theory & Linear Algebra – I
MARCH	Theory	Vector Spaces, Subspaces, Quotient spaces, Linear span, independence, basis and dimension. Dimension of a subspace.	B.Sc.(Hons) Maths II Year, Sem IV, Sec A	C 10 / Ring Theory & Linear Algebra – I

	Practicals	5. Cauchy's root test by plotting n th roots. 6. Ratio test by plotting the ratio of n th and $(n+1)$ th term.	B.Sc.(Hons) Maths II Year, Sem II, Sec B	C4/ Differential Equations
	Tutorials	Discussion of examples and prescribed exercises from Chapter 1. Doubts of the students, if any, are to be taken.	B.Sc.(Hons) Maths II Year, Sem IV	C 10 / Ring Theory & Linear Algebra – I
	Assignment	Assignment of 10 marks will be given on any two of the above topics.	B.Sc.(Hons) Maths II Year, Sem IV, Sec A	C 10 / Ring Theory & Linear Algebra - I
APRIL	Theory	Linear transformations, Rank & nullity. Matrix representation, Isomorphism theorems, Invertibility and change of coordinate matrix.	B.Sc.(Hons) Maths II Year, Sem IV, Sec A	C 10 / Ring Theory & Linear Algebra - I
	Practicals	7. Convergence of Sequence by epsilon -K definition 8. Revision and Internal Test	B.Sc.(Hons) Maths II Year, Sem II, Sec B	C4/ Differential Equations
	Tutorials	Discussion of examples and prescribed exercises from Chapter 2. Doubts of the students, if any, are to be taken.	B.Sc.(Hons) Maths II Year, Sem IV	C 10 / Ring Theory & Linear Algebra - I
	Test	Class test of 10 marks will be taken for Internal Assessment.	B.Sc.(Hons) Maths II Year, Sem IV, Sec A	C 10 / Ring Theory & Linear Algebra - I

Dr. Mainak Mukherjee

Month		Topics	Course	Paper Code/Name
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Jan	Theory	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) Maths Sem-IV B	Riemann Integration & Series of Functions
	Theory	Significant digits, Error, Order of a method.	B.A(P) Sem-VI	Numerical Analysis
	Tutorials:	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) Maths Sem-IVB	Riemann Integration & Series of Functions

	Practicals	<p>1. Declaring a complex number and graphical representation. e.g. $Z_1 = 3 + 4i$, $Z_2 = 4 - 7i$</p> <p>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</p> <p>3. To find conjugate, modulus and phase angle of an array of complex numbers. e.g., $Z = [2 + 3i \ 4 - 2i \ 6 + 11i \ 2 - 5i]$</p> <p>4. To compute the integral over a straight line path between the two specified end points.</p>	B.Sc(H) Maths Sem-VI A	Analysis V
	Practicals	<p>1. Solution of Cauchy problem for first order PDE.</p> <p>2. Plotting the characteristics for the first order PDE.</p> <p>3. Plot the integral surfaces of a given first order PDE with initial data</p>	B.Sc(H) Maths Sem-IV A	C8 Partial Differential Equations
Feb	Theory	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
	Theory	Convergence and terminal conditions, Efficient computations.	B.A(P) Sem-VI	Numerical Analysis
	Tutorials:	To Discuss the Doubt of students and to solve various exercise of	B.Sc(H) Maths Sem-IV B	Riemann Integration & Series of Functions

Practicals	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 A	Analysis V
Practicals	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 A	C8 Partial Differential Equations
Test	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	Theory	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	B.Sc(H) Maths Sem-IV B	Riemann Integration & Series of Functions
	Theory	Bisection method, Secant method, Regula-Falsi method, Newton-Raphson method,	B.A(P) Sem-VI	Numerical Analysis
	Tutorials:	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 the limit and integrability of a sequence of	B.Sc(H) Maths Sem-IV B	Riemann Integration & Series of Functions
	Practicals	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 and To compute the poles and corresponding residues of complex functions.	B.Sc(H) Maths Sem-VI A	Analysis V
	Practicals	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 pointwise convergence	B.Sc(H) Maths Sem-IV A	C8 Partial Differential Equations

	Assignments	To give assignment related to syllabus		
	Test	To take internal test related to syllabus And internal lab test related to above Practicals		
April	Theory	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 B	Riemann Integration & Series of Functions
	Theory	Newton's method for solving nonlinear systems and to Revise whole syllabus, to Discuss last previous year questions papers	B.A(P) Sem-VI	Numerical Analysis
	Tutorials:	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 previous year questions papers.	B.Sc(H) Maths Sem-IV B	Riemann Integration & Series of Functions
	Practicals	Computing the Fourier Series, Fourier Sine Series, Fourier Cosine Series of function and their graph and to revise whole Practical	B.Sc(H) Maths Sem-VI A	Analysis V
	Practicals	Discuss the uniform convergence of sequence of functions with various examples and to revise whole Practical.	B.Sc(H) Maths Sem-IV A	C8 Partial Differential Equations

Ms Pratibha Gaur

		Topics	Course	Paper Code/Name
Jan	Theory	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	C8:Partial Differential Equations.
	Practical s	3. Plotting of recursive sequences. 4. Study the convergence of sequences through plotting.	B.Sc. (H) Maths Sem-II	C4 : Differential equations
	Practical s	1. Solution of Cauchy problem for first order PDE. 2. Plotting the characteristics for the first order PDE.	B. Sc. (H) Maths Sem IV	C8: Partial Differential Equations
	Tutorials	To discuss the doubts of student and various exercise, questions and examples related to definition and examples of rings, properties of rings, subrings, integral domains and fields, Characteristic of ring, Ideals, Ideals generated by a subset of ring, Factor rings, Operations of ideals, Prime and maximal ideals	B. Sc. (H) Maths Sem IV	Ring Theory and Linear Algebra-I
Feb	Theory	Mathematical modeling of vibrating string, vibration membrane, conduction of heat in solids, gravitational potential, conservation of law and Burger's equations, classification of second order PDE, reduction to canonical forms, equations with constant coefficients, general solution.	B.Sc(H) Maths Sem-IV	Partial Differential Equations
	Practicals	5. Verify Bolzano Weierstrass theorem through plotting of sequences and hence identify convergent subsequences from the plot. 6. Study the convergence/divergence of infinite series by plotting their sequences of partial sum.	B.Sc. (H) Maths Sem-II	C 4: Differential equations

	Practicals	3) Plot the integral surfaces of a given first order PDE with initial data. 4) Solution of wave equation	B.Sc.(H) Maths Sem IV	C8: Partial Differential Equations
	Tutorials	To discuss the doubt of students and various exercise questions and examples related to Ring homomorphisms, Properties of ring homomorphisms, First, Second and Third Isomorphism theorems for rings, The Field of quotients. Unit 3: Introduction of Vector Spaces, Vector spaces, Subspaces	B.Sc(H) Maths Sem-IV	Ring Theory and Linear Algebra-I
March	Theory	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, Riemann problem, Goursat problem, spherical and cylindrical wave equation.	B.Sc(H) Maths Sem-IV	Analysis V
	Practicals	7. Cauchy's root test by plotting nth roots. 8. Ratio test by plotting the ratio of nth and n+1th term.	B.Sc. (H) Maths Sem-II	C 4 Differential Equations
	Practicals	5) Solution of one-Dimensional heat equation 6) Solving systems of ordinary differential equations.	B.Sc. (H) Maths Sem-IV	C8: Partial Differential Equations
	Tutorials	To discuss the doubt of students and various exercise questions and examples related Quotient spaces, Linear combination of vectors, Linear span, Linear independence, Basis and dimension, Dimension of subspaces. Unit 4: Linear Transformations Linear transformations, Null space, Range, Rank and nullity of a linear transformation	B.Sc. (H) Maths Sem-IV	Ring Theory and Linear Algebra-I
	Assignments	To give assignment related to syllabus	B.Sc(H) Maths Sem- IV	C8:PARTIAL DIFFERENTIAL EQUATIONS
	Test	To take internal test related to syllabus.	B.Sc(H) Maths Sem-IV	C8:PARTIAL DIFFERENTIAL EQUATIONS

April	Theory	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 beam equation, non-homogeneous problem	B.Sc(H) Maths Sem-IV	Partial Differential Equations
	Practicals	9. Convergence of Sequence by epsilon -K definition 10. Revision and Internal Test	B.Sc(H) Maths Sem-II	C 4 Differential Equations
	Practicals	To revise all the practicals and to conduct internal test.	B.Sc(H) Maths Sem-IV	C8 Partial Differential equations
	Tutorials	To discuss the doubt of students and various exercise questions and examples related Matrix representation of a linear transformation, Algebra of linear transformations, Isomorphism, Isomorphism theorems, Invertibility and the change of coordinate matrix.	B.Sc(H) Maths Sem-IV	Ring Theory and Linear Algebra-I

Ninian Nauneet Kujur

Month		Topics	Course	Paper Code/Name
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January	Theory	Algebraic and Order Properties of \mathbb{R} , δ -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, Suprema and Infima, The Completeness Property of \mathbb{R} , The Archimedean Property, Density of Rational (and Irrational) numbers in \mathbb{R} , Intervals.	B.Sc(H) Maths Sem-II (B)	Real Analysis
	Theory	De Moivre's theorem (both integral and rational index). Solutions of equations using trigonometry	BA(P) Sem II	Algebra

	Practicals	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)
	Practicals	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
	Tutorials	Questions related to the portion covered .	B.Sc(H) Maths Sem-II (B)	Real Analysis
February	Theory Assignment Assignment	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
	Theory Assignment	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

Practicals	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	B.Sc(H) Maths Sem-IV(A)	CAS and related softwares (SEC-II)
Practicals	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
Tutorials	Questions related to the portion covered	B.Sc(H) Maths Sem-II (B)	Real Analysis

March	Theory	Monotone Sequences, Monotone Convergence Theorem, Subsequences, Divergence Criteria, Monotone Subsequence Theorem (statement only), Bolzano Weierstrass Theorem for Sequences. Cauchy sequence, Cauchy's Convergence Criterion. Infinite series, convergence and divergence of infinite series,.	B.Sc(H) Maths Sem-II (B)	Real Analysis
	Test			
	Theory	Relation between roots and coefficients of n^{th} degree equation. Solutions of cubic and biquadratic equations, when some conditions on roots of the equation are given,	BA(P) Sem II	Algebra
	Test			
	Practicals:	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	B.Sc(H) Maths Sem-IV(A)	CAS and related softwares (SEC-II)

	Practicals	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
	Tutorials	Questions related to the portion covered	B.Sc(H) Maths Sem-II (B)	Real Analysis
April	Theory:	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
	Theory Assignment	Symmetric functions of the roots for cubic and biquadratic equations.	BA(P) Sem II	Algebra
	Practicals	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)

	Practicals	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.	B.Sc(H) Maths Sem-IV(A)	C8-Partial Differential Equations
	Tutorials	Questions related to the portion covered	B.Sc(H) Maths Sem-II (B)	Real Analysis

Amit Kumar

Month		Topics	Course	Paper Code/Name
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Jan	Theory	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) Maths Sem-IV A	Riemann Integration & Series of Functions
	Tutorials	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) Maths Sem-IV A	Riemann Integration & Series of Functions
	Theory	Introduction of Differential equation, Ordinary and partial differential equations, First order exact differential equations, Integrating factors and rules to find integrating factors, Examples and Exercise Questions	B.Sc(H) Maths Sem-II A and B	Differential Equaton

Practicals	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.	B.Sc(H) Maths Sem-II	Differential Equations
Test	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	Theory	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 A	Riemann Integration & Series of Functions
	Tutorias	To Discuss the Doubt of students and to solve various exercise questions of related above topics	B.Sc(H) Maths Sem-IV A	Riemann Integration & Series of Functions
	Theory	Linear equations and Bernoulli equations, Basic theory of higher order linear differential equations, Wronskian and its properties; Solving differential equation by reducing its order. Related examples and exercise questions.	B.Sc(H) Maths Sem-II	Differential Equation
	Assignmens	To be given assignment related to syllabus.	B.Sc(H) Maths Sem-II and Sem-IV	Riemann Integration & Series of Functions /Differential Equation
	Practicals	4. Solution of differential equation by variation of parameter method. 5. Solution of system of ordinary differential equations. 6. Solution of Cauchy problem for first order partial differential equations		Differential Equation
March	Theory	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 convergence.	B.Sc(H) Maths Sem-IV A	Riemann Integration & Series of Functions

Tutorials	To discuss the doubt of students and various exercise questions and examples related work done in Theory Class.	B.Sc(H) Maths Sem-IV A	Riemann Integration & Series of Functions
Theory	Linear homogenous equations with constant coefficients, Linear non-homogenous equations, Method of undetermined coefficients.	B.Sc(H) Maths Sem-II	Differential Equation
Practicals	7. Plotting the characteristics of the first order partial differential equations. 8. Plot the integral surfaces of first order partial differential equations with initial data.	B.Sc(H) Maths Sem-II	Differential Equations
Test	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	Theory	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
	Tutorials	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
	Theory	Method of variation of parameters, Cauchy–Euler equations, Simultaneous differential equations and revise whole syllabus, to discuss last previous year questions papers.	B.Sc(H) Maths Sem-II	Differential Equation
	Practicals	Revision of Practicals	B.Sc(H) Maths Sem-II	Differential Equations

Nisha Bohra

		Topics	Course	Paper Code/Name
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Jan	Theory	Review of complex plane, sequences and series, polygonally connected sets, stereographic projection, analytic polynomials, power series, Analytic functions, examples of analytic functions.	B.Sc. (H) Maths Sem-VI B	Analysis V
	Theory	Properties of external direct products, the group of units modulo n as an external direct product, internal direct products.	B.Sc. (H) Maths Sem VI-A	Algebra V
	Theory	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.	B.Sc.(H) Chemistry, Bio. Sc., Bio. Chem., Electronics.	GE-II: Linear Algebra
	Tutorials	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	Analysis V and Algebra V
	Practical s	11. Plotting of recursive sequences. 12. Study the convergence of sequences through plotting.	B.Sc. (H) Maths Sem-I B	C4 : Differential equations
	Practicals	1. Solution of Cauchy problem for first order PDE. 2. Plotting the characteristics for the first order PDE.	B. Sc. (H) Maths Sem II A	C8: Partial Differential Equations
Feb	Theory	Exponential function, Logarithmic function, trigonometric functions, Cauchy Riemann equations, Line integrals and their properties, Cauchy integral formula, Taylor expansion, Liouville's theorem and fundamental theorem of Algebra	B.Sc(H) Maths Sem-VI B	Analysis V
	Theory	Fundamental Theorem of finite abelian groups. Group actions, stabilizers and kernels, permutation representation associated with a given group action.	B.Sc. (H) Maths Sem-VI A	Algebra V

	Theory	Some elementary results on vector in \mathbb{R}^n , Matrices, Gauss–Jordan row reduction, Reduced row echelon form.	B.Sc.(H) Chemistry, Bio. Sc., Bio. Chem., Electronics.	GE II: Linear Algebra
	Tutorials	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 VI B	Analysis V and Algebra V
	Practicals	13. Verify Bolzano Weierstrass theorem through plotting of sequences and hence identify convergent subsequences from the plot. 14. Study the convergence/divergence of infinite series by plotting their sequences of partial sum.	B.Sc. (H) Maths Sem-I B	C 4: Differential equations
	Practicals	3) Plot the integral surfaces of a given first order PDE with initial data. 4) Solution of wave equation	B.Sc.(H) Maths Sem II A	C8: Partial Differential Equations
March	Theory	Power series representation of functions analytic in unit disk, analyticity in an arbitrary open unit disk, uniqueness theorem, definition and examples of conformal mappings, bilinear transformations.	B.Sc(H) Maths Sem-VI B	Analysis V
	Theory	Applications of group actions: Generalized Cayley’s theorem, Index theorem. Groups acting on themselves by conjugation, class equation and consequences, conjugacy in S_n , p-groups. Sylow’s theorems and consequences.	B.Sc. (H) Maths Sem-VI A	Algebra V
	Theory	Row equivalence, Rank, Linear combination of vectors, Row space, Eigenvalues, Eigenvectors, Eigenspace, Characteristic polynomials.	B.Sc.(H) Chemistry, Bio. Sc., Bio. Chem., Electronics.	GE II: Linear Algebra
	Tutorials	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	Analysis V and Algebra V

	Practicals	15. Cauchy's root test by plotting nth roots. 16. Ratio test by plotting the ratio of nth and n+1th term.	B.Sc. (H) Maths Sem-I B	C 4 Differential Equations
	Practicals	5) Solution of one-Dimensional heat equation 6) Solving systems of ordinary differential equations.	B.Sc. (H) Maths Sem-II A	C8: Partial Differential Equations
	Assignments	To give assignment related to syllabus	B.Sc(H) Maths Sem-VI A and VI B	Analysis V and Algebra V
	Test	To take internal test related to syllabus.	B.Sc(H) Maths Sem-VI A and VI B	Analysis V and Algebra V
April	Theory	Fourier series, piecewise continuous functions, Fourier sine and cosine series, Fourier coefficients. Revision of syllabus.	B.Sc(H) Maths Sem-VI B	Analysis V
	Theory	Cauchy's theorem, Simplicity of A_n for $n \geq 5$, non-simplicity tests. Solvable groups, Jordan holder theorem, composition series.	B.Sc(H) Maths Sem-VI A	Algebra V
	Theory	Diagonalization of matrices, Definition and examples of vector space, Some elementary properties of vector spaces, Subspace.	B.Sc.(H) Chemistry, Bio. Sc., Bio. Chem., Electronics.	GE II: Linear Algebra
	Tutorials	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	Algebra V
	Practicals	17. Convergence of Sequence by epsilon -K definition 18. Revision and Internal Test	B.Sc(H) Maths Sem-I B	C 4 Differential Equations

	Practicals	To revise all the practical s and to conduct internal test.	B.Sc(H) Maths Sem-II A	C8 Partial Differential equations
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Mr. Sudhakar Yadav

Month		Topics	Course	Paper Code/Name
Jan	Theory	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 B	C8 Partial Differential Equations

Theory	Floating point representation and computer arithmetic, Significant digits, Errors: Round off error, Local truncation error, Global truncation error, Order of a method, Convergence and terminal conditions, Efficient computations Bisection method, Secant method, Regula-Falsi method, Newton Raphson method, Newton's method for solving nonlinear systems.	B.Sc(H) other than Maths(H)	GE-4 Numerical Method
Tutorials:	To Discuss the doubt of students and to solve various exercise of floating point representation and computer arithmetic, Significant digits, Errors: Round off error, Local truncation error, Global truncation error, Order of a method, Convergence and terminal conditions, Efficient computations Bisection method, Secant method, Regula-Falsi method, Newton Raphson method, Newton's method for solving nonlinear systems.	B.Sc(H) other than Maths(H)	GE-4 Numerical Method
Practicals	<ol style="list-style-type: none"> 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 course of cold pills. (c) Limited growth of population (with and without harvesting). 	B.Sc(H) Maths Sem-II A	Differential Equations
Practicals	<ol style="list-style-type: none"> 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	Theory	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 solution.	B.Sc(H) Maths Sem-IV B	C8 Partial Differential Equations
	Theory	Gauss elimination method (with row pivoting) and Gauss-Jordan method, Gauss Thomas method for tridiagonal systems Iterative methods: Jacobi and Gauss-Seidel iterative methods Interpolation: Lagrange's form and Newton's form Finite difference operators, Gregory Newton forward and backward differences Interpolation.	B.Sc(H) other than Maths(H)	GE-4 Numerical Method
	Tutorials:	To Discuss the doubt of students and to solve various exercise of Gauss elimination method (with row pivoting) and Gauss-Jordan method, Gauss Thomas method for tridiagonal systems Iterative methods: Jacobi and Gauss-Seidel iterative methods Interpolation: Lagrange's form and Newton's form Finite difference operators, Gregory Newton forward and backward differences Interpolation	B.Sc(H) other than Maths(H)	GE-4 Numerical Method

Practicals	4. (a) Predatory-prey model (basic volterra model, with density dependence, effect of DDT, two prey one predator). (b) Epidemic model of influenza (basic epidemic model, contagious for life, disease with carriers). (c) Battle model (basic battle model, jungle warfare, long range weapons). 5. Plotting of recursive sequences, and study the convergence. 6. Find a value that will make the following inequality holds for all $m > n$.	B.Sc(H) Maths Sem-II A	Differential Equations
Practicals	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
Test	To take class test related to syllabus and lab test related to above Practicals.	B.Sc(H) Maths Sem-II A/IVB	ODE/PDE

March	Theory	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, Riemann problem, Goursat problem, spherical and cylindrical wave equation, Method of separation of variables for second order PDE.	B.Sc(H) Maths Sem-IV B	C8 Partial Differential Equations
	Theory	Piecewise polynomial interpolation: Linear interpolation, Cubic spline interpolation (only method), Numerical differentiation: First derivatives and second order derivatives, Richardson extrapolation Numerical integration: Trapezoid rule, Simpson's rule (only method), Newton-Cotes open formulas Extrapolation methods: Romberg integration, Gaussian quadrature, Ordinary differential equation: Euler's method Modified Euler's .methods	B.Sc(H) other than Maths(H)	GE-4 Numerical Method
	Tutorials:	To Discuss the doubt of students and to solve various exercise of Piecewise polynomial interpolation: Linear interpolation, Cubic spline interpolation (only method), Numerical differentiation: First derivatives and second order derivatives, Richardson extrapolation Numerical integration: Trapezoid rule, Simpson's rule (only method), Newton-Cotes open formulas Extrapolation methods: Romberg integration, Gaussian quadrature, Ordinary differential equation: Euler's method Modified Euler's .methods	B.Sc(H) other than Maths(H)	GE-4 Numerical Method

	Practicals	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 plotting the ratio of n th and $(n+1)$ th term of the given series of positive terms.	B.Sc(H) Maths Sem-II A	Differential Equations
	Practicals	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 pointwise convergence.	B.Sc(H) Maths Sem-IV B	C8 Partial Differential Equations
	Assignments	To give assignment related to syllabus		
	Test	To take internal test related to syllabus and internal lab test related to above Practicals.	B.Sc(H) Maths Sem-IV B/IIA	PDE/ODE
April	Theory	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 beam equation, non-homogeneous problem and to revise whole syllabus, to discuss last previous year questions papers.	B.Sc(H) Maths Sem-IV B	C8 Partial Differential Equations

Theory	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 for linear ODE and to revise whole syllabus and to discuss last previous year questions papers	B.Sc(H) other than Maths(H)	GE-4 Numerical Method
Tutorials:	To discuss the doubt of students and to solve various exercise of 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 for linear ODE. Further, to revise whole syllabus and discuss last previous year questions papers	B.Sc(H) other than Maths(H)	GE-4 Numerical Method
Practicals	For the given various sequences given 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
Practicals	Discuss the uniform convergence of sequence of functions with various examples and to revise whole syllabus.	B.Sc(H) Maths Sem-IV B	C8 Partial Differential Equations
Test	To take test related to syllabus and internal lab test related to above Practicals.	B.Sc(H) Maths Sem-IV B/IIA	PDE/ODE

Ms. Rajni Arora

		Topics	Course	Paper name
JANUARY	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	Computer Algebra Systems (CAS), use of CAS as calculator, Computing and plotting functions in 2D, 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) Mathematics Sem-IV	CAS and related softwares (SEC-II)
	Theory 3	Gauss elimination method (with row pivoting), Gauss–Jordan method, GaussThomas method for tridiagonal systems Iterative methods: Jacobi and GaussSeidel iterative methods	B.Sc(H) courses	Numerical Methods (GE-4)
	Practicals	Use of Mathematica as calculator, computing and plotting functions in 2D in 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, downloading and installing statistical software R.	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	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	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, reading and getting data into R: combine and scan commands.	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	B.Sc(H) courses	Numerical Methods (GE-4)

Y		interpolation		
	Practicals	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, reading and getting data into R: combine and scan commands.	Sem-IV	CAS and related softwares (SEC-II)
	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	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	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: 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	Sem-IV	CAS and related softwares (SEC-II)
	Tutorials	Doubts and discussion on topics covered	Sem-VI	DSE-3
	Test 1	Test of topics covered till date	B.Sc(H) Mathematics Sem-VI	DSE-3
	Test 2	Test of topics covered till date	B.Sc(H) Mathematics Sem-IV	SEC-II
	Test 3	Test of topics covered till date	B.Sc(H) courses	GE-4

		Topics	Course	Paper name
A	Theory 1	Chapman-Kolmogorov equations, classification of states and related problems	B.Sc(H) Mathematics Sem-VI	Probability Theory and Statistics (DSE-3)

P R I L	Theory 2	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	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	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.	Sem-IV	CAS and related softwares (SEC-II)
	Tutorials	Doubts and discussion on previous year question papers	Sem-VI	DSE-3



SEMESTER WISE TEACHING PLAN-2017-18 (Even SEM)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Kameshwar Sharma YVR, Assistant Professor
Department: Biochemistry
Semester: II/IV/VI (Even Sem)

Month		Topics	Course	Paper Code/Name
JANUARY	Theory	<ul style="list-style-type: none"> • Introduction <ul style="list-style-type: none"> - Photosynthetic Complex - Light Reaction 	B.Sc(H) Biochemistry Sem VI	BCH DSE-5 PLANT BIOCHEMISTRY
		<ul style="list-style-type: none"> • Biomolecules <ul style="list-style-type: none"> Amino acids Nucleic acids 	B.Sc(H) Biological Science - Sem II	BSC3 BIOPHYSICS
		<ul style="list-style-type: none"> • Blotting Techniques 	Biophysical Techniques - II	PG Diploma in Molecular and Biochemical Technology
	Practicals	<ul style="list-style-type: none"> • Estimation of proteins using UV absorbance and Biurette method 	B.Sc(H) Biochemistry – Sem II	BCH C-3 PROTEINS
		<ul style="list-style-type: none"> • Introduction to Bioinformatics • J mol and Java • PDB • BLAST • Primary Structure Prediction and Consensus 	B.Sc(H) Biochemistry Sem IV	BCH SEC-4 : BIOINFORMATICS
		<ul style="list-style-type: none"> • Glucose Estimation (GOD – POD) • Cholesterol Estimation 	B.Sc(H) Biological Science - Sem IV	BSC3 METABOLISM AND INTEGRATION
	Tutorials			

FEBRUARY	Theory:	<ul style="list-style-type: none"> Photosystem Continuation... Photophosphorylation, Carbon Assimilation, Photorespiration Biomolecules Carbohydrates Lipids <p>Radioactive Materials</p>	<p>B.Sc(H) Biochemistry Sem VI</p> <p>B.Sc(H) Biological Science - Sem I</p> <p>Biophysical Techniques - II</p>	<p>BCH DSE-5 PLANT BIOCHEMISTRY</p> <p>BSC3 BIOPHYSICS</p> <p>PG Diploma in Molecular and Biochemical Technology</p>
	Practicals:	<ul style="list-style-type: none"> Estimation of proteins using Lowry's / Bradford's method. Determination of isoelectric pH of casein. Ammonium sulfate fractionation of proteins <ul style="list-style-type: none"> Clustal Omega Transmembrane Prediction Tertiary Structure Prediction Evaluation Gene Structure Prediction (GENSCAN) <ul style="list-style-type: none"> Bilirubin Estimation Estimation of Creatinine Estimation of SGOT and SGPT (LFT) 	<p>B.Sc(H) Biochemistry – Sem II</p> <p>B.Sc(H) Biochemistry Sem IV</p> <p>B.Sc(H) Biological Science - Sem IV</p>	<p>BCH C-3 PROTEINS</p> <p>BCH SEC-4 : BIOINFORMATICS</p> <p>BSC3 METABOLISM AND INTEGRATION</p>
	Tutorials:	Class Tests / assignments		
MARCH	Theory:	<ul style="list-style-type: none"> Plant Hormones Plant Morphogenesis Secondary Metabolites - Alkaloids (Online notes and ppt)* <ul style="list-style-type: none"> Spectroscopy (Online notes and ppt)* <p>Fermentation Technology</p> <p>Bioinformatics- Introduction and Database</p>	<p>B.Sc(H) Biochemistry Sem VI</p> <p>B.Sc(H) Biological Science - Sem I</p> <p>Biophysical Techniques - II</p>	<p>BCH DSE-5 PLANT BIOCHEMISTRY</p> <p>BSC3 BIOPHYSICS</p> <p>PG Diploma in Molecular and Biochemical Technology</p>

	Practicals	<ul style="list-style-type: none"> Molecular visualization of softwares : py mol and Ras mol from protein structures from PDB. Separation of proteins using Ion Exchange Chromatography (Demonstration). SDS – PAGE analysis of proteins: Demonstration 	B.Sc(H) Biochemistry – Sem II	BCH C-3 PROTEINS
		<ul style="list-style-type: none"> Revision Exercises 	B.Sc(H) Biochemistry Sem IV	BCH SEC-4 : BIOINFORMATICS
		<ul style="list-style-type: none"> Glucose Estimation (Repeat/Revision) Isolation and Identification of Marker Enzymes (SDH,LDH) 	B.Sc(H) Biological Science - Sem IV	BSC3 METABOLISM AND INTEGRATION
	Tutorials	Assignments / Tests		
	Test	MID TERM Exams		

APRIL	Theory:	<ul style="list-style-type: none"> Secondary Metabolites <ul style="list-style-type: none"> - Phenols - Terpenoids Biological Membranes Mechanobiology 	B.Sc(H) Biochemistry Sem VI	BCH DSE-5 PLANT BIOCHEMISTRY
		<ul style="list-style-type: none"> REVISION CLASSES AND EXAM PREPERATION 	B.Sc(H) Biological Science - Sem I	BSC3 BIOPHYSICS
			Biophysical Techniques - II	PG Diploma in Molecular and Biochemical Technology

MAY	Practicals:	Preparation of Mock Practicals and Main Practical Examinations	B.Sc(H) Biochemistry – Sem II B.Sc(H) Biochemistry Sem IV B.Sc(H) Biological Science - Sem IV	BCH C-3 PROTEINS BCH SEC-4 : BIOINFORMATICS BSC3 METABOLISM AND INTEGRATION
	Tutorials:			
	Theory:	Conduct of Theory Exams		

DR. KAMESHWAR SHARMA YVR
Assistant Professor
Department of Biochemistry



SRI VENKATESWARA COLLEGE
SEMESTER WISE TEACHING PLAN

Name of the Faculty: Dr. NIMISHA SINHA

Department: BIOCHEMISTRY

Semester: II/IV/VI (2017-18)

Month		Topics	Course	Paper Code/Name
JANUARY	Theory	Unit 3: Respiration: Overview of glycolysis, Alternative reactions of glycolysis, Regulation of plant glycolysis, Translocation of metabolites across mitochondrial membrane, TCA cycle, Alternative NAD(P)H oxidative pathways; Cyanide resistant respiration. No. of HOURS: 8	B.Sc. BIOCHEMISTRY Hons.) III Year, Semester VI	CBCS DSE 9: Plant Biochemistry
		Unit 2 Overview of amino acid metabolism. Catabolism of amino acids, Catabolic pathways of individual amino acids. Glucogenic and ketogenic amino acids. Metabolism of one carbon units. Disorders of amino acids metabolism, phenylketonuria, alkaptonuria, maple syrup urine disease, methylmalonic acidemia (MMA), homocystinuria and Hartnup's disease. No. of Hours: 10	B.Sc. BIOCHEMISTRY Hons.) II Year, Semester IV	CBCS:BCH C-10: METABOLISM OF AMINO ACIDS AND NUCLEOTIDES
		Unit 1 Basic concepts and design of metabolism, The nature of metabolism. Role of oxidation and reduction and coupling of these. ATP as energy currency. No. of HOURS: 4 Unit 7 Fatty acid synthesis and degradation TAG as energy source, β oxidation of fatty acids in mitochondria and peroxisomes, ketone bodies. Biosynthesis of fatty acids - elongation and unsaturation of fatty acids. No. of HOURS: 4	B.Sc. BIOCHEMISTRY Hons.) I Year, Semester II	CBCS BCH GE-3 : INTERMEDIARY METABOLISM
	Practical	<ul style="list-style-type: none"> Isolation of Plasmid DNA Restriction enzyme digestion of plasmid DNA and size estimation of fragments. Isolation of plasmid DNA from <i>E.coli</i> and restriction enzyme digestion and molecular weight determination 	B.Sc. BIOCHEMISTRY (Hons.) III Year, Semester VI	CBCS: BCH C- Genetic Engg, and Biotechnology
		<ul style="list-style-type: none"> Estimation of serum urea. Estimation of serum uric acid. 	B.Sc. BIOCHEMISTRY Hons.) II Year, Semester IV	CBCS:BCH C-10: METABOLISM OF AMINO ACIDS AND
		<ul style="list-style-type: none"> Ultraviolet absorption spectrum of DNA and RNA. Determination of DNA and RNA concentration by A260nm. Absorption spectrum of bases. (Value added) Practice assignment 	B.Sc. BIOCHEMISTRY Hons.) II Year, Semester IV	CBCS: BCH C-09 GENE ORGANIZATION REPLICATION AND REPAIR
	Assignments	Related to the topics covered so far.		

FEBRUARY	Theory	<p>Unit 3: Biological Nitrogen fixation by free living and in symbiotic association, structure and function of enzyme Nitrogenase. Nitrate assimilation: Nitrate and Nitrite reductase.</p>	B.Sc. BIOCHEMISTRY (Hons.) III Year, Semester VI	CBCS DSE 9: Plant Biochemistry
		<p>Unit 3 Biosynthesis of amino acids No. of Hours: 8 Overview of amino acid synthesis. Biosynthesis of non-essential amino acids and its regulation.</p>	B.Sc. BIOCHEMISTRY (Hons.) II Year, Semester IV	CBCS :BCH C-10: METABOLISM OF AMINO ACIDS AND NUCLEOTIDES
		<p>Unit 8 Amino acid catabolism and anabolism No. of HOURS: 6 Protein degradation to amino acids, urea cycle, feeder pathways into TCA cycle. Nitrogen fixation, synthesis of non-essential amino acids.</p>	B.Sc. BIOCHEMISTRY (Hons.) I Year, Semester II	CBCS BCH GE-3 : INTERMEDIARY METABOLISM
	Practical	<ul style="list-style-type: none"> • Designing of primers for any selected genes. • Demonstration of PCR technique. 	B.Sc. BIOCHEMISTRY (Hons.) III Year, Semester VI	CBCS: BCH C- Genetic Engg, and Biotechnology
		<ul style="list-style-type: none"> • Estimation of serum creatinine • Assay of serum transaminases – SGOT and SGPT. • Continuous evaluation 	B.Sc. BIOCHEMISTRY (Hons.) II Year, Semester IV	CBCS:BCH C-10: METABOLISM OF AMINO ACIDS AND NUCLEOTIDES
		<ul style="list-style-type: none"> • Verification of Chargaff's rule by paper chromatography. • Determination of the melting temperature and GC content of DNA. 	B.Sc. BIOCHEMISTRY (Hons.) II Year, Semester IV	CBCS: BCH C-09 GENE ORGAIZATION REPLICATION AND REPAIR
	Assignments	Related to the topics covered		
	Test	Class Test -1, for all courses will be conducted pertaining to the syllabus done so far.		
MARCH	Theory	<p>Unit 3 (contd) Primary and secondary ammonia assimilation in plants; ammonia assimilation by Glutamine synthetase-glutamine oxoglutarate amino transferase (GS-GOGAT) pathway. Seed storage proteins in legumes and cereals. Unit 6: Cell and tissue culture techniques, types of cultures: organ and explants culture, callus culture, cell suspension culture and protoplast culture.</p>	B.Sc. BIOCHEMISTRY (Hons.) III Year, Semester VI	CBCS DSE 9: Plant Biochemistry
		<p>Unit 4 Precursor functions of amino acids, Biosynthesis of creatine and creatinine, polyamines (putresine, spermine, spermidine), catecholamines (dopamine, epinephrine, norepinephrine) and neurotransmitters (serotonin, GABA). Porphyrin biosynthesis, catabolism and disorders of porphyrin metabolism. No. of Hours: 8</p>	B.Sc. BIOCHEMISTRY (Hons.) II Year, Semester IV	CBCS :BCH C-10: METABOLISM OF AMINO ACIDS AND NUCLEOTIDES

		Unit 9 : Nucleotide metabolism No. of HOURS: 6 Biosynthesis - <i>de novo</i> and salvage pathways, regulation of nucleotide synthesis by feedback inhibition, degradation and excretion. Unit 5: synthesis of glucose, starch, sucrose, regulation, C4 pathway. Pentose phosphate pathway, importance and regulation.	B.Sc. BIOCHEMISTRY (Hons.) I Year, Semester II	CBCS BCH GE-3 : INTERMEDIARY METABOLISM
	Practical	<ul style="list-style-type: none"> Preparation of competent cells by calcium chloride method Transformation of E coli cells with plasmid DNA Blue white selection Repeat any previous experiment 	B.Sc. BIOCHEMISTRY (Hons.) III Year, Semester VI	CBCS: BCH C- Genetic Engg, and Biotechnology
		<ul style="list-style-type: none"> Estimation of Glutamate Dehydrogenase enzyme in the serum. Case studies Repeat of any previous experiment 	B.Sc. BIOCHEMISTRY (Hons.) II Year, Semester IV	CBCS:BCH C-10: METABOLISM OF AMINO ACIDS AND NUCLEOTIDES
		<ul style="list-style-type: none"> Isolation of chromosomal DNA from E. coli cells. Repeat of any previous experiment 	B.Sc. BIOCHEMISTRY (Hons.) II Year, Semester IV	CBCS: BCH C-09 GENE ORGAIZATION REPLICATION AND REPAIR
	Test	Class Test -2, for all courses will be conducted pertaining to the syllabus done so far. And repeat test for those who fail to score well in class test 1		
APRIL	Theory	Unit 6: Plant regeneration pathways: organogenesis and somatic embryogenesis. Applications of cell and tissue culture and somoclonal variation.	B.Sc. BIOCHEMISTRY (Hons.) III Year, Semester VI	CBCS DSE 9: Plant Biochemistry
		Unit 8 Integration of metabolism No. of Hours: 6 Integration of metabolic pathways (carbohydrate, lipid and amino acid metabolic pathways), tissue specific metabolism (brain, muscle, and liver).	B.Sc. BIOCHEMISTRY (Hons.) II Year, Semester IV	CBCS :BCH C-10: METABOLISM OF AMINO ACIDS AND NUCLEOTIDES
		Unit 10 Integration of metabolism Brief role of hormones - catecholamines, insulin, glucagon; metabolic shifts to provide fuel to brain during fasting and starvation, role of cortisol in signaling stress - increase in gluconeogenesis and muscle protein breakdown. No. of HOURS: 6	B.Sc. BIOCHEMISTRY (Hons.) I Year, Semester II	CBCS BCH GE-3 : INTERMEDIARY METABOLISM
	Practical	Revision and Preparation for Viva Mock Practical Exam	B.Sc. BIOCHEMISTRY (Hons.) III Year, Semester VI	CBCS: BCH C- Genetic Engg, and Biotechnology
		Revision and Preparation for Viva Mock Practical Exam	B.Sc. BIOCHEMISTRY (Hons.) II Year, Semester IV	CBCS:BCH C-10: METABOLISM OF AMINO

				ACIDS AND NUCLEOTIDES
		Revision and Preparation for Viva Mock Practical Exam	B.Sc. BIOCHEMISTRY Hons.) II Year, Semester IV	CBCS: BCH C-09 GENE ORGANIZATION REPLICATION AND REPAIR



SEMESTER WISE TEACHING PLAN 2017-18
SRI VENKATESWARA COLLEGE
UNIVERSITY OF DELHI

Name of the Faculty: Dr.Ravindra Varma Polisetty
Department: Biochemistry
Semester: II/IV/VI

Month		Topics	Course	Paper Code/Name
JANUARY	Theory	Introduction to amino acids, peptides and proteins : <ul style="list-style-type: none"> • Amino acids and their properties - hydrophobic, polar and charged. • Biologically important peptides - hormones, antibiotics and growth factors. • Multimeric proteins, conjugated proteins and metallo proteins. Diversity of function. 	BSc. (H) Biochemistry FBCH.	BCH CC-3/Proteins.
		Extraction of proteins for downstream processing: <ul style="list-style-type: none"> • Solubilization of proteins from their cellular and extracellular locations. Use of simple grinding methods, homogenization, ultrasonication, French press and centrifugation. 		
		Overview of amino acid metabolism: <ul style="list-style-type: none"> • Nitrogen cycle, incorporation of ammonia into biomolecules. Metabolic fates of amino groups. • Digestion and absorption of dietary proteins. Protein calorie malnutrition - Kwashiorkar and Marasmus. • Nitrogen balance, transamination, role of pyridoxal phosphate, glucose-alanine cycle, Kreb's bicycle, urea cycle and inherited defects of urea cycle. 	BSc. (H) Biochemistry SBCH	BCH C-8/ Amino Acid and Nucleotide Metabolism
		Biological membranes: <ul style="list-style-type: none"> • Colloidal solution, Micelles, reverse micelles, bilayers, liposomes, phase transitions of lipids, active, passive and facilitated transport of solutes and ions, Fick's Laws, Nernst Planck 	BSc (H) Biological Sciences FBS	BSH CC-3/Biophysics

	Practicals:	<ul style="list-style-type: none"> Determination of K_m and V_{max} using Lineweaver-Burk graph. Enzyme inhibition - calculation of K_i for competitive inhibition. Urea estimation. Uric acid estimation. Isoelectric focussing of proteins and two dimensional gel electrophoresis Southern blotting Western blotting 	BSc. (H) Biochemistry FBCH	BCH CC- 4/ Enzymes
	Tutorials:			GE -3/ Intermediary metabolism PGD MB L204/ Biophysical techniques-II
MARCH	Theory:	<p>Characterization of proteins:</p> <ul style="list-style-type: none"> Determination of purity, molecular weight, extinction coefficient and sedimentation coefficient, IEF, SDS-PAGE and 2-D electrophoresis Mass spectrometric analysis, tandem MS, Techniques used in studying 3-D structures – Xray diffraction and NMR. <p>Deoxyribonucleotides and synthesis of nucleotide triphosphate:</p> <ul style="list-style-type: none"> Biosynthesis of deoxyribonucleotides and its regulation, conversion to triphosphates, biosynthesis of coenzyme nucleotides. <p>Spectroscopic techniques:</p> <ul style="list-style-type: none"> Basic principles of electromagnetic radiation, energy, wavelength, wave numbers and frequency. Review of electronic structure of molecules (Molecular Orbital theory), absorption and emission spectra. Beer-Lambert law, light absorption and its transmittance. UV and visible spectrophotometry- principles, instrumentation and applications. 	BSc. (H) Biochemistry FBCH	BCH CC-3/Proteins
			BSc. (H) Biochemistry SBCH	BCH C-8/ Amino Acid and Nucleotide Metabolism
			BSc (H) Biological Sciences FBS	BSH CC-3/Biophysics

	Practicals:	<ul style="list-style-type: none"> Continuous assay of lactate dehydrogenase. Bioinformatics Exercises: <ul style="list-style-type: none"> Databases: Protein data bank, Nucleic acid database, Genbank, Sequence alignment using BLASTn, BLASTp, CLUSTALW. Gene finding tools- GenScan, GLIMMER. 	BSc. (H) Biochemistry FBCH	BCH CC- 4/ Enzymes
	Tutorials:		PGD MB SEMESTER-II	PGD MB L204/ Biophysical techniques- II
	Assignment			
APRIL	Theory:	<ul style="list-style-type: none"> Defects in protein folding. Diseases – Alzheimer’s and Prion based. Cooperativity between subunits and models to explain the phenomena - concerted and sequential models. Haemoglobin disorders. Introduction to protein structure databases. Insilico tools for viewing protein structures Degradation of purine and pyrimidine nucleotides: <ul style="list-style-type: none"> Digestion of nucleic acids, degradation of purine and pyrimidine nucleotides. Inhibitors of nucleotide metabolism. Disorders of purine and pyrimidine metabolism – Lesch-Nyhan syndrome, Gout, SCID, adenosine deaminase deficiency. Spectroscopic techniques: <ul style="list-style-type: none"> energy transfer, fluorescent probes in the study of fluorescence spectroscopy, static & dynamic quenching, protein, nucleic acids, Infra-red spectroscopy, light scattering in biology, circular dichroism, optical rotatory dispersion, magnetic resonance spectroscopy. 	BSc. (H) Biochemistry FBCH	BCH CC-3/Proteins
			BSc. (H) Biochemistry SBCH	BCH C-8/ Amino Acid and Nucleotide Metabolism
				BSc (H) Biological Sciences FBS
	Practicals:	<ul style="list-style-type: none"> Introduction to proteomics ProtParam, GOR, nnPredict, SWISSMODEL Visualization Softwares - Rasmol, JMOL Repetitions / Mock Repetitions / Mock 	PGD MB SEMESTER-II	PGD MB L204/ Biophysical techniques- II
	Tutorials:		BSc. (H) Biochemistry FBCH	BCH CC- 4/ Enzymes GE -3/ Intermediary metabolism
	Test			



SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Sarika Yadav

Department: **BIOCHEMISTRY**

Semester: II/IV/VI (2017-18) (Even Semester)

Month		Topics	Course	Paper Code/Name
JAN	Theory	Introduction to amino acids, peptides and proteins. Covalent structure of proteins: Organization of protein structure into primary, secondary, tertiary and quaternary structures. N-terminal and C-terminal amino acid analysis. Sequencing techniques - Edman degradation. Generation of overlap peptides using different enzymes and chemical reagents. Disulfide bonds and their location. Solid phase peptide synthesis	B.Sc. Biochemistry (H) I Yr, Sem II	CBCS C-3: Proteins
		De novo synthesis of purine and pyrimidine nucleotides, regulation and salvage pathways.	B.Sc. Biochemistry (H) II Yr, Sem IV	CBCS C-10: METABOLISM OF AMINO ACIDS AND NUCLEOTIDES
		The complement system: classical & alternate pathway, Lectin pathway, regulation of the pathway, biological consequences of complement activation.	PGDMB Sem-II	PGD MB 203: Immunology-II
		<u>Practicals</u>		
	Practical	Estimation of proteins using UV absorbance and Biuret method. Microassay of proteins using Lowry/Bradford method	B.Sc. Biochemistry (H) I Yr, Sem II	CBCS C-3: Proteins
		Hematology: RBC and WBC counting; Differential leucocyte count; Clotting time. Estimation of haemoglobin	B.Sc. Biochemistry (H) II Yr, Sem IV	CBCS C-8: Human Physiology
		Immunodiffusion – DID and SRID.	B. Sc (H) Biological Science, III Yr, Sem VI	BS-C13: DEFENCE MECHANISMS (PRACTICALS)
FEB	Theory	Three dimensional structures of proteins: Nature of stabilizing bonds - covalent and non covalent. Importance of primary structure in folding. The peptide bond - bond lengths and configuration. Dihedral angles psi and phi. Helices, sheets and turns. Ramachandran map. Motifs and domains. Tertiary and quaternary structures. Structures of myoglobin and haemoglobin	B.Sc. Biochemistry (H) I Yr, Sem II	CBCS C-3: Proteins
		Biosynthesis of deoxyribonucleotides and its regulation, conversion to triphosphates, biosynthesis of coenzyme nucleotides.	B.Sc. Biochemistry (H) II Yr, Sem IV	CBCS C-10: METABOLISM OF AMINO ACIDS AND NUCLEOTIDES

		Hypersensitivity reactions : type I, II,III and IV	PGDMB Sem-II	PGD MB 203 : Immunology-II
	Practical:	Isoelectric pH of casein. Ammonium sulphate fractionation of serum proteins.	B.Sc. Biochemistry (H) I Yr, Sem II	CBCS C-3: Proteins
		Separation of plasma proteins. Determination of total iron binding capacity. Pulmonary function tests, spirometry and measurement of blood pressure	B.Sc. Biochemistry (H) II Yr, Sem IV	CBCS C-8: Human Physiology
		Immunoelectrophoresis (IEP), Countercurrent IEP, Rocket IEP, Spleen cell isolation and Counting.	B. Sc (H) Biological Science, III Yr, Sem VI	BS-C13: DEFENCE MECHANISMS (PRACTICALS)
MARCH	Theory	Protein folding and conformational diseases: Denaturation and renaturation of Ribonuclease A. Introduction to thermodynamics of folding and molten globule. Assisted folding by molecular chaperones, chaperonins and PDI. Myoglobin and haemoglobin: Oxygen binding curves, influence of 2,3-BPG, CO ₂ and Cl ⁻ . Hill plot. Cooperativity between subunits Specialized proteins - antibodies and actin-myosin motors: Antibody structure and binding to antigens. (TEST and ASSIGNMENTS)	B.Sc. Biochemistry (H) I Yr, Sem II	CBCS C-3: Proteins
		Digestion of nucleic acids, degradation of purine and pyrimidine nucleotides. Inhibitors of nucleotide metabolism. Disorders of purine and pyrimidine metabolism – Lesch-Nyhan syndrome, Gout, SCID, adenosine deaminase deficiency (TEST and ASSIGNMENTS)	B.Sc. Biochemistry (H) II Yr, Sem IV	CBCS C-10: METABOLISM OF AMINO ACIDS AND NUCLEOTIDES
		Vaccines : active and passive immunization, attenuated & inactivated vaccines, new approaches to vaccine development (TEST and ASSIGNMENTS)	PGDMB Sem-II	PGD MB 203 : Immunology-II
	Practical	Separation of albumin from serum using anion-exchange chromatography. SDS-PAGE analysis of proteins.	B.Sc. Biochemistry (H) I Yr, Sem II	CBCS C-3: Proteins
		Separation of isoenzymes of LDH by electrophoresis. Histology of connective tissue, liver and/ brain permanent slides. Case studies (Renal clearance, GFR, ECG).	B. Sc (H) Biochemistry, II Yr, Sem IV	CBCS C-8: Human Physiology
		Survey: Quantitative and qualitative secondary metabolites in plants: alkaloids, glycosides, glycosinolates, terpinoids, phenolics, gammosis etc. in healthy and diseased plant/plant organs.; Characterization of diseases symptoms and identification of pathogenic organisms (at least one each from viral, fungal, pest and nematodes injection); Survey of structural plants defences: viz. cuticle, wax, lignin, bark, thorns, prickles, trichomes, armour in different plants species including thigmonasty, camouflage, mimicry.	B. Sc (H) Biological Science, III Yr, Sem VI	BS-C13: DEFENCE MECHANISMS (PRACTICALS)

<u>APRIL</u>	Theory	ATP activated actin - myosin contractions. Membrane proteins: Integral and membrane associated proteins. Hydropathy plots to predict transmembrane domains. Significance of membrane proteins - bacteriorhodopsin.	B.Sc. Biochemistry (H) I Yr, Sem II	CBCS C-3: Proteins
		Integration of metabolic pathways (carbohydrate, lipid and amino acid metabolic pathways), tissue specific metabolism (brain, muscle, and liver).	B.Sc. Biochemistry (H) II Yr, Sem IV	CBCS C-10: METABOLISM OF AMINO ACIDS AND NUCLEOTIDES
		Autoimmunity : organ specific and systemic autoimmune diseases	PGDMB Sem-II	PGD MB 203 : Immunology-II
	Practical	Revision of practicals, Mock Practical Examination	B.Sc. Biochemistry (H) I Yr, Sem II	CBCS C-3: Proteins
		Revision of practicals, Mock Practical Examination	B. Sc (H) Biochemistry, II Yr, Sem IV	CBCS C-8: Human Physiology
		Revision of practicals, Mock Practical Examination	B. Sc (H) Biological Science, III Yr, Sem VI	BS-C13: DEFENCE MECHANISMS (PRACTICALS)



**SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE**

(2017-2018)

Name of the Faculty: Dr. Shalini Sen

Department: Biochemistry

Semester : II/IV/VI

Month		Topics	Course	Paper Code/Name
JANUARY	Theory	1. Overview of recombinant DNA technology. Restriction and modification systems, restriction endonucleases	BSc(H) Biochemistry Semester VI	BCH C13 Genetic Engineering and Biotechnology
		1. The chemistry of DNA synthesis, DNA polymerase, the replication fork, origin of replication, enzymes and proteins in DNA replication	BSc(H) Biochemistry Semester IV	BCH C9 Gene Organization Replication and Repair
		1. Expression vectors (lac promoter, tryptophan promoter, Lambda cI promoter, arabinose promoter based) optimization of protein expression (using upstream and downstream signals) Fusion proteins, cell-free translation systems. RNAi vectors.	PG Diploma in Mol and Biochemical Technology Sem II	PGDMB 202 Recombinant DNA Technology-II
	Practicals	1. Verification of Chargaff's rule by paper chromatography. 1. Preparation of competent cells of <i>E. coli</i> 2. Transformation of competent <i>E. coli</i> cells with plasmid DNA.	BSc(H) Biochemistry Semester IV PG Diploma in Mol and Biochemical Technology Sem II	BCH C9 Gene Organization Replication and Repair PGDMB 202 Recombinant DNA Technology-II

February	Theory	<p>3.Extraction and purification of plasmid and bacteriophage DNA.</p> <p>4. Ligation of DNA molecules. DNA ligase, sticky ends, blunt ends, linkers and adapters. Synthetic oligonucleotides, synthesis and use.</p> <p>2. Various modes of replication, stages of replication of <i>E. coli</i> chromosome, relationship between replication and cell division, replication in eukaryotes. Comparison of replication in prokaryotes and eukaryotes. Inhibitors of DNA replication and applications in medicine. Supercoiling of DNA and its importance, topoisomerases, critical role of topoisomerases in cell, topoisomerase inhibitors and their application in medicine.</p> <p>2. Biolistics, protoplast mediated, electroporation, Agrobacterium mediated transfer (Ti plasmid, disarmed vectors, cointegrate vector binary vectors), virus-mediated transfer (CaMV) planta transformation, sign for optimization of protein synthesis.</p> <p>3. Gene transfer to animal cells</p>	BSc(H) Biochemistry Semester IV	BCH C9 Gene Organization Replication and Repair
	Practicals	<p>2. Ultraviolet absorption spectrum of DNA and RNA.</p> <p>3. Determination of DNA and RNA concentration by A_{260nm}.</p>	BSc(H) Biochemistry Semester IV	BCH C9 Gene Organization Replication and Repair

		2. To study the effect of alkaline phosphatase on plasmid recircularization	PG Diploma in Molecular and Biochemical Technology Sem II	PGDMB 202 Recombinant DNA Technology-II
	Assignment:	Assignments related to Theory for all courses		
MARCH	Theory:	5. Fundamentals of polymerase chain reaction, designing primers for PCR. Studying PCR products. Cloning PCR products. Real time PCR. 6. DNA sequencing by Sanger's method, modifications based on Sanger's method. Automated DNA sequencing. Pyrosequencing.	BSc(H) Biochemistry Semester VI	BCH C13 Genetic Engineering and Biotechnology
		3. Importance of mutations in evolution of species. Types of mutations - transition, transversions, frame shift mutations, mutations induced by chemicals, radiation, transposable elements, Ames test.	BSc(H) Biochemistry Semester IV	BCH C9 Gene Organization Replication and Repair
		4. DNA sequencing (dideoxy chain termination, chemical degradation, pyrosequencing, shotgun sequencing and contig assembly). 5. Components of the PCR, importance of primer designing, various thermostable enzymes vs Taq polymerase	PG Diploma in Molecular and Biochemical Technology Sem II	PGDMB 202 Recombinant DNA Technology-II

	Practicals:	4.Determination of the melting temperature and GC content of DNA. 4.To amplify a gene using PCR.	BSc(H) Biochemistry Semester IV PG Diploma in Molecular and Biochemical Technology Sem II	BCH C9 Gene Organization Replication and Repair PGDMB 202 Recombinant DNA Technology-II
	<u>Test</u>	For all courses, based on theory covered		
APRIL	Theory:	6. Site-directed mutagenesis and protein engineering. Applications in medicine, production of recombinant pharmaceuticals such as insulin, human growth hormone, factor VIII. Recombinant vaccines. Gene therapy. Applications in agriculture - plant genetic engineering, herbicide resistant crops, problems with genetically modified plants, safety concerns. 4.Replication errors and mismatch repair system 6.Site directed mutagenesis(cassette mutagenesis, primer extension method, overlap extension method, megaprimer method)Protein engineering. 7. Transgenic crops, recombinant vaccines and proteins, using polymorphic DNA in forensics	BSc(H) Biochemistry Semester VI BSc(H) Biochemistry Semester IV PG Diploma in Molecular and Biochemical Technology Sem II	BCH C13 Genetic Engineering and Biotechnology BCH C9 Gene Organization Replication and Repair PGDMB 202 Recombinant DNA Technology-II

	Practicals: Repetition of practicals, mock practical exam for both courses	BSc(H) Biochemistry Semester IV PG Diploma in Mol and Biochemical Technology Sem II	BCH C9 Gene Organization Replication and Repair PGDMB 202 Recombinant DNA Technology-II
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**SEMESTER WISE TEACHING PLAN
SRI VENKATESWARCOLLEGE**

2017-2018

Name of the Faculty: Dr.N. Latha Department: BIOCHEMISTRY

EVEN SEMESTER

Semester: II/IV/VI

Month		Topics	Course	Paper Code/Name
JANUARY 2018	Theory	Cells & Organs of the Immune System, cells of the immune system; hematopoiesis; HSC, distribution and function(s) of lymphoid and myeloid cells; CD nomenclature; structure and function of primary and secondary lymphoid tissues and organs; Antibody Structure	B.Sc. BIOCHEMISTRY (Hons.) III Year, Semester VI	C14- IMMUNOLOGY-II
		Introduction to bioinformatics Computer fundamentals - programming languages in bioinformatics, role of supercomputers,,Scope of bioinformatics - genomics, proteomics, computer aided drug design (structure based and ligand based approaches) and Systems Biology & Biological Databases	B.Sc. BIOCHEMISTRY Hons.) II Year, Semester IV	SEC 4: BIOINFORMATICS
	Practicals	Introduction to enzymes Nature of enzymes - protein and non-protein (ribozyme). Cofactor and prosthetic group, apoenzyme, holoenzyme. IUBMB classification of enzymes.	B.Sc. BIOCHEMISTRY Hons.) I Year, Semester II	CBCS C4: ENZYMES
		Introduction to Bioinformatics & its applications, Biological Databases , Retrieval of Sequences from NCBI, Structure downloads from PDB, File Formats	B.Sc. BIOCHEMISTRY (Hons.) II Year, Semester IV	SEC 4: BIOINFORMATICS
		Introduction to Bioinformatics & its applications, Biological Databases , Retrieval of Sequences from NCBI, Structure downloads from PDB, File Formats	PGDiploma Semester II	BPT-II
FEBRUARY 2018	Theory	Antibody structure: structure of IgG, IgM, IgA, IgD & IgE;immunoglobulin (Ig) fold and Ig super family; isotype, allotype and idiootype; Receptor diversity: Dreyer- Bennett model for the structure of Ig and its experimental demonstration; organization of Ig genes- kappa, lambda and heavy chain multi-gene families; mechanism of DNA rearrangement and the role of RAG recombinase, Tdt and DNA repair enzymes; immunoglobulin diversification mechanisms.	B.Sc. BIOCHEMISTRY (Hons.) III Year, Semester VI	C14- IMMUNOLOGY-II
		Sequence Alignment Similarity, identity and homology. Alignment – local and global alignment, pairwise and multiple sequence alignments, alignment algorithms, amino acid substitution matrices (PAM and BLOSUM), BLAST and CLUSTALW	B.Sc. BIOCHEMISTRY Hons.) II Year, Semester IV	SEC 4: BIOINFORMATICS

		Factors affecting the rate of chemical reactions, collision theory, activation energy and transition state theory, catalysis, reaction rates and thermodynamics of reaction. Catalytic power and specificity of enzymes (concept of active site), Fischer's lock and key hypothesis,	B.Sc. BIOCHEMISTRY (Hons.) I Year, Semester II	CBCS C4: ENZYMES
	Practicals:	Sequence Alignments-Pairwise Sequence Alignment using BLAST, Multiple Sequence Alignment (CLUSTALW),	B.Sc. BIOCHEMISTRY (Hons.) II Year, Semester IV	SEC 4: BIOINFORMATICS
		Sequence Alignment : BLAST & CLUSTALW	PGDiploma Semester II	BPT-II
MARCH 2018	Theory	Antigen independent phase of B cell maturation and selection, humoral response – T-dependent and T-independent response, anatomical distribution of B cell populations	B.Sc. BIOCHEMISTRY (Hons.) III Year, Semester VI	C14- IMMUNOLOGY-II
		Protein Structure Prediction: Levels of protein structure. Protein tertiary structure prediction methods - homology modeling, fold recognition and ab-initio methods. Significance of Ramachandran map	B.Sc. BIOCHEMISTRY (Hons.) II Year, Semester IV	SEC 4: BIOINFORMATICS
		Mechanism of action of enzymes General features - proximity and orientation, strain and distortion, acid base and covalent catalysis (chymotrypsin, lysozyme). Metal activated enzymes and metalloenzymes, transition state analogues	B.Sc. BIOCHEMISTRY (Hons.) I Year, Semester II	CBCS C4: ENZYMES
	Practicals	Protein sequence Analysis & Secondary Structure Prediction Tools	B.Sc. BIOCHEMISTRY (Hons.) II Year, Semester IV	SEC 4: BIOINFORMATICS
		Protein sequence Analysis & Secondary Structure Prediction Tools	PGDiploma Semester II	BPT-II
	<u>Test /Assignment</u>	Innate and Adaptive Immunity, Cells & Organs of the Immune System, Lymphoid Organs, Antibody Structure and Function	B.Sc. BIOCHEMISTRY (Hons.) III Year, Semester V	BCHT510- IMMUNOLOGY

		Introduction to Enzymes, Enzyme catalysis & Mechanisms of Enzyme action	B.Sc. BIOCHEMISTRY (Hons.) I Year, Semester II	CBCS C4: ENZYMES
APRIL 2018	Theory	Tolerance, autoimmunity and hypersensitivity Organ specific and systemic autoimmune diseases, possible mechanisms of induction of autoimmunity, Gell and Coombs classification, IgE mediated (Type I) hypersensitivity, antibody 37 mediated cytotoxic (Type II) hypersensitivity, immune complex mediated (type III) hypersensitivity and delayed type (Type IV) hypersensitivity, Vaccines	B.Sc. BIOCHEMISTRY (Hons.) III Year, Semester VI	C14- IMMUNOLOGY-II
		Introduction to genomics, comparative and functional genomics, gene structure in prokaryotes and eukaryotes, gene prediction methods and tools.	B.Sc. BIOCHEMISTRY (Hons.) II Year, Semester IV	SEC 4: BIOINFORMATICS
		Role of Coenzymes and application of enzymes	B.Sc. BIOCHEMISTRY (Hons.) I Year, Semester II	CBCS C4: ENZYMES
	Practicals:	Gene Prediction Tools (GeneScan & Glimmer) , CADD	B.Sc. BIOCHEMISTRY (Hons.) II Year, Semester IV	SEC 4: BIOINFORMATICS
		Gene Prediction Tools, Introduction to CADD	PGDiploma Semester II	BPT-II



SRI VENKATESWARA COLLEGE
SEMESTER WISE TEACHING PLAN

Name of the Faculty: Dr. Pooja Gokhale Sinha

Department: Botany

Semester: IV

Month		Topics	Course	Paper Code/Name
JULY	Theory	Taxonomic hierarchy Concept of ranks and categories	B.Sc. (H) Botany	/BTHT-507 Plant Systematics and Evolution
	Practicals	Introduction to Taxonomic Terminology (Vegetative characters)	B.Sc (H) Botany	/BTHT-507 Plant Systematics and Evolution
AUGUST	Theory:	Species Concept: Biological, Taxonomic, Nominalistic, Typological, Morphogeographical . Description, Advantages and disadvantages of all the	B.Sc (H) Botany	/BTHT-507 Plant Systematics and Evolution
	Practicals:	Introduction to Taxonomic Terminology (Vegetative characters) Morphological and anatomical features of the following species: <i>Vinca rosea</i> , <i>Hibiscus rosa sinensis</i>	B.Sc (H) Botany	/BTHT-507 Plant Systematics and Evolution
SEPTEMBER	Theory:	Introduction to chemotaxonomy Phylogeny of angiosperms:	B.Sc (H) Botany	/BTHT-507 Plant Systematics and Evolution

		All theories of the time and place of their origin. Theories related to their monophyletic or paraphyletic origin.		
	Practicals:	Morphological and anatomical features of the following species: <i>Hamelia, Sonchus</i> <i>Solanum nigrum</i> <i>Ocimum sanctum</i> <i>Euphorbia hirta</i> <i>Phyllanthus,</i> <i>Thevetia</i> <i>Tabernaemontana</i> <i>Tridax, vernonia,</i> Morphological features of families: Cannaceae, Asclepidiaceae, Cucurbitaceae, Poaceae,	B.Sc (H) Botany	/BTHT-507 Plant Systematics and Evolution
OCTOBER	Theory:	Theories related to their monophyletic or paraphyletic origin	B.Sc (H) Botany	/BTHT-507 Plant Systematics and Evolution
	Practicals:	<i>Thevetia</i> <i>Tabernaemontana</i> <i>Tridax, vernonia,</i> Morphological features of families: Cannaceae, Asclepidiaceae, Cucurbitaceae, Poaceae		
NOVEMBER	Theory:	Revision and discussion of previous years question papers	B.Sc (H) Botany	/BTHT-507 Plant Systematics and Evolution
	Practicals:	Poaceae		

**SEMESTER WISE
TEACHING PLAN
SRI VENKATESWARA COLLEGE**

Name of the Faculty: Pooja Gokhale

Department: Botany

Course: B.Sc. (H) Botany, Semester: IV

Paper: Ecology

MONTH		Topics	Course	Paper Code/Name
JULY	Theory	Introduction to Ecology History and overview of school of thoughts	B.Sc. (H) Botany	Ecology
	Practicals	Introduction to community Analysis and plotting of survivorship curves	B.Sc. (H) Botany	Ecology
	Tutorials			
AUGUST	Theory:	Levels of organization Community: Characteristics, structure	B.Sc. (H) Botany	Ecology

SEPTEMBER	Practicals:	<ul style="list-style-type: none"> Plotting of Species- area curve by minimal quadrat size Frequency, density and abundance of herbaceous vegetation of SVC campus 	B.Sc. (H) Botany	Ecology
	Theory	Raunkiers life forms Community function	B.Sc. (H) Botany	Ecology
	Practical	Soil analysis by rapid field tests Analysis of physical characteristics of soil Principle and function of field instruments	B.Sc. (H) Botany	Ecology
OCTOBER	Theory	Succession: types and principles Hydrosere, xerosere and mesosere	B.Sc. (H) Botany	Ecology
	Practical	Analysis of water samples to determine DO and BOD	B.Sc. (H) Botany	Ecology
NOVEMBER	Theory	Introduction to ecosystem: Structure and function Nutrient cycling and energy flow	B.Sc. (H) Botany	Ecology

Practical	Study of ecological adaptations: Morphological and anatomical	B.Sc. (H) Botany	Ecology
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SEMESTER WISE TEACHING PLAN (January 2017)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Tabassum Afshan

Department: Botany

Semester: II/IV

Month		Topics	Course	Paper
JANUARY	Theory	<p>1. Plant communities: Characters; Ecotone and edge effect; Succession; Processes and types.</p> <p>2. Introduction to plant taxonomy Identification, Classification, Nomenclature.</p> <p>3. Photosynthesis: Photosynthetic Pigments (Chl a, b, xanthophylls, carotene); Photosystem I and II, reaction center, antenna molecules; Electron transport and mechanism of ATP synthesis.</p> <p>3. History, Scope and Importance of Medicinal Plants. Indigenous Medicinal Sciences; Definition and Scope- Ayurveda: History, origin, panchamahabhutas, saptadhatu and tridosha concepts, Rasayana, plants used in ayurvedic treatments, Siddha: Origin of Siddha medicinal systems, Basis of Siddha system, plants used in Siddha medicine.</p> <p>4. Phytopathology: Terms and concepts; General symptoms; Geographical distribution of diseases; Etiology; Symptomology; Host-Pathogen relationships; Disease cycle and environmental relation; prevention and control of plant diseases, and role of quarantine.</p>	<p>B.Sc. Life Science</p> <p>B.Sc. Life Science</p> <p>B.Sc. Life Science</p> <p>B.Sc. Botany (Hons.)</p> <p>B.Sc. Botany (Hons.)</p>	<p>CC-II/Plant Ecology and Taxonomy</p> <p>CC-IV/Plant Physiology and Metabolism</p> <p>SEC- Medicinal Botany</p> <p>SEC- Medicinal Botany</p> <p>CC-III/Mycology and Phytopathology</p>

	Practicals	<p>1. Study of instruments used to measure microclimatic variables: Soil thermometer, maximum and minimum thermometer, anemometer, psychrometer/hygrometer, rain gauge and lux meter.</p> <p>2. Determination of pH, and analysis of two soil samples for carbonates, chlorides, nitrates, sulphates, organic matter and base deficiency by rapid field test.</p> <p>3. Introduction to the world of fungi (Unicellular, coenocytic/septate mycelium, ascocarps & basidiocarps).</p> <p>4. Rhizopus: study of asexual stage from temporary mounts and sexual structures through permanent slides.</p> <p>5. Aspergillus and Penicillium: study of asexual stage from temporary mounts. Study of Sexual stage from permanent slides/photographs.</p> <p>6. To locate any ten common medicinal plants in the surrounding area and write their importance.</p>	<p>B.Sc. Life Science</p> <p>B.Sc. Botany (Hons.)</p> <p>B.Sc. Botany (Hons.)</p>	<p>CC-II/Plant Ecology and Taxonomy</p> <p>CC-III/Mycology and Phytopathology</p> <p>SEC/Medicinal Botany</p>
	Tutorials			
FEBRUARY	Theory:	<p>1. Identification, Functions of Herbarium, important herbaria and botanical gardens of the world and India; Documentation: Flora, Keys: single access and multi-access</p> <p>2. Taxonomic hierarchy Ranks, categories and taxonomic groups</p> <p>3. C₃, C₄ and CAM pathways of carbon fixation; Photorespiration.</p> <p>4. Unani: History, concept: Umoor-e- tabiya, tumors treatments/ therapy, polyherbal formulations</p> <p>5. Ethnobotany and Folk medicines. Definition; Ethnobotany in India</p> <p>6. Bacterial diseases – Citrus canker and angular leaf spot of cotton. Viral diseases – Tobacco Mosaic viruses, vein clearing. Fungal diseases – Early blight of potato, Black stem rust of wheat, White rust of crucifers.</p>	<p>B.Sc. Life Science</p> <p>B.Sc. Life Science</p> <p>B.Sc. Life Science</p> <p>B.Sc. Botany(H)</p> <p>B.Sc. Botany (Hons.)</p>	<p>CC-II/Plant Ecology and Taxonomy</p> <p>CC-IV/Plant Physiology and Metabolism</p> <p>SEC- Medicinal Botany</p> <p>SEC- Medicinal Botany</p> <p>CC-III/Mycology and Phytopathology</p>
	Practicals:	<p>1. Comparison of bulk density, porosity and rate of infiltration of water in soil of three habitats.</p> <p>2. (a) Study of morphological adaptations of hydrophytes and xerophytes (flair each). (b) Study of biotic interactions of the following: Stem parasite (Cuscuta), Root parasite (Orobancha), Epiphytes, Predation (Insectivorous plants)</p> <p>3. Peziza: sectioning through ascocarp.</p> <p>4. Alternaria: Specimens/photographs and temporary mounts.</p> <p>5. Puccinia: Herbarium specimens of Black Stem Rust of Wheat and infected Barberry leaves; sections/ mounts of spores on wheat and permanent slides of both the hosts.</p> <p>6. To extract the active principle from any four medicinal plants (<i>Aloe-vera</i>, <i>Ocimum</i>, <i>Azardirachta</i>, <i>Catharantus</i>, <i>Adhatoda</i>, <i>Withania</i>)</p>	<p>B.Sc. Life Science</p> <p>B.Sc. Botany (Hons.)</p> <p>B.Sc. Botany (Hons.)</p>	<p>CC-II/Plant Ecology and Taxonomy</p> <p>CC-III/Mycology and Phytopathology</p> <p>SEC/Medicinal Botany</p>
	Tutorials:			

	<u>Assignment</u>	Entire Syllabus		
MARCH	Theory:	<p>1. Botanical nomenclature Principles and rules (ICN); ranks and names; binominal system, typification, author citation, valid publication, rejection of names, principle of priority and its limitations.</p> <p>2. Nitrogen metabolism: Biological nitrogen fixation</p> <p>3. Methods to study ethnobotany; Applications of Ethnobotany: National interacts, Palaeo-ethnobotany. folk medicines of ethnobotany, ethnomedicine, ethnoecology</p> <p>4. Applied Mycology (10 Lectures) Role of fungi in biotechnology; Application of fungi in food industry (Flavour & texture, Fermentation)</p>	<p>B.Sc. Life Science</p> <p>B.Sc. Life Science</p> <p>B.Sc. Life Science</p> <p>B.Sc.</p> <p>Botany (Hons.)</p> <p>B.Sc. Botany (Hons.)</p>	<p>CC-II/Plant Ecology and Taxonomy</p> <p>CC-IV/Plant Physiology and Metabolism</p> <p>SEC- Medicinal Botany</p> <p>SEC- Medicinal Botany</p> <p>CC-III/Mycology and Phytopathology</p>
	Practicals:	<p>1. Determination of minimal quadrat size for the study of herbaceous vegetation in the college campus by species area curve method. (species to be listed)</p> <p>2. Quantitative analysis of herbaceous vegetation in the college campus for frequency and comparison with Raunkiaer's frequency distribution law</p> <p>3. Agaricus: Specimens of button stage and full grown mushroom; sectioning of gills of Agaricus, fairy rings and bioluminescent mushrooms to be shown.</p> <p>4. Study of phaneroplasmodium from actual specimens and /or photograph. Study of Stemonitis sporangia</p> <p>5. Albugo: Study of symptoms of plants infected with Albugo; asexual phase study through section/ temporary mounts and sexual structures through permanent slides.</p> <p>6. Write the details of any two commonly used medicines from the indigenous systems of medicines (Ayurveda, Siddha, Unani)</p>	<p>B.Sc. Life Science</p> <p>B.Sc. Botany (Hons.)</p> <p>B.Sc. Botany (Hons.)</p>	<p>CC-II/Plant Ecology and Taxonomy</p> <p>CC-III/Mycology and Phytopathology</p> <p>SEC/Medicinal Botany</p>
	Tutorials:			
	<u>Test</u>	Entire Syllabus		
APRIL	Theory:	<p>1. Classification: Types of classification-artificial, natural and phylogenetic. Bentham and Hooker (upto series), Engler and Prantl (upto series).</p> <p>2. Nitrogen Metabolism: Nitrate and ammonia assimilation</p> <p>3. Ethnic communities of India. Application of natural products to certain diseases- Jaundice, cardiac, infertility, diabetics, Blood pressure and skin diseases.</p> <p>4. Role of fungi in Baking, Organic acids, Enzymes, Mycoproteins</p>	<p>B.Sc. Life Science</p> <p>B.Sc. Life Science</p> <p>B.Sc. Botany(H)</p> <p>B.Sc. Botany (H)</p>	<p>CC-II/Plant Ecology and Taxonomy</p> <p>CC-IV/Plant Physiology and Metabolism</p> <p>SEC- Medicinal Botany</p> <p>SEC- Medicinal Botany</p> <p>CC-III</p>

Practicals:	<p>1. 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 & 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.</p> <p>2. Lichens: Study of growth forms of lichens (crustose, foliose and fruticose) on different substrates. Study of thallus and reproductive structures (soredia and apothecium) through permanent slides. Mycorrhizae: ectomycorrhiza and endomycorrhiza (Photographs)</p> <p>3. Phytopathology: Herbarium specimens of bacterial diseases; Citrus Canker; Angular leaf spot of cotton, Viral diseases: TMV, Vein clearing, Fungal diseases: Early blight of potato, Black stem rust of wheat and White rust of crucifers.</p> <p>4. E-presentations (System of medicine, conservation strategies, propagation of medicinal plants, folk medicines, application of natural products to certain diseases.</p>	<p>B.Sc. Life Science</p> <p>B.Sc. Botany (Hons.)</p> <p>B.Sc. Botany (Hons.)</p>	<p>CC-II/Plant Ecology and Taxonomy</p> <p>CC-III/Mycology and Phytopathology</p> <p>SEC/Medicinal Botany</p>
Tutorials:			

MAY	Theory:			
	Practicals:			
	Tutorials:			

**CHEMISTRY TEACHING
PLAN**

ALL TEACHERS

2017-18- EVEN SEMESTER



SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE

Name of the Faculty: **Dr Mercy Jacob**

Department: **Chemistry**

Semester : **II/IV/VI**

Month		Topics	Course	Paper
JANUARY	Theory	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	B.Sc. (H) Chemistry II nd Year, Semester - IV (2020)	CHEMISTRY – C VIII: INORGANIC CHEMISTRY – III Coordination Chemistry
	Practicals	Inorganic Preparations: i. Tetraamminecopper (II) sulphate, ii. Acetylacetonate complexes of Cu ²⁺	B.Sc. (H) Chemistry II nd Year, Semester - IV	CHEMISTRY – C VIII: INORGANIC CHEMISTRY – III Coordination
		Qualitative semimicro analysis of mixtures containing 3 anions and 3 cations	B.Sc. (H) Chemistry III rd Year, Semester - VI	INORGANIC CHEMISTRY IV
	Tutorials			
FEBRUARY	Theory:	Werner's theory, valence bond theory (inner and outer orbital complexes), electroneutrality principle and back bonding, Crystal field theory	B.Sc. (H) Chemistry II nd Year, Semester - IV (2020)	CHEMISTRY – C VIII: INORGANIC CHEMISTRY – III Coordination Chemistry
	Practicals	Preparation of (iv) Potassium tri(oxalato)ferrate(III) Estimation of nickel (II) using Dimethylglyoxime (DMG).	B.Sc. (H) Chemistry II nd 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 rd Year, Semester - VI	INORGANIC CHEMISTRY IV
	Tutorials:			
	Assignment :	Coordination chemistry and chemistry of s block elements	B.Sc. (H) Chemistry II nd Year, Semester - IV	CHEMISTRY – C VIII: INORGANIC CHEMISTRY – III

MARCH	Theory:	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	B.Sc. (H) Chemistry II nd Year, Semester - IV (2020)	CHEMISTRY – C VIII: INORGANIC CHEMISTRY – III Coordination
	Practicals:	Estimation of copper as CuSCN Preparation of Tetraamminecarbonatocobalt(III) nitrate	B.Sc. (H) Chemistry II nd 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	B.Sc. (H) Chemistry III rd Year, Semester - VI	INORGANIC CHEMISTRY IV
	Tutorials:			
	Test	Coordination Chemistry and transition elements	B.Sc. (H) Chemistry II nd Year, Semester - IV	CHEMISTRY – C VIII: INORGANIC CHEMISTRY – III
APRIL	Theory:	Tetragonal distortions from octahedral geometry Jahn-Teller theorem, square planar geometry. Qualitative aspect of Ligand field and MO Theory	B.Sc. (H) Chemistry II nd Year, Semester - IV (2020)	CHEMISTRY – C VIII: INORGANIC CHEMISTRY – III Coordination
	Practicals:	Estimation of iron as Fe_2O_3 by precipitating iron as $Fe(OH)_3$.	B.Sc. (H) Chemistry II nd Year, Semester - IV	CHEMISTRY – C VIII: INORGANIC CHEMISTRY – III Coordination
		Mixtures preferably contain one interfering anion and combination of anions	B.Sc. (H) Chemistry III rd Year, Semester - VI	INORGANIC CHEMISTRY IV
	Tutorials:			



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

	Practicals:	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	CHEMISTRY - CXIII: INORGANIC CHEMISTRY – IV Organometallic Chemistry & Bio-inorganic Chemistry
		Semi-micro qualitative analysis of mixture of two cations and two anions	BSc(P) Life science II year	Chemistry Practical
	Tutorials:	NA	NA	NA
	<u>Assignment :</u>	Organometallic Chemistry & Bio-inorganic Chemistry Assignment	B.Sc(H) Chemistry III year	CHEMISTRY - CXIII: INORGANIC CHEMISTRY – IV Organometallic Chemistry & Bio-inorganic Chemistry
MARCH	Theory:	Interfering anions (fluoride, borate, oxalate and phosphate),	B.Sc(H) Chemistry III year	CHEMISTRY - CXIII: INORGANIC CHEMISTRY – IV Organometallic Chemistry & Bio-inorganic Chemistry
		Bonding in coordination compounds Valence Bond Theory (VBT): Salient features of theory, concept of inner and outer orbital complexes of	BSc(P) Life science III year	DSE1: Chemistry of d-block elements, Quantum chemistry and spectroscopy
	Practicals:	Qualitative semi-micro analysis of mixtures containing 3 anions and 3 cations. Emphasis should be given to the	B.Sc(H) Chemistry III year	CHEMISTRY - CXIII: INORGANIC CHEMISTRY – IV Organometallic Chemistry & Bio-inorganic Chemistry
		Semi-micro qualitative analysis of mixture of two cations and two anions	BSc(P) Life science II year	Chemistry Practical

	Tutorials:	NA	NA	NA
	<u>Test</u>	Organometallic Chemistry & Bio-inorganic Chemistry Test	B.Sc(H) Chemistry III year	CHEMISTRY - CXIII: INORGANIC CHEMISTRY – IV Organometallic Chemistry & Bio-inorganic Chemistry
APRIL	Theory:	need to remove them after Group II and methods of removal. Analysis of insoluble substances.	B.Sc(H) Chemistry III year	CHEMISTRY - CXIII: INORGANIC CHEMISTRY – IV Organometallic Chemistry & Bio-inorganic Chemistry
		Crystal Field Theory 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	DSE1: Chemistry of d-block elements, Quantum chemistry and spectroscopy
	Practicals:	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	CHEMISTRY - CXIII: INORGANIC CHEMISTRY – IV Organometallic Chemistry & Bio-inorganic Chemistry
		Semi-micro qualitative analysis of mixture of two cations and two anions	BSc(P) Life science II year	Chemistry Practical
	Tutorials:			



**SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE**

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

Semester: VI

Year: 2017-18

Month		Topics	Course	Paper Code/Name
January	Theory	Carbohydrates Occurrence, classification and their biological importance. Correlation of configuration. 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)	B.Sc. CHEMISTRY (Hons.) III Year, Semester VI	CHEMISTRY - C XIV: ORGANIC CHEMISTRY V
		Polynuclear Hydrocarbons Aromaticity of polynuclear hydrocarbons, structure elucidation of naphthalene; Preparation and properties of naphthalene, phenanthrene and anthracene. (8 Lectures)	B.Sc. CHEMISTRY (Hons.) II nd Year, Semester IV	CHEMISTRY –CC-IX Organic Chemistry III
	Practical	Qualitative analysis of unknown organic compounds containing monofunctional groups (carbohydrates, aryl halides, aromatic hydrocarbons) 1. Qualitative analysis of unknown organic compounds containing simple functional groups (alcohols, carboxylic acids, phenols, carbonyl compounds and esters)=	B.Sc. CHEMISTRY (Hons.) III Year, Semester VI B.Sc. CHEMISTRY (Hons.) II nd Year, Semester IV	CHEMISTRY PRACTICAL –CC-XIV LAB: Organic Chemistry V CHEMISTRY PRACTICAL –CC-IX LAB: Organic Chemistry III

February	Theory:	<p>Carbohydrates Occurrence, classification and their biological importance. Correlation of configuration. 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> <p>Heterocyclic Compounds Classification and nomenclature, Structure, aromaticity in 5-numbered and 6-membered rings containing one heteroatom; Synthesis, reactions and mechanism of substitution reactions of: Furan, Pyrrole (Paal-Knorr synthesis, Knorr pyrrole synthesis, Hantzsch synthesis), Thiophene, Pyridine (Hantzsch synthesis)</p>	B.Sc. CHEMISTRY (Hons.) III Year, Semester VI	CHEMISTRY - C XIV: ORGANIC CHEMISTRY V
	Practical:	<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>	B.Sc. CHEMISTRY (Hons.) III Year, Semester VI	CHEMISTRY PRACTICAL –CC-XIV LAB: Organic Chemistry V
			B.Sc. CHEMISTRY (Hons.) II nd Year, Semester IV	CHEMISTRY PRACTICAL –CC-IX LAB: Organic Chemistry III

March	Theory:	<p>Polymers 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> <p>Heterocyclic Compounds Indole(Fischer indole synthesis and Madelung synthesis), Quinoline and isoquinoline, (Skraup synthesis, Friedlander’s synthesis, Knorr quinoline synthesis,</p>	<p>B.Sc. CHEMISTRY (Hons.) III Year, Semester VI</p> <p>B.Sc. CHEMISTRY (Hons.) IInd Year, Semester IV</p>	<p>CHEMISTRY - C XIV: ORGANIC CHEMISTRY V</p> <p>CHEMISTRY –CC-IX Organic Chemistry III</p>

	Practical:	<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>B.Sc. CHEMISTRY (Hons.) III Year, Semester VI</p> <p>B.Sc. CHEMISTRY (Hons.) IInd Year, Semester IV</p>	<p>CHEMISTRY PRACTICAL –CC-XIV LAB: Organic Chemistry V</p> <p>CHEMISTRY PRACTICAL –CC-IX LAB: Organic Chemistry III</p>
	<u>Assignment 1 (10 Marks)</u>	Topic : Carbohydrates	B.Sc. CHEMISTRY (Hons.) III Year, Semester VI	CHEMISTRY –CC-XIV Organic Chemistry V
	<u>Internal Assessment(10 Marks)</u>	Topic: Polynuclear hydrocarbons and Five membered heterocyclics	B.Sc. CHEMISTRY (Hons.) II nd Year, Semester IV	CHEMISTRY –CC-IX Organic Chemistry III
April	Theory:	<p>. Polymers 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>Heterocycles Doebner- Miller synthesis, Bischler-Napieralski reaction, Pictetl Spengler reaction, Pomeranz-Fritsch reaction)</p> <p>Any Pending Work from Previous Month</p> <p>Revision and Discussion of Previous year papers.</p>	B.Sc. CHEMISTRY (Hons.) II nd Year, Semester IV	CHEMISTRY –CC-IX Organic Chemistry III



SEMESTER WISE TEACHING PLAN
2017-18
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Shefali Shukla

Department: Chemistry

Semester: II/IV/VI

Month		Topic	Course	Paper
January	Theory:	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 Stereoisomerism: 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
	Practicals:	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
		Preparation of shampoo. Preparation of talcum powder.	B. Sc. (P) Life Sciences III year, Semester VI	Practical SEC: CHEMISTRY OF COSMETICS & PERFUMES
	Tutorials:	NA	NA	NA
February	Theory:	Optical Activity, Specific Rotation, Chirality/Asymmetry, Enantiomers, Molecules with two or more chiral-centres, Distereoisomers, meso structures, Racemic mixture and their resolution. Relative and absolute configuration: D/L and R/S designations.	B. Sc. (H) Chemistry I year, Semester II	Organic Chemistry I: Basics and Hydrocarbons

		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		
	Practicals:	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
		Preparation of enamels. Preparation of hair remover.	B. Sc. (P) Life Sciences III year, Semester VI	Practical SEC: CHEMISTRY OF COSMETICS & PERFUMES
	Tutorials:	NA	NA	NA
	Assignment	Basic concepts of Organic Chemistry, Stereochemistry	B. Sc. (H) Chemistry I year, Semester II	Organic Chemistry I:Basics and Hydrocarbons
March	Theory:	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-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. Sc. (H) Chemistry I year, Semester II	Organic Chemistry I:Basics and Hydrocarbons
	Practicals:	Chromatography a.Separation of a mixture of two amino acids by ascending and circular chromatography	B. Sc. (H) Chemistry I year, Semester II	B. Sc. (H) Chemistry I year, Semester II Practical C – III

		<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>		
		Preparation of face cream.	B. Sc. (P) Life Sciences III year, Semester VI	Practical SEC: CHEMISTRY OF COSMETICS & PERFUMES
	Tutorials:	NA	NA	NA
	Test	Basic concepts, Stereochemistry, Alkene- Preparation, Electrophilic addition reactions	B. Sc. (H) Chemistry I year, Semester II	Organic Chemistry I: Basics and Hydrocarbons
April	Theory:	<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 aromatic substitution: halogenation, nitration, sulphonation, Friedel Crafts alkylation/ acylation with their mechanism. Directing effects of groups in electrophilic substitution.</p>	B. Sc. (H) Chemistry I year, Semester II	Organic Chemistry I: Basics and Hydrocarbons
	Practicals:	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
		Preparation of nail polish and nail polish remover.	B. Sc. (P) Life Sciences III year, Semester VI	Practical SEC: CHEMISTRY OF COSMETICS & PERFUMES
	Tutorials:	NA	NA	NA



SEMESTER WISE TEACHING PLAN (2017-2018)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Pragya Gahlot

Department: Chemistry

Semester: II/IV/VI

Month		Topics	Course	Paper Code/Name
JANUARY	Theory	<p>Chemical Thermodynamics: Intensive and extensive variables; state and path functions; isolated, closed and open systems. First law: Concept of heat, Q, work, W, internal energy, U, and statement of first law; enthalpy, H, relation between heat capacities, calculations of Q, W, ΔU and ΔH for reversible, irreversible and free expansion of gases (ideal and van der Waals) under isothermal and adiabatic conditions. Thermochemistry: Heats of reactions: standard states; enthalpy of formation and enthalpy of combustion and its applications; effect of temperature (Kirchhoff's equations) and pressure on enthalpy of reactions.</p>	B.Sc. (H) Chemistry, I year, Semester II	Core Course-IV Practical Physical Chemistry-II
	Practicals	<p>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.</p>	GE-II	CHEMISTRY LAB: CHEMICAL ENERGETICS, EQUILIBRIA & FUNCTIONAL ORGANIC CHEMISTRY
		Determination of heat capacity of a calorimeter for different volumes using (i) change of enthalpy data of a known system (method of back	B.Sc. (H) Chemistry, I year, Semester II	Core Course-IV Practical Physical Chemistry-II Lab

		<p>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 Determination of enthalpy of neutralization of hydrochloric acid with sodium hydroxide.</p>		
FEBRUARY	Theory:	<p>Second Law: Concept of entropy; thermodynamic scale of temperature, statement of the second law of thermodynamics. Calculation of entropy change for reversible and irreversible processes. Third Law: Statement of third law, concept of residual entropy, calculation of absolute entropy of molecules.</p>	B.Sc. (H) Chemistry, I year, Semester II	Core Course-IV Practical Physical Chemistry-II
	Practicals:	<p>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 KNO₃</p>	GE-II	CHEMISTRY LAB: CHEMICAL ENERGETICS, EQUILIBRIA & FUNCTIONAL ORGANIC CHEMISTRY
		<p>Determination of the enthalpy of ionization of ethanoic acid. (d) Determination of integral enthalpy (endothermic and exothermic) solution of salts- KNO₃, NH₄Cl</p>	B.Sc. (H) Chemistry, I year, Semester II	Core Course-IV Practical Physical Chemistry-II Lab
	Tutorials:			

	<u>Assignment :</u>			
MARCH	Theory:	Free Energy Functions: Gibbs and Helmholtz energy; variation of S, G, A with T, V, P; Free energy	B.Sc. (H) Chemistry, I year, Semester II	Core Course-IV Practical Physical Chemistry-II
	Practicals:	9. Determination of integral enthalpy of solution of salts NH ₄ Cl.	GE-II	CHEMISTRY LAB: CHEMICAL ENERGETICS, EQUILIBRIA
		Determination of basicity of a diprotic acid by the thermochemical	B.Sc. (H) Chemistry, I year, Semester II	Core Course-IV Practical Physical Chemistry-II Lab
	<u>Test</u>			
APRIL	Theory:	Colligative properties	B.Sc. (H) Chemistry, I year, Semester II	Core Course-IV Practical Physical Chemistry-II
	Practicals:	11. Study of the solubility of benzoic acid in water and determination of <i>H</i> .	GE-II	CHEMISTRY LAB: CHEMICAL ENERGETICS, EQUILIBRIA &
		(g) Study of the solubility of benzoic acid in water and determination of ΔH .	B.Sc. (H) Chemistry, I year, Semester II	Core Course-IV Practical Physical Chemistry-II Lab



SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Vinita Kapoor

Department: Chemistry

Semester : II/IV/VI

Month		Topics	Course	Paper Code/Name
JAN	Theory	Basic Computer system, Introduction	B.Sc. (Hons.) Chemistry sem VI	CHEMISTRY-DSE: APPLICATIONS OF COMPUTERS IN CHEMISTRY
	Practicals	I. Determination of cell constant II. Determination of conductivity, molar conductivity, degree of dissociation and dissociation constant of a weak acid. III. Perform the following conductometric titrations: i. Strong acid vs. strong base ii. Weak acid vs. strong base iii. Mixture of strong acid and weak acid vs. strong base iv. Strong acid vs. weak base	B.Sc. (Hons.) Chemistry sem IV	C X: PHYSICAL CHEMISTRY IV
	Practicals	Small programs for mathematical 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).	B.Sc. (Hons.) Chemistry sem VI	CHEMISTRY-DSE: APPLICATIONS OF COMPUTERS IN CHEMISTRY

	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	Computer Programming Language- QBASIC, (for solving some of the basic and in turn complicated chemistry problems).	B.Sc. (Hons.) Chemistry sem VI	CHEMISTRY-DSE: APPLICATIONS OF COMPUTERS IN CHEMISTRY
	Practicals	1. Acid hydrolysis of methyl acetate with hydrochloric acid. 2. Comparison of the strengths of HCl and H ₂ SO ₄ by studying kinetics of hydrolysis of methyl acetate.	B.Sc. (Hons.) Chemistry sem IV	C X: PHYSICAL CHEMISTRY IV
	Practicals	Probability distributions (gas kinetic theory) and mean values. Matrix operations.	B.Sc. (Hons.) Chemistry sem VI	CHEMISTRY-DSE: APPLICATIONS OF COMPUTERS IN CHEMISTRY

	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	QBASIC commands, programs for Chemistry problems Numerical methods	B.Sc. (Hons.) Chemistry sem VI	CHEMISTRY-DSE: APPLICATIONS OF COMPUTERS IN CHEMISTRY
	Practicals	Acid hydrolysis of methyl acetate with hydrochloric acid. Saponification of ethyl acetate.	B.Sc. (Hons.) Chemistry sem IV	C X: PHYSICAL CHEMISTRY IV
	Practicals	Numerical differentiation (e.g., change in pressure for small change in volume of a van der Waals gas, potentiometric titrations).	B.Sc. (Hons.) Chemistry sem VI	CHEMISTRY-DSE: APPLICATIONS OF COMPUTERS IN CHEMISTRY

	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 ₃ , NH ₄ 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	Numerical methods	B.Sc. (Hons.) Chemistry sem VI	CHEMISTRY-DSE: APPLICATIONS OF COMPUTERS IN CHEMISTRY
	Practicals	Study the kinetics of the following reactions. 1. Iodide-persulphate reaction (i) Initial rate method; (ii)Integrated rate method	B.Sc. (Hons.) Chemistry sem IV	C X: PHYSICAL CHEMISTRY IV
	Practicals	Graphic programs related to Chemistry problems. e.g. van der Waals isotherm, Compressibility versus pressure curves, Maxwell distribution curves, concentration-time	B.Sc. (Hons.) Chemistry sem VI	CHEMISTRY-DSE: APPLICATIONS OF COMPUTERS IN CHEMISTRY

	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
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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	Theory	Organometallic Compounds 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
	Practicals	Gravimetric Analysis: i. Estimation of nickel (II) using Dimethylglyoxime (DMG). Inorganic Preparations: 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 Co^{2+} and 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
	Tutorials	NA	NA	NA

FEBRUARY	Theory:	<p>Structures of mononuclear and binuclear carbonyls of Cr, Mn, Fe, Co and Ni using VBT. π-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). Structure and aromaticity. Comparison of aromaticity and reactivity with that of benzene.</p> <p>Catalysis by Organometallic Compounds</p> <p>Study of the following industrial processes and their mechanism:</p> <ol style="list-style-type: none"> 1. Alkene hydrogenation (Wilkinson's Catalyst) 2. Synthetic gasoline (Fischer Tropsch reaction) 3. Polymerisation of ethene using Ziegler-Natta catalyst 	B.Sc. (Hons.) Chemistry III Year	C XIII: INORGANIC CHEMISTRY IV
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	Practicals:	ii. Estimation of copper as CuSCN iii. Estimation of iron as Fe ₂ O ₃ by precipitating iron as Fe(OH) ₃ . Inorganic Preparations: 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 ²⁺ & Fe ²⁺ by complexation with DMG and extracting the Ni ²⁺ -DMG complex in chloroform, and determine its concentration by	B.Sc. (Hons.) Chemistry III Year	DSE LAB: ANALYTICAL METHODS IN CHEMISTRY
	Tutorials:	NA	NA	NA
	Assignment :	Organometallics and Bioinorganic Chemistry	B.Sc. (Hons.) Chemistry III Year	C XIII: INORGANIC CHEMISTRY IV

MARCH	Theory:	Bioinorganic Chemistry: 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.	B.Sc. (Hons.) Chemistry III Year	C XIII: INORGANIC CHEMISTRY IV
	Practicals:	Estimation of Al(III) by precipitating with oxine and weighing as Al(oxine) ₃ (aluminium oxinate). Properties of Complexes i. Measurement of 10 Dq by spectrophotometric method	B.Sc. (Hons.) Chemistry II Year	C VIII: INORGANIC CHEMISTRY III
		(iii) Estimation of calcium, magnesium (iv) Qualitative detection of nitrate, phosphate	B.Sc. (Hons.) Chemistry III Year	DSE LAB: ANALYTICAL METHODS IN CHEMISTRY
	Tutorials:	NA	NA	NA

	Test	Organometallics and Bioinorganic Chemistry	B.Sc. (Hons.) Chemistry III Year	C XIII: INORGANIC CHEMISTRY IV
APRIL	Theory:	Catalysis by Organometallic Compounds Study of the following industrial processes and their mechanism: 1. Alkene hydrogenation (Wilkinson's Catalyst) 2. Synthetic gasoline (Fischer Tropsch reaction) 3. Polymerisation of ethene using Ziegler-Natta catalyst	B.Sc. (Hons.) Chemistry III Year	C XIII: INORGANIC CHEMISTRY IV
	Practicals:	ii. Verification of spectrochemical series. iii. Synthesis of ammine complexes of Ni(II) and its ligand exchange reactions (e.g. bidentate ligands like acetylacetonone, DMG, glycine) by substitution method.	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 ₄ , KMnO ₄)	B.Sc. (Hons.) Chemistry III Year	DSE LAB: ANALYTICAL METHODS IN CHEMISTRY
	Tutorials:	NA	NA	NA



**SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE**

Name of the Faculty: Deepti Sharma

Department: Chemistry

Semester : IV/ V

Month		Topics	Course	Paper Code/Name
JANUARY	Theory	Nitrogen Containing Functional Groups	B.Sc.(H) Chemistry Semester IV	Organic Chemistry III
	Practicals	1. Functional group test for nitro, amine and amide groups	B.Sc.(H) Chemistry Second Year Semester IV	Organic Chemistry III
		2. Qualitative analysis of unknown organic compounds containing simple functional groups	B.Sc.(H) Chemistry Third Year Semester VI	Organic Chemistry V
		1. Qualitative analysis of unknown organic compounds containing monofunctional groups	B.Sc.(H) Chemistry Second Year Semester IV	Pesticide Chemistry
		1. To calculate acidity/alkalinity in given sample of pesticide		
FEBRUARY	Theory	Nitrogen Containing Functional Groups cont. Polynuclear Hydrocarbons.	B.Sc.(H) Chemistry Semester IV	Organic Chemistry III

Practicals:	1. Practiced qualitative analysis of unknown organic compounds containing simple functional groups	B.Sc.(H) Chemistry Second Year Semester IV	Organic Chemistry III
		B.Sc.(H) Chemistry Third Year Semester VI	Organic Chemistry V
	1. Practiced qualitative analysis of unknown organic compounds containing monofunctional groups	B.Sc.(H) Chemistry Second Year Semester IV	Pesticide Chemistry
	1. Preparation of simple organophosphates.		

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



SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE-
2017-18

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
		Preparation of talcum powder.	B.Sc. Life Science (prog.) III Year, Semester VI	Cosmetic Chemistry Practicals
		Organic Preparations (i) Bromination of acetanilide use green method (ii) Nitration of nitrobenzene use green method.	B.Sc. CHEMISTRY (Hons.) I Year, Semester II	ORGANIC CHEMISTRY PRACTICALS

FEBRUARY	Theory:	<p>synthesis and technical manufacture and uses of representative pesticides in the following classes: Organochlorines (DDT, Gammexene).</p> <p>Electromagnetic radiations, electronic transitions, Amax & Emax, m chromophore, auxochrome, bathochromic and hypsochromic shifts. Application of electronic spectroscopy and Woodward rules for calculating λ_{max} of conjugated dienes and λ_{max} — 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>
	Practicals:	<p>To calculate alkalinity in given sample of pesticide formulations as per BIS specifications.</p> <p>Preparation of shampoo. Preparation of enamels.</p> <p>Purification of organic compounds by crystallization using the following solvents: (a) Water (b) Alcohol (c) Alcohol-Water Detection of extra elements.</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.) I Year, Semester II</p>	<p>SEC 11: PESTICIDE CHEMISTRY PRACTICALS</p> <p>Cosmetic Chemistry Practicals</p> <p>ORGANIC CHEMISTRY PRACTICALS</p>
MARCH	Theory:	<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>

Practicals:	Preparation of phenylethylamine thiocarbamate as organic pesticide.	B.Sc. CHEMISTRY (Hons.) II Year, Semester IV	SEC 11: PESTICIDE CHEMISTRY PRACTICALS
	Preparation of hair remover. Preparation of face cream, Preparation of nail polish and nail polish remover.	B.Sc. Life Science (prog.) III Year, Semester VI	Cosmetic Chemistry Practicals
	Determination of the melting points of unknown organic compounds (Kjeldahl method and BODMel method) Effect of impurities on the melting point-mixed melting point of two unknown organic compounds Determination of boiling point of liquid compounds. (boiling point lower than and more than 100 °C by distillation and capillary method) Chromatographic Separation of a mixture of two amino acids by ascending and horizontal paper chromatography	B.Sc. CHEMISTRY (Hons.) I Year, Semester II	ORGANIC CHEMISTRY PRACTICALS
<u>Assignment :</u>	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	Theory:	Synthesis and technical manufacture and uses of representative pesticides in the following classes: Quinones (Chloranil), Anilides (Alachlor and Butachlor). 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. CHEMISTRY (Hons.) II Year, Semester IV B.Sc. Life Sciences (prog.) III Year, Semester VI	SEC 11: PESTICIDE CHEMISTRY ORGANOMETALLICS, BIOINORGANIC CHEMISTRY, POLYNUCLEAR HYDROCARBONS AND UV, IR SPECTROSCOPY
	Practicals:	Practice exercise. Practice exercise. Practice exercise.	B.Sc. CHEMISTRY (Hons.) II Year, Semester IV B.Sc. Life Science (prog.) III Year, Semester VI B.Sc. CHEMISTRY (Hons.) I Year, Semester II	SEC 11: PESTICIDE CHEMISTRY PRACTICALS Cosmetic Chemistry Practicals ORGANIC CHEMISTRY PRACTICALS
	Test	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



SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE

Academic Year 2017-2018 (Even)

Name of the Faculty: Dr. Rekha Yadav

Department: Chemistry

Semester: II/IV/VI

Month		Topics	Course	Paper Code/Name
JAN	Theory	Ionic Equilibria: Strong, moderate and weak electrolytes, degree of ionization, factors affecting degree of ionization, ionization constant and ionic product of water. Ionization of weak acids and bases, pH scale, common ion effect. Salt hydrolysis-calculation of hydrolysis constant, degree of hydrolysis and pH for different salts. Buffer solutions.	GE-II	GE-II- CHEMICAL ENERGETICS, EQUILIBRIA & FUNCTIONAL ORGANIC CHEMISTRY I
		Introduction: Introduction to Analytical Chemistry and its interdisciplinary nature. Concept of sampling.	B.Sc. (P) Life Sciences, II year, Semester IV	SEC- Basic Analytical Chemistry
	Practicals	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 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.	B.Sc. (Hons.) Chemistry Semester II	Core Course-IV Practical Physical Chemistry-II Lab

	Practicals	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
	Practicals	1. Semi-micro qualitative analysis of mixtures 2. Determination of the surface tension of a liquid or a dilute solution using a stalagmometer.	B.Sc. (P) Life Sci. Semester IV	CHEMISTRY OF S- AND P-BLOCK ELEMENTS, STATES OF MATTER & CHEMICAL KINETICS
	Practicals	a. Determination of pH of soil samples. b. Estimation of Calcium and Magnesium ions as Calcium carbonate by complexometric titration.	B.Sc. (P) Life Sci. Semester IV	SEC-Basic Analytical Chemistry
FEB	Theory	Solubility and solubility product of sparingly soluble salts – applications of solubility product principle. Chemical Equilibrium: Free energy change in a chemical reaction. Thermodynamic derivation of the law of chemical equilibrium. Distinction between G and G_0 , Le Chatelier's principle. Relationships between K_p , K_c and K_x for reactions involving ideal gases	GE-II	GE-II- CHEMICAL ENERGETICS, EQUILIBRIA & FUNCTIONAL ORGANIC CHEMISTRY I
		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. (P) Life Sciences, II year, Semester IV	SEC- Basic Analytical Chemistry

	Practicals	(c) Determination of the enthalpy of ionization of ethanoic acid. (d) Determination of integral enthalpy (endothermic and exothermic) solution of salts KNO_3 . (e) Determination of integral enthalpy (endothermic and exothermic) solution of salts NH_4Cl .	B.Sc. (Hons.) Chemistry Semester II	Core Course-IV Practical Physical Chemistry-II Lab
	Practicals	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_3	GE-II	CHEMISTRY LAB: CHEMICAL ENERGETICS, EQUILIBRIA & FUNCTIONAL ORGANIC CHEMISTRY
	Practicals	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
	Practicals	a. Determination of pH, acidity and alkalinity of a water sample. b. Determination of dissolved oxygen (DO) of a water sample. c. Paper chromatographic separation of mixture of metal ion (Ni^{2+} and Co^{2+}).	B.Sc. (P) Life Sci. Semester IV	SEC-Basic Analytical Chemistry

MARCH	Theory	Review of thermodynamics and the Laws of Thermodynamics. 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.	GE-II	GE-II- CHEMICAL ENERGETICS, EQUILIBRIA & FUNCTIONAL ORGANIC CHEMISTRY I
		Ion-exchange: Column, ion-exchange chromatography etc. Determination of ion exchange capacity of anion / cation exchange resin (using batch procedure if use of column is not feasible).	B.Sc. (P) Life Sciences, II year, Semester IV	SEC- Basic Analytical Chemistry
	Practicals	(f) 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. (g) Determination of enthalpy of hydration of salt.	B.Sc. (Hons.) Chemistry Semester II	Core Course-IV Practical Physical Chemistry-II Lab
	Practicals	9. Determination of integral enthalpy of solution of salts NH ₄ Cl. 10. Determination of enthalpy of hydration of copper sulphate.	GE-II	CHEMISTRY LAB: CHEMICAL ENERGETICS, EQUILIBRIA & FUNCTIONAL ORGANIC CHEMISTRY
	Practicals	6. Semi-micro qualitative analysis of mixtures 7. 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	a. Determination of ion exchange capacity of anion / cation exchange resin (using batch procedure if use of column is not feasible). b. To study the use of phenolphthalein in trap cases.	B.Sc. (P) Life Sci. Semester IV	SEC-Basic Analytical Chemistry
APRIL	Theory	Variation of enthalpy of a reaction with temperature – Kirchoff's equation. Statement of Third Law of thermodynamics and calculation of absolute entropies of substances.	GE-II	GE-II- CHEMICAL ENERGETICS, EQUILIBRIA & FUNCTIONAL ORGANIC CHEMISTRY I
		Applications To study the use of phenolphthalein in trap cases	B.Sc. (P) Life Sciences, II year, Semester IV	SEC- Basic Analytical Chemistry
	Practicals	(h) Study of the solubility of benzoic acid in water and determination of ΔH . Revision	B.Sc. (Hons.) Chemistry Semester II	Core Course-IV Practical Physical Chemistry-II Lab
	Practicals	11. Study of the solubility of benzoic acid in water and determination of H . 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 and preparation of one suitable derivative.	GE-II	CHEMISTRY LAB: CHEMICAL ENERGETICS, EQUILIBRIA & FUNCTIONAL ORGANIC CHEMISTRY
	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 ₂ SO ₄ 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	a. Spectrophotometric determination of Iron in Vitamin / Dietary Tablets.	B.Sc. (P) Life Sci. Semester IV	SEC-Basic Analytical Chemistry



SEMESTER WISE TEACHING PLAN

Academic year 2017-2018 (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	Theory	<p>CONDUCTANCE: 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 29 infinite dilution. Kohlrausch law of independent migration of ions. Debye-Hückel-Onsager equation, Wien effect, Debye-Falkenhagen effect.</p> <p>IONIC EQUILIBRIA Strong, moderate and weak electrolytes, degree of ionization, factors affecting degree of ionization, ionization constant and ionic product of water. Ionization of weak acids and bases, pH scale, common ion effect. Salt hydrolysis-calculation of hydrolysis constant, degree of hydrolysis and for different salts. Buffer solutions. Solubility and solubility product of sparingly soluble salts, Applications of solubility product principle.</p>	<p>B.Sc.(H) CHEMISTRY Semester IV</p> <p>GE II</p>	<p>C X: PHYSICAL CHEMISTRY IV</p> <p>CHEMICAL ENERGETICS, EQUILIBRIA, FUNCTIONAL ORGANIC CHEMISTRY-I</p>
	Practical	<p>Introductory class</p> <p>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>Verification of Lambert-Beer's Law for various solutions and determination of concentration of an unknown sample calorimetrically. Determination of concentration of an unknown calorimetrically from a mixture.</p>	<p>B.Sc (P) Life Sciences Semester IV</p> <p>B.Sc.(H) CHEMISTRY Semester VI</p>	<p>CHEMISTRY OF s- AND p-BLOCK ELEMENTS, STATES OF MATTER & CHEMICAL KINETICS</p> <p>Paper 23-CHHP 617: Physical Chemistry -V</p>
		<p>Introductory class Preparations: (i) Recrystallisation and determination of melting point and calculation of quantitative yields (ii) Benzoylation of amines and phenols (iii) Oxime and 2,4 dinitrophenylhydrazone of aldehyde/ketone</p>	<p>B.Sc. (P) Life Sciences Semester II</p>	<p>C II: CHEMICAL ENERGETICS, CHEMICAL EQUILIBRIUM, IONIC EQUILIBRIUM, FUNCTIONAL GROUPS-I</p>

FEBRUARY	Theory:	<p>CONDUCTANCE: Walden's rules. Ionic velocities, mobilities and their determinations, transference numbers and their relation to ionic mobilities, determination 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>CHEMICAL EQUILIBRIUM: Free energy change in a chemical reaction. Thermodynamic derivation of the law of chemical equilibrium. Distinction between G and G_0, Le Chatelier's principle. Relationships between K_p, K_c and K_x for reactions involving ideal gases.</p> <p>CHEMICAL ENERGETICS: Review of thermodynamics and the Laws of Thermodynamics. Important principles and definitions of thermochemistry. Concept of standard state and standard enthalpies of formations, integral and differential enthalpies</p>	<p>B.Sc.(H) CHEMISTRY Semester IV</p> <p>GE II</p>	<p>C X: PHYSICAL CHEMISTRY IV</p> <p>CHEMICAL ENERGETICS, EQUILIBRIA, FUNCTIONAL ORGANIC CHEMISTRY-I</p>
	Practical:	<p>Semi-micro qualitative analysis of mixtures (two anions and two cations and excluding insoluble salts)</p> <p>Determination of pK (indicator) for phenolphthalein or methyl red Study the formation of a complex between ferric and thiocyanate (or salicylate) ions. Study the kinetics of interaction of crystal violet with sodium hydroxide colorimetrically.</p> <p>Thermochemistry: (1). Determination of heat capacity of calorimeter using different volumes. (2). Determination of enthalpy of neutralization of hydrochloric acid with sodium hydroxide.</p>	<p>B.Sc (P) Life Sciences Semester IV</p> <p>B.Sc.(H) CHEMISTRY Semester VI</p> <p>B.Sc (P) Life Sciences Semester II</p>	<p>CHEMISTRY OF s- AND p-BLOCK ELEMENTS, STATES OF MATTER & CHEMICAL KINETICS</p> <p>Paper 23-CHHP 617: Physical Chemistry -V</p> <p>C II: CHEMICAL ENERGETICS, CHEMICAL EQUILIBRIUM, IONIC EQUILIBRIUM, FUNCTIONAL GROUPS-I</p>

MARCH	Theory:	<p>PHOTOCHEMISTRY: Characteristics of electromagnetic radiation, Lambert-Beer's law and its limitations, physical significance of absorption coefficients. Laws, of photochemistry, quantum yield, actinometry.</p> <p>CHEMICAL ENERGETICS: Calculation of bond energy, bond dissociation energy and resonance energy from thermochemical data. Variation of enthalpy of a reaction with temperature — Kirchoff's equation.</p>	<p>B.Sc.(H) CHEMISTRY Semester IV</p> <p>GE-II</p>	<p>C X: PHYSICAL CHEMISTRY IV</p> <p>CHEMICAL ENERGETICS, EQUILIBRIA, FUNCTIONAL ORGANIC CHEMISTRY-I</p>
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	Practical	<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>Record the UV spectrum of p-nitrophenol (in 1:4 ethanol:water mixture). Repeat after adding a small crystal of NaOH. Comment on the difference, if any.</p> <p>Purification of organic compound by crystallisation (from water and alcohol) and distillation. 2. Criteria of purity: Determination of M.P./B.P.</p> <p>Determination of integral enthalpy of solution of salts (KNO₃, NH₄ Cl). Determination of enthalpy of hydration of salts (CuSO₄)</p>	<p>B.Sc.(P) Life Science Semester IV</p> <p>B.Sc.(H) CHEMISTRY Semester VI</p> <p>B.Sc (P) Life Sciences Semester II</p>	<p>CHEMISTRY OF s- AND p-BLOCK ELEMENTS, STATES OF MATTER & CHEMICAL KINETICS</p> <p>Paper 23-CHHP 617: Physical Chemistry -V</p> <p>C II: CHEMICAL ENERGETICS, CHEMICAL EQUILIBRIUM, IONIC EQUILIBRIUM, FUNCTIONAL GROUPS-I</p>
	Assignment and test			
APRIL	Theory:	<p>PHOTOCHEMISTRY: 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>CHEMICAL ENERGETICS: Statement of Third Law of thermodynamics and calculation of absolute entropies of substances.</p>	<p>B.Sc.(H) CHEMISTRY Semester IV</p> <p>GE II</p>	<p>C X: PHYSICAL CHEMISTRY IV</p> <p>CHEMICAL ENERGETICS, EQUILIBRIA, FUNCTIONAL ORGANIC CHEMISTRY-I -I</p>

	Practicals:	<p>Mixture analysis exercises</p> <p>Record the U.V. spectrum of a given compound (acetone) in cyclohexane (a) Plot transmittance versus wavelength. (b) Plot absorbance versus wavelength. (c) Calculate the energy involved in the electronic transition in different units, i.e. cm^{-1}, kJ/mol, kcal/mol & eV.</p> <p>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.</p>	<p>B.Sc (P) Life Sciences Semester IV</p> <p>B.Sc.(H) CHEMISTRY Semester V</p> <p>B.Sc (P) Life Sciences Semester II</p>	<p>CHEMISTRY OF s- AND p-BLOCK ELEMENTS, STATES OF MATTER & CHEMICAL KINETICS</p> <p>Paper 23-CHHP 617: Physical Chemistry -V</p> <p>C II: CHEMICAL ENERGETICS, CHEMICAL EQUILIBRIUM, IONIC EQUILIBRIUM, FUNCTIONAL GROUPS-I</p>
MAY	Theory:	<p>REVISION AND PREVIOUS YEARS QUESTION PAPERS DISCUSSION</p> <p>REVISION AND PREVIOUS YEARS QUESTION PAPERS DISCUSSION</p>	<p>B.Sc.(H) CHEMISTRY Semester IV</p> <p>GE II</p>	<p>C X: PHYSICAL CHEMISTRY IV</p> <p>CHEMICAL ENERGETICS, EQUILIBRIA, FUNCTIONAL ORGANIC CHEMISTRY-I -I</p>



**SEMESTER WISE
TEACHING PLAN-2017-2018
EVEN SEMESTER
SRI VENKATESWARA COLLEGE**

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

Department: Chemistry

Semester: II/IV/VI

Month		Topic	Course	Paper
January	Theory:	Structure and aromatic character of benzene. Preparation of benzene from phenol, benzoic acid, acetylene and benzene sulphonic acid. Reactions: electrophilic substitution reactions in benzene citing examples of nitration, halogenation, sulphonation and Friedel-Craft's alkylation and acylation with emphasis on carbocationic rearrangement, side chain oxidation of alkyl benzenes. Williamson's ether synthesis, Cleavage of ethers with HI, Aldehydes and ketones (Aliphatic and Aromatic): Preparation: from acid chlorides and from nitriles.	B. Sc. (P) Life Science-I year And B.Sc (H) Generic Elective Semester-II	Chemical energetics, Equilibria and Functional Group Organic Chemistry-I
	Practicals:	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
	Practicals:	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)
	Practicals:			
	Tutorials:	NA	NA	NA
February	Theory:	Reactions: Nucleophilic addition, nucleophilic addition – elimination reaction including reaction with HCN, ROH, NaHSO ₃ , NH ₂ -G derivatives. Iodoform test, Aldol Condensation, Cannizzaro's reaction, Wittig Reaction. Benzoin condensation. Clemmensen reduction, Wolff Kishner reduction, Meerwein-Ponndorf Verley reduction. Structure and classification of alcohols as 1 ^o , 2 ^o & 3 ^o .	B. Sc. (P) Life Science-I year And B.Sc (H) Generic Elective Semester-II	Chemical energetics, Equilibria and Functional Group Organic Chemistry-I

		Preparation: Methods of preparation of 1 ^o , 2 ^o & 3 ^o by using Grignard reagent, ester hydrolysis and reduction of aldehydes, ketones, carboxylic acids and esters. Reactions: Acidic character of alcohols and reaction with sodium, with HX (Lucas Test), esterification,		
	Practicals:	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
		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)
	Tutorials:	NA	NA	NA
March	Theory:	Oxidation (with PCC, alkaline KMnO ₄ , acidic K ₂ Cr ₂ O ₇ and conc. HNO ₃), Oppeneauer Oxidation. B) Diols (upto 6 Carbons): Oxidation and Pinacol-Pinacolone rearrangement. Phenols: acidity of phenols and factors affecting their acidity. Preparation: Methods of preparation from cumene, diazonium salts and benzene sulphonic acid. Reactions: Directive influence of OH group and Electrophilic substitution reactions, viz. nitration, halogenation, sulphonation, Reimer-Tiemann reaction, Gattermann–Koch reaction, Houben-Hoesch condensation, reaction due to OH group: Schotten-Baumann reaction	B. Sc. (P) Life Science-I year And B.Sc (H) Generic Elective Semester-II	Chemical energetics, Equilibria and Functional Group Organic Chemistry-I
	Practicals:	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
		Determination of integral enthalpy of salts (KNO ₃ , NH ₄ 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)
	Tutorials:	NA	NA	NA
	Assignment	Assignment-I	B. Sc. Life Science- I year and	Chemical energetics, Equilibria and Functional Group Organic Chemistry-I

			B.Sc (H) Generic Elective Semester-I	
April	Theory:	Structure of haloalkanes Preparation and alkenes with mechanisms. Reactions: Nucleophilic substitution reactions with mechanism and their types (SN1, SN2 and SNi), competition with elimination reactions (elimination vs substitution), nucleophilic substitution reactions with specific examples from: hydrolysis, nitrite & nitro formation, nitrile & isonitrile formation. Haloarenes: Structure and resonance Preparation: Reaction: Nucleophilic aromatic substitution by OH group (Bimolecular Displacement Mechanism), Effect of nitro substituent on reactivity of haloarenes, Reaction with strong bases NaNH2/NH3 (elimination addition mechanism involving benzyne intermediate), relative reactivity and strength of C-X bond in alkyl, allyl, benzyl, vinyl and aryl halides.	B. Sc. (P) Life Science-I year And B.Sc (H) Generic Elective Semester-II	Chemical energetics, Equilibria and Functional Group Organic Chemistry-I
	Practicals:	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
		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)
	Tutorials:	NA	NA	NA
	Test	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

**SEMESTER WISE
TEACHING PLAN (2017-2018) 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	Theory	Kinetic theory of the gas :- postulates of kinetic theory of gases and derivation of real gases, from ideal behavior,	GE 4 Chemistry	Matter, kinetics theory of gas, chemical kinetics.
		Systems of Variable Composition: Partial molar quantities, dependence of thermodynamic, parameters on composition.	B.Sc (H) Chemistry II Semester	CHEMISTRY - C IV: PHYSICAL CHEMISTRY II
	Practicals	Perform the following conductometric titrations: i. Strong acid vs. strong base ii. Weak acid vs. strong base iii. Mixture of strong acid and weak acid vs. strong base iv.	B.Sc (H) Chemistry IV Semester	CHEMISTRY - C X: PHYSICAL CHEMISTRY IV
	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 staleometer	GE 4 Chemistry	Matter, kinetics theory of gas, chemical kinetics.	
	Thermochemistry 1. Determination of heat capacity of calorimeter for different volumes. 2. Determination of enthalpy of neutralization of hydrochloric acid with sodium hydroxide.	B.Sc Life Science II Semester	CHPP 202- Chemistry-2 (Thermodynamics, Equilibria & Functional Group Organic Chemistry-1)	
Section A: Physical Chemistry Thermochemistry 1. Determination of heat capacity of calorimeter for different volumes. 2. Determination of enthalpy of neutralization of	GE II	CHEMISTRY LAB: CHEMICAL ENERGETICS, EQUILIBRIA & FUNCTIONAL ORGANIC CHEMISTRY		

	Tutorials			
FEBRUARY	Theory:	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.
		Gibbs Duhem equation, chemical potential of ideal	B.Sc (H) Chemistry II Semester	CHEMISTRY - C IV: PHYSICAL
	Practicals :	Study the kinetics of the following reactions. 1. Iodide-persulphate reaction (i) Initial rate method; (ii) Integrated rate method	B.Sc (H) Chemistry IV Semester	Practical C – X Lab:
		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) Study of the variation of viscosity of an	GE 4 Chemistry	Matter, kinetics theory of gas, chemical kinetics.
		Determination of enthalpy of ionization of acetic acid.	B.Sc Life Science II Semester	CHPP 202- Chemistry-2 (Thermodynamics, Equilibria & Functional Group Organic Chemistry-1)
		3. Determination of enthalpy of ionization of acetic acid.	GE II	CHEMISTRY LAB: CHEMICAL ENERGETICS, EQUILIBRIA & FUNCTIONAL ORGANIC CHEMISTRY
Tutorials:				

	<u>Assignment :</u>			
MARCH	Theory:	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.
		Chemical Equilibrium: 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)). Free energy of mixing and spontaneity. equilibrium between ideal gases and a pure condensed phase.	B.Sc (H) Chemistry II Semester	CHEMISTRY - C IV: PHYSICAL CHEMISTRY II
	Practicals :	2. Acid hydrolysis of methyl acetate with hydrochloric acid. 3. Saponification of ethyl acetate	B.Sc (H) Chemistry IV Semester	Practical C – X Lab:
		Study the kinetics of the following reactions. 1.Initial rate method: Iodide-persulphate reaction 2.Integrated rate method: a.Acid hydrolysis of methyl acetate with hydrochloric	GE 4 Chemistry	Matter, kinetics theory of gas, chemical kinetics.
		Determination of integral enthalpy of solution of salts (KNO ₃ , NH ₄ Cl). 5. Determination of enthalpy of hydration of copper sulphate	B.Sc Life Science II Semester	CHPP 202- Chemistry-2 (Thermodynamics, Equilibria & Functional Group Organic Chemistry-1)
		3.Determination of enthalpy of ionization of acetic acid.	GE II	CHEMISTRY LAB: CHEMICAL ENERGETICS, EQUILIBRIA & FUNCTIONAL ORGANIC
Tutorials:				

	Test			
APRIL (27/4/2018)	Theory:	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.
		Solutions and Colligative Properties: 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	B.Sc (H) Chemistry II Semester	CHEMISTRY - C IV: PHYSICAL CHEMISTRY II
	Practicals :	4. Comparison of the strengths of HCl and H ₂ SO ₄ by studying kinetics of hydrolysis of methyl acetate	B.Sc (H) Chemistry IV Semester	Practical C – X Lab:
		b.Saponification of ethyl acetate. c.Compare the strengths of HCl and H ₂ SO ₄ by studying kinetics of hydrolysis of methyl acetate	GE 4 Chemistry	Matter, kinetics theory of gas, chemical kinetics.
		6. Study of the solubility of benzoic acid in water and determination of ΔH .	B.Sc (H) Chemistry IV Semester	CHPP 202- Chemistry-2 (Thermodynamics, Equilibria & Functional Group Organic Chemistry-1)
4.Determination of integral enthalpy of solution of salts (KNO ₃ , NH ₄ Cl). Ionic equilibria pH measurements 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. b)Preparation of buffer solutions: (i)Sodium acetate-acetic acid (ii)Ammonium chloride-	GE II	CHEMISTRY LAB: CHEMICAL ENERGETICS, EQUILIBRIA & FUNCTIONAL ORGANIC CHEMISTRY		



**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	Theory	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 third transition series.	B.Sc. (H) Chemistry II nd 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 rd Year, Semester - VI	DSE: Analytical Methods in Chemistry
	Practicals	Inorganic Preparations: i. Tetraamminecopper (II) sulphate, ii. Acetylacetonate complexes of Cu ²⁺	B.Sc. (H) Chemistry II nd Year, Semester - IV	CHEMISTRY – C VIII: INORGANIC CHEMISTRY – III Coordination Chemistry
		Paper chromatographic separation of Co ²⁺ and Ni ²⁺ . Separation and identification of the amino acids present in the given mixture by	B.Sc. (H) Chemistry III rd Year, Semester - VI	DSE- Analytical Methods in Chemistry
		Preparation (i) tetraamminecopper (II) sulphate (ii) potassium trioxalatoferrate trihydrate	B.Sc. Life Sciences III rd Year, Semester - VI	Organometallics, bioinorganic chemistry, polynuclear hydrocarbons and uv, ir spectroscopy
	Tutorials			
FEBRUARY	Theory:	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 nd 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 rd Year, Semester - VI	DSE: Analytical Methods in Chemistry
Practicals:	(iv) Potassium tri(oxalato)ferrate(III) Estimation of nickel (II) using Dimethylglyoxime (DMG).	B.Sc. (H) Chemistry II nd Year, Semester - IV	CHEMISTRY – C VIII: INORGANIC CHEMISTRY – III Coordination Chemistry
	Analysis of soil: (i) Determination of pH of soil. (ii) Total soluble salt	B.Sc. (H) Chemistry III rd Year, Semester - VI	DSE- Analytical Methods in Chemistry
	Qualitative Organic Analysis of Organic Compounds possessing monofunctional groups (-COOH, alcoholic, ketonic, amides)	B.Sc. Life Sciences III rd Year, Semester - VI	Organometallics, bioinorganic chemistry, polynuclear hydrocarbons and uv, ir spectroscopy
Tutorials:			
Assignment :	Coordination Chemistry and transition elements	B.Sc. (H) Chemistry II nd Year, Semester - IV	CHEMISTRY – C VIII: INORGANIC CHEMISTRY – III Coordination Chemistry
	UV visible, Electroanalytical techniques	B.Sc. (H) Chemistry III rd Year, Semester - VI	DSE: Analytical Methods in Chemistry
MARCH	Theory: 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 nd 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 rd Year, Semester - VI	DSE: Analytical Methods in Chemistry
	Practicals:	Estimation of copper as CuSCN Preparation of Tetraamminecarbonatocobalt (III) nitrate	B.Sc. (H) Chemistry II nd Year, Semester - IV	CHEMISTRY – C VIII: INORGANIC CHEMISTRY – III Coordination Chemistry
		Estimation of calcium, magnesium Qualitative detection of nitrate, phosphate	B.Sc. (H) Chemistry III rd Year, Semester - VI	DSE- Analytical Methods in Chemistry
		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 rd Year, Semester - VI	Organometallics, bioinorganic chemistry, polynuclear hydrocarbons and uv, ir spectroscopy
	Tutorials:			
	Test	Coordination Chemistry and transition elements	B.Sc. (H) Chemistry II nd Year, Semester - IV	CHEMISTRY – C VIII: INORGANIC CHEMISTRY – III Coordination Chemistry
	Test	UV visible, thermal method of analysis and Qualitative and quantitative aspects of analysis	B.Sc. (H) Chemistry III rd Year, Semester - VI	DSE: Analytical Methods in Chemistry
APRIL	Theory:	Substitution reactions in square planar complexes, Trans- effect, theories of trans-effect. Thermodynamic and Kinetic stability	B.Sc. (H) Chemistry II nd 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 rd Year, Semester - VI	DSE: Analytical Methods in Chemistry
	Practicals:	Estimation of iron as Fe ₂ O ₃ by precipitating iron as Fe(OH) ₃ .	B.Sc. (H) Chemistry II nd Year, Semester - IV	CHEMISTRY – C VIII: INORGANIC CHEMISTRY – III Coordination Chemistry
		Verification of Lambert-Beer's law and determination of concentration of a coloured species (CuSO ₄ , KMnO ₄)	B.Sc. (H) Chemistry III rd Year, Semester - VI	DSE- Analytical Methods in Chemistry
		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 _f value in each case. Paper chromatographic separation of Ni ²⁺ or Co ²⁺	B.Sc. Life Sciences III rd Year, Semester - VI	Organometallics, bioinorganic chemistry, polynuclear hydrocarbons and uv, ir spectroscopy
	Tutorials:			
MAY	Theory:			
	Practicals:			
	Tutorials:			



SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
(2017-18)

Name of the Faculty: Dr. S. Venkata Kumar

Department: Commerce

Semester: VI

Month	Type of Class	Topics	Course	Paper Code/Name
JANUARY 2018	Theory	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; 2. Thinking conceptually about politics: liberty, equality, justice, rights and recognition, the idea of a good society, domain of politics and ethics, democracy and welfare state, market and globalisation; consequentialism, deontologism, teleological reasoning, concept of business, ethics, corporate code of ethics, environment, accountability, responsibility, leadership, diversity, discrimination	1. B.Com. (Hons) - VI 2. B.Com. (Hons) - VI	1. CH 6.1: International Business 2. CH 6.2: Governance, Ethics and Social Responsibility of Business
	Tutorials	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; 2. Thinking conceptually about politics: liberty, equality, justice, rights and recognition, the idea of a good society, domain of politics and ethics, democracy and welfare state, market and globalisation	1. B.Com. (Hons) - VI 2. B.Com. (Hons) - VI	1. CH 6.1: International Business 2. CH 6.2: Governance, Ethics, and Social Responsibility of Business
Month	Type of Class	Topics	Course	Paper Code/Name
FEBURARY 2018	Theory	1. International business environment: National and foreign environments and their components –	1. B.Com. (Hons) - VI 2. B.Com. (Hons)- VI	1. CH 6.1: International Business

		<p>economic, cultural, and political-legal environments; Theories of international trade – an overview; Global trading environment – recent trends in world trade in goods and services; trends in India’s foreign trade</p> <p>2. Principles of business ethics, characteristics of ethical organisation, theories of business ethics, globalization and business ethics, stakeholder’s protection, corporate governance and business ethics; conceptual framework of corporate governance, insider trading, rating agencies, whistle blowing, corporate governance reforms, initiatives in India including clause 49.</p>		<p>2. CH 6.2: Governance, Ethics, and Social Responsibility of Business</p>
	Tutorials	<p>1. International business environment: National and foreign environments and their components – economic, cultural, and political-legal environments; Theories of international trade – an overview; Global trading environment – recent trends in world trade in goods and services; trends in India’s foreign trade</p> <p>2. Principles of business ethics, characteristics of ethical organisation, theories of business ethics, globalization and business ethics, stakeholder’s protection, corporate governance and business ethics; conceptual framework of corporate governance, insider trading, rating agencies, whistle blowing, corporate governance reforms, initiatives in India including clause 49.</p>	<p>1. B.Com. (Hons) - VI 2. B.Com. (Hons)- VI</p>	<p>1. CH 6.1: International Business 2. CH 6.2: Governance, Ethics and Social Responsibility of Business</p>
Month	Type of Class	Topics	Course	Paper Code/Name
MARCH 2018	Theory	<p>1. Commercial policy instruments – tariff and non-tariff measures, balance of payment account and its components; An overview of other organizations – UNCTAD, World Bank and IMF, Commodity and other trading agreements; regional economic co-operation, forms of regional groupings; integration efforts among countries in Europe, North America and Asia</p> <p>2. Junk Bond scam (USA), Bank of credit and commerce international (UK), Maxwell</p>	<p>1. B.Com. (Hons) - VI 2. B.Com. (Hons)- VI</p>	<p>1. CH 6.1: International Business 2. CH 6.2: Governance, Ethics and Social Responsibility of Business</p>

		communication corporation and Mirror Group Newspapers (UK), Enron (USA), WorldCom (USA), Tyco (USA), Anderson Worldwide (USA), Kirch Media (Germany), Vivendi (France), Paramalat (Italy) and Satyam Computer Services Ltd. (India), Common Governance Problems noticed in various corporate failures, is corporate governance always the cause for corporate failures?; Codes and standards on corporate governance (Unit VII)		
	Tutorials	1. Topics on unit- II 2. Topics on unit – VI & VII	1. B.Com. (Hons) - VI 2. B.Com. (Hons)- VI	1. CH 6.1: International Business 2. CH 6.2: Governance, Ethics and Social Responsibility of Business
	Assignment	1. Topics allotment for making the assignments. 2. Topics allotment for making the assignments.	1. B.Com. (Hons) - VI 2. B.Com. (Hons)- VI	1. CH 6.1: International Business 2. CH 6.2: Governance, Ethics and Social Responsibility of Business
	Test	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. (Hons) - VI 2. B.Com. (Hons)- VI	1. CH 6.1: International Business 2. CH 6.2: Governance, Ethics and Social Responsibility of Business
Month	Type of Class	Topics	Course	Paper Code/Name
APRIL 2018	Theory	1. International Financial environment: International financial system and institutions; foreign investment in Indian perspective. 2. Corporate social responsibility (CSR) – Unit-VIII	1. B.Com. (Hons) - VI 2. B.Com. (Hons)- VI	1. CH 6.1: International Business 2. CH 6.2: Governance, Ethics and Social Responsibility of Business

	Tutorials	<ol style="list-style-type: none"> 1. International Financial environment: International financial system and institutions; foreign investment in Indian perspective. 2. Corporate social responsibility (CSR) – Unit-VIII 	<ol style="list-style-type: none"> 1. B.Com. (Hons) - VI 2. B.Com. (Hons)- VI 	<ol style="list-style-type: none"> 1. CH 6.1: International Business 2. CH 6.2: Governance, Ethics and Social Responsibility of Business



SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
(2017-18) (Even Semester)

Name of the Faculty: Ms. Sunita Chhabra

Department: Commerce

Semester: VI

Month	Type of Class	Topics	Course	Paper Code/Name
JANUARY 2018	Theory	1. Conceptual framework: Concept of consumers, Nature of markets, concept of price in retail and wholesale, MRP and local taxes, fair price, misleading advertisements and deceptive packaging. Experiencing dissatisfaction, form of complaint to a business, making a complaint heard by the business, corporate redress system, conciliation and intermediation for out of court redressal. National standards, BIS Act, 1986, ISO 10000. 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)- III 2. B.Com (P)- III	1. BCH 6.4 DSE: Consumer Affairs and Customer Care 2. BC 6.3: Personal Selling and Salesmanship
	Tutorials	1. Unit-1 2. Unit-1	1. B.Com (H)- III 2. B.Com (P)- III	1. BCH 6.4 DSE: Consumer Affairs and Customer Care 2. BC 6.3: Personal Selling and Salesmanship
Month	Type of Class	Topics	Course	Paper Code/Name
FEBURARY 2018	Theory	1. The Consumer Protection Act, 1986: objectives and basic concepts, consumer rights, adjudicatory bodies, role of Supreme Court under the CPA. 2. Theories of selling: traditional and modern, AIDAS Model of selling, problem solving approach, right	1. B.Com (H)- III 2. B.Com (P)- III	1. BCH 6.4 DSE: Consumer Affairs and Customer Care 2. BC 6.3: Personal Selling and

		set of circumstances theory and modern sales approaches.		Salesmanship
	Tutorials	1. Unit-II 2. Unit-II	1. B.Com (H)- III 2. B.Com (P)- III	1. BCH 6.4 DSE: Consumer Affairs and Customer Care 2. BC 6.3: Personal Selling and Salesmanship
Month	Type of Class	Topics	Course	Paper Code/Name
MARCH 2018	Theory	1. Grievance redress mechanism under the CPA 1986 and leading cases decided under the CPA related to medical negligence, banking and financial service, housing and real estate, electricity, water and telecom service, education, defective product and unfair trade practice. 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)- III 2. B.Com (P)- III	1. BCH 6.4 DSE: Consumer Affairs and Customer Care 2. BC 6.3: Personal Selling and Salesmanship
	Tutorials	1. Unit-III&IV 2. Unit-III&IV	1. B.Com (H)- III 2. B.Com (P)- III	1. BCH 6.4 DSE: Consumer Affairs and Customer Care 2. BC 6.3: Personal Selling and Salesmanship
	Assignment	1. Topics allotment for making the assignments. 2. Topics allotment for making the assignments.	1. B.Com (H)- III 2. B.Com (P)- III	1. BCH 6.4 DSE: Consumer Affairs and Customer Care 2. BC 6.3: Personal Selling and Salesmanship
	Test	1. Test would be conducted on the concerned subject after mid-semester break. 2. Test would be conducted on the concerned subject	1. B.Com (H)- III 2. B.Com (P)- III	1. BCH 6.4 DSE: Consumer Affairs and Customer Care

		after mid-semester break.		2. BC 6.3: Personal Selling and Salesmanship
Month	Type of Class	Topics	Course	Paper Code/Name
APRIL 2018	Theory	<ol style="list-style-type: none"> 1. Consumer protection in India and industry regulators and consumer complaint redressal mechanism. Competition Law 2002: objective, purpose and salient features, concept of agreements having adverse impact on competition, abuse of dominant position, regulation of combination, criteria for determining appreciable adverse effect on competition and dominant position, relevant geographic market forces and complaints and procedures. 2. Sales reports and documents, sales manual, order book, cash memo, tour diary, daily and periodical reports and ethical aspects of selling. 	<ol style="list-style-type: none"> 1. B.Com (H)- III 2. B.Com (P)- III 	<ol style="list-style-type: none"> 1. BCH 6.4 DSE: Consumer Affairs and Customer Care 2. BC 6.3: Personal Selling and Salesmanship
	Tutorials	<ol style="list-style-type: none"> 1. Unit-V 2. Unit-V 	<ol style="list-style-type: none"> 1. B.Com (H)- III 2. B.Com (P)- III 	<ol style="list-style-type: none"> 1. BCH 6.4 DSE: Consumer Affairs and Customer Care 2. BC 6.3: Personal Selling and Salesmanship



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 2018	Theory	Unit 1: Matrices & Determinants	B.COM (H) – Sem IV	Business Mathematics BCH 4.2
FEBRUARY 2018	Theory	Unit 2: Basic calculus – Application of differentiation Unit 4: Mathematics of Finance	B.COM (H) – Sem IV	Business Mathematics BCH 4.2
	<u>Assignment</u>	Unit 1 and 4	B.COM (H) – Sem IV	Business Mathematics BCH 4.2
MARCH 2018	Theory	Unit 3: Advance Calculus – Application of partial differentiation	B.COM (H) – Sem IV	Business Mathematics BCH 4.2
	<u>Test</u>	Unit 1, 2 and 3 (application of partial differentiation)	B.COM (H) – Sem IV	Business Mathematics BCH 4.2
APRIL 2018	Theory	Unit 3: Advance Calculus – Application of integration Unit 5: LPP	B.COM (H) – Sem IV	Business Mathematics BCH 4.2



**SEMESTER WISE TEACHING PLAN SRI
VENKATESWARA COLLEGE
(2017-18)**

Name of the Faculty: Dr. Shruti Mathur

Department: Commerce

Semester : II/IV/VI

Month		Topics	Course	Paper Code/Name
JANUARY	Theory	Unit 1: The Investment Environment - 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 Sem VI and B.Com H Sem VI	DSE-Fundamentals of Investment

	Tutorials	1). Discussion on IPO/FPO, Book building. Understanding SENSEX, NIFTY. Practice numerical on calculation of risk and return	B.Com (H) Sem VI & B.Com Sem VI	DSE: Fundamentals of Investment
FEBRUARY	Theory:	<p>Unit 2: Fixed Income Securities - Bond features, types of bonds, estimating bond yields, Bond Valuation, types of bond risks, default risk and credit rating.</p> <p>Unit 3: Approaches to Equity Analysis: Valuation of Equity Shares using various models. Introductions to Fundamental Analysis</p>	B.Com Sem VI & B.Com H Sem VI	DSE: Fundamentals of Investment

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

	Test	Fixed Income Securities ; Approaches to Equity Analysis; The Investment Environment	B.Com Sem VI & BCom H Sem VI	DSE: Fundamentals of Investment
APRIL	Theory:	Unit 4: MF & Financial Derivatives: Mutual funds. Introduction to Financial Derivatives- Forward, Futures & Options, Financial Derivatives Markets in India. Unit 5: Investor Protection – Role of SEBI & stock exchanges in investor protection, investor grievances and their redressal system, insider trading, investors’ awareness and activism.	B.Com Sem VI & BCom H Sem VI	DSE: Fundamentals of Investment
	Tutorials:	1) Presentation, and Discussion on MFs, Derivatives and Investor Protection.	1) BCom H Sem VI & BCom Sem VI	DSE: Fundamentals of Investment



SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
EVEN SEM 2017-18

Name of the Faculty: Ms Pooja Jain

Department: Commerce

Semester: II/IV/VI

Month	Type of Class	Topics	Course	Paper Code/Name
JANUARY	Theory	<p>1. Unit I: 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>Unit IV: 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>2. Unit I: 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. Matrices and Determinants</p>	<p>1. B.Com. VI 2. B.Com. II</p>	<p>1. BC 6.1 Management Accounting 2. BC 2.3 Business Mathematics and Statistics</p>
	Practicals	Introduction to excel and Mathematics of Finance	B.Com. (Hons) – IV B	BCH 4.2 B.Mathematics
	Tutorials	<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, QD, MD and Matrices</p>	<p>1. B.Com. VI 2. B.Com. II</p>	<p>1. BC 6.1 Management Accounting 2. BC 2.3 Business Mathematics and Statistics</p>

Month	Type of Class	Topics	Course	Paper Code/Name
FEBRUARY	Theory	<p>1. Unit II: 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>Unit VI: Responsibility Accounting: Concept, Significance, Different Responsibility Centers, Divisional Performance Measurement – Financial Measures.</p> <p>2. Unit II: 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>Mathematics of Finance</p>	<p>1. B.Com. VI 2. B.Com. II</p>	<p>1. BC 6.1 Management Accounting 2. BC 2.3 Business Mathematics and Statistics</p>
	Practicals	<p>Excel projects of Mathematics of finance-FV-annuity & Lump sum, PV-annuity & Lump sum Excel project: Graphical solutions of LPP Problems on Mathematics of Finance</p>	B.Com. (Hons) – IV B	BCH 4.2 B.Mathematics
	Tutorials	<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, Determinants and Differentiation</p>	<p>1. B.Com. VI 2. B.Com. II</p>	<p>1. BC 6.1 Management Accounting 2. BC 2.3 Business Mathematics and Statistics</p>

	Assignment	1. One home assignment will be given from the topic: Absorption and variable Costing and CVP analysis. 2. Assignment on: Matrices and Univariate Analysis	1. B.Com. VI 2. B.Com. II	1. BC 6.1 Management Accounting 2. BC 2.3 Business Mathematics and Statistics
Month	Type of Class	Topics	Course	Paper Code/Name
MARCH	Theory	1. Unit V: 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 2. Unit III: Time based data: Index Numbers including construction of Index Numbers-Simple and Weighted, Tests of adequacy and Construction of consumer price indices. Differentiation and its applications	1. B.Com. VI 2. B.Com. II	1. BC 6.1 Management Accounting 2. BC 2.3 Business Mathematics and Statistics
	Practicals	Excel Projects :LLP graphical solution and simplex using ‘solver-in’ in excel Problems on Mathematics of Finance	B.Com. (Hons) – IV B	BCH 4.2 B.Mathematics
	Tutorials	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 and application of differentiation	1. B.Com. VI 2. B.Com. II	1. BC 6.1 Management Accounting 2. BC 2.3 Business Mathematics and Statistics
	Test	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	1. B.Com. VI 2. B.Com. II	1. BC 6.1 Management Accounting 2. BC 2.3

Month	Type of Class	Topics	Course	Paper Code/Name
		C-V-P Analysis 2. Matrices and Determinants, Univariate Analysis and Bivariate Analysis		Business Mathematics and Statistics
APRIL	Theory	1. Unit III: 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. 2. Unit III: Time Series Analysis including meaning, components and trend analysis: moving average and least squares method.	1. B.Com. VI 2. B.Com. II	1. BC 6.1 Management Accounting 2. BC 2.3 Business Mathematics and Statistics
	Practicals	Integration and its Applications	1. B.Com. (Hons) – IV B	BCH 4.2 B.Mathematics
	Tutorials	1. Practical questions and Presentation will be taken from the following topics: a. Decision making: make or buy, product mix, operate or shut down, sell or process further 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. Miscellaneous questions will be discussed from examination point of view. 2. Practical problems will be taken from time series analysis and Mathematics of finance	1. B.Com. VI 2. B.Com. II	1. BC 6.1 Management Accounting 2. BC 2.3 Business Mathematics and Statistics



**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
JANUARY-2018	Theory	<ol style="list-style-type: none"> 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. The Indian Contract Act 1872: (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. 	<ol style="list-style-type: none"> 1. B.Com. (Hons) – IIA 2. B.Com (Hons)-IIB 3. B.Com (p) –II 4. B.Com(H)-IVB 	<ol style="list-style-type: none"> 1.BCH 2.3: Corporate Laws 2.BCH 2.3: Corporate Laws. 3. BC-2.2: Business Laws 4. BCH-4.1: Cost Accounting
	Tutorials	<ol style="list-style-type: none"> 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 	<ol style="list-style-type: none"> 1. B.Com. (Hons) – IIA 2.B.Com. (Hons) – IIB 3. B.Com(P)-II 4. B.Com(H)-IVB 	<ol style="list-style-type: none"> 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
FEBRUARY-2018	Theory	<ol style="list-style-type: none"> 1. Formation of companies, Memorandum of Association. 2. Formation of companies, Memorandum of Association. 3. The Indian contract Act 1872: 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. 	<ol style="list-style-type: none"> 1. B.Com. (Hons) – IIA 2. B.Com (Hons)-IIB 3. B.Com (p)-II 	<ol style="list-style-type: none"> 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
	Tutorials	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
Month	Type of Class	Topics	Course	Paper Code/Name
MARCH-2018	Theory	1. Articles of Associations, Prospectus 2. Articles of Associations, Prospectus 3. The sales of goods Act, 1930: 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.. The Limited Liability Partnership, 2008: Salient features of LLP, difference between LLP and Partnership, LLP and Company, change of name, partners and their relations. 4.Labour: 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

	Tutorials	<ol style="list-style-type: none"> 1. Case laws of Articles of Association and Prospectus presented by the students. 2. Case laws of Articles of Association and Prospectus presented by the students. 3. Case laws of quasi contracts, contract of indemnity and guarantee, contract of bailment and contract of Agency. 4. Student practicing of problem of labour 	<ol style="list-style-type: none"> 1. B.Com. (Hons) – IIA 2. B.Com. (Hons) – IIB 3. B.Com. (P) - II 4. B.COM(H)-IVB 	<ol style="list-style-type: none"> 1. BCH 2.3: Corporate Laws 2. BCH 2.3: Corporate Laws. 3. BC-2.2: Business Laws 4. BCH-4.1: Cost Accounting
	Assignment	<ol style="list-style-type: none"> 1. Topic allotment for 1st assignment & collect it and topic allotment for 2nd assignment (sharing with Mr. Ajit Singh). 2. Topics allotment and collect of 1st Assignment and Topic allotment for 2nd Assignment (sharing with Mr. Ajit Singh). 3. Topic allotment for 1st assignment & collect it and topic allotment for 2nd assignment. 4. Topic allotment for 1st assignment & collect it and topic allotment for 2nd assignment (sharing with Mrs. Shilpa). 	<ol style="list-style-type: none"> 1. B.Com. (Hons) – IIA 2. B.Com. (Hons) – IIB 3. B.Com (P)-II 4. B.COM(H)-IVB 	<ol style="list-style-type: none"> 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
APRIL-2018	Theory	<ol style="list-style-type: none"> 1. Shares and Share Capital 2. Shares and Share Capital 3. The Limited Liability Partnership, 2008: Extent and limitation of liability of LLP and partners, whistle blowing, taxation of LLP, conversion of LLP. winding up and dissolution. The Information Technology Act 2000: definition under the Act, Digital signature, electronic governance, attribution, acknowledgement, and dispatch of electronic records, regulation of certifying authorities, digital signature certificate, duties 	<ol style="list-style-type: none"> 1. B.Com. (Hons) – IIA 2. B.Com (Hons) -IIB 3. B.Com (P)-II 	<ol style="list-style-type: none"> 1. BCH 2.3: Corporate Laws 2. BCH 2.3: Corporate Laws. 3. BC-2.2: Business Laws

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



SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
(2017-18)

Name of the Faculty: Dr. Vinod Kumar

Department: Commerce

Semester: IV/VI

Month	Type of Class	Topics	Course	Paper Code/Name
JANUARY 2018	Theory	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 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.	1. B.Com. (Hons) - VI 2. B.Com - VI	1. CH 6.1: International Business 2. CP 6.2: Business Environment
	Practicals	1. Word: Working with word document, Inserting, 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	1. B.Com. (Hons.) - IV	1. BCH 4.3: Computer Applications in Business

		documents – checking for viruses in macros, referencing, creating bibliography, manage sources and citations, review documents.		
	Tutorials	<ol style="list-style-type: none"> 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; 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; 	<ol style="list-style-type: none"> 1. B.Com. (Hons) - VI 2. B.Com. - VI 	<ol style="list-style-type: none"> 1. CH 6.1: International Business 2. CP 6.2 Business Environment
Month	Type of Class	Topics	Course	Paper Code/Name
FEBURARY 2018	Theory	<ol style="list-style-type: none"> 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; 	<ol style="list-style-type: none"> 1. B.Com. (Hons) - VI 2. B.Com. - VI 	<ol style="list-style-type: none"> 1. CH 6.1: International Business 2. CP 6.2: Business Environment
	Practicals	<ol style="list-style-type: none"> 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 timings; Spreadsheet: creating a work book, rearranging worksheet, organizing charts and graphs, 	<ol style="list-style-type: none"> 1. B.Com. (Hons.): IV 	<ol style="list-style-type: none"> 1. BCH 4.3: Computer Applications in Business

		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		
	Tutorials	<ol style="list-style-type: none"> 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; 	<ol style="list-style-type: none"> 1. B.Com. (Hons) - VI 2. B.Com. - VI 	<ol style="list-style-type: none"> 1. CH 6.1: International Business 2. CP 6.2 Business Environment
Month	Type of Class	Topics	Course	Paper Code/Name
MARCH 2018	Theory	<ol style="list-style-type: none"> 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. 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 	<ol style="list-style-type: none"> 1. B.Com. (Hons) - VI 2. B.Com. - VI 	<ol style="list-style-type: none"> 1. CH 6.1: International Business 2. CP: 6.2 Business Environment
	Practicals	<ol style="list-style-type: none"> 1. Spreadsheet: Formula editing, consolidation of data & data analysis- sorting list, filter & more filtering techniques – consolidate data in multiple worksheets – 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, 	<ol style="list-style-type: none"> 1. B.Com. (Hons.) - IV 	<ol style="list-style-type: none"> 1. BCH 4.3: Computer Applications in Business

		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		
	Tutorials	1. Strategic alliances, mergers and acquisitions; role of IT in international business; international business and ecological considerations. 2. demographic environment, population size, migration and ethnic aspects, birth rate, death rate and age structure	1. B.Com. (Hons) - VI 2. B.Com. - VI	1. CH 6.1: International Business 2. CP 6.2: Business Environment
	Assignment	1. Topics allotment for making the assignments. 2. Topics allotment for making the assignments. 3. Topics for making workbook on computer.	1. B.Com. (Hons) - VI 2. B.Com. – VI 3. B. Com. (Hons) - IV	1. CH 6.1: International Business 2. CP 6.2: Business Environment 3. BCH 4.3: Computer Applications in Business
	Test	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. (Hons) - VI 2. B.Com. - VI	1. CH 6.1: International Business 2. CP 6.2: Business Environment
Month	Type of Class	Topics	Course	Paper Code/Name
APRIL 2018	Theory	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. 2. Functions of state, economic roles of government, government and legal environment; the constitutional environment, rationale and extent of state intervention.	1. B.Com. (Hons) - VI 2. B.Com. - VI	1. CH 6.1 International Business 2. CP 6.2: Business Environment
	Practicals	1. Practice on MS Word, MS PowerPoint, MS Excel, MS Access	1. B.Com. (Hons.) - IV	2. BCH 4.3: Computer Applications in

				Business
	Tutorials	<ol style="list-style-type: none"> 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. 2. Functions of state, economic roles of government, government and legal environment; the constitutional environment, rationale and extent of state intervention. 	<ol style="list-style-type: none"> 1. B.Com. (Hons) - VI 2. B.Com. - VI 	<ol style="list-style-type: none"> 1. CH 6.1 International Business 2. CP 6.2: Business Environment



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
JANUARY	Theory	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
	Practical	1. Mathematics of Finance	1.B.com (H)-IV	1. BCH-4.2-Busines Mathematics
	Tutorials	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
FEBRUARY	Theory:	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
	Practical:	1. Mathematics of Finance 2. Linear Programming	1.B.com (H)-IV	1. BCH-4.2- Business Mathematics

	Tutorials:	1. Major Corporate Failures	1.B.Com(H)-IV 2. B.Com (H)-VI	1. BCH-6.1-Auditing and CG
	Test	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
	Assignment	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
MARCH	Theory	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
	Practical	1. Mathematics of Finance 2. Linear Programming	1.B.com (H)-IV	1. BCH-4.2-Busines Mathematics
	Tutorials	1. Business Ethics	1. B.Com(H)-IV 2. B.Com (H)-VI	1. BCH-6.1-Auditing and CG
APRIL	Theory	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

	Practical	<ol style="list-style-type: none"> 1. Mathematics of Finance 2. Linear Programming 	1.B.com (H)-IV	1. BCH-4.2-Busines Mathematics
	Tutorials	<ol style="list-style-type: none"> 1. Corporate Social Responsibility 	<ol style="list-style-type: none"> 1) B.com (H)-IV 2) B.Com (H)-VI 	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 2018	Theory	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
	Practicals	Payroll Statement Depreciation	B.Com(H) Semester IV (A+B)	BCH4.3/Computer Applications in Business
	Tutorials	Doubt Clearing Session	B.Com(H) Semester II(B)	BCH2.2 / Corporate Accounting
FEBRUARY 2018	Theory:	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
	Practicals:	Loan Sheet Regression Ratio Analysis	B.Com(H) Semester IV (A+B)	BCH4.3/Computer Applications in Business
	Tutorials:	Doubt Clearing Session	B.Com(H) Semester II(B)	BCH2.2 / Corporate Accounting
	<u>Assignment :</u>	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 2018	Theory:	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
	Practicals:	Capital Budgeting Solver Frequency Caat Tools What if analysis	B.Com(H) Semester IV (A+B)	BCH4.3/Computer Applications in Business
	Tutorials:	Doubt Clearing Session	B.Com(H) Semester II(B)	BCH2.2 / Corporate Accounting
	Test	Holding Company And Cash Flow Statement	B.Com(H) Semester II(B)	BCH2.2 / Corporate Accounting
		Service Costing,Contract Costing &Reconciliation of Financial statements	B.com(H) Semester IV(B)	BCH4.1/ Cost Accounting
		Training and Development		
APRIL 2018	Theory:	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
	Practicals:	Test for the work book preparation	B.Com(H) Semester IV (A+B)	BCH4.3/Computer Applications in Business
	Tutorials:	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

Department: Commerce

Semester: II/IV/VI (2017-18)

Month		Topics	Course	Paper Code/Name
JANUARY 2018	Theory	Amalgamation (Meaning of amalgamation, absorption, external reconstruction, difference between merger and purchase, meaning and calculation of purchase consideration, treatment in the books of purchasing company in the nature of purchase, treatment in the books of purchasing company in the nature of merger, treatment in the books of vendor) , Internal Reconstruction, (Meaning, difference between internal reconstruction and external reconstruction, modes of internal reconstruction- alteration of share capital, reduction of share capital compromise and settlement, Introduction to OB, Disciplines contributing to OB, OB Models, Challenges of OB, Values, Attitudes, Perception (Milton Rokeach Value Survey was taken up in the class, students filled the questionnaire to know what they value most and how different people have different values, this also promoted the discussion on why individual differences emerge) Case study on individual differences	B.Com H II B.COM VI	BCH 2.2 CORPORATE ACCOUNTING BC6.2(e)ORGANIZ ATIONAL BEHAVIOUR
	Tutorials	Taking doubts and practice questions on amalgamation and internal reconstruction Discussion on how to decide on topics for projects to be submitted for internal assessment. Interest, Simple Interest, Compound Interest	B.Com H II B.COM VI	BCH 2.2 CORPORATE ACCOUNTING BC6.2(e)ORGANIZ ATIONAL BEHAVIOUR
	Practical:		B.Com H IV	

FEBRUARY 2018	Theory:	Final Accounts (Statement of P&L, Balance Sheet), Redemption of Preference shares, Bonus issue Personality video , Emotions Learning, Motivation (Questionnaire on Big 5 Trait, Locus of Control, Self Monitoring and Emotional Intelligence were all taken up in the class to explain the concepts)	B.Com H II B.Com VI	BCH 2.2 CORPORATE ACCOUNTING BC6.2(e)ORGANIZ ATIONAL BEHAVIOUR
	Tutorials	Taking doubts and practice questions on final accounts and redemption of preference shares. Discussion on questionnaire selection, sample size etc.and development of questionnaire on google form Present value, Future value, Equation of value	B.Com H II B.Com VI	BCH 2.2 CORPORATE ACCOUNTING BC6.2(e)ORGANIZ ATIONAL BEHAVIOUR
	Practical:		B.Com H IV	BCH 4.2Business Mathematics
	Assignment	Students were divided into groups of 4 each and projects on big 5 traits, job satisfaction, locus of control, self-monitoring, emotional intelligence etc. were taken up by them. They collected the data online by putting questionnaire on google form and analyse.		BC6.2(e)ORGANIZ ATIONAL BEHAVIOUR BCH 4.2Business Mathematics
MARCH 2018	Theory:	Cash Flow statement, liquidation and buy back of shares. Leadership, Decision Making, Individual Decision Making, Individual v/s group, Video- 5 Essentials of Team Development https://www.youtube.com/watch?v=qtP9zwuzFM https://www.youtube.com/watch?v=vsfkk3tQmtw Communication, Johari Window		BCH 2.2 CORPORATE ACCOUNTING BC6.2(e)ORGANIZ ATIONAL BEHAVIOUR BCH 4.2Business Mathematics

	<p>Tutorials</p> <p>Taking doubts and practice questions on valuation of shares, cash flow, buy back</p> <p>Case Study</p> <p>Practical:</p> <p>Annuities, Bonds, Perpetuity, Linear Programming using solver</p>		<p>BCH 2.2 CORPORATE ACCOUNTING</p> <p>BC6.2(e)ORGANIZATIONAL BEHAVIOUR</p> <p>BCH 4.2Business Mathematics</p>
	<p>Test</p> <p>After mid term break, the test schedule: ORGANISATIONAL BEHAVIOUR- 16/03/2020 CORPORATE ACCOUNTING- 19/03/2020 BUSINESS MATHEMATICS - INTERNAL PRACTICAL EXAM- 20/03/2020</p>		
APRIL 2018	<p>Theory:</p> <p>Underwriting, Redemption of debentures</p> <p>Transactional Analysis, Organization culture and climate, Change, Stress</p>		<p>BCH 2.2 CORPORATE ACCOUNTING</p> <p>BC6.2(e)ORGANIZATIONAL BEHAVIOUR</p>
	<p>Tutorials</p> <p>Doubts and practice questions on underwriting and redemption of debentures</p> <p>Case study</p>		<p>BCH 2.2 CORPORATE ACCOUNTING</p> <p>BC6.2(e)ORGANIZATIONAL BEHAVIOUR</p>



**SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE**

Name of the Faculty: Ajit Singh

Department: Commerce

Semester: II/IV

Month	Type of Class	Topics	Course	Paper Code/Name
JANUARY-2018	Theory	<ol style="list-style-type: none"> 1. Introduction, Classification of directors, Independent director, small shareholders, Director (DIN), Key managerial personnel. Meetings of Shareholders and board. 2. Introduction, Classification of directors, Independent director, small shareholders, Director (DIN), Key managerial personnel. Meeting of Shareholders and board. 3. Introduction to e-commerce, Electronic commerce applications, Supply chain management. Planning online-business, models, pure online vs brick and click business. 4. Introduction: meanings, dimensions of entrepreneurship. Types of business entities: Micro, Small and Medium. 	<ol style="list-style-type: none"> 1. B.Com. (Hons) – IIA 2. B.Com (Hons)-IIB 3. B.Com (P) –IV 4. B.Com(H)-IVB 	<ol style="list-style-type: none"> 1.BCH 2.3: Corporate Laws 2.BCH 2.3: Corporate Laws 3.BCH 4.4(A): E-Commerce 4. BCH-4.5(A): Entrepreneurship
	Tutorials	<ol style="list-style-type: none"> 1. Case laws of topics discussion and presented by the students. 2. Case laws of topics discussion and presented by the students. 	<ol style="list-style-type: none"> 1.B.Com. (Hons) – IIA 2.B.Com. (Hons) – IIB 	<ol style="list-style-type: none"> 1. BCH 2.3: Corporate Laws. 2. BCH 2.3: Corporate Laws.
Month	Type of Class	Topics	Course	Paper Code/Name
FEBRUARY-2018	Theory	<ol style="list-style-type: none"> 1. Audit Committee, CSR, Prohibition of insider trading. 2. Audit Committee, CSR, Prohibition of insider trading. 	<ol style="list-style-type: none"> 1. B.Com. (Hons) – IIA 2. B.Com (Hons)-IIB 	<ol style="list-style-type: none"> 1. BCH 2.3: Corporate Laws

		<p>3. Technology for online-business: Internet and its evolution, development of intranet extranet.</p> <p>4. Conflict in family business. Entrepreneurial sustainability: Public and Private system of stimulation.</p>	<p>3. B.Com (P)- IV</p> <p>4. B.Com(H)-IVB</p>	<p>2. BCH 2.3: Corporate Laws.</p> <p>3. BC-4.4(A): E-Commerce</p> <p>4. BCH-4.5(A): Entrepreneurship</p>
	Tutorials	<p>1. Case laws on Meeting of Shareholders & Board and Insider trading.</p> <p>2. Case laws on Meeting of Shareholders & Board and Insider trading.</p>	<p>1 .B.Com. (Hons) – IIA</p> <p>2 .B.Com. (Hons) – IIB</p>	<p>1. BCH -2.3 Corporate Laws</p> <p>2. BCH- 2.3:Corporate Laws</p>
Month	Type of Class	Topics	Course	Paper Code/Name
MARCH-2018	Theory	<p>1. Dividends, Account and Audit, concept and modes of winding up.</p> <p>2. Dividends, Account and Audit, concept and modes of winding up.</p> <p>3. Operations of E commerce, tools for promoting websites and E payment systems.</p> <p>4. Role of Industries and Self-help Groups, Role and functions of business Incubators.</p>	<p>1. B.Com. (Hons) – IIA</p> <p>2. B.Com. (Hons) – IIB</p> <p>3. B.Com (P)-IV</p> <p>4. B.COM(H)-IVB</p>	<p>1.BCH 2.3:Corporate Laws</p> <p>2. BCH 2.3:CorporateLaws</p> <p>3. BC 4.4(A): E-Commerce</p> <p>4. BCH-4.5(A): Entrepreneurship</p>

	Tutorials	<ol style="list-style-type: none"> 1. Case laws on Dividends, Accounts & Audit and winding up. 2. Case laws on Dividends, Accounts & Audit and winding up. 	<ol style="list-style-type: none"> 1. B.Com. (Hons) – IIA 2. B.Com. (Hons) – IIB 	<ol style="list-style-type: none"> 1. BCH 2.3: Corporate Laws 2. BCH 2.3: Corporate Laws.
	Assignment	<ol style="list-style-type: none"> 1. Topic allotment for 1st assignment & collect it and topic allotment for 2nd assignment (sharing with Dr. Sindhu mani Bag). 2. Topics allotment and collect of 1st Assignment and Topic allotment for 2nd Assignment (sharing with Dr. Sindhu mani Bag). 3. Topic allotment for 1st assignment & collect it and topic allotment for 2nd assignment. 4. Topic allotment for Presentation. 	<ol style="list-style-type: none"> 1. B.Com. (Hons) – IIA 2. B.Com. (Hons) – IIB 3. B.Com (P)-IV 4. B.COM(H)-IVB 	<ol style="list-style-type: none"> 1. BCH 2.3: Corporate Laws 2. BCH 2.3: Corporate Laws 3. BC 4.4(A): E-Commerce 4. BCH-4.5(A): Entrepreneurship
Month	Type of Class	Topics	Course	Paper Code/Name
APRIL-2018	Theory	<ol style="list-style-type: none"> 1. The Depositories Act 1996 and Revision of syllabus and discussion on previous year papers. 2. The Depositories Act 1996 and Revision of syllabus and discussion on previous year papers. 3. Security and Legal aspects of E commerce and revision of syllabus. 4. Mobilising Resources, Basic startup problems and revision of syllabus. 	<ol style="list-style-type: none"> 1. B.Com. (Hons) – IIA 2. B.Com (Hons) – IIB 3. B.Com (P)-IV 4. B.COM(H)-IVB 	<ol style="list-style-type: none"> 1. BCH 2.3: Corporate Laws 2. BCH 2.3: Corporate Laws. 3. BC 4.4(A): E-Commerce 4. BCH-4.5(A): Entrepreneurship
	Tutorials	1. Discussion on Depository system and previous year questions.	1. B.Com. (Hons) – IIA	1. BCH 2.3: Corporate Laws

		2. Discussion on Depository system and Previous year questions.	2. B.Com. (Hons) – IIB	2.BCH 2.3:Corporate Laws
	Test	1. Notification of date schedule for the conduct of the Internal Examination. 2. Notification of date schedule for the conduct of the Internal Examination. 3. Notification of date schedule for the conduct of the Internal Examination. 4. Notification of date schedule for the conduct of the Internal Examination.	1. B.Com. (Hons) –IIA 2 .B.Com. (Hons) – IIB 1. B.Com (P) – IV 4. B.COM(H)-IVB	1.BCH 2.3:Corporate Laws 2.BCH 2.3:CorporateLaws 3.BCH4.4(A):E commerce 4. BCH-4.5(A): Entrepreneurship
	Test	1. Conduct internal Examination 2. Conduct internal Examination 3. Conduct internal Examination 4. Conduct Internal Examination	1. B.Com. (Hons) - IIA 2. B.Com. (Hons) – IIB 3. B.Com (P) - IV 4. B.COM(H)-IVB	1.BCH 2.3:Corporate Laws 2. BCH 2.3:Corporate laws 3. BCH-4.4(A): E commerce. 4. BCH-4.5: Entrepreneurship



SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
 (2017-2018) Even Semester

Name of the Faculty: Priyanka
Commerce

Department:

Semester : II/IV

Month		Topics	Course	Paper Code/Name
JANUARY	Theory	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. cost accounting 2. Business Mathematics and statistics
	Tutorials /Practical:	Problems related with above topics		
FEBRUARY	Theory:	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

	Tutorials/Practical:			
	<u>Assignment</u>	1. Assignment from labour costing and introduction of costing		
MARCH	Theory:	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
	Tutorials/Practical:	Problems related with above topics		
	<u>Test</u>	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	Theory:	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
	Tutorials/Practical:	Problems related with above topics.		



SRI VENKATESWARA COLLEGE

SEMESTER WISE TEACHING PLAN Department of Commerce (Year 2017-18) TEACHING PLAN

Name of the Faculty: Aashish Jain

Department: Commerce

Semester: II,IV,VI

Month	Type of Class	Topics	Course	Paper Code/Name
January	Theory	<p><u>Goods & service Tax</u></p> <p>UNIT-1 Constitutional framework of Indirect Taxes before GST (Taxation Powers of Union & State Government); Concept of VAT: Meaning, Variants and Methods; Major Defects in the structure of Indirect Taxes prior to GST; Rationale for GST; Structure of GST (SGST, CGST, UTGST & IGST); GST Council, GST Network, State Compensation Mechanism, Registration.</p> <p><u>Cost Accounting</u></p> <p>UNIT-1: Introduction: Meaning, objectives and advantages of cost accounting, Difference between cost accounting and financial accounting. Cost concepts and classifications, Elements of cost. Installation of a costing system. Role of a cost accountant in an organization</p> <p><u>Computer Application & business</u> Operating System</p>	<p>1. B.Com – (H) III Semester-VI</p> <p>2. B.com-(H)II Semester-IV</p> <p>3. B.com Semester- IV</p>	<p>1. BCH 6.2: Goods & service Tax</p> <p>2. BCH 4.1: Cost Accounting</p> <p>3. BCH 4.3: Computer Application In Business</p>

	Practicals	HTML	1. B.Com II Semester-IV	1. BC 4.3: E-commerce
Month	Type of Class	Topics	Course	Paper Code/Name
February	Theory	<p><u>Goods & service Tax</u></p> <p>UNIT-II Levy & collection of GST Taxable event- “Supply” of Goods and Services; Place of Supply: Within state, Interstate, Import and Export; Time of supply; Valuation for GST- Valuation rules, taxability of reimbursement of expenses; Exemption from GST: Small supplies and Composition Scheme; Classification of Goods and Services: Composite and Mixed Supplies.</p> <p><u>Cost Accounting</u></p> <p>UNIT-II Materials: Material/inventory control- concept and techniques, Accounting and control of purchases, storage and issue of materials. Methods of pricing of materials issues – FIFO, LIFO, Simple Average, Weighted Average, Replacement, Standard, Treatment of Material Losses.</p>	<p>1. B.Com – (H) III Semester-VI</p> <p>2. B.com-(H)II Semester-IV</p> <p>3. B.com Semester- IV</p>	<p>1 BCH 6.2: Goods & service Tax</p> <p>2 BCH 4.1: Cost Accounting</p> <p>3 BCH 4.3: Computer Application In Business</p>
	Practicals	HTML	1. B.Com – II Semester-IV	1. BC 4.3- E-Commerce
Month	Type of Class	Topics	Course	Paper Code/Name
March	Theory	<u>Goods & service Tax</u>	1. B.Com – (H) III	1 BCH 6.2: Goods

		<p>UNIT-III Input Tax Credit Eligible and Ineligible Input Tax Credit; Apportionments of Credit and Blocked Credits; Tax Credit in respect of Capital Goods; Recovery of Excess Tax Credit; Availability of Tax Credit in special circumstances; Transfer of Input Credit (Input Service Distribution); Payment of Taxes; Refund; Doctrine of unjust enrichment; TDS, TCS. Reverse Charge Mechanism, Job work.</p> <p><u>Cost Accounting</u></p> <p>Unit III: Labour: Accounting and Control of labour cost, time keeping and time booking, concept and treatment of idle time, over time, labour turnover and fringe benefits</p> <p>UNIT-IV Overhead: Classification, allocation, apportionment and absorption of overhead. Under- and over-absorption. Capacity costs. Treatments of certain items in costing, like interest on capital, packing expenses, debts, research and development expenses, Bad Activity – based cost allocation.</p>	<p>Semester-VI</p> <p>2. B.com-(H)II Semester-IV</p> <p>3. B.com Semester- IV</p>	<p>& service Tax</p> <p>2 BCH 4.1: Cost Accounting</p> <p>3 BCH 4.3: Computer Application In Business</p>
	Practicals	HTML	1. B.Com – II Semester-IV	1. BC -4.3 E-Commerce
	Assignment	1. Topics allotment for making the assignments from probability & central value	1. B.Com – (H) III Semester-v	1. BCH 5.4 (e): Business Statistics

	Test	1. Test would be conducted on the concerned subject after mid-semester break.	1. B.Com – (H) III Semester-v	1. BCH6.2- Goods & service Tax 2. BCH 4.1- Cost Accounting 3. BCH 4.3- Computer application in Business
Month	Type of Class	Topics	Course	Paper Code/Name
April	Theory	<p><u>Goods & service Tax</u></p> <p>UNIT-IV Procedures Tax Invoice, Credit and Debit Notes, Returns, Audit in GST, Assessment: Self-Assessment, Summary and Scrutiny.</p> <p>UNIT-V Special Provisions Taxability of E-Commerce, Anti-Profiteering, Avoidance of dual control, E-way bills, zero-rated supply, Offences and Penalties, Appeals</p> <p>UNIT-VI Custom law Basic Concepts, Territorial Waters, High Seas, Types of Custom Duties, Valuation, Baggage Rules & exemptions.</p> <p><u>Cost Accounting</u></p> <p>Unit V: Methods of Costing: Unit costing, Job costing. Contract Costing. Process costing (process losses, valuation of work in progress, joint and by-products) Service costing</p>	<p>1. B.Com – (H) III Semester-VI</p> <p>2. B.com-(H)II Semester-IV</p> <p>3. B.com Semester- IV</p>	<p>1 BCH 6.2: Goods & service Tax</p> <p>2 BCH 4.1: Cost Accounting</p> <p>3 BCH4.3Computer Application In Business</p>

		(only transport). Unit VI: Accounting Systems: Integral and non-integral systems, Reconciliation of cost and financial accounts.		
	Practicals	HTML	1. B.Com – II Semester-IV	1. BC 4.3- E- Commerce



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) & 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) & Customs Law</p> <p>2.BCH 2.4(b) Investing in Stock Markets (GE)</p>

	Assignment -I	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)
Month	Type of Class	Topics	Course	Paper Code/Name
February	Theory	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

	Tutorials	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)
	Assignment- II	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)
Month	Type of Class	Topics	Course	Paper Code/Name
March	Theory	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
	Tutorials	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)
	Test	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
April & May	Theory	<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) & 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) & Customs Law</p> <p>2.BCH 2.4(b) Investing in Stock Markets (GE)</p>



SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
Academic Session 2017-2018 (Even Semester)

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

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

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

Month		Topics	Course	Paper Code/Name
JANUARY	Theory	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
	Practical	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. 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 0C). 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. (Different Experiments allotted to different groups)	B.Sc.(Hons) Electronics, Sem IV B.Sc.(Hons) Electronics, Sem II	Core-Course-VIII/ Operational Amplifiers and Applications Lab Core-Course-IV/ Applied Physics Lab
FEBRUARY	Theory	Op-Amp Circuits: Open and closed loop	B.Sc.(Hons)	Core-Course-VIII/

		configuration, Frequency response of an op-amp in open loop and closed loop configurations, Inverting, Non-inverting, Summing and difference amplifier, Integrator, Differentiator, Voltage to current converter, Current to voltage converter. Comparators: Basic comparator, Level detector, Voltage limiters, Schmitt Trigger.	Electronics, Sem IV	Operational Amplifiers and Applications
	Practical	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 (Different Experiments allotted to different groups) 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 0C). 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. (Different Experiments allotted to different groups)	B.Sc.(Hons) Electronics, Sem IV B.Sc.(Hons) Electronics, Sem II	Core-Course-VIII/ Operational Amplifiers and Applications Lab Core-Course-IV/ Applied Physics Lab
	Assignment	As per the syllabus covered		
MARCH	Theory	Signal generators: Phase shift oscillator, Wein bridge oscillator, Square wave generator, triangle wave generator, saw tooth wave generator, and Voltage controlled oscillator(IC 566). Multivibrators (IC 555): Block diagram, Astable and monostable multivibrator circuit, Applications of Monostable and Astable multivibrators. Phase locked loops (PLL): Block diagram, phase detectors,	B.Sc.(Hons) Electronics, Sem IV	Core-Course-VIII/ Operational Amplifiers and Applications
	Practical	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	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 (Different Experiments allotted to different groups)</p> <p>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 0C). 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. (Different Experiments allotted to different groups)</p>	B.Sc.(Hons) Electronics, Sem II	Core-Course-IV/ Applied Physics Lab
	Mid Term Test	As per the syllabus covered		
APRIL	Theory	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.	B.Sc.(Hons) Electronics, Sem IV	Core-Course-VIII/ Operational Amplifiers and Applications
	Practical	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 (Different Experiments allotted to different groups)	B.Sc.(Hons) Electronics, Sem IV	Core-Course-VIII/ Operational Amplifiers and Applications Lab
		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.	B.Sc.(Hons) Electronics, Sem II	Core-Course-IV/ Applied Physics Lab

		<p>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).</p> <p>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.</p> <p>To determine e/m of electron by Bar Magnet or by Magnetic Focusing.</p> <p>(Different Experiments allotted to different groups)</p>		
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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
Academic Session 2017-2018 (Even Semester)

Name of the Faculty: Dr. Neeru Kumar
 Department: Electronics

Semester: VI

Month		Topics	Course	Paper Code/Name
January	Theory:	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. Concept of Noise, Types of Noise, Signal to noise ratio, Noise Figure, Noise Temperature, Friss formula. Amplitude Modulation: Amplitude Modulation, modulation index and frequency spectrum. Generation of AM, Amplitude Demodulation (diode detector),	B.Sc. Electronics	Core course-XIII Communication Electronics
	Practicals:	1. Study of Amplitude Modulation 2. Study of Amplitude Demodulation 3. Study of Frequency Modulation 4. Study of Frequency Demodulation Study of characteristics of DC Series motor. Study of characteristics of DC Shunt motor. Study of characteristics of single phase induction motor. Study of characteristics of three phase induction motor. Study of control of DC motor using SCR. Study of Open Circuit Test on single phase transformer. Study of Short Circuit Test on single phase transformer. (Different Experiments allotted to different groups)	B.Sc. Electronics B.Sc.(Hons) Electronics, Sem VI	Core course-XIII Communication Electronics Discipline-Specific-Course-IV/ Electrical Machines Lab
	Tutorials:			
February	Theory:	Concept of Double side band suppressed carrier, Single side band suppressed carrier, 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.Sc. Electronics	Core course-XIII Communication Electronics
	Practicals:	1. AM Transmitter/Receiver 2. FM Transmitter/Receiver 3. Study of TDM, FDM Study of characteristics of DC Series motor. Study of characteristics of DC Shunt motor. Study of characteristics of single phase induction motor.	B.Sc. Electronics B.Sc.(Hons) Electronics, Sem VI	Core course-XIII Communication Electronics Discipline-Specific-Course-IV/ Electrical Machines Lab

		Study of characteristics of three phase induction motor. Study of control of DC motor using SCR. Study of Open Circuit Test on single phase transformer. Study of Short Circuit Test on single phase transformer. (Different Experiments allotted to different groups)		
	Tutorials:			
	Assignment		B.Sc. Electronics	Core course-XIII Communication Electronics
March	Theory:	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 Quantization, Quantization Noise, Companding, Coding, Decoding, Regeneration.	B.Sc. Electronics	Core course-XIII Communication Electronics
	Practicals:	1.Study of Pulse Amplitude Modulation 2.Study of Pulse Width Modulation 3. Study of Pulse Position Modulation 4. Study of Pulse Code Modulation Study of characteristics of DC Series motor. Study of characteristics of DC Shunt motor. Study of characteristics of single phase induction motor. Study of characteristics of three phase induction motor. Study of control of DC motor using SCR. Study of Open Circuit Test on single phase transformer. Study of Short Circuit Test on single phase transformer. (Different Experiments allotted to different groups)	B.Sc. Electronics B.Sc.(Hons) Electronics, Sem VI	Core course-XIII Communication Electronics Discipline-Specific-Course-IV/ Electrical Machines Lab
	Mid Term Test	Sem VI Based on Unit 1 and 2		
April	Theory	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.Sc. Electronics	Core course-XIII Communication Electronics
	Practicals:	1,Study of Amplitude Shift Keying 2. Study of Phase Shift Keying, 3. Study of Frequency Shift Keying 4. Simulation of all on software. Study of characteristics of DC Series motor. Study of characteristics of DC Shunt motor. Study of characteristics of single phase induction motor. Study of characteristics of three phase induction motor.	B.Sc. Elec tronics B.Sc.(Hons) Electronics, Sem VI	Core course-XIII Communication Electronics Discipline-Specific-Course-IV/ Electrical Machines Lab

	Study of control of DC motor using SCR. Study of Open Circuit Test on single phase transformer. Study of Short Circuit Test on single phase transformer. (Different Experiments allotted to different groups)		
Tutorials:			



SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
Academic Session 2017-2018 (Even Semester)

Name of the Faculty: Dr. Sunita Jain

Department: Electronics

Semester: VI

Month		Topics	Course	Paper Code/Name
JAN	Theory	Introduction to e.m waves, concept of spherical & plane waves, reflection and transmission, total internal reflection, Brewster's law, origin of refractive index and dispersion Interference, division of wavefront, division of amplitude, Interference based on division of wavefront & division of amplitude	B.Sc. (H) SEM VI	CORE COURSE
	Practical Photonics	Sem VI: To verify the law of Malus for plane polarized light. 2. To determine resolving power of diffraction grating.	B.Sc. (H) SEM VI	CORE COURSE
	Practical Semi conductor devices	<ol style="list-style-type: none"> 1. I -V Characteristics of Solid State and Zener diode 2. I -V Characteristics of C E / CB configuration 3. CC Configuration voltage gain and current gain 	SEM- II	CORE COURSE
FEBRUARY	Theory	Michelson Interferometer, holography Diffraction by rectangular aperture, single slit, double slit, circular aperture Resolving and dispersive power of telescope and microscope. Polarization, Linear circular and elliptical polarization, Malus Law, Double refraction, half and quarter wave plate	B.Sc. (H) SEM VI	CORE COURSE
	Practical Photonics	Sem VI: To determine wavelength of sodium light using Newton's Rings. To determine the Dispersive power of Diffraction Grating	B.Sc. (H) SEM VI	CORE COURSE
	Practical Semi conductor devices	<ol style="list-style-type: none"> 1. I -V Characteristics of UJT 2. I -V Characteristics of solar cell 	SEM -II	CORE COURSE
	Assignment	Questions based on interference and diffraction	B.Sc. (H) SEM VI	

MARCH	Theory Photonics	Liquid crystal display, LED, Interaction of radiation and matter, Einstein coefficients, Condition for amplification, laser cavity, threshold for laser oscillation, line shape function. Examples of common lasers. The semiconductor injection laser diode. Holography Photodetectors: Bolometer, Photomultiplier tubes, Charge Coupled Devices; Photodiodes (p-n, p-i-n, avalanche), quantum efficiency and responsivity	B.Sc. (H) SEM VI	CORE COURSE
	Practical	Sem VI: To determine the specific rotation of scan sugar using polarimeter. Characteristics of LEDs and Photodetector.	B.Sc. (H) SEM VI	CORE COURSE
	Practical Semi conductor devices	1. I-V Characteristics of SCR 2. I-V Characteristics of JFET	SEM -II	CORE COURSE
	Mid-Term Test	Questions based on interference, diffraction polarization & Laser		
APRIL	Theory Photonics	Symmtric slab waveguides, TE&TM mode. Linearly polarized and circularly polarized dielectric wave guide. Concept of group velocity and dispersion relation.	B.Sc. (H) SEM VI	CORE COURSE
	Practical	Sem VI: Diffraction experiments using a laser. Single slit, double slit diffraction grating and circular aperture	B.Sc. (H) SEM VI	CORE COURSE
	Practical Semi conductor devices	1. I-V Characteristics of MOSFET 2.Hall Effect	B.Sc. (H) SEM II	CORE COURSE



SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
Academic Session 2017-2018 (Even Semester)

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

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

JANUARY / 2018	Theory	<p>Qualities of Measurement: 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. Basic Measurement Instruments: 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).</p>	B.Sc(Hons), Electronic Science / CBCS	Electronic Instrumentation
	Practicals	<ol style="list-style-type: none"> 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. 		Electronic Instrumentation

<p>FEBRUARY/ 2018</p>	<p>Theory:</p>	<p>Connectors and Probes: low capacitance probes, high voltage probes, current probes, identifying electronic connectors – audio and video, RF/Coaxial, USB etc. Unit-2 (15 Lectures) Measurement of Resistance and Impedance: 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. A-D and D-A Conversion: 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>Electronic Instrum</p>
	<p>Practicals:</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>Electronic Instrum</p>

MARCH/2018	Theory:	<p>Oscilloscopes: 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>Signal Generators: Audio oscillator, Pulse Generator, Function generators.</p>	B.Sc(Hons), Electronic Science / CBCS	Electronic Instrument
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Practicals:	<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>		Electronic Instrumentation
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APRIL/2018	Theory:	<p>Transducers and sensors: Classification of transducers, Basic requirement/characteristics of transducers, active & 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	Electronic Instrumentation
	Practicals	<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>		



SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
Academic Session 2017-2018 (Even Semester)

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

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

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

Month		Topics	Course	Paper Code/Name
JANUARY	Theory	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. 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.	B.Sc.(Hons) Electronics, Sem II	Core-Course-IV/ Applied Physics
		PCB Fundamentals: PCB Advantages, components of PCB, Electronic components, Microprocessors and Microcontrollers, IC's, Surface Mount Devices (SMD). Classification of PCB - single, double, multilayer and flexible boards, Manufacturing of PCB, PCB standards.	B.Sc.(Hons) Electronics, Sem IV	SEC-II/ Design and Fabrication of Printed Circuit Boards Lab
	Practical	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 0C). 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. (Different Experiments allotted to different groups)	B.Sc.(Hons) Electronics, Sem II	Core-Course-IV/ Applied Physics Lab
		Introduction to PCB designing and various CAD software. Installation and introduction to EAGLE.	B.Sc.(Hons) Electronics, Sem IV	SEC-II/ Design and Fabrication of

		Designing of the PCB layout of Blinky Box using IC 555 Timer. Designing of the PCB layout of Low Pass Filter using IC 741.		Printed Circuit Boards Lab
		Generation of Signals: continuous time Generation of Signals: discrete time Time shifting and time scaling of signals	B.Sc.(Hons) Electronics, Sem IV	Core-Course-IX/ Signals and Systems Lab
FEBRUARY	Theory	Thermal Properties: Brief Introduction to Laws of Thermodynamics, Concept of Entropy, Concept of Phonons, 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 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,	B.Sc.(Hons) Electronics, Sem II	Core-Course-IV/ Applied Physics
		Schematic & Layout Design: Schematic diagram, General Mechanical and Electrical design considerations, Placing and Mounting of components, Conductor spacing, routing guidelines, heat sinks and package density, Net list, creating components for library, Tracks, Pads, Vias, power plane, grounding.	B.Sc.(Hons) Electronics, Sem IV	SEC-II/ Design and Fabrication of Printed Circuit Boards Lab
	Practical	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 0C). 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. (Different Experiments allotted to different groups) Designing of the PCB layout of High Pass Filter using IC 741. Designing of the PCB layout of Band Pass Filter using IC 741 Designing of the PCB layout of Differentiator. Designing of the PCB layout of Integrator.	B.Sc.(Hons) Electronics, Sem II	Core-Course-IV/ Applied Physics Lab
		Convolution Solution of Difference equation. Step and impulse response	B.Sc.(Hons) Electronics, Sem IV	SEC-II/ Design and Fabrication of Printed Circuit Boards Lab
	Assignment	As per the syllabus covered		Core-Course-IX/ Signals and Systems Lab
MARCH	Theory	Strengthening Mechanisms, Hardness, Creep, Fatigue, Fracture. Quantum Physics: Inadequacies of Classical physics. Compton's effect, Photo-electric	B.Sc.(Hons) Electronics, Sem II	Core-Course-IV/ Applied Physics

		<p>Effect, Wave-particle duality, 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.</p> <p>Technology OF PCB: Design automation, Design Rule Checking, Exporting Drill and Gerber Files; Drills; Footprints and Libraries Adding and Editing Pins, copper clad laminates materials of copper clad laminates, properties of laminates (electrical & physical), types of laminates, soldering techniques. Film master preparation, Image transfer, photo printing, Screen Printing, Plating techniques etching techniques, Mechanical Machining operations, Lead cutting and Soldering Techniques, Testing and quality controls</p>	B.Sc.(Hons) Electronics, Sem IV	SEC-II/ Design and Fabrication of Printed Circuit Boards Lab
	Practical	<p>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 0C). 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. (Different Experiments allotted to different groups)</p> <p>Designing of the PCB layout of Full Wave Bridge Rectifier. Designing of the PCB layout of Half and Full Adder. Designing of the PCB layout of Half and Full Subtractor.</p> <p>Laplace transform and Fourier transform of continuous time signals, generation of Fourier series through Simulink</p>	B.Sc.(Hons) Electronics, Sem II	Core-Course-IV/ Applied Physics Lab
			B.Sc.(Hons) Electronics, Sem IV	SEC-II/ Design and Fabrication of Printed Circuit Boards Lab
			B.Sc.(Hons) Electronics, Sem IV	Core-Course-IX/ Signals and Systems Lab
	Mid Term Test	As per the syllabus covered		
APRIL	Theory	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,	B.Sc.(Hons) Electronics, Sem II	Core-Course-IV/ Applied Physics

		the Hydrogen-like atom problem. PCB Technology: Trends, Environmental concerns in PCB industry	B.Sc.(Hons) Electronics, Sem IV	SEC-II/ Design and Fabrication of Printed Circuit Boards Lab
	Practical	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 0C). 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. (Different Experiments allotted to different groups)	B.Sc.(Hons) Electronics, Sem II	Core-Course-IV/ Applied Physics Lab
		Designing of the PCB layout of 4×1 Multiplexer	B.Sc.(Hons) Electronics, Sem IV	SEC-II/ Design and Fabrication of Printed Circuit Boards Lab
		Using Simulink for designing systems through transfer function. Design of Low pass, high pass, band pass filters and studying the frequency response.	B.Sc.(Hons) Electronics, Sem IV	Core-Course-IX/ Signals and Systems Lab



SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
Academic Session 2017-2018 (Even Semester)

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	Theory:	<p>SEM II : Unit 1 : 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.</p> <p>Unit 2 : P-N Junction Diode: Formation of Depletion Layer</p>	Bsc (Hons) Electronics	CC III : Semiconductor Devices
		<p>SEM VI : Unit 1 : DC Machines: Basic constructional features and physical principles involved in electrical machines, armature winding (ac and dc), lap and wave connections, different types of pitches D.C. Generators: Construction and principles of operation, brief idea about armature reaction and commutation, E.M.F. Equation, methods of excitation, and Characteristics of Self excited and separately (Shunt, Compound and Series) excited generators, Losses and efficiency, applications. D.C. Motors: Comparison of generator and motor action & interchangeability, principle of operation, significance of back EMF, maximum power, Torque and speed relation, Characteristics of series, shunt and Compound excited motors & applications, losses & efficiency, necessity of motor starters, Three point starter, Speed control of DC motors, electronic speed control of DC motors, electric braking</p>	Bsc (Hons) Electronics	DSE 2 : Electrical Machines

	Practicals:	<p>SEM II : 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, α, Study of Hall Effect , Solar Cell(Alloted To Different Groups)</p> <p>SEM VI : Transfer function, Pole zero graph, Time response analysis of control systems</p> <p>SEM VI : Introduction to lab equipment , Study of characteristics of single phase induction motor. , Study of control of DC motor using SCR. (Alloted To Different Groups)</p>	Bsc (Hons) Electronics	<p>CC III Lab: Semiconductor Devices</p> <p>DSE 1 Lab :Control Systems</p> <p>DSE 2 Lab : Electrical Machines</p>
	Tutorials:			
FEBRUARY	Theory:	<p>SEM II : 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</p> <p>Unit 3 : Bipolar Junction Transistors (BJT): PNP and NPN Transistors, Basic Transistor Action, Emitter Efficiency , Base Transport Factor, Current Gain</p>	Bsc (Hons) Electronics	CC III : Semiconductor Devices
		<p>SEM VI : Unit 4 : State Space Analysis: Definitions of state, state variables, state space, representation of systems, Solution of time invariant, homogeneous state equation, state transition matrix and its properties.</p>	Bsc (Hons) Electronics	DSE 1 :Control Systems
	Practicals:	<p>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, α, Study of Hall Effect, I-V Characteristics of the UJT, I-V Characteristics of the SCR , Solar Cell (Alloted To Different Groups)</p> <p>SEM VI : Simulink, siso tool, ltiviewer, steady state error evaluation</p> <p>SEM VI : Study of characteristics of single phase induction motor.,Three phase induction motor , Study of control of DC motor using SCR , open circuit test and short circuit test on transformer(Alloted To Different Groups)</p>	Bsc (Hons) Electronics	<p>CC III Lab: Semiconductor Devices</p> <p>DSE 1 Lab :Control Systems</p> <p>DSE 2 Lab : Electrical Machines</p>
	Tutorials:			

	Assignment	SEM II : Unit 1 SEM VI : Unit 4	Bsc (Hons) Electronics	CC III : Semiconductor Devices DSE 1 :Control Systems
MARCH	Theory:	SEM II : 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. Unit 4 : Field Effect Transistors: JFET, Construction, Idea of Channel Formation, Pinch-Off and Saturation Voltage, Current-Voltage Output Characteristics. MOSFET, types of MOSFETs, Circuit symbols, Working and Characteristic curves of Depletion type MOSFET (both N channel and P Channel)	Bsc (Hons) Electronics	CC III : Semiconductor Devices
		SEM VI : Unit 4 : Controllers and Compensation Techniques: Response with P, PI and PID Controllers, Concept of compensation, Lag, Lead and Lag-Lead networks	Bsc (Hons) Electronics	DSE 1 :Control Systems
	Practicals:	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 , α , 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) SEM VI : P, PI, PD and PID controller design Automatic PID controller DC motor speed and position control, AC servomotor	Bsc (Hons) Electronics	CC III Lab: Semiconductor Devices DSE 1 Lab :Control Systems DSE 2 Lab : Electrical Machines
	Tutorials:	SEM VI : Study of characteristics of single phase induction motor, Three phase induction motor , Study of control of DC motor using SCR , open circuit test and short circuit test on transformer (Alloted To Different Groups)		
	Mid Term Test	SEM II : Unit 1 and Unit 2 SEM VI : Unit 4	Bsc (Hons) Electronics	CC III : Semiconductor Devices DSE 1 :Control Systems
APRIL	Theory	SEM II : Unit 4: Enhancement type MOSFET (both N channel and P channel). Complimentary MOS (CMOS). 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, MESFET, Circuit symbols, Basic constructional features, Operation and Applications.	Bsc (Hons) Electronics	CC III : Semiconductor Devices

		<p>SEM VI : Unit 3 : Logarithmic plots (Bode Plots), gain and phase margins, Nyquist stability criterion, relative stability using Nyquist criterion, constant M & N circles.</p>	Bsc (Hons) Electronics	DSE 1 :Control Systems
	Practicals:	<p>SEM II : Study of the I-V Characteristics of CE configuration of BJT ,I-V Characteristics of the Common Base Configuration of BJT and obtain r_i, r_o, α, 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>SEM VI : Frequency response of Lead and Lag networks , nyquist criterion , State space analysis.</p> <p>SEM VI : Study of characteristics of single phase induction motor.,Three phase induction motor , Study of control of DC motor using SCR , open circuit test and short circuit test on transformer(Alloted To Different Groups)</p>	Bsc (Hons) Electronics	<p>CC III Lab: Semiconductor Devices</p> <p>DSE 1 Lab :Control Systems</p> <p>DSE 2 Lab : Electrical Machines</p>



SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
Academic Session 2017-2018 (Even Semester)

Name of the Faculty: Dr. Rakhi Narang

Semester: II/IV/VI

Department: Electronics

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

Practicals: **B.Sc(H) Electronics, Sem IV (CBCS)**
B.Sc(H) Electronics, Sem VI (CBCS)

Month		Topics	Course	Paper Code/Name
January	Theory:	Sem IV: 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. Sem VI: Open loop and Closed loop control systems, Mathematical modeling of physical systems (Electrical, Mechanical and Thermal), Derivation of transfer function, Armature controlled and field controlled DC servomotors, AC servomotors, block diagram representation & signal flow graph	B.Sc. Electronics B.Sc. Electronics	Core course-IX Signals and Systems DSE: Control Systems
	Practicals:	Sem IV: 1. Generation of Signals: continuous time 2. Generation of Signals: discrete time 3. Time shifting and time scaling of signals. Sem VI: Transfer function, Pole zero graph, Time response analysis of control systems	B.Sc. Electronics B.Sc. Electronics	Core course-IX Signals and Systems DSE: Control Systems
	Tutorials:			
February	Theory:	Sem IV: 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 Sem VI: Reduction Technique, Mason's Gain Formula. Effect of feedback on control systems, Basic Control Actions: Proportional, integral and Derivative controls. Time domain performance criteria, transient response of first, second & higher order systems	B.Sc. Electronics B.Sc. Electronics	Core course-IX Signals and Systems DSE: Control Systems
	Practicals:	Sem IV: 1. Convolution 2. Solution of Difference equation. 3. Step and impulse response Sem VI:	B.Sc. Electronics B.Sc. Electronics	Core course-IX Signals and Systems DSE: Control

		Simulink, siso tool, ltiviewer, steady state error evaluation		Systems
	Tutorials:			
	Assignment	Sem IV: Assignment based on Unit I Sem VI: Assignment based on Unit I	B.Sc. Electronics B.Sc. Electronics	Core course-IX Signals and Systems DSE: Control Systems
March	Theory:	Sem IV: 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 Sem VI: steady state errors and static error constants, Performance indices. Concept of Stability: Asymptotic stability and conditional stability, Routh – Hurwitz criterion, relative stability analysis	B.Sc. Electronics B.Sc. Electronics	Core course-IX Signals and Systems DSE: Control Systems
	Practicals:	Sem IV: Laplace transform and Fourier transform of continuous time signals, generation of Fourier series through Simulink Sem VI: P, PI, PD and PID controller design, Automatic PID controller DC motor speed and position control, AC servomotor	B.Sc. Electronics B.Sc. Electronics	Core course-IX Signals and Systems DSE: Control Systems
	Mid Term Test	Sem IV: Based on Unit 1 and 2 Sem VI: Based on Unit 1 and		
April	Theory	Sem IV: Properties of Discrete-Time Fourier series. Frequency-Selective filters, Simple RC highpass and lowpass filters Fourier Transform: Aperiodic signals, Periodic signals, Properties of Continuous-time Fourier transform, Convolution and Multiplication Properties, Properties of Fourier transform and basic Fourier transform Pairs. Sem VI: Root Locus plots and their applications. Correlation between time and frequency response, Polar and inverse polar plots, frequency domain specifications,	B.Sc. Electronics B.Sc. Electronics	Core course-IX Signals and Systems DSE: Control Systems
	Practicals:	Sem IV: 1. Using Simulink for designing systems through transfer function. 2. Design of Low pass, high pass, band pass filters and studying the frequency response. Sem VI : Frequency response of Lead and Lag networks , nyquist	B.Sc. Electronics B.Sc. Electronics	Core course-IX Signals and Systems

		riterion , State space analysis.		DSE: Control Systems
	Tutorials:			



SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
Academic Session 2017-2018 (Even Semester)

Name of the Faculty : **Dr Neha Verma**
Department : **Electronics**

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

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

Month		Topics	Course	Paper Code/Name
JANUARY	Theory	Not Applicable	Not Applicable	Not Applicable
	Practical	Not Applicable	Not Applicable	Not Applicable
FEBRUARY	Theory	Transformers: Types of transformers, Transformer Construction, EMF equation, No load operation, operation under load, Phasor diagram, equivalent circuit of transformer, Transformer Losses, Voltage regulation, condition for maximum efficiency, All day efficiency, Short circuit and open circuit tests, Auto transformers. Polyphase Circuits: Polyphase circuits, three phase transformers, delta-delta and delta –Y Connection Poly Phase Induction Motors: General constructional features, Types of rotors, Rotating magnetic field (Ferrari's Principle)	B.Sc.(Hons) Electronics, Sem VI	Discipline-Specific-Course-IV/ Electrical Machines
	Practical	Study of characteristics of DC Series motor. Study of characteristics of DC Shunt motor. Study of characteristics of single phase induction motor. Study of characteristics of three phase induction motor. Study of control of DC motor using SCR. Study of Open Circuit Test on single phase transformer. Study of Short Circuit Test on single phase transformer. (Different Experiments allotted to different groups) Designing of the PCB layout of High Pass Filter using IC 741. Designing of the PCB layout of Band Pass Filter using IC 741 Designing of the PCB layout of Differentiator. Designing of the PCB layout of Integrator. Study of the I-V Characteristics of Diode – Ordinary and Zener Diode. Study of the I-V Characteristics of the CE configuration of BJT and obtain r_i , r_o , β . Study of the I-V Characteristics of the Common Base Configuration of BJT and	B.Sc.(Hons) Electronics, Sem VI B.Sc.(Hons) Electronics, Sem IV B.Sc.(Hons) Electronics, Sem II	Discipline-Specific-Course-IV/ Electrical Machines Lab SEC-II/ Design and Fabrication of Printed Circuit Boards Lab Core-Course-III/ Semiconductor Devices Lab

		<p>obtain r_i, r_o, α. Study of the I-V Characteristics of the Common Collector Configuration of BJT and obtain voltage gain, r_i, r_o. Study of the I-V Characteristics of the UJT. Study of the I-V Characteristics of the SCR. Study of the I-V Characteristics of JFET. Study of the I-V Characteristics of MOSFET. Study of Characteristics of Solar Cell Study of Hall Effect. (Different Experiments allotted to different groups)</p> <p>Convolution Solution of Difference equation. Step and impulse response</p>	B.Sc.(Hons) Electronics, Sem IV	Core-Course-IX/ Signals and Systems Lab
	Assignment	As per the syllabus covered		
MARCH	Theory	<p>Induction motor as a generalized transformer, equivalent circuit, Production of torque, Slip, Torque equation, Torque-slip characteristics, Speed control of Induction motor. Comparison with DC motor Single Phase Motors: Single phase induction motors, Construction, principle of operation based on starting methods, Split phase motors, capacitor start motors, capacitor start & run motors, Reluctance Motor, Stepper Motor, Single phase a.c. series motors, Universal motor.</p>	B.Sc.(Hons) Electronics, Sem VI	Discipline-Specific-Course-IV/ Electrical Machines
	Practical	<p>Study of characteristics of DC Series motor. Study of characteristics of DC Shunt motor. Study of characteristics of single phase induction motor. Study of characteristics of three phase induction motor. Study of control of DC motor using SCR. Study of Open Circuit Test on single phase transformer. Study of Short Circuit Test on single phase transformer. (Different Experiments allotted to different groups)</p> <p>Designing of the PCB layout of Full Wave Bridge Rectifier. Designing of the PCB layout of Half and Full Adder. Designing of the PCB layout of Half and Full Subtractor.</p>	B.Sc.(Hons) Electronics, Sem VI	Discipline-Specific-Course-IV/ Electrical Machines Lab
		<p>Study of the I-V Characteristics of Diode – Ordinary and Zener Diode. Study of the I-V Characteristics of the CE configuration of BJT and obtain r_i, r_o, β. Study of the I-V Characteristics of the Common Base Configuration of BJT and obtain r_i, r_o, α. Study of the I-V Characteristics of the Common Collector Configuration of BJT and obtain voltage gain, r_i, r_o. Study of the I-V Characteristics of the UJT. Study of the I-V Characteristics of the SCR.</p>	B.Sc.(Hons) Electronics, Sem IV	SEC-II/ Design and Fabrication of Printed Circuit Boards Lab
			B.Sc.(Hons) Electronics, Sem II	Core-Course-III/ Semiconductor Devices Lab

		<p>Study of the I-V Characteristics of JFET. Study of the I-V Characteristics of MOSFET. Study of Characteristics of Solar Cell Study of Hall Effect. (Different Experiments allotted to different groups)</p> <p>Laplace transform and Fourier transform of continuous time signals, generation of Fourier series through Simulink</p>	B.Sc.(Hons) Electronics, Sem IV	Core-Course-IX/ Signals and Systems Lab
	Mid Term Test	As per the syllabus covered		
APRIL	Theory	Synchronous Machines: Brief construction details of three phase synchronous generators, E.M.F. equation, Principle of operation of synchronous motor, methods of starting, factors for failure to start, applications, comparison of synchronous and induction motor	B.Sc.(Hons) Electronics, Sem VI	Discipline-Specific-Course-IV/ Electrical Machines
	Practical	<p>Study of characteristics of DC Series motor. Study of characteristics of DC Shunt motor. Study of characteristics of single phase induction motor. Study of characteristics of three phase induction motor. Study of control of DC motor using SCR. Study of Open Circuit Test on single phase transformer. Study of Short Circuit Test on single phase transformer. (Different Experiments allotted to different groups)</p> <p>Designing of the PCB layout of 4×1 Multiplexer</p>	B.Sc.(Hons) Electronics, Sem VI	Discipline-Specific-Course-IV/ Electrical Machines Lab
		<p>Study of the I-V Characteristics of Diode – Ordinary and Zener Diode. Study of the I-V Characteristics of the CE configuration of BJT and obtain r_i, r_o, β. Study of the I-V Characteristics of the Common Base Configuration of BJT and obtain r_i, r_o, α. Study of the I-V Characteristics of the Common Collector Configuration of BJT and obtain voltage gain, r_i, r_o. Study of the I-V Characteristics of the UJT. Study of the I-V Characteristics of the SCR. Study of the I-V Characteristics of JFET. Study of the I-V Characteristics of MOSFET. Study of Characteristics of Solar Cell Study of Hall Effect. (Different Experiments allotted to different groups)</p> <p>Using Simulink for designing systems through transfer function. Design of Low pass, high pass, band pass filters and studying the frequency response.</p>	B.Sc.(Hons) Electronics, Sem II	SEC-II/ Design and Fabrication of Printed Circuit Boards Lab
			B.Sc.(Hons) Electronics, Sem IV	Core-Course-III/ Semiconductor Devices Lab
			B.Sc.(Hons) Electronics, Sem IV	Core-Course-IX/ Signals and Systems Lab



SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
Academic Planner: Even Semester 2017 (January - April)

Name of the Faculty: Ms. Ramaa Sinha

Department: Zoology

Semester: II/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	B.Sc (H) Zoology III year VI semester (TZH)	CORE COURSE XIII
	Practical	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) Batch I	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 II	LS Core II
February	Theory	DEVELOPMENTAL BIOLOGY Unit 2: Early Embryonic Development Planes and patterns of cleavage; Types of Blastula; Fate maps (including Techniques)	B.Sc (H) Zoology III year VI semester (TZH)	CORE COURSE XIII
	Practical	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
		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 I	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 II	LS Core II
March	Theory	DEVELOPMENTAL BIOLOGY Unit 3: Late Embryonic Development 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
	Practical	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
		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 I	LS core II
		Comparative anatomy and developmental biology Study of the different types of placenta-histological sections through permanent slides or photomicrograph	B.Sc. Life sciences sem II (FLS) Batch II	LS core II
APRIL	Theory	DEVELOPMENTAL BIOLOGY Unit 4: Post Embryonic Development 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
	Practical	DEVELOPMENTAL BIOLOGY Study of different sections of placenta (photomicrograph/ slides) Submission of project report on Drosophila culture/chick embryo development <ul style="list-style-type: none"> • Revision/ mock exam 	B.Sc (H) Zoology III year VI semester (TZH)	CORE COURSE XIII
		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	B.Sc. Life sciences Sem II (FLS) Batch I	LS Core II

	<p>in mammals.</p> <p>Unit 12: Applied Aspects of Developmental Biology 6 hrs Stem cells, Cloning, IVF</p> <p>Revision/ mock exam</p>		
	<p>Comparative anatomy and Developmental Biology</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"> • Revision/ mock exam 	<p>B.Sc. Life sciences Sem II (FLS) Batch II</p>	<p>LS Core II</p>



SEMESTER WISE TEACHING PLAN (2017-2018)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Anita Verma

Department: Zoology

Semester: II/IV/VI

Month		Topics	Course	Paper Code/Name
JANUARY	Theory	Syllabus overview. Scope of studying the course. Unit 1 Movements and Bulk Transport: 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 Unit 2: Physiology of Respiration: Histology of respiratory tract; Mechanism of respiration.	B.Sc. (Hons) Zoology, Semester-IV	Animal Physiology: Life Sustaining Systems (CC IX)
	Practicals	Syllabus overview, general instructions and maintenance of lab record. Effect of isotonic hypotonic hypertonic salines on erythrocytes. Estimation of haemoglobin using Sahli's haemoglobinometer. Enumeration of white blood cells using haemocytometer. Enumeration of red blood cells using haemocytometer. Temporary mount of neuron, blood film preparation, ABO blood group, Preparation of haemin and haemochromogen crystals.	B.Sc. (Hons) Biological Science, Semester-IV B.Sc. (Hons) Zoology, Semester-IV GE II Zoology, Semester-IV	Systems Physiology (BS C-8) Animal Physiology: Life Sustaining Systems (CC IX) GE II: Human Physiology

FEBRUARY	Theory:	Unit 2 Gas exchange in organism; Generation and utilization of energy: Respiratory organs in aquatic and terrestrial systems; Physiology of aquatic breathing and aerial breathing; Feeding patterns, digestive tract systems.	B.Sc. (Hons) Biological Science, Semester-IV	Systems Physiology (BS C-8)
		Unit 2: Physiology of Respiration: Pulmonary ventilation; Respiratory volumes and capacities.	B.Sc. (Hons) Zoology, Semester-IV	Animal Physiology: Life Sustaining Systems (CC IX)
	Practicals:	Enumeration of RBC using haemocytometer. Continous evaluation based on performance and record maintenance.	B.Sc. (Hons) Biological Science, Semester-IV	Systems Physiology (BS C-8)
		Enumeration of white blood cells using haemocytometer (repeat). Enumeration of red blood cells using haemocytometer (repeat). Preparation of haemin and haemochromogen crystals. Examination of sections of mammalian oesophagus, stomach, duodenum, ileum, rectum, liver, trachea, lung, kidney.	B.Sc. (Hons) Zoology, Semester-IV	Animal Physiology: Life Sustaining Systems (CC IX)
		Estimation of haemoglobin using Sahli's haemoglobinometer, Examination of sections of mammalian stomach, lung, kidney, pancreas, ovary, testis, thyroid.	GE II Zoology, Semester-IV	GE II: Human Physiology

MARCH	Theory:	Unit 2 Gas exchange in organism; Generation and utilization of energy: Digestion of food in different animals.	B.Sc. (Hons) Biological Science, Semester-IV	Systems Physiology (BS C-8)
		Unit 4 Integrative Physiology: An overview of neuronal structure and function; Sensory physiology – mechanoreceptors and chemoreceptors.		
		Unit 2: Physiology of Respiration: Transport of oxygen and carbon dioxide in blood; Respiratory pigments, Dissociation curves and the factors influencing it.	B.Sc. (Hons) Zoology, Semester-IV	Animal Physiology: Life Sustaining Systems (CC IX)
	Practicals:	Enumeration of total count of WBC using haemocytometer.	B.Sc. (Hons) Biological Science, Semester-IV	Systems Physiology (BS C-8)
	Study of lung volumes and capacities by spirometer.	B.Sc. (Hons) Zoology, Semester-IV	Animal Physiology: Life Sustaining Systems (CC IX)	
	Recording of blood pressure using a sphygmomanometer			
	Recording of blood pressure, Repeat of histology sections.	GE II Zoology, Semester-IV	GE II: Human Physiology	
Test	Mid-term Test: Test questions in DU exam pattern of covered topics.	B.Sc. (Hons) Biological Science, Semester-IV	Systems Physiology (BS C-8)	
	Mid-term Test: Test questions in DU exam pattern of covered topics.	B.Sc. (Hons) Zoology, Semester-IV	Animal Physiology: Life Sustaining Systems (CC IX)	
APRIL	Theory:	Unit 4 Integrative Physiology: Thermoreceptors, photoreceptors and electroreceptors; Endocrine systems in animals and their physiological effects.	B.Sc. (Hons) Biological Science, Semester-IV	Systems Physiology (BS C-8)
		Unit 2: Physiology of Respiration: Carbon monoxide poisoning; Control of respiration.	B.Sc. (Hons) Zoology, Semester-IV	Animal Physiology: Life Sustaining Systems (CC IX)

Practicals:	Revision exercises and test, viva for practical exams.	B.Sc. (Hons) Biological Science, Semester-IV	Systems Physiology (BS C-8)
	Revision and mock test.	B.Sc. (Hons) Zoology, Semester-IV	Animal Physiology: Life Sustaining Systems (CC IX)
	Revision exercises and test, viva for practical exams.	GE II Zoology, Semester-IV	GE II: Human Physiology



SEMESTER WISE TEACHING PLAN

SRI VENKATESWARA COLLEGE

Jan-April, 2017-2018 (Even Semester)

Name of the Faculty: Dr. Vartika Mathur

Department: Zoology

Semester: II/IV/VI –

Theory & Practicals : B.Sc. (H) Zoology Sem VI

(Wildlife Conservation and management), B.Sc. (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	Unit 1: Introduction to Wild Life Values of wild life - positive and negative; Conservation ethics; Importance of conservation; Causes of depletion; World conservation strategies.	B.Sc. (Hons.) Zoology Sem VI (TZH)	Wildlife Conservation and management DSE-XI
		Unit 1: Introduction to Animal Behavior and Chronobiology Origin and history of ethology	BSc (H) Biological Sciences Sem VI	Animal behavior & chronobiology (DSE III)
	Practicals	<ul style="list-style-type: none"> • Identification of flora, mammalian fauna, avian fauna, herpeto-fauna • Demonstration of basic equipment needed in wildlife studies use, care and maintenance (Compass, Binoculars, Spotting scope, Range Finders) 	B.Sc. (Hons.) Zoology Sem VI (TZH)	Wildlife Conservation and management DSE-XI
		<ul style="list-style-type: none"> • To study different types of animal behaviour • Nesting behaviour, social behaviour 	BSc (H) Biological Sciences Sem VI	Animal behavior & chronobiology (DSE III)
		<ul style="list-style-type: none"> • Annelids - <i>Aphrodite, Nereis, Heteronereis, Sabella, Serpula, Chaetopterus, Pheretima, Hirudinaria</i> • T.S. through pharynx, gizzard, and typhlosolar intestine of earthworm 	B.Sc. (Hons.) Zoology Sem II FZH	Non-chordata-II CC-III
February	Theory	Protected areas National parks & sanctuaries, Community reserve; Important features of protected areas in India; Tiger conservation - Tiger reserves in India; Management challenges in Tiger reserve.	B.Sc. (Hons.) Zoology Sem VI (TZH)	Wildlife Conservation and management DSE-XI
		Social Behavior Insects' society; Honey bee: Society organization, polyethism, foraging, round dance, waggle dance, Experiments to prove distance and direction component of dance, learning ability in honey bee, formation of new hive/queen	BSc (H) Biological Sciences Sem VI	Animal behavior & chronobiology (DSE III)

	Practicals:	<ul style="list-style-type: none"> Demonstration of basic equipment needed in wildlife studies use, care and maintenance Global Positioning System, Various types of Cameras and lenses) Familiarization and study of animal evidences in the field; Identification of animals through pug marks, hoof marks, scats, pellet groups, nest, antlers etc. 	B.Sc. (Hons.) Zoology Sem VI (TZH)	Wildlife Conservation and management DSE-XI
		Non-chordata II <ul style="list-style-type: none"> Molluscs - <i>Chiton, Dentalium, Pila, Doris, Helix, Unio, Ostrea, Pinctada, Sepia, Octopus, Nautilus</i> Echinodermates - <i>Pentaceros/Asterias, Ophiura, Clypeaster, Echinus, Cucumaria</i> and <i>Antedon</i> 	B.Sc. (Hons.) Zoology Sem II	Non-Chordata II CC-III
		<ul style="list-style-type: none"> To study the behavioral responses of wood lice to dry condition. To study behavior responses of wood lice in response to humid condition 	BSc (H) Biological Sciences Sem VI	Animal behavior & chronobiology (DSE III)
March	Theory	<ul style="list-style-type: none"> Faecal analysis of ungulates and carnivores: Faecal samples, slide preparation, Hair identification, Pug marks and census method 	B.Sc. (Hons.) Zoology Sem VI (TZH)	Wildlife Conservation and management DSE-XI
		Mechanisms of Behavior <ul style="list-style-type: none"> Innate behavior, Instinct, Stimulus filtering, Sign stimuli, Code breakers 	BSc (H) Biological Sciences Sem VI	Animal behavior & chronobiology (DSE III)
	Practical	<ul style="list-style-type: none"> Trail / transect monitoring for abundance and diversity estimation of mammals and bird (direct and indirect evidences) PCQ, Circular, Square & rectangular plot methods for ground cover assessment, 	B.Sc. (Hons.) Zoology Sem VI TZH	Wildlife Conservation and management DSE-XI
		<ul style="list-style-type: none"> To study the phototaxis behavior in insect larvae. 	Biological Sciences Sem VI (TBS)	Animal behavior & chronobiology (DSE III)
	Assignment	Wild life conservation and Management Concept of climax persistence/ Ecology of perturbation.	B.Sc. (Hons.) Zoology Sem VI TZH	Wildlife Conservation and management DSE-XI
	Animal behavior and chronobiology Topic: Animal behavior related concepts	Biological Sciences Sem VI (TBS)	Animal behavior & chronobiology (DSE III)	
	Mid Term Test Animal behavior and chronobiology 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
APRIL	Theory:	Revision	B.Sc. (Hons.) Zoology Sem VI (TZH)	Wildlife Conservation and management DSE-XI
		Revision	BSc (H) Biological Sciences Sem VI	Animal behavior & chronobiology (DSE III)
	Practicals:	Revision/ mock exam	B. Sc. Life Sciences Sem-II	Comparative Anatomy and developmental biology
		Revision/ mock exam	B.Sc. (Hons.) Zoology Sem II FZH	Non-Chordata II CC-III
		Revision/ mock exam	BSc (H) Biological Sciences Sem VI	Animal behavior & chronobiology (DSE III)



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

Name of the Faculty: Dr. Om Prakash

Department: Zoology

Semester: II/IV/VI

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

		Biotechnology Polymerase Chain Reaction	B.Sc. (Hons.) Zoology Sem VI TZH	DSE I
	Practical	Cell Biology 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
	Mid Term Test	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
APRIL	Theory:	Cell Biology Unit 6: Nucleus Structure of Nucleus: Nuclear envelope, Nuclear pore complex, Nucleolus Chromatin: Euchromatin and Hetrochromatin and packaging (nucleosome) Unit 4: Mitochondria and Peroxisomes Mitochondria: Structure, Semi-autonomous nature, Endosymbiotic hypothesis Mitochondrial Respiratory Chain, Chemiosmotic hypothesis	B.Sc. (Hons.) Zoology Sem II TZH	CC IV
		Biotechnology DNA Finger Printing DNA micro array	B.Sc. (Hons.) Zoology Sem VI TZH	DSE I
	Practicals:	Cell Biology 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 2018 (Jan-April)

Name of the Faculty: Dr. AjaibSingh

Department: Zoology

Semester: II/IV/VI

Month		Topics	Course	Paper Code/Name
January	Theory	Agranulocytes : Neutrophils, basophils, Eosinophils	B.Sc LifeSciences Sem VI	DSE II Immunology
		Unit 2: Carbohydrate metabolism: Glycolysis, citric acid cycle, HMP pathway, GNG, glycogenesis, glycogenolysis.	B.Sc Zoology Sem IV	CC X Biochemistry of metabolic processes
	Practicals	Cloning vectors: plasmids, cosmids, phagemids, phage lambda, M13, BAC, YAC, MAC and expression vectors.	B.Sc Zoology Sem VI	DSE Animal Biotechnology
		To perform Ouchterlony double immunodiffusion assay. ABO blood group determination.	B.Sc LifeSciences Sem VI (Three batches)	DSEII Immunology
February	Theory	Granulocytes : Lymphocytes (Tcell and B cell), Monocytes	B.Sc LifeSciences SemVI	DSE II Immunology
		Unit 5: Oxidative phosphorylation. Redox system, ETC, inhibitors and uncouplers.	B.Sc Zoology SemIV	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 SemVI	DSE Animal Biotechnology

	Practicals:	Cell counting and viability of splenocytes. ELISA Immunoelectrophoresis	B.Sc Life Sciences SemVI (Twobatches) DSEII Immunology
March	Theory	Thymus and Lymph Nodes – structure and function	B.Sc Life Sciences SemVI DSE II Immunology
		Unit 1: Catabolism vs anabolism. Compartmentalization of metabolic pathways, shuttle systems and transporters.	B.Sc Zoology SemIV CC X Biochemistry of metabolic processes
		Recombinant DNA in medicine, recombinant insulin and human growth hormone. Gene therapy.	B.Sc Zoology SemVI DSE Animal Biotechnology
	Practicals	Study of lymphoid organs: spleen, thymus, lymph nodes. Preparation of stained blood film.	B.Sc Life Sciences SemVI (Three batches) DSEII Immunology
	Mid Term Test	Test of B.Sc Zoology SemIV (Biochemistry of metabolic processes) Assignments	
		Test of B.Sc Zoology SemVI (Animal. Biotechnology) Assignments	

APRIL	Theory:	Spleen, MALT, GALT, CALT, Peyers Patches	B.Sc Life Sciences SemVI	DSE II Immunology
		Unit 1: ATP as energy currency, coupled reactions, use of reducing equivalents and cofactors. Intermediary metabolism.	B.Sc Zoology SemIV	CC X Biochemistry of metabolic processes
		Animalbiotechnology Animal cell culture.	B.Sc Zoology SemVI	DSE Animal Biotechnology
	Practicals:	Immunology Revision Mock tests.	B.Sc LifeSciences SemVI (Three batches)	DSEII Immunology



**SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE**

January -May 2018, (Session 2017-18)

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) Zoology Semester IV (Animal Physiology: Controlling Life Sustaining Systems)

Month		Topics	Course	Paper Code/Name
JANUARY	Theory:	<p align="center">Concepts Of Evolutionary Biology 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;</p>	B.Sc. H . Biological Science Sem VI	BS-C14 (Concepts Of Evolutionary Biology)
		<p align="center">Evolutionary Biology 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)</p>	B.Sc. (H) Zoology Sem VI	CC-14 (Evolutionary Biology)
		Brief introduction of the aquatic biomes: Freshwater ecosystem (lakes, wetlands, streams and rivers), estuaries	BSc (H) Zoology GE IV Sem IV	GE IV (Aquatic Biology)

	Practicals:	<p>Concepts Of Evolutionary Biology</p> <ul style="list-style-type: none"> • Study of types of fossils (e.g. trails, casts and moulds and others) and Index fossils of Palaeozoic era • Vestigial, Analogous and Homologous organs using photographs, models or specimen • Calculations of genotypic, phenotypic and allelic frequencies from the data provided • Simulation experiments using coloured beads/playing cards to understand the effects of Natural Selection 	B.Sc. H . Biological Science Sem VI	BS-C14 (Concepts Of Evolutionary Biology)
		<p>Genetics and Evolutionary Biology</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>System Physiology</p> <ul style="list-style-type: none"> • Syllabus overview, general instructions and maintenance of lab record. • Effect of isotonic hypotonic hypertonic salines on erythrocytes. 	BSc (H) Zoology Semester IV	CC-IX (Animal Physiology: Controlling Life Sustaining Systems)
FEBRUARY	Theory:	<p>Concepts Of Evolutionary Biology</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>Evolutionary Biology</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>Aquatic Biology</p> <p>Intertidal zones, oceanic pelagic zone, marine benthic zone and coral reefs. Lakes: Origin, and classification</p>	BSc (H) Zoology GE IV Sem IV	GE IV (Aquatic Biology)
	Practicals:	<p>Concepts Of Evolutionary Biology</p> <ul style="list-style-type: none"> • Simulation experiments using coloured beads/playing cards to understand the effects of Bottleneck effect and Founder effect • Selection Exemplifying Adaptive strategies (Colouration, Mimetic form, Co-adaptation and co-evolution; Adaptations to aquatic, 	B.Sc. H . Biological Science Sem VI	BS-C14 (Concepts Of Evolutionary Biology)

		fossorial and arboreal modes of life) using Specimens		
		<p>Genetics and Evolutionary Biology 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>Animal Physiology:Life Sustaining Systems</p> <ul style="list-style-type: none"> • Enumeration of white blood cells using haemocytometer (repeat) • Enumeration of red blood cells using haemocytometer (repeat) • Preparation of haemin and haemochromogen crystals • Examination of sections of mammalian oesophagus, stomach, duodenum, ileum, rectum liver, trachea, lung, kidney 	BSc (H) Zoology Semester IV	CC-IX (Animal Physiology: Controlling Life Sustaining Systems)
MARCH	Theory:	<p>Concepts Of Evolutionary Biology 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>Evolutionary Biology 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>Aquatic Biology Lake as an Ecosystem</p>	BSc (H) Zoology GE IV Sem IV	GE IV (Aquatic Biology)
	Practicals:	<p>Concepts Of Evolutionary Biology</p> <ul style="list-style-type: none"> • <i>Connecting links/transitional forms -</i> • Living fossils • Sampling of human height, weight and BMI for continuous variation • Sampling for discrete characteristics 	B.Sc. H . Biological Science Sem VI	BS-C14 (Concepts Of Evolutionary Biology)

	(dominant vs recessive) for discontinuous variations			
	Genetics and Evolutionary Biology Darwin's Finches with diagrams/ cut outs of beaks of different species Study of Linkage, recombination, gene mapping using the data.	BSc (P) Life Science Sem IV	CC-4 (Genetics and Evolutionary Biology)	
	Animal Physiology:Life Sustaining Systems <ul style="list-style-type: none"> Study of lung volumes and capacities by spirometry Recording of blood pressure using a sphygmomanometer	BSc (H) Zoology Semester IV	CC-IX (Animal Physiology: Controlling Life Sustaining Systems)	
Assignment	Concepts Of Evolutionary Biology	B.Sc. H . Biological Science Sem VI	BS-C14 (Concepts Of Evolutionary Biology)	
	Evolutionary Biology	B.Sc. (H) Zoology Sem VI	CC-14 (Evolutionary Biology)	
	Aquatic Biology	BSc (H) Zoology GE IV Sem IV	GE IV (Aquatic Biology)	
	Concepts Of Evolutionary Biology	B.Sc. H . Biological Science Sem VI	BS-C14 (Concepts Of Evolutionary Biology)	
	Evolutionary Biology	B.Sc. (H) Zoology Sem VI	CC-14 (Evolutionary Biology)	
	Aquatic Biology	BSc (H) Zoology GE IV Sem IV	GE IV (Aquatic Biology)	
TESTS	Concepts Of Evolutionary Biology	B.Sc. H . Biological Science Sem VI	BS-C14 (Concepts Of Evolutionary Biology)	
	Evolutionary Biology	B.Sc. (H) Zoology Sem VI	CC-14 (Evolutionary Biology)	
	Aquatic Biology	BSc (H) Zoology GE IV Sem IV	GE IV (Aquatic Biology)	
APRIL	Theory	Concepts Of Evolutionary Biology 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	B.Sc. H . Biological Science Sem VI	BS-C14 (Concepts Of Evolutionary Biology)
		Evolutionary Biology 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	B.Sc. (H) Zoology Sem VI	CC-14 (Evolutionary Biology)
		Aquatic Biology Lake morphometry, Physico–chemical Characteristics: Light, Temperature, Thermal stratification	BSc (H) Zoology GE IV Sem IV	GE IV (Aquatic Biology)
	Practicals:	Concepts Of Evolutionary Biology <ul style="list-style-type: none"> Digit reduction in horse phylogeny (study from chart) Study of horse skull to illustrate key features 	B.Sc. H . Biological Science Sem VI	BS-C14 (Concepts Of Evolutionary Biology)

	<p>in equine evolution</p> <ul style="list-style-type: none"> • Study of monkey and human skull - • Revision and mock practical test 		
	<p>Genetics and Evolutionary Biology</p> <ul style="list-style-type: none"> • Revision and mock practical test 	BSc (P) Life Science Sem IV	CC-4 (Genetics and Evolutionary Biology)
	<p>Animal Physiology:Life Sustaining Systems</p> <ul style="list-style-type: none"> • Revision and mock practicals 	BSc (H) Zoology Semester IV	CC-IX (Animal Physiology: Controlling Life Sustaining Systems)



SEMESTER WISE TEACHING PLAN (2017-2018)
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
		1. Study of fossils from models/ pictures 2. Study of homology and analogy from suitable specimens 3. Study and verification of Hardy-Weinberg Law by chi square analysis	B.Sc. (H) Zoology Semester VI	Evolutionary Biology
FEBRUARY	Theory	Agrobacterium mediated transformation and other methods of plant	B.Sc. (H) Zoology Semester VI	Animal Biotechnology

		transformation		
		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	Study of homology and analogy from suitable specimens/ pictures . Study of fossil evidences from plaster cast models and pictures Phylogeny of horse with diagrams/ cut outs of limbs and teeth of horse ancestors <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
		Teaching Bioinformatic tools and introduction to databases, Alignment using clustal X and construction of phylogenetic tree	B.Sc. (H) Zoology Semester VI	Evolutionary Biology
MARC H	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	B.Sc. (H.) Life Sciences Semester IV	Genetics and Evolutionary Biology

		Suppressor mutations,		
	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
		Graphical representation and interpretation of data of height/ weight of a sample of 100 humans in relation to their age and sex. Mock test	B.Sc. (H) Zoology Semester VI	Evolutionary Biology
	Assignment	Assignment of Biotechnology		
	Mid Term Test			
APRIL	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
		Demonstration of role of following using simulation studies i) natural selection ii) bottleneck effect in changing allele frequencies iii) Founder effect in changing allele frequencies	B.Sc. (H) Zoology Semester VI	Evolutionary Biology



SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
Academic Planner: Even Semester 2017 (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 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	TLS DSE II: Immunology
	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	B.Sc (H) Zoology III year VI semester (TZH)	CORE COURSE XIII

		<p>COMPARATIVE ANATOMY AND DEVELOPMENTAL BIOLOGY OF VERTEBRATES</p> <p>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;</p>	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	TLS DSE II: Immunology
	Practicals:	<p>DEVELOPMENTAL BIOLOGY</p> <p>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)</p>	B.Sc (H) Zoology III year VI semester (TZH)	CORE COURSE XIII
		<p>Comparative anatomy and developmental biology</p> <p>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.</p>	B.Sc. Life sciences sem II (FLS)	LS Core II
		Unit 6: Immune system in health and disease 10 Gell and Coombs		
March	Theory	<p>DEVELOPMENTAL BIOLOGY</p> <p>Early development of frog and chick up to gastrulation; Embryonic induction and organizers</p>	B.Sc (H) Zoology III year VI semester (TZH)	CORE COURSE XIII
		<p>Comparative anatomy and developmental biology</p> <p>Unit 10 cont.. Types of morphogenetic movements; Early development of frog and human (up to formation of gastrula); Fate maps, Fate of germ layers</p>	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	TLS DSE II: Immunology
	Practical	<p>DEVELOPMENTAL BIOLOGY</p> <p>Study of the developmental stages and life cycle of Drosophila from stock culture</p>	B.Sc (H) Zoology III year VI semester (TZH)	CORE COURSE XIII

	Comparative anatomy and developmental biology <ul style="list-style-type: none"> Study of the different types of placenta-histological sections through permanent slides or photomicrograph. 	B.Sc. Life sciences sem II (FLS)	LS core II
<u>Assignment</u>	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)	

	<u>Mid Term Test</u>	Topics covered before mid semester break and from assignment		
APRIL	Theory:	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	B.Sc (H) Zoology III year VI semester (TZH)	CORE COURSE XIII

	<p>Comparative anatomy and developmental biology</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	TLS DSE II: Immunology
Practicals:	<p>DEVELOPMENTAL BIOLOGY</p> <p>Study of different sections of placenta (photomicrograph/ slides)</p> <p>Submission of project report on Drosophila culture/chick embryo development</p> <ul style="list-style-type: none"> • Revision/ mock exam 	B.Sc (H) Zoology III year VI semester (TZH)	CORE COURSE XIII
	<p>Comparative anatomy and Developmental Biology</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"> • Revision/ mock exam 	B.Sc. Life sciences Sem II (FLS)	LS Core II



SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
Jan-April, 2017-2018 (Even Semester)

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

Month		Topics	Course	Paper Code/Name
jan	Theory	Unit 1: Digestion and Absorption of Food	B.Sc. IV SEM	GE-II, Human Physiology
		Unit 5: Working of the immune system Structure and functions of MHC	Life Sc. Sem-VI	DSE-II, Immunology
	Practicals	Unit 1: Physiology of Digestion	Zoo(H), SEM-IV	CC-IX- Physiology: Life sustaining systems
		Public health & Hygiene <ul style="list-style-type: none"> • Estimate the blood glucose level by glucometer / kit • To study the functioning and clinical significance of sphygmomanometer. • To Know your BMI 	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)	LS Core II
		1. Demonstration of lymphoid organs 2. Histological study of spleen, thymus and lymph nodes through slides/ photographs	B.Sc. Life Sciences Sem VI	DSE-II, IMMUNOLOGY
February	Theory	Unit 3: Respiratory Physiology	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"> Unit 4: Blood 	Zoo(H),SEM-IV	CC-IX- Physiology: Life sustaining systems
	Practicals:	Public Health & Hygiene <ul style="list-style-type: none"> To study the medically important organisms- Rat, Cockroach, Ants, Mosquitoes, Housefly 	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
		3. Preparation of stained blood film to study various types of blood cells.,4. Ouehterlony's double immuno-diffusion method	B.Sc. Life sciences sem VI	DSE-II, IMMUNOL OGY
March	Theory	<ul style="list-style-type: none"> Unit 5: Cardiovascular Physiology Unit 4: Renal Physiology 	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"> Unit 5: Physiology of Heart 	Zoo(H),SEM-IV	CC-IX- Physiology: Life sustaining systems
	Practical	Public Health & Hygiene <ul style="list-style-type: none"> To estimate the purity of water by MPN method To study the different Life style diseases- diabetes, Hypertension, TB, PCOD 	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)	LS Core II
		5. ABO blood group determination. 6. Cell counting and viability test from splenocytes of farm bred animals/cell lines.	B.Sc. Life sciences sem VI	DSE-II, IMMUNOL OGY

	<u>Assignment</u>	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: Life sustaining systems
	<u>Mid Term Test</u>	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)	LS Core II
		Test will include all the topics covered	B.Sc. Life sciences sem VI	DSE-II, IMMUNOLOGY
APRIL	Theory:	Unit 6: Endocrine and Reproductive Physiology	B.Sc. IV SEM	GE-II, Human Physiology
		Revision	Zoo(H),SEM-IV	CC-IX- Physiology: Life sustaining systems
	Practicals:	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)	LS Core II
		Revision/ mock exam 7. Demonstration Of a) ELISA b) Immunoelectrophoresis Revision/ mock exam	B.Sc. Life sciences sem VI	DSE-II, IMMUNOLOGY



SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
Jan-April, 2017-2018 (Even Semester)

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

Month		Topics	Course	Paper Code/Name
January	Theory	Management of excess population <ul style="list-style-type: none"> 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
		Biological Rhythm <ul style="list-style-type: none"> Types and characteristics of biological rhythms: Short- and Long- term rhythms; Circadian rhythms; Tidal rhythms and Lunar rhythms; 	BSc (H) Biological Sciences Sem VI	Animal behavior & chronobiology (DSE III)
		Introduction to Coelomates <ul style="list-style-type: none"> Evolution of coelom and metamerism 	B.Sc. (Hons.) Zoology Sem II (FZH)	Non-Chordata II CC-III
	Practicals	<ul style="list-style-type: none"> Carapace and plastron of turtle /tortoise Study of developmental stages of frog 	B. Sc. Life Sciences Sem-II	Comparative Anatomy and developmental biology
		<ul style="list-style-type: none"> Annelids - <i>Aphrodite, Nereis, Heteronereis, Sabella, Serpula, Chaetopterus, Pheretima, Hirudinaria</i> T.S. through pharynx, gizzard, and typhlosolar intestine of earthworm 	B.Sc. (Hons.) Zoology Sem II FZH	Non-chordata-II CC-III
February	Theory	<ul style="list-style-type: none"> Habitat analysis, Physical parameters: Topography, Geology, Soil and water; Biological Parameters: food, cover, forage, browse and cover estimation; 	B.Sc. (Hons.) Zoology Sem VI (TZH)	Wildlife Conservation and management DSE-XI
		Altruism <ul style="list-style-type: none"> Reciprocal altruism, Hamilton's rule and inclusive fitness with suitable examples Mechanisms of Behavior <ul style="list-style-type: none"> Innate behavior, Instinct, Stimulus filtering, Sign stimuli, Code breakers 	B.Sc (H) Biological Sciences Sem VI	Animal behavior & chronobiology (DSE III)

		Arthropoda <ul style="list-style-type: none"> General characteristics and Classification up to classes Vision and Respiration in Arthropoda 	B.Sc. (Hons.) Zoology Sem II FZH	Non-Chordata II CC-III
	Practicals:	<ul style="list-style-type: none"> Disarticulated skeleton of fowl and rabbit Study of developmental stages of frog 	B. Sc. Life Sciences Sem-II	Comparative Anatomy and developmental biology
		Non-chordata II <ul style="list-style-type: none"> Molluscs - <i>Chiton, Dentalium, Pila, Doris, Helix, Unio, Ostrea, Pinctada, Sepia, Octopus, Nautilus</i> Echinodermates - <i>Pentaceros/Asterias, Ophiura, Clypeaster, Echinus, Cucumaria</i> and <i>Antedon</i> 	B.Sc. (Hons.) Zoology Sem II	Non-Chordata II CC-III
March	Theory	Management planning of wild life in protected areas <ul style="list-style-type: none"> Estimation of carrying capacity; Eco tourism / wild life tourism in forests; Concept of climax persistence; Ecology of perturbation. 	B.Sc. (Hons.) Zoology Sem VI (TZH)	Wildlife Conservation and management DSE-XI
		Sexual Behavior <ul style="list-style-type: none"> Asymmetry of sex, Sexual dimorphism mate choice, Intra-sexual selection (male rivalry), Inter-sexual selection (female choice), Infanticide, Consequences of mate choice for female fitness, Sexual conflict for male verses female parental care, Courtship behavior in 3-spine stickleback 	BSc (H) Biological Sciences Sem VI	Animal behavior & chronobiology (DSE III)
		Arthropoda <ul style="list-style-type: none"> Metamorphosis in Insects Social life in bees and termites 	B.Sc. (Hons.) Zoology Sem II FZH	Non-Chordata II CC-III
	Practical	<ul style="list-style-type: none"> To study of different types of placenta Temporary mount of rat sperm through slides 	B. Sc. Life Sciences Sem-II	Comparative Anatomy and developmental biology
		Non-chordata II <ul style="list-style-type: none"> Arthropods - <i>Limulus, Palamnaeus, Palaemon, Daphnia, Balanus, Sacculina, Cancer, Eupagurus, Scolopendra, Julus, Bombyx, Periplaneta</i>, termites and honey bees Onychophora - <i>Peripatus</i> 	B.Sc. (Hons.) Zoology Sem II FZH	Non-Chordata II CC-III
	Assignment	WILD LIFE CONSERVATION AND MANAGEMENT Concept of climax persistence/ Ecology of perturbation.		B.Sc. (Hons.) Zoology Sem VI TZH
Animal behavior and chronobiology Topic: Animal behavior related concepts		Biological Sciences Sem VI (TBS)	Animal behavior & chronobiology (DSE III)	

		Non-chordata –II <ul style="list-style-type: none"> • Onychophora General characteristics and Evolutionary significance & Water-vascular system in Asteroidea 	B.Sc. (Hons.) Zoology Sem II FZH	Non-Chordata II CC-III
Mid Term Test		Animal behavior and chronobiology 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
		Test will include all the topics covered	B.Sc. (Hons.) Zoology Sem II FZH	
APRIL	Theory:	Unit 4:Population estimation <ul style="list-style-type: none"> • Population density, Natality, Birth rate, Mortality, fertility schedules and sex ratio computation; 	B.Sc. (Hons.) Zoology Sem VI (TZH)	Wildlife Conservation and management DSE-XI
		Revision	B.Sc. (H) Biological Sciences Sem VI	Animal behavior & chronobiology (DSE III)
	Practicals:	Revision/ mock exam	B. Sc. Life Sciences Sem-II	Comparative Anatomy and developmental biology
		Revision/ mock exam	B.Sc. (Hons.) Zoology Sem II FZH	Non-Chordata II CC-III
		Revision/ mock exam	BSc (H) Biological Sciences Sem VI	Animal behavior & chronobiology (DSE III)



SEMESTER WISE TEACHING PLAN (2017-2018)
SRI VENKATESWARA COLLEGE

January-May, 2018

Name of the Faculty: Dr. Richa Misra

Department: Zoology

Semester: II, IV, VI (Even)

Month		Topics	Course	Paper Code/Name
January	Theory: (1+2+2)	Respiratory Physiology: Ventilation, External and internal Respiration, Transport of oxygen and carbon dioxide in blood	B. Sc. (H) 1 st year Sem II	GE-II/Human Physiology
		Introduction to Research Methodology, Importance of proposals and surveys, Overview of research paper	B. Sc. (H) Zoology 2 nd year Sem IV	SEC/Research Methodology
		Animal Systematics, Biodiversity studies, representative study of non-chordates, chordates	B. Sc. (H) Biological Sciences 1 nd year Sem II	BS-C4/Biodiversity
	Practicals: (4+4+4=12)	Theory and Usage of various search engines such as Pubmed, Google scholar, Scopus, Web of Science	B. Sc. (H) Zoology 2 nd year Sem IV	SEC/ Research Methodology
		Restriction Mapping, Transformation efficiency, Introduction to Genomic DNA and plasmid DNA isolation	B. Sc. (H) Zoology 3 rd year Sem VI	DSE/ Animal Biotechnology
		1. Study of Mendelian Inheritance mid gene interactions (Non-Mendelian Inheritance) using suitable examples. Verify the results using Chi-square test. 7. Brief about the museum visit.	BSc. Life Science 2 nd year Sem IV	CC-IV/Genetics and Evolutionary Biology
February	Theory:	Factors affecting transport of gases, Introduction and significance of Renal Physiology, Cardiovascular physiology	B. Sc. (H) 1 st year Sem II	GE-II/Human Physiology
		Importance of Referencing and Understanding of Plagiarism, Discussion of various areas of Research, Motivation for Research	B. Sc. (H) Zoology 2 nd year Sem IV	SEC/Research Methodology
		Mapping of biodiversity, GPS, GIS/remote sensing, Conservation of biodiversity	B. Sc. (H) Biological Sciences 1 nd year Sem II	BS-C4/Biodiversity
	Practicals:	Types of Reference Styles, Learning usage of Endnote, Exercises related to Plagiarism	B. Sc. (H) Zoology 2 nd year Sem IV	SEC/ Research Methodology
		Genomic DNA and plasmid DNA isolation, PCR, DNA Fingerprinting	B. Sc. (H) Zoology 3 rd year Sem VI	DSE/ Animal Biotechnology
		2. Study of Linkage, recombination, gene mapping using the data. 5. Study of homology and analogy from suitable specimens/ pictures	BSc. Life Science 2 nd year Sem IV	CC-IV/Genetics and Evolutionary Biology
March	Theory:	Cardiac cycle, Factors, ECG	B. Sc. (H) 1 st year Sem II	GE-II/Human Physiology
		Concept of Null and alternate hypothesis, Discussion about Survey topics and Proposal topics with students	B. Sc. (H) Zoology 2 nd year Sem IV	SEC/Research Methodology
		Bioprospecting- Microorganisms, Immunosuppressive agents and therapeutic agents	B. Sc. (H) Biological Sciences 1 nd year Sem II	BS-C4/Biodiversity
	Practicals	Hypothesis building, Role of statistics, Types of graphs and its importance in Data presentation	B. Sc. (H) Zoology 2 nd year Sem IV	SEC/ Research Methodology

		Southern, Northern and Western Blotting, DNA sequencing, Restriction digestion	B. Sc. (H) Zoology 3 rd year Sem VI	DSE/ Animal Biotechnology
		3. Study of Human Karyotypes (normal and abnormal). 4. Study of fossil evidences from plaster cast models and pictures	BSc. Life Science 2 nd year Sem IV	CC-IV/Genetics and Evolutionary Biology
	Mid Term Test	Test questions in DU exam pattern of covered topics	B. Sc. (H) Biological Sciences 1 nd year Sem II	BS-C4/Biodiversity
		Test questions in DU exam pattern of covered topics	B. B. Sc. (H) 1 st year Sem II	GE-II/Human Physiology
April	Theory:	Discussion of Mid-term Test paper and previous year question papers, Revision of topics	B. Sc. (H) 1 st year Sem II	GE-II/Human Physiology
		Presentations of Research Proposal and Survey Reports	B. Sc. (H) Zoology 2 nd year Sem IV	SEC/Research Methodology
		Discussion of Mid-term Test paper and previous year question papers, Revision of topics	B. Sc. (H) Biological Sciences 1 nd year Sem II	BS-C4/Biodiversity
	Practicals:	Revision exercises and test, viva for practical exams	B. Sc. (H) Zoology 2 nd year Sem IV	SEC: Research Methodology
		Revision exercises and test, viva for practical exams, checking of project report	B. Sc. (H) Zoology 3 rd year Sem VI	DSE: Animal Biotechnology
		6. Charts: a) Phylogeny of horse with diagrams/ cut outs of limbs and teeth of horse ancestors b) Darwin's Finches with diagrams/ cut outs of beaks of different species. Viva for practical exams, checking of report	BSc. Life Science 2 nd year Sem IV	CC-IV/Genetics and Evolutionary Biology



SEMESTER WISE TEACHING PLAN (2017-18)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Namita Nayyar

Department: Zoology

Semester: Even IV, VI

Month		Topics	Course	Paper Code/Name
January	Theory:	Unit 6: Circulatory System - General plan of circulation, evolution of heart and aortic arches	BSc. Zoology Hons. IV Sem	Comparative anatomy of Vertebrates: CCVIII
		Unit 6 History of Life - Major Events in History of Life Unit 7: Introduction to Evolutionary Theories Lamarckism, Darwinism, Neo Darwinism	BSc. Life Science IV Sem	Genetics and Evolutionary Biology: CCIV
		Unit 2: Historical review of evolutionary concept: Lamarckism, Darwinism, Neo-Darwinism Unit 5: Population genetics: Hardy-Weinberg Law (statement and derivation of equation, application of law to human Population);	B.Sc. (H) Zoology VI Sem	Evolutionary Biology CCXIV
	Practicals:	-Study of scales of fishes -Frog osteology -Varanus osteology	BSc. Zoology Hons. IV Sem	Comparative anatomy of Vertebrates: CCVIII
		1. Study of Mendelian Inheritance mid gene interactions (Non-Mendelian Inheritance) using suitable examples. Verify the results using Chi-square test. 7. Brief about the museum visit.	BSc. Life Science IV Sem	Genetics and Evolutionary Biology: CCIV
		1. Preparation of temporary stained squash of onion root tip to study various stages of mitosis . 4. Preparation of permanent slide to demonstrate: i DNA by Feulgen reaction	B.Sc. Zoology II Sem	Cell Biology CCIV
		Unit 6: Urinogenital System - Succession of kidney, Evolution of urinogenital ducts, Types of mammalian uteri Unit 4: Respiratory System - Lungs and air sacs; Accessory respiratory organs	BSc. Zoology Hons. IV Sem	Comparative anatomy of Vertebrates: CCVIII
February	Theory:			

		<p>Unit 8: Direct Evidences of Evolution Types of fossils, Incompleteness of fossil record, Dating of fossils, Phylogeny of Horse</p> <p>Unit 9: Processes of Evolutionary Change Organic variations; Isolating Mechanisms; Natural selection (Example: Industrial melanism);</p>	BSc. Life Science IV Sem	Genetics and Evolutionary Biology: CCIV
		<p>Unit 5: Population genetics: Evolutionary forces upsetting H-W equilibrium. Natural selection (concept of fitness, selection coefficient, derivation of one unit of selection for a dominant allele, genetic load, mechanism of working, types of selection, density-dependent selection, heterozygous superiority, kin selection, adaptive resemblances, sexual selection. Genetic Drift (mechanism, founder's effect, bottleneck phenomenon; Role of Migration and Mutation in changing allele frequencies</p>	B.Sc. (H) Zoology VI Sem	Evolutionary Biology CCXIV
	Practicals:	<ul style="list-style-type: none"> - Complete Varanus osteology - Fowl osteology - Rabbit osteology - Carapace and plastron of turtle/tortoise 	BSc. Zoology Hons. IV Sem	Comparative anatomy of Vertebrates: CCVIII
		<p>2. Study of Linkage, recombination, gene mapping using the data.</p> <p>5. Study of homology and analogy from suitable specimens/ pictures</p>	BSc. Life Science IV Sem	Genetics and Evolutionary Biology: CCIV
		<p>Practice of onion root tip</p> <p>2. Study of various stages of meiosis.</p>	B.Sc. Zoology II Sem	Cell Biology CCIV
March	Theory:	<p>Unit 2: Skeletal System</p> <ul style="list-style-type: none"> - Overview of axial and appendicular skeleton, Jaw suspensorium, Visceral arches <p>Unit 7: Nervous System</p> <ul style="list-style-type: none"> - Comparative account of brain Autonomic nervous system, 	BSc. Zoology Hons. IV Sem	Comparative anatomy of Vertebrates: CCVIII
		<p>Unit 9: Processes of Evolutionary Change Types of natural selection (Directional, Stabilizing, Disruptive), Artificial selection</p> <p>Unit 10: Species Concept Biological species concept (Advantages and Limitations): Modes of speciation (Allopatric, Sympatric)</p>	BSc. Life Science IV Sem	Genetics and Evolutionary Biology: CCIV
		<p>Unit 5: Population genetics: Natural selection (concept of fitness, selection coefficient, derivation of one unit of selection for a dominant allele, genetic load, mechanism of</p>	B.Sc. (H) Zoology VI Sem	Evolutionary Biology CCXIV

		working, types of selection, density-dependent selection, heterozygous superiority, kin selection, adaptive resemblances, sexual selection. Genetic Drift (mechanism, founder's effect, bottleneck phenomenon; Role of Migration and Mutation in changing allele frequencies.		
	Practicals	<ul style="list-style-type: none"> - Skulls of Frog, Varanus. Fowl, Rabbit - Adaptations of Herbivorous and Carnivorous Skulls - Study of arterial and urinogenital system of rat. 	BSc. Zoology Hons. IV Sem	Comparative anatomy of Vertebrates: CCVIII
		3. Study of Human Karyotypes (normal and abnormal). 4. Study of fossil evidences from plaster cast models and pictures	BSc. Life Science IV Sem	Genetics and Evolutionary Biology: CCIV
		3. Preparation of permanent slide to show the presence of Barr body in human female blood cells/cheek cells. 4. Preparation of permanent slide to demonstrate: ii DNA and RNA by MGP	B.Sc. Zoology II Sem	Cell Biology CCIV
	Assignment	Previous years question paper.	BSc. Zoology Hons. IV Sem	Comparative anatomy of Vertebrates: CCVIII
	Assignment	Previous years question paper.	BSc. Life Science IV Sem	Genetics and Evolutionary Biology: CCIV
		Previous years question paper.	B.Sc. (H) Zoology VI Sem	Evolutionary Biology CCXIV
	Mid Term Test	Circulatory system, Urinogenital System, Respiratory System, Skeletal system.	BSc. Zoology Hons. IV Sem	Comparative anatomy of Vertebrates: CCVIII
		Syllabus covered till March	BSc. Life Science IV Sem	Genetics and Evolutionary Biology: CCIV
		Syllabus covered till March	B.Sc. (H) Zoology VI Sem	Evolutionary Biology CCXIV
April	Theory:	Unit 7: Nervous System <ul style="list-style-type: none"> - Spinal cord, Cranial nerves in mammals Unit 8: Sense Organs <ul style="list-style-type: none"> - Classification of receptors - Brief account of visual and auditory receptors in man 	BSc. Zoology Hons. IV Sem	Comparative anatomy of Vertebrates: CCVIII

	<p>Unit 11: Macro-evolution Macro-evolutionary Principles (example: Darwin's Finches)</p> <p>Unit 12: Extinction Mass extinction (Causes, Names of five major extinctions, K21' extinction in detail), Role of extinction in evolution</p>	BSc. Life Science IV Sem	Genetics and Evolutionary Biology: CCIV
	<p>Unit 4: Sources of variations: Heritable variations and their role in evolution</p>	B.Sc. (H) Zoology VI Sem	Evolutionary Biology CCXIV
Practicals:	Mock exam, checking of project report, viva.	BSc. Zoology Hons. IV Sem	Comparative anatomy of Vertebrates: CCVIII
	<p>6. Charts:</p> <p>a) Phylogeny of horse with diagrams/ cut outs of limbs and teeth of horse ancestors b) Darwin's Finches with diagrams/ cut outs of beaks of different species.</p>	BSc. Life Science IV Sem	Genetics and Evolutionary Biology: CCIV
	<p>4. Preparation of permanent slide to demonstrate:</p> <p>iii Mucopolysaccharides by PAS reaction iv Proteins by Mercurobromophenol blue/Fast Green</p>	B.Sc. Zoology II Sem	Cell Biology CCIV
	Mock exam and file checking		



SEMESTER WISE TEACHING PLAN

Sri Venkateswara College

January-May, 2018

Name of the Faculty: Dr. Preeti Khandelwal

Department: Zoology

Semester: Even – II, IV and VI

Subjects:

THEORY: B.Sc. (Hons) Zoology, Sem II: **Non- Chordata: Coelomates**

B.Sc. (Hons) Sem IV: **GE: Aquatic Biology,**

B.Sc. (Hons) Zoology, Sem II **Biochemistry of Metabolic Processes**

PRACTICAL: B.Sc (P) Life Sciences, Sem IV:**SEC: Aquarium Fish Keeping**

B.Sc. (Hons) Zoology, Sem II: **Cell Biology**

B.Sc (P) Life Sciences, Sem VI: **Immunology**

Month		Topics	Course	Paper Code/Name
January	Theory:	Unit 2: Freshwater Biology 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	GE IV/ Aquatic Biology
		Unit 4: Protein Metabolism 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 nd year)	CCX /Biochemistry of Metabolic Processes
		Unit 1: Introduction to Public health and hygiene Significance of Public health and hygiene, nutrition and health , classification of foods, major nutritional deficiency diseases-protein energy malnutrition (kwashiorkor and marasmus) Unit2:Environment and Health Hazards Environmental degradation, environmental pollution- air, water, soil and noise: associated health hazards	B.Sc Life Sciences Sem VI (Batch 3)	SEC: Public Health and Hygiene
	Practical:	-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)	SEC/ Aquarium fish keeping
		Preparation of temporary stained squash of onion root tip to study various stages of mitosis Repeat Preparation of temporary stained squash of onion root tip to study various stages of mitosis	B.Sc. (Hons.) Zoology Sem II TZH	CC IV/ Cell Biology

		To perform Ouchterlony double immunodiffusion assay. ABO blood group determination.	B.Sc Life Sciences Sem VI(Batch 3)	DSE /Immunology
February	Theory:	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 Salinity and Density of water, continental shelf, Adaptations of deep sea organisms, coral reefs, sea weeds.	B.Sc (Hons.) Semester IV	GE IV/ Aquatic Biology
		Unit 3: Lipid Metabolism β-oxidation and ω-oxidation of saturated fatty acids with even and odd number of carbon atoms; ketogenesis	B.Sc (Hons.) Zoology (Semester IV)	CCX /Biochemistry of Metabolic Processes
		Unit 1: vitamin deficiency disorders, Iron Deficiency disorders, iodine deficiency disorders Unit 3: Communicable diseases Different types of communicable diseases and their control measures- Tuberculosis, measles, dengue, leprosy	B.Sc Life Sciences Sem VI (Batch 3)	SEC: Public Health and Hygiene
	Practical	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)	SEC/ Aquarium fish keeping
		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	CC IV/ Cell Biology
		Cell counting and viability of splenocytes. ELISA Immunoelectrophoresis	B.Sc Life Sciences Sem VI(Batch 3)	DSE / Immunology
March	Theory:	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	GE IV/ Aquatic Biology
		Unit 3: Lipid Metabolism Biosynthesis of Palmitic acid. Unit 1: Overview of Metabolism Catabolism vs Metabolism, shuttle systems and membrane transporters;	B.Sc (Hons.) Zoology (Semester IV)	CCX /Biochemistry of Metabolic Processes
		Unit 4: Life style related non-communicable diseases Different types of Life style related non-communicable diseases- Hypertension, Coronary Heart diseases, stroke, diabetes	B.Sc Life Sciences Sem VI (Batch 3)	SEC: Public Health and Hygiene

		mellitus, Obesity and mental-ill health- their causes and prevention through dietary and lifestyle modifications		
	Practicals	-Potential of aquarium fish farm as cottage industry Field trip to aquarium shop	B.Sc Life Sciences Sem IV(Batch 2)	SEC/ Aquarium fish keeping
		Preparation of permanent slide to demonstrate: i DNA by Feulgen reaction ii Mucopolysaccharides by PAS reaction	B.Sc. (Hons.) Zoology Sem II	CCIV/ Cell Biology
		Study of lymphoid organs: spleen, thymus, lymph nodes. Preparation of stained blood film.	B.Sc Life Sciences Sem VI(Batch 3)	Immunology
	Assignment	Coral Reefs, Sea weeds, Eutrophication, Sewage treatment, thermal and oil spill.	B.Sc (Hons.) Semester IV	GE IV/ Aquatic Biology
		Life style Disorders and their dietary prevention	B.Sc Life Sciences Sem VI(Batch 3)	SEC: Public Health and Hygiene
	Mid Term Test	Unit: 4: Management of Aquatic resources	B.Sc (Hons.) Semester IV	GE IV/ Aquatic Biology
		Unit 3: Lipid Metabolism Unit 4: Protein Metabolism	B.Sc (Hons.) Zoology (Semester IV)	CCX /Biochemistry of Metabolic Processes
April	Theory	Revision	B.Sc (Hons.) Semester IV	GE IV/ Aquatic Biology
		Revision	B.Sc (Hons.) Zoology (Semester IV, 2 nd)	CCX /Biochemistry of Metabolic
		Unit 5: Social Health Problems Smoking, Alcoholism, Drug Dependence and acquired immune deficiency syndrome (AIDS)- their causes, treatment and prevention	B.Sc Life Sciences Sem VI(Batch 3)	SEC: Public Health and Hygiene
	Practical	- Evaluation of Practical File and Report Practice and repetition of practical Conduct of Mock examination.	B.Sc Life Sciences Sem IV(Batch 2)	SEC/ Aquarium fish keeping
		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	CCIV/ Cell Biology
		Evaluation of Practical File Practice and repetition of practical Conduct of Mock examination.	B.Sc Life Sciences Sem VI(Batch 3)	DSE / Immunology



SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
January-May, 2018

Name of the Faculty: Dr. Sadqua Shameem

Department: Zoology

Semester: II / IV / VI

Month		Topics	Course	Paper Code/Name
FEBRAURY	Theory:	Unit 3: Renal Physiology Structure of kidney and its functional unit;	B.Sc. (Hons.) Zoology Sem IV	Core course-IX Physiology: Life Sustaining Systems
		Unit-2 Functioning of Excitable Tissue (Nerve and Muscle), Structure of neuron and brief introduction of neuroglia;	B.Sc. (Hons.) Sem II	GE-II / Human Physiology
		Unit 4: Fish Transportation Live fish transport - Fish handling	B.Sc. Life Sciences Sem IV	SEC /Aquarium fish keeping
		Historical review of evolutionary concept: Lamarckism .	B.Sc. (Hons.) Zoology Sem VI	Core Course- XIV Evolutionary
	Practicals:	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	BS – 4 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	Core Course- IV Genetics and Evolutionary Biology

		<p>-Determine the area of a lake using graphimetric and gravimetric method.</p> <p>-<i>With continuous evaluation</i> Evaluation of students on their performance in practical and Record</p>	B.Sc. (Hons.) Sem IV	GE IV / Aquatic Biology
	Assignment	Separate questions will be given to students from previous year question paper.	B.Sc. (Hons.) Zoology Sem IV	Core course-IX Physiology: Life Sustaining Systems
		Separate questions will be given to students from previous year question paper.	B.Sc. (Hons.) Sem II	GEII/Human Physiology
		Separate questions will be given to students from previous year question paper.	B.Sc. (Hons.) Zoology Sem VI	Core Course-XIV Evolutionary
MARCH	Theory:	<p>Unit 3: Renal Physiology Structure of kidney and its functional unit; Mechanism of urine formation; Regulation of water balance; Regulation of acid-base balance</p>	B.Sc. (Hons.) Zoology Sem IV	Core course-IX Physiology: Life Sustaining Systems
		Unit-2 Structure of skeletal muscle; Mechanism of muscle contraction (Sliding filament theory); Propagation of nerve impulse (myelinated and non-myelinated nerve fibre);	B.Sc. (Hons.) Sem II	GE-II / Human Physiology
		Unit 4: Fish Transportation packing and forwarding techniques.	B.Sc. Life Sciences Sem IV	LS-SEC /Aquarium fish keeping
		Historical review of evolutionary concept: Darwinism, Neo-Darwinism Unit-4 Sources of variations: Heritable variations and their role in evolution	B.Sc. (Hons.) Zoology Sem VI	Core Course-XIV Evolutionary Biology
	Practicals:	<p>Dissections/Virtualdemonstrationi Digestive and nervous system of Cockroach; Unstained mount of Placoid scales.</p> <p>Study of following specimens: <i>Balanoglossus</i> ,<i>Amphioxus</i> <i>Petromyzon</i>, <i>Pristis</i>, <i>Hippocampus</i>, <i>Labeo</i>, <i>Icthyophis/Uraeotyphlus</i>, <i>Salamander</i>, <i>Draco</i>,<i>Naja</i> Three common birds , Bat</p> <p>Visit toBiodiversity park,</p>	B.Sc. (Hons.) Biological Science Sem II	BS – 4 Biodiversity

		<p><i>With continuous evaluation</i> Evaluation of students on their performance in practical and Record</p>		
		<p>-Study of Mendelian Inheritance and gene interactions (Non Mendelian Inheritance) using suitable examples. Verify the results using Chi-square test. -Study of homology and analogy from suitable specimens/pictures - Study of fossil evidences from plaster cast models and pictures -Phylogeny of horse with diagrams/ cut outs of limbs and teeth of horse ancestors <i>With continuous evaluation</i> Evaluation of students on their performance in practical and Record</p>	B.Sc. Life Sciences Sem IV	Core Course-IV Genetics and Evolutionary Biology
	Mid Term Test	<p>- Determine the amount of Turbidity/transparency, Dissolved Oxygen, Free Carbon dioxide, Alkalinity (carbonates & bicarbonates) in water collected from a nearby lake/ waterbody. -A Project Report on a visit to a Sewage treatment plant/Marine bio-reserve/Fisheries Institutes. <i>With continuous evaluation</i> Evaluation of students on their performance in practical and Record</p>	B.Sc. (Hons.) Sem IV	GE IV / Aquatic Biology
		Test questions in DU exam pattern of covered topics	B.Sc. (Hons.) Zoology Sem IV	Core course-IX Physiology: Life Sustaining Systems
		Test questions in DU exam pattern of covered topics	B.Sc. (Hons.) Sem II	GE-II / Human Physiology
APRIL	Theory:	<p>Unit 5: Physiology of Heart Structure of mammalian heart; Coronary circulation; Structure and working of conducting myocardial fibers. Origin and conduction of cardiac impulses Cardiac cycle; Cardiac output and its regulation, Frank-Starling Law of the heart,</p>	B.Sc. (Hons.) Zoology Sem IV	Core course-IX Physiology: Life Sustaining Systems

	nervous and chemical regulation of heart rate. Electrocardiogram, Blood pressure and its regulation		
	Unit-2 Neuromuscular Junction Unit-4 Functional anatomy of kidney, Mechanism and regulation of urine formation	B.Sc. (Hons.) Sem II	GE-II / Human Physiology
	Unit 5: Maintenance of Aquarium General Aquarium maintenance – budget for setting up an Aquarium Fish Farm as a Cottage Industry	B.Sc. Life Sciences Sem IV	SEC /Aquarium fish keeping
	Unit-3 Three domains of life, neutral theory of molecular evolution, Molecular clock ,example of globin gene family.	B.Sc. (Hons.) Zoology Sem VI	Core Course- XIV Evolutionary Biology
Practicals:	-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	BS – 4 Biodiversity
	-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	Core Course- IV Genetics and Evolutionary Biology

	<p>- Instruments used in limnology (Secchi disc, Van Dorn Bottle, Conductivity meter, Turbidity meter, PONAR grab sampler) and their significance.</p> <p><i>With continuous evaluation</i> Evaluation of students on their performance in practical and Record</p> <p>-Submission of Report and File, -Viva for practical exams. -Mock test</p>	<p>B.Sc. (Hons.) Sem IV</p>	<p>GE IV / Aquatic Biology</p>
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**SEMESTER WISE TEACHING
PLAN Jan-May (2018)
SRI VENKATESWARA COLLEGE**

Name of the Faculty: Dr. Aarti Seherawat

Department: Zoology

Semester : II/IV/VI (even semester)

Month		Topics	Course	Paper Code/Name
February	Theory	Unit 1: Integumentary System	BSc. Life Science Sem II	Comparative anatomy and developmental Biology CC II
		Unit 6: Echinodermata	BSc. (Hons.) Zoology Sem II	Non Chordata CC III
		UNIT 2: Fresh Water Biology - Streams - Stages of Streams - Physiochemicals	BSc. (Hons) GE Sem IV	Aquatic Biology GE IV
		Unit 1: Introduction to Public Health and Hygiene	BSc. Life Science Sem IV	Public Health and Hygiene SEC 4
		Unit: Thermoregulation	BSc. (Hons) Biological Sciences Sem IV	Systems Physiology BS-C8
	Practicals	- Protein estimation by Lowry's method - Trace the labeled C atoms in TCA cycle	BSc. Zoology (Hons) Sem IV	Biochemistry of Metabolic Processes CCX
		- Measure the blood pressure using sphygmomanometer.	BSc. Life Science Sem VI	Public Health and Hygiene SEC
		- Type, composition and formulation of fish feed (using Pearson Square Methods)	BSc. Life Science Sem IV	Aquarium Fish Keeping SEC 2
	Tutorials			
MARCH	Theory:	Unit 1: Integumentary System	BSc. Life Science Sem II	Comparative anatomy and developmental Biology CC II
		Unit 6: Echinodermata	BSc. (Hons.) Zoology Sem II	Non Chordata CC III

		UNIT 2: Fresh Water Biology - Streams - Stages of Streams - Physiochemical Environment	BSc. (Hons) GE Sem IV	Aquatic Biology GE IV
		Unit 1: Introduction to Public Health and Hygiene Unit 4: Lifestyle related non-communicable diseases	BSc. Life Science Sem IV	Public Health and Hygiene SEC 4
		Unit: Thermoregulation	BSc. (Hons) Biological Sciences Sem IV	Systems Physiology BS-C8
	Practicals:	- Study of Biological Oxidation (SDH) - Study of enzymatic activity of Trypsin - Study of enzymatic activity of Lipase -	BSc. Zoology (Hons) Sem IV	Biochemistry of Metabolic Processes CCX
		- Calculate the BMI of students and analyse the results with suitable statistical tools.	BSc. Life Science Sem VI	Public Health and Hygiene SEC
		- Type, composition and formulation of fish feed (using Pearson Square Methods)	BSc. Life Science Sem IV	Aquarium Fish Keeping SEC 2
	Tutorials:			

APRIL	Theory:	Unit 3: Digestive system	BSc. Life Science Sem II	Comparative anatomy and developmental Biology CC II
		Unit 4: Onychophora	BSc. (Hons.) Zoology Sem II	Non Chordata CC III
		UNIT 2: Fresh Water Biology - Adaptations of Hill Stream Fishes - Adaptations of deep sea organisms	BSc. (Hons) GE Sem IV	Aquatic Biology GE IV

		Unit 4: Lifestyle related non-communicable diseases Unit 3: Communicable diseases	BSc. Life Science Sem IV	Public Health and Hygiene SEC 4
		Unit: Osmoregulation	BSc. (Hons) Biological Sciences Sem IV	Systems Physiology BS-C8
	Practicals:	- To perform Acid Phosphatase assay - To perform Alkaline Phosphatase	BSc. Zoology (Hons) Sem IV	Biochemistry of Metabolic Processes CCX
		- Data collection, case studies or interviews of the individuals suffering from diseases; and Submission of report.	BSc. Life Science Sem VI	Public Health and Hygiene SEC
		- Study of Sexual Dimorphism of Fresh water and Marine Aquarium Fish(Guppy, Molly, Sword tail, Gold fish, Angel fish,	BSc. Life Science Sem IV	Aquarium Fish Keeping SEC 2
	Assignment:	Adaptation in deep see organisms	BSc. (Hons) GE Sem IV	Aquatic Biology GE IV
	Test	UNIT 1: INTEGUMENTARY SYSTEM	BSc. Life Science Sem II	Comparative anatomy and developmental Biology CC II
MAY	Theory:	Unit 4: Respiratory system	BSc. Life Science Sem II	Comparative anatomy and developmental Biology CC II
		Unit 4: Onychophora - Revision	BSc. (Hons.) Zoology Sem II	Non Chordata CC III
		- Adaptations of deep sea organisms - Revision	BSc. (Hons) GE Sem IV	Aquatic Biology GE IV
		Unit 3: Communicable diseases - Revision	BSc. Life Science Sem IV	Public Health and Hygiene SEC 4
		Unit: Osmoregulation	BSc. (Hons) Biological Sciences Sem IV	Systems Physiology BS-C8
	Practicals:	- Revision - Mock Exam	BSc. Zoology (Hons) Sem IV	Biochemistry of Metabolic Processes CCX

		<ul style="list-style-type: none"> - Revision - Mock Exam 	BSc. Life Science Sem VI	Public Health and Hygiene SEC
		Study of Sexual Dimorphism of Fresh water and Marine Aquarium <ul style="list-style-type: none"> - Blue morph, Anemone fish, Butterfly fish) 	BSc. Life Science Sem IV	Aquarium Fish Keeping SEC 2
	Tutorials:			



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 Introduction of Mudiyarasan and contemporary writers	B.A Prog Tamil DSC	62081210
August	Theory	Study of Important Authors: Tamil life of Mudiyarsan	B.A Prog Tamil DSC	62081210
September	Theory Assignment	Study of Important Authors: Tamil Creative style of Mudiyarasan Techniques of epics and Kaviyarangam	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 Social and Political life of EVR. Periyar	B.A Prog Tamil DSC	62081210
September	Theory Assignment	Study of Important Authors: Tamil Journalistic style of EVR Periyar Fight against Casitism in Vaikkam, Kerala	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 Concept of Akam and Puram	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) Description of Country, Nature, Fort, Palace and War field	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 Creative Style and Techniques of Kuyilpaattu	B.A Prog Tamil DSC	62081436
September	Theory Assignment	Study of Important Texts: Kuyilpaattu Bharathiyin Kuyilpattu Punaithiran. Kuyilpaattu in Barathi's Epics	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 Kudumba Vilakku in Modern Epic	B.A Prog Tamil DSE	62087640
September	Theory Assignment	Selected Texts: Poetry & Play : Kudumba Vilakku Study of culture and customs of Tamils Depiction of Characters in Kudumba Vilakku	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 Language and Techniques in Durkkira Avalam	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 (2017-18)****EVEN SEMESTER****SRI VENKATESWARA COLLEGE****Name of the Faculty: Geeta Jayaram Sodhi****Department: Sociology****Semester: II**

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

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



SEMESTER WISE TEACHING PLAN (2017-18)

EVEN SEMESTER

SRI VENKATESWARA COLLEGE

Name of the Faculty: Geeta Jayaram Sodhi

Department: Sociology

Semester: IV

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

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



EVEN SEMESTER
SRI VENKATESWARA COLLEGE

Name of the Faculty: ABHIJIT KUNDU **Department:** SOCIOLOGY

Semester : EVEN

Month		Topics	Course	Paper Code/Name
JANUARY	Theory	<ol style="list-style-type: none"> 1. Action Theory-Parsons 2. Culture-Personality-Social 	LOCF Honours VI Sem	Sociological Theories II
	Practicals			
	Tutorials	<ol style="list-style-type: none"> 1. Talcott Parsons System Theory 	do	do
FEBRUARY	Theory:	<ol style="list-style-type: none"> 1. G.H Mead-Mind Self and Society 2. Erving Goffman-Dramaturgy, Techniques of Impression Management 	do	do
	Practicals:			
	Tutorials:	<ol style="list-style-type: none"> 1. Symbolic Interactionism 2. Self-Society Negotiation 	do	do

	<u>Assignment :</u>	1. Analyse the interaction between the three subsystems in Parsonian model of Social System		
MARCH	Theory:	Critical School Theories 1. Horkheimer 2. Adorno 3. Marcuse		
	Practicals:			
	Tutorials:	1. What is the epistemological issues in Dialectics of Enlightenment		
	<u>Test</u>	1. Explain Self as a social Product. 2. What is meant by Re-sublimation in Marcuse's Theory		
APRIL	Theory:	Outline of A Theory on Practice -Bourdieu	do	do
	Practicals:			
	Tutorials:	1. What is Habitus 2. How does Bourdieu resolve the issue of Objectivism in social theory	do	do

MAY	Theory:	Semester Exam		
	Practicals:			
	Tutorials:			



SEMESTER WISE TEACHING PLAN (2017-18)

EVEN SEMESTER

SRI VENKATESWARA COLLEGE

Name of the Faculty: Nabanipa Bhattacharjee

Department: Sociology

Semester: II BA (H)

Month		Topic(s)	Course	Paper Code/Name
JANUARY	Theory	Ideas of India: A Discursive Discourse; Location of Gandhi and Ambedkar in the discourse.	Core Course 03 (C03)	Sociology of India II
	Practical	NA	NA	NA
	Tutorial	Reading Ambedkar's <i>Annihilation of Caste</i> (and Gandhi's <i>Hind Swaraj</i>) to understand the thoughts of both Ambedkar and Gandhi.	Core Course 03 (C03)	Sociology of India II
FEBRUARY	Theory	Indological and ethnographic approaches to India; disciplinary history of Indian sociology; Sanskritization and mobility; Dalit movement.	Core Course 03 (C03)	Sociology of India II
	Practical	NA	NA	NA
	Tutorial	Conceptualizing Dalit identity and tracing the trajectory of Dalit movement in India.	Core Course 03 (C03)	Sociology of India II
MARCH	Theory	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

	Practical	NA	NA	NA
	Tutorial	Discussion on ethnicity, nation and citizenship by exploration of the Assam movement.	Core Course 03 (C03)	Sociology of India II
	<u>Assignment (10 Marks)</u>	Drawing from the Gandhi-Ambedkar debate, elaborate on their ideas of India (1200-1500 words, TNR & 12 font, 1.5 space, justified)	Core Course 03 (C03)	Sociology of India II
APRIL	Theory	Communalism in India; the history & growth of secularism, nation and nationalism in India.	Core Course 03 (C03)	Sociology of India II
	Practical	NA	NA	NA
	Tutorial	Mapping the debates on secularism as an ideology; problems faced by Indian secularism particularly since independence.	Core Course 03 (C03)	Sociology of India II
	<u>Mid-Semester Examination (10 Marks)</u>	Two short essays (350 words each) to be attempted on Dalit and Women's movements in India.	Core Course 03 (C03)	Sociology of India II
MAY	Theory	Understanding the varieties of secularism in India.	Core Course 03 (C03)	Sociology of India II
	Practical	NA	NA	NA
	Tutorial	Revision of the entire syllabus depending on student feedback and demand.	Core Course 03 (C03)	Sociology of India II



SEMESTER WISE TEACHING PLAN (2017-18)

EVEN SEMESTER

SRI VENKATESWARA COLLEGE

Name of the Faculty: Nabanipa Bhattacharjee

Department: Sociology

Semester: BA (Program), Semester VI (January-June, 2018)

Month		Topics	Course	Paper Code/Name
JANUARY	Theory		Generic Elective 02 (GE 02)	Economy and Society
	Practical		NA	NA
	Tutorial		Generic Elective 02 (GE 02)	Economy and Society
FEBRUARY	Theory		Generic Elective 02 (GE 02)	Economy and Society
	Practical	NA	NA	NA
	Tutorial		Generic Elective 02 (GE 02)	Economy and Society

MARCH	Theory		Generic Elective 02 (GE 02)	Economy and Society
	Practical	NA	NA	NA
	Tutorial		Generic Elective 02 (GE 02)	Economy and Society
	<u>Assignment (10 Marks)</u>		Generic Elective 02 (GE 02)	Economy and Society
APRIL	Theory		Generic Elective 02 (GE 02)	Economy and Society
	Practical		NA	NA
	Tutorial		Generic Elective 02 (GE 02)	Economy and Society
	<u>Mid-Semester Examination (10 Marks)</u>		Generic Elective 02 (GE 02)	Economy and Society

MAY	Theory		Generic Elective 02 (GE 02)	Economy and Society
	Practical	NA	NA	NA
	Tutorial		Generic Elective 02 (GE 02)	Economy and Society



SEMESTER WISE TEACHING PLAN (2017-2018)
EVEN SEMESTER
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Padma Priyadarshini

Department: Sociology

Semester: BA (Hons.) IV Sem

Month		Topic(s)	Course	Paper Code/Name
JAN	Theory	Perspectives in Economic Sociology 1. Formalism and Substantivism 2. New Economic Sociology	Core Course-08	Economic Sociology
	Practical	NA	NA	NA
	Tutorial	Discuss the ways in which the term 'economy' has evolved over the years. (Ref: Hann and Hart, Polanyi)	Core Course-08	Economic Sociology
FEB	Theory	Forms of Exchange 1. Reciprocity and Gift 2. Exchange and Money Systems of Production 1. Hunting and Gathering 2. DMP	Core Course-08	Economic Sociology
	Practical	NA	NA	NA
	Tutorial	What is the difference between gifts and commodities? (Ref: Marcel Mauss and Carrier).	Core Course-08	Economic Sociology

	Mid Sem Exam	Topics: 1. Formalism and Substantivism 2. New Economic Sociology		Economic Sociology
MARCH	Theory	Contemporary issues in Economic Sociology 1. Development 2. Globalization	Core Course-08	Economic Sociology
	Practical	NA	NA	NA
	Tutorial	Systems of production with special reference to capitalism and Socialism	Core Course-08	Economic Sociology
	Assignment	Examine the differences between different systems of production, circulation and consumption	Core Course-08	Economic Sociology
APRIL	Theory	1. Globalization and cross-cultural consumption Ref: David Howes	Core Course-08	Economic Sociology
	Practical	NA	NA	NA
	Tutorial	Why is globalization being referred to as the latest stage of capitalism? (Ref: Wallerstein and Fran Tonkiss)	Core Course-08	Economic Sociology



SEMESTER WISE TEACHING PLAN (2017-2018)
EVEN SEMESTER
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Padma Priyadarshini

Department: Sociology

Semester: BA (Hons.) II Sem

Month		Topics	Course	Paper Code/Name
JAN	Theory	What is Family? 1. Historical account 2. Sociological account 3. Anthropological 4. How just is the family? 5. Gay-Lesbian families	GE 02	Family and Intimacy
	Practical	NA	NA	NA
	Tutorial	What do we mean by the family? Has it lost its functions? How just is it? (Ref: Mitterauer, Worsley, Shapiro, Okin and Weston)	GE 02	Family and Intimacy
FEBRUARY	Theory	Family and Intimacy 6. Socialization in the Indian family 7. Gujarati family 8. Tamil Family 9. Eroticism in Rajasthani folk songs 10. The Elderly	GE 02	Family and Intimacy
	Practical	NA	NA	NA
	Tutorial	Discuss the different aspects of Indian families (Ref: Lannoy, Trawick, Raheja and Gould and Vatuk)	GE 02	Family and Intimacy
	Mid-Sem Exam	Topics: 1,2 and 3	GE 02	Family and Intimacy

MARCH	Theory	Critiques and Transformations 11. The anti-social family 12. Feminist Heterosexuality 13. History of Marriage 14. Joint family system of India	GE 02	Family and Intimacy
	Practical	NA	NA	NA
	Tutorial	Critically assess the family. (Ref: Baret, Carteledge and Ryan, Coontz and Shah)	GE 02	Family and Intimacy
	Assignment	When is a marriage not a marriage? Sex, sacrament and contract in Hindu marriage. (Ref: Patricia Uberoi)	GE 02	Family and Intimacy
APRIL	Theory	15. Hindu Marriage 16. How's the family?	GE 02	Family and Intimacy
	Practical	NA	NA	NA
	Tutorial	How is the family doing today? How has this course enhanced your understanding of the family? (Ref: Uberoi and Hochschild)	GE 02	Family and Intimacy



SRI VENKATESWARA COLLEGE

Name of the Faculty: DR. URMI BHATTACHARYYA

Department: SOCIOLOGY

Semester: IV

Month		Topics	Course	Paper Code/Name
JANUARY	Theory	Key Approaches in Kinship: Descent theory Alliance theory	Core Course 08	Sociology of Kinship
	Practical	NA	NA	NA
	Tutorial	Explaining kinship through the study of descent. The study of African societies by early anthropologists How did structuralists explain kinship	Core Course 08	Sociology of Kinship
FEBRUARY	Theory	Key Approaches in Kinship: Cultural theory Concepts of family, household, domestic groups and its relation to kinship	Core Course 08	Sociology of Kinship
	Practical	NA	NA	NA
	Tutorial	Reconceptualization of kinship and its meaning	Core Course 08	Sociology of Kinship
	<u>Assignment</u>	Write a note on the structural principles underlying African kinship systems	Core Course 08	Sociology of Kinship

MARCH	Theory	The anthropological definition of marriage Contemporary meaning of kinship – as relatedness	Core Course 08	Sociology of Kinship
	Practical	NA	NA	NA

	Tutorial	Discussion on marriage laws Relatedness Interconnections of gender and kinship	Core Course 08	Sociology of Kinship
			Core Course 08	Sociology of Kinship
APRIL	Theory	Gender and kinship Redefining kinship: Cultural construction of kinship Reconstructing families Questioning biological paternity/maternity with IVF	Core Course 08	Sociology of Kinship
	Practical		NA	NA
	Tutorial	Chosen families New reproductive technologies and the construction of identity	Core Course 08	Sociology of Kinship
	Mid-sem test	How are elements of biology and culture synthesized and reflected in kinship? Provide illustrations	Core Course 08	Sociology of Kinship

MAY	Theory	Declaration of internal evaluation results University Examinations	Core Course 08	Sociology of Kinship
	Practical	NA	NA	NA

	Tutorial		Core Course 08	Sociology of Kinship
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SEMESTER WISE TEACHING PLAN (2017-18)
EVEN SEMESTER
SRI VENKATESWARA COLLEGE

Name of the Faculty: DR. URMI BHATTACHARYYA

Department: SOCIOLOGY

Semester: VI

Month		Topics	Course	Paper Code/Name
JANUARY	Theory	Introducing visual culture and the process of seeing The Spectacles of Modernity	DSE 07	Visual Culture
	Practical	NA	NA	NA
	Tutorial	Social construction of seeing How have ways of seeing influenced our knowledge throughout history	DSE 07	Visual Culture
FEBRUARY	Theory	Social critique of ethnocentric visuality; Narrative and visual forms of perception in contemporary life Panopticism and power The Right to Look, power and visuality	DSE 07	Visual Culture
	Practical	NA	NA	NA
	Tutorial	Critiquing technical modernity How can visual culture escape the dominant narrative of the West Global events and local narratives How did visuality become a source of power	DSE 07	Visual Culture

MARCH	Theory	Authority in colonial India; State and Photographic Records; Critical Art; Visual Practices and identity formation	DSE 07	Visual Culture
	Practical	NA	NA	NA
	Tutorial	Countervisuality; authority and its symbolic representation ; Photography, technology and truth; Problems and possibilities of critical art	DSE 07	Visual Culture
	<u>Assignment 01</u>	What according to Debord is at the heart of unrealism in present-day society? Give your personal observations.	DSE 07	Visual Culture
APRIL	Theory	Everyday life and visuality Printed image and identity Globalism, visuality and identity	DSE 07	Visual Culture
	Practical	NA	NA	NA
	Tutorial	Carnival and theatre as subversive contexts; Everyday life involving tactics and strategies;	DSE 07	Visual Culture
	<u>Mid-sem</u>	Write a note on the different forms of discipline as witnessed in the 18 th CE plague-stricken town and the 19 th CE panoptic establishment.	DSE 07	Visual Culture

MAY	Theory	Declaration of internal evaluation results University Examinations	DSE 07	Visual Culture
	Practical	NA	NA	NA
	Tutorial		DSE 07	Visual Culture



SEMESTER WISE TEACHING PLAN (2017-18)
EVEN SEMESTER
SRI VENKATESWARA COLLEGE

Name of the Faculty: Antasa Vairagya

Department: Sociology

Semester: IV BA (Hons)

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

MARCH	Theory	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
	Practical	NA	NA	NA
	Tutorial	NA	NA	NA
	<u>Assignment</u>	On Flavia Agnes, My Story, Our Story: Building Broken Lives	Generic Elective 04	Gender and Violence
APRIL	Theory	The other side of silence; Only words; Violence Against Women; This thing Called Justice	Generic Elective 04	Gender and Violence
	Practical	NA	NA	NA
	Test	Enforcing Cultural Codes	Generic Elective 04	Gender and Violence



SEMESTER WISE TEACHING PLAN (2017-18)

EVEN SEMESTER

SRI VENKATESWARA COLLEGE

Name of the Faculty: Antasa Vairagya

Department: Sociology

Semester: IV BA (P)

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

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



SEMESTER WISE TEACHING PLAN (2017-18)
EVEN SEMESTER
SRI VENKATESWARA COLLEGE

Name of the Faculty: Nupurnima Yadav

Department: Sociology

Semester: 6th B.A

(Hons)

Paper: Core course 14, Sociological Research Methods – II

Month		Topic(s)	Course	Paper Code/Name
January	Theory	The Process of Social Research Introduction to the theory of Concepts and Hypothesis	Core course 14	Sociological Research Methods – II
	Practical	NA	NA	NA
	Tutorial	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	Theory	Field (Issues and Context) Survey Methods: Sampling, Questionnaire and Interview	Core Course-14	Sociological Research Methods – II
	Practical	NA	NA	NA
	Tutorial	The concept of field was explored and each student was advice to problematize their respective field of choice.		
March	Theory	Observation: Participant and non-participant. Graphical and Diagrammatic Presentation of Data (Bar diagrams, Pie-diagram, Histogram, Frequency Polygon, Smoothed frequency curve and Ogives)	Core Course-14	Sociological Research Methods – II

	Practical	NA	NA	NA
	Tutorial	Supervision of their Research questions and techniques of doing research. their interview schedules and questionnaires were closely monitored.		
	<u>Mid- Semester exam (10 Marks)</u>			
April	Theory	Measures of Central Tendency (Simple Arithmetic Mean, Median and Mode)	Core Course-14	Sociological Research Methods – II
	Practical	NA	NA	NA
	Tutorial	Various tools from statistics were explored to ease their respective data projections.		
	<u>Project (10 Marks)</u>			Sociological Research Methods – II
May	Theory	Standard Deviation, Variance and Covariance	Core Course-14	Sociological Research Methods – II
	Practical	NA	NA	NA
	Tutorial		Core Course-14	Sociological Research Methods – II



SEMESTER WISE TEACHING PLAN (2017-18)

EVEN SEMESTER

SRI VENKATESWARA COLLEGE

Name of the Faculty: Nupurnima Yadav

Department: Sociology

Semester: 6th B.A Program

Paper: DSE 06 Indian Sociological Traditions

Month		Topics	Course	Paper Code/Name
January	Theory	G.S Ghurye: Caste and Race City and Civilization Radhakamal Mukerjee: Social Ecology	DSE 06	Indian Sociological Traditions
	Practical	NA	NA	NA
	Tutorial	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	Theory	Radhakamal Mukerjee: Personality, Society, Values. D P Mukerji: Tradition and Modernity Middle Class	DSE 06	Indian Sociological Traditions
	Practical	NA	NA	NA

	Tutorial	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	Theory	M.N. Srinivas: Social Change Verrier Elwin: Tribes in India	DSE 06	Indian Sociological Traditions
	Practical	NA	NA	NA
	Tutorial	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
	<u>Assignment (10 Marks)</u>	Values are intrinsic as well as instrumental. Elucidate the statement through the ideas of R.K Mukerjee.		
April	Theory	Irawati Karve : Gender and Kinship Leela Dube: Caste and Gender	DSE 06	Indian Sociological Traditions
	Practical	NA	NA	NA
	Tutorial <u>Mid-Semester Examination (10 Marks)</u>	Exploring Biographies of both the scholars and how each of them contributed towards the fortification of Gender studies in India.	DSE 06	Indian Sociological Traditions

May	Theory		DSE 06	Indian Sociological Traditions
	Practical	NA	NA	NA
	Tutorial		DSE 06	Indian Sociological Traditions



SEMESTER WISE TEACHING PLAN (2017-18)
EVEN SEMESTER
SRI VENKATESWARA COLLEGE

Name of the Faculty: Nupurnima Yadav

Department: Sociology

Semester: 5th B.A Prog.

Month		Topics	Course	Paper Code/Name
JULY	Theory	Introduction to Sociological understanding of Visual	SEC 03	Society through the Visual
	Practical	NA	NA	NA
	Tutorial	NA	NA	NA
AUGUST	Theory	Visual Anthropology Visual Sociology	SEC 03	Society through the Visual
	Practical	NA	NA	NA
	Tutorial	NA	NA	NA

SEPTEMBER	Theory	Reflexivity Film Making as an ethnographic research	SEC 03	Society through the Visual
	Practical	NA	NA	NA
	Tutorial	NA	NA	NA
	<u>Assignment (10 Marks)</u>			
OCTOBER	Theory	New techniques of observations and research Hypermedia	SEC 03	Society through the visual
	Practical	NA	NA	NA
	Tutorial		NA	NA
	<u>Mid-Semester Project (10 Marks)</u> <u>Presentation (10 Marks)</u>	Topic/Themes to be decided by the students.		

NOVEMBER	Theory			
	Practical	NA	NA	NA
	Tutorial	NA	NA	NA



**SEMESTER WISE TEACHING PLAN
(2017-2018)
SRI VENKATESWARA COLLEGE**

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

Name of the Paper: **Politics of Globalization GE-II SEM**

Month		Topic	Course	Paper Code/Name
January	Theory	Concept of Globalization: Globalization debate; for and against. Approaches to understanding globalization: a. Liberal approach b. Radical approach	GE – II SEM	Politics of Globalization
	Practicals			
	Tutorials	Liberal & Radical Approaches		
February	Theory	International Institutions/Regimes a. World Bank b. International Monetary Fund c. The World Trade Organization		
	Practicals			
	Tutorials			
	Assignment	Debates for & against Globalisation		
March	Theory	Issues in Globalization: Alternative Perspectives on its nature and character, critical dimensions: economic, political and cultural Globalization and democracy: State, sovereignty and the civil society		
	Practicals			
	Tutorials	Other dimensions of Globalization		
April	Theory	Globalization and democracy: State, sovereignty and the civil society. Globalization and Politics in developing countries Globalization and social movements Globalization and the demise of Nation State		
	Practicals			
	Tutorials	Globalization & the State		
	Test	Unit I & II		
May	Theory	Globalization and human migration The inevitability of globalization: Domestic and Global responses		
	Practicals			
	Tutorials	Revision		

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

Month		Topic	Course	Paper Code/Name
January	Theory	Rule of Law and the Criminal Justice system in India	Honours SEC Paper	12323901_OC
	Practicals			
	Tutorials	Criminal Justice		
February	Theory	Laws Relating to Criminal Justice Administration in India		
	Practicals			
	Tutorials			
	Assignment	FIR		
March	Theory	How to file a complaint, First Information Report (FIR) Detention, arrest and bail		
	Practicals			
	Tutorials			
April	Theory	Gender: The protection of women against domestic violence, rape and sexual harassment Caste: Laws abolishing untouchability and providing protection against atrocities		
	Practicals			
	Tutorials	Domestic Violence		
	Test	Unit I & II		
May	Theory	Class: laws concerning minimum wages d. Disability and equality of participation and opportunity		
	Practicals			
	Tutorials			

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

Month		Topic	Course	Paper Code/Name
January	Theory	Colonialism & Nationalism: 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	12327905
	Practicals			
	Tutorials	Subaltern Approach		
February	Theory	Colonial Rule in India and its impact: a. Constitutional developments and the colonial state b. Colonial ideology of civilizing mission: Utilitarians and Missionaries c. Impact on agriculture, land relations, industry and ecology		
	Practicals			
	Tutorials	Civilizing Mission		
	Assignment	Any Topic in the Syllabus		

March	Theory	Reform and Resistance: a. The 1857 rebellion b. Major social and religious movements c. Education and the rise of the new middle class		
	Practicals			
	Tutorials	Rise of Middle Class		
April	Theory	Nationalist Politics and Expansion of its Social Base 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		
	Practicals			
	Tutorials			
	Test	Unit I & II		
May	Theory	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		
	Practicals			
	Tutorials	Tribal Movements		

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

Month		Topic	Course	Paper Code/Name
January	Theory	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
	Practicals			
	Tutorials			
February	Theory	Measuring Public Opinion with Surveys: Representation and sampling What is sampling? Why do we need to sample? Sample design. Sampling error and non-response		
	Practicals			
	Tutorials			
	Assignment	Any topic on Unit I, II & III		
March	Theory	Types of sampling: Non random sampling (quota, purposive and snowball sampling); random sampling: simple and stratified		
	Practicals			
	Tutorials			
April	Theory	Survey Research		

		Interviewing: Interview techniques pitfalls, different types of and forms of interview		
	Practicals			
	Tutorials			
	Test			
May	Theory	Questionnaire: Question wording; fairness and clarity.		
	Practicals			
	Tutorials			

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



SEMESTER WISE TEACHING PLAN (2017-2018)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Kanwar Singh

Department: Sanskrit

Semester: II/IV/VI

Month		Topics	Course	Paper Code/Name
JANUARY	Theory	SECTION 'A': MAHAKAVYA AND CHARITAKAVYA	B.A. 2 ND YEAR (H)	C-9 MODERN SANSKRIT LITERATURE
		SECTION 'A': VIBHAKTYARTHA, VOICE AND KRT	B.A. 3 RD YEAR (H)	C-14 SANSKRIT COMPOSITION AND COMMUNICATION
		SECTION 'C': TAITTIRIYOPANISA D UNIT I	B.A. 3 RD YEAR (H)	DSE-7 FUNDAMENTALS OF AYURVEDA
	Tutorials	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN.		
FEBRUARY	Theory:	SECTION 'B': GADYAKAVYA AND RUPAKA	B.A. 2 ND YEAR (H)	C-9 MODERN SANSKRIT LITERATURE
		SECTION 'B': TRANSLATION AND COMMUNICATION UNIT I	B.A. 3 RD YEAR (H)	C-14 SANSKRIT COMPOSITION AND COMMUNICATION
		SECTION 'C': TAITTIRIYOPANISA D UNIT I	B.A. 3 RD YEAR (H)	DSE-7 FUNDAMENTALS OF AYURVEDA

	Tutorials:	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN.		
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	<u>Assignment :</u>	ASSIGNMENTS WILL BE GIVEN REGARDING THE TOPICS.		
MARCH	Theory:	SECTION 'C': GITIKAVYA AND OTHER GENRES	B.A. 2 ND YEAR (H)	C-9 MODERN SANSKRIT LITERATURE
		SECTION 'B': TRANSLATION AND COMMUNICATION UNIT II	B.A. 3 RD YEAR (H)	C-14 SANSKRIT COMPOSITION AND COMMUNICATION
		SECTION 'C': TAITTIRIYOPANISA D UNIT II	B.A. 3 RD YEAR (H)	DSE-7 FUNDAMENTALS OF AYURVEDA
	Tutorials:	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN.		
	<u>Test</u>	TESTS WILL BE TAKEN TIMELY.		
APRIL	Theory:	SECTION 'D': GENERAL SURVEY OF MODERN SANSKRIT LITERATURE	B.A. 2 ND YEAR (H)	C-9 MODERN SANSKRIT LITERATURE
		SECTION 'C': ESSAY	B.A. 3 RD YEAR (H)	C-14 SANSKRIT COMPOSITION AND COMMUNICATION
		SECTION 'C': TAITTIRIYOPANISA D UNIT II	B.A. 3 RD YEAR (H)	DSE-7 FUNDAMENTALS OF AYURVEDA

	Tutorials:	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN.		
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SEMESTER WISE TEACHING PLAN (2019-2020)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Sunita Atal

Department: Sanskrit

Semester: II/IV/VI

Month		Topics	Course	Paper Code/Name
JANUARY	Theory	SECTION-A UNIT-1 SCIENCE OF INQUIRY	B.A.(H)3 rd year	INDIAN SYSTEM OF LOGIC AND DEBATE
		SECTION-A INTRODUCTION TO INDIAN MEDICINE SYSTEM AYURVEDA	B.A. 2 ND YEAR GE	BASIC PRINCIPLES OF INDIAN MEDICINE SYSTEM
	Tutorials	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN.		
FEBRUARY	Theory:	SECTION-A UNIT-2 METHOD OF DEBATE TYPES OF DEBATE	B.A.(H)3 rd year	INDIAN SYSTEM OF LOGIC AND DEBATE
		SECTION-B BASIC PRINCIPLES OF AYURVEDA	B.A. 2 ND YEAR GE	BASIC PRINCIPLES OF INDIAN MEDICINE SYSTEM
	Tutorials:	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN.		

	<u>Assignment :</u>	ASSIGNMENTS WILL BE GIVEN REGARDING THE TOPICS		
MARCH		SECTION-C UNIT-1 THEORY OF DEBATE	B.A.(H)3 rd year	INDIAN SYSTEM OF LOGIC AND DEBATE
		SECTION-C DIETICS, NUTRITION AND TREATMENTS IN AYURVEDA	B.A. 2 ND YEAR GE	BASIC PRINCIPLES OF INDIAN MEDICINE SYSTEM
	Tutorials:	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN.		
	<u>Test</u>	TESTS WILL BE TAKEN TIMELY		
APRIL	Theory:	SECTION-C UNIT-2 THEORY OF DEBATE	B.A.(H)3 rd year	INDIAN SYSTEM OF LOGIC AND DEBATE
		SECTION-C DIETICS, NUTRITION AND TREATMENTS IN AYURVEDA	B.A. 2 ND YEAR GE	BASIC PRINCIPLES OF INDIAN MEDICINE SYSTEM
	Tutorials:	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN.		



SEMESTER WISE TEACHING PLAN (2019-2020)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Sunita Atal

Department: Sanskrit

Semester: II/IV/VI

Month		Topics	Course	Paper Code/Name
JANUARY	Theory	SECTION-A UNIT-1 SCIENCE OF INQUIRY	B.A.(H)3 rd year	INDIAN SYSTEM OF LOGIC AND DEBATE
		SECTION-A INTRODUCTION TO INDIAN MEDICINE SYSTEM AYURVEDA	B.A. 2 ND YEAR GE	BASIC PRINCIPLES OF INDIAN MEDICINE SYSTEM
	Tutorials	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN.		
FEBRUARY	Theory:	SECTION-A UNIT-2 METHOD OF DEBATE TYPES OF DEBATE	B.A.(H)3 rd year	INDIAN SYSTEM OF LOGIC AND DEBATE
		SECTION-B BASIC PRINCIPLES OF AYURVEDA	B.A. 2 ND YEAR GE	BASIC PRINCIPLES OF INDIAN MEDICINE SYSTEM
	Tutorials:	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN.		

	<u>Assignment :</u>	ASSIGNMENTS WILL BE GIVEN REGARDING THE TOPICS		
MARCH		SECTION-C UNIT-1 THEORY OF DEBATE	B.A.(H)3 rd year	INDIAN SYSTEM OF LOGIC AND DEBATE
		SECTION-C DIETICS, NUTRITION AND TREATMENTS IN AYURVEDA	B.A. 2 ND YEAR GE	BASIC PRINCIPLES OF INDIAN MEDICINE SYSTEM
	Tutorials:	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN.		
	<u>Test</u>	TESTS WILL BE TAKEN TIMELY		
APRIL	Theory:	SECTION-C UNIT-2 THEORY OF DEBATE	B.A.(H)3 rd year	INDIAN SYSTEM OF LOGIC AND DEBATE
		SECTION-C DIETICS, NUTRITION AND TREATMENTS IN AYURVEDA	B.A. 2 ND YEAR GE	BASIC PRINCIPLES OF INDIAN MEDICINE SYSTEM
	Tutorials:	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN.		



SEMESTER WISE TEACHING PLAN (2017-18)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr M PADMA SURESH

Department: ECONOMICS

Semester : IV

MONTH		TOPICS	COURSE	PAPER CODE/NAME
JANUARY	Theory:	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
FEBRUARY	Theory:	Approaches to research and research strategy-Ch-5,6,7,8,13 of RK, Research ethics-Ch 14 Submission of research proposal.		
MARCH	Theory:	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	Theory:	Analyzing data, Writing Project Report-Ch 15,16.17 of RK Submission of Project/Research Report		



SEMESTER WISE TEACHING PLAN (2017-18)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. M PADMA SURESH

Department: ECONOMICS

Semester : IV /2017-18

MONTH		TOPICS	COURSE	PAPER CODE/ NAME
JANUARY	Theory:	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 C-10
	Tutorials:	Problems from Gujarati and Devore and question papers		
FEBRUARY	Theory:	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		
	Tutorials:	End chapter questions from		
MARCH	Theory:	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.		
	Tutorials:	End chapter questions from Gujarati, Dougherty		

APRIL	Theory:	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.		
	Tutorials:	End chapter exercises from Gujarati Dougherty and revision from previous question papers.		



Name of the Faculty: KRISHNAKUMAR S (2017-18)

Department: ECONOMICS

Semester : II/IV/VI

Month		Topics	Course	Paper
JANUARY	Theory:	Introduction to the Growth Theory. Neoclassical Solow model and its assumptions. Golden	BA(Hons) Sem IV	Intermediate Macroeconomics-II
	Practicals:			
	Tutorials:	Assignments on neoclassical Solow growth model from Mankiw workbook		
FEBRUARY	Theory:	Theories of consumption: absolute income hypothesis Duesenberry relative income hypothesis, Permanent Income Hypothesis,	BA(Hons) Sem IV	Intermediate Macroeconomics-II
	Practicals:			
	Tutorials:	Economics Growth tutorials and tests. some new readings		
MARCH	Theory:	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		
	Practicals:			
	Tutorials:	Problems on inter-temporal approach. Discussion of some articles.		
	<u>Assignment:</u>	Test based on		

APRIL	Theory:	Critical rate of interest. Regressive expectations model. Baumol Tobin approach. Tobin's liquidity preference as behaviour	BA(Hons) Sem IV	Intermediate Macroeconomics- II
	Practicals:			
	Tutorials:	Problems on debt stabilization , Taylor's rule		
	<u>Test</u>			
MAY	Theory:	Economics of ideas. Miscellaneous. Revision	BA(Hons) Sem IV	Intermediate Macroeconomics- II
	Practicals:			
	Tutorials:			



SEMESTER WISE TEACHING PLAN (2017-18)
SRI VENKATESWARA COLLEGE

Name of the Faculty: KRISHNAKUMAR S

Department: ECONOMICS

Semester : II/IV/VI

Month		Topics	Course	Paper Code/Name
JANUARY	Theory:	Introduction to Macroeconomics, measurements of gross domestic product, income, expenditure and the circular flow; real versus nominal GDP; price indices; national income accounting for open economy, balance of	BA(Hons) Sem II	Introductory Macroeconomics
	Practicals:			
	Tutorials:	Reading balance of payments sheet from Economics Survev.		
FEBRUARY	Theory:	Functions of money; quantity theory of money; determination of money supply and demand; credit creation; tools of monetary policy. Inflation and its costs;	BA(Hons) Sem II	Introductory Macroeconomics
	Practicals:			
	Tutorials:	Exploring RBI Datawarehouse for the different definitions of money supply. New monetary aggregates.		
MARCH	Theory:	Classical and Keynesian systems; simple Keynesian model of income determination; IS-LM model.	BA(Hons) Sem II	Introductory Macroeconomics
	Tutorials:	Numericals on the simple model and IS LM		
	Assignment:	Project on the study of the Balance of payments sheet of the countries from IMF, RBI Datawarehouse etc.		
APRIL	Theory:	Fiscal and monetary multipliers.	BA(Hons) Sem II	Introductory Macroeconomics

	Practicals:			
	Tutorials:	Numericals on IS LM and fiscal and monetary policy multipliers		
	Test	Test on Simple Theory and IS LM Analytics		
May	Theory:	Overview of the course. Contemporary Issues.	BA(Hons) Sem II	Introductory Macroeconomics
	Practicals:			
	Tutorials:			



SEMESTER WISE TEACHING PLAN (2017-18)
SRI VENKATESWARA COLLEGE

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3. Name of the Faculty: N. KALITHASAMMAL

4. Department: Economics

Semester:

VI

5. Month	6.	7. Topics	8. Course	9. Paper Name/ Code
10. 11. 12. 13. 14.JANUAR Y	15. Theory:	16. Gains of international trade, advantages, comparative and absolute advantage, PPC, offer 17. Curves.	18. 19. 20. B. Com (Prog.)	21. 22. 23. Internationa l trade
	24.Tutorials :	25. PPC, Advantages of trade, 26. Terms of trade.		
27. 28. 29. FEBRUA RY	30. Theory:	31. Frame work and equilibrium of Heckscher and Ohlin theorem.		32.
	33.Tutorials :	34. Heckscher Ohlin theorem.		
35. 36. 37. 38. 39. 40.MARCH 41. 42. 43. 44.	50. 51.Theory:	52. Policy of international trade, tariff and trade, NTB, Stolper and Samuelson, and free trade and protection.		
45. 46. 47. 48. 49.	53.Tutorials :	54. Free trade and protection, NTB, Policy of IT.		
	55.Assignm ent:	56. Both Assignment and Test Taken.		

57. 58. 59. 60. 61.APRIL, MAY	62.Theory:	63. GATT and WTO, WTO and developing countries, trade rounds.		
	64.Tutorials :	65. WTO and GATT.		
	66.<u>Test</u>	67. Group assignments and test taken.		

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SEMESTER WISE TEACHING PLAN (2017-18)
SRI VENKATESWARA COLLEGE

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74. **Name of the Faculty: N. KALITHASAMMAL**75. **Department: Economics****Semester:****II**

76.Month	77. 78.	79. Topics	80. Course	81.Paper Name/ Code
82.JANUAR Y	83. 84. Theory:	85. Concepts of scarcity and choice, demand and supply, determination and movements in supply, and demand curves, elasticity, applications.	86. 87. 88. B.A (Prog.) I yr.	89. 90. 91. Principles of micro economics
	92.Tutorials:	93. Equilibrium and determination of demand and supply		
94. FEBRUARY	95. 96. 97.Theory:	98. Consumers theory and cardinal and IC curves, budget line		99.
	100. 101. Tutori als:	102. Derivation of PCC, ICC, IC and budget line and consumer's equilibrium.		
103. MAR CH	104. 105. 106. 107. Theory :	108. Market structure, concepts of PC market, derivation of MR, AR AND TR, equilibrium, long run industry's supply curve.		
	109. 110. Tutori als:	111. Features of pc market, derivation of long run short run equilibrium, long run supply curve of an industry, allocative efficiency.		

112.	113. <u>Assignment:</u>	114. Two Tests Are Going to Conduct According to The Given Schedule.		
115. 116. APRI L-MAY	117. 118. Theory :	119. Production and cost, iso cost and quants, returns to scale, maximization, equilibrium.		
	120. 121. Tutori als:	122. Technological changes, cost minimization and profit maximization.		
	123.	124. Finalisation of internal assesments.		

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SEMESTER WISE TEACHING PLAN (2017-18)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Meenakshi Sharma

Department: ECONOMICS

Semester: IV

Month		Topics	Course	Paper Code/Name
JANUARY	Theory:	Market Structure: Monopoly Price discrimination and regulation, Two part tariff. Welfare comparison with perfect competition. Synder & Nicholson	B.A (H), Economics, Semester IV	Intermediate Microeconomics II
	Tutorials:	Market Structure (Monopoly) and Game Theory.	B.A (H), Economics, Semester IV	Intermediate Microeconomics II
FEBRUARY	Theory:	Game Theory contd.. Imperfect competition; Bertrand, Cournot and Stackelberg models; Price leadership; Hotelling's beach model. Synder & Nicholson General equilibrium in pure exchange and production; Fundamental welfare theorems and their implications	B.A (H), Economics, Semester IV	Intermediate Microeconomics II
	Tutorials:	Imperfect competition and Exchange	B.A (H), Economics,	Intermediate Microeconomics
MARCH	Theory:	Welfare: 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. Varian	B.A (H), Economics, Semester IV	Intermediate Microeconomics II

	Tutorials:	Welfare and Externality.	B.A (H), Economics, Semester IV	Intermediate Microeconomics II
	<u>Test 1:</u>	Test-I Monopoly and Game Theory.	B.A (H), Economics, Semester IV	Intermediate Microeconomics II
APRIL	Theory:	Public Goods: definition & classification, efficiency criteria, free riding problem. Asymmetric Information: Market for lemons, Moral hazard, separating and pooling equilibria. Hal.R. Varain	B.A (H), Economics, Semester IV	Intermediate Microeconomics II
	Tutorials:	Public Goods and Asymmetric Information.	B.A (H), Economics, Semester IV	Intermediate Microeconomics II
	<u>Test 2</u>	Test-II Exchange and Welfare	B.A (H), Economics, Semester IV	Intermediate Microeconomics II

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

Month		Topics	Course	Paper Code/Name
JANUARY	Theory:	<p>Demography and Development Population Growth and Economic Development. The Lewis Model and the Harris Todarro Model. Land Labor and Credit Markets</p> <p>Overview of Rural Markets.</p>	B.A (H), Economics, Semester VI	Development Theory and Experience-II
	Tutorials:	Demography and Development and Overview of Rural Markets.	B.A (H), Economics, Semester VI	Development Theory and Experience-II
FEBRUARY	Theory:	<p>Land, Labor and Credit Markets Land Markets, Labor Markets, Credit Markets- Debraj Ray- Chapter 12, 13 and 14 Unit 3: Individual, Communities and Collective outcome. Elinor Ostrom, Chapter 1, pp 1-14</p>	B.A (H), Economics, Semester VI	Development Theory and Experience-II
	Tutorials:	Land, Labor and Credit Markets	B.A (H), Economics, Semester VI	Development Theory and Experience-II
	Test 1	<p>Demography and Development.: Population Growth and Economic</p>	B.A (H), Economics, Semester VI	Development Theory and Experience-II

MARCH	Theory:	<p>Environment and Sustainable Development</p> <p>A very short Introduction by Partha Deasgupta.Chapter 7</p> <p>Leading Issues in Economic Development by Gerald M.Meier and James E. Rauch Chapter 10</p> <p>World Bank Report 1992 from the World Bank (section 10.1)</p> <p>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
	Tutorials:	Environment and Sustainable Development	B.A (H), Economics, Semester VI	Development Theory and Experience-II
APRIL	Theory:	<p>Globalization</p> <p>Abhijit Banerjee, Roland Benabou and Dilip Mookerjee, Understanding Poverty. Chapter 6 and 7.</p> <p>Dani Rodrik, The Globalization Paradox Why</p>	B.A (H), Economics, Semester VI	Development Theory and Experience-II
	Tutorials:	Globalization	B.A (H), Economics, Semester VI	Development Theory and Experience-II
	Test II	Land , Labor and Credit and Environment and Sustainable Development	B.A (H), Economics, Semester VI	Development Theory and Experience-II



SEMESTER WISE TEACHING PLAN (2017-18)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Ankit Joshi

Department: Economics

Semester: II (2017- 18)

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

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

	Tutorials:	Unit- 4: Closed Economy in Short Run Mankiw: Chapter 3, 10 Unit- 2: Money (Blanchard: Chapter 4) Unit – 3: Inflation (Blanchard: Chapter 23; Partha Ray: Chapter 1 Partha Sen: Article on Urijit Patel Committee Report)		
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SEMESTER WISE TEACHING PLAN (2017-18)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Ankit Joshi

Department: Economics

Semester: VI (2017- 18)

Month		Topics	Course	Paper Code/Name
JANUARY	Theory:	Unit -1: Money: Concepts, Functions and Money Supply Determination	B.A. (Hons.) Economics	Money and Financial Markets
	Practicals:	-		
	Tutorials:	Unit -1: Money: Concepts, Functions and Money Supply Determination		
FEBRUARY	Theory:	Unit -2: Financial Institutions, Money and Capital Markets, Asymmetric Information	B.A. (Hons.) Economics	Money and Financial Markets
	Practicals:	-		
	Tutorials:	Unit -1: Money: Concepts, Functions and Money Supply Determination Unit -2: Financial Institutions, Money and Capital Markets, Asymmetric Information		

	<u>Assignment:</u>	Unit – 1: Money: Concept, measurement and money supply determination		
MARCH	Theory:	Unit – 3: Interest Rate Determination, Term Structure of Interest Rates Unit – 4: Balance Sheet and Portfolio Management	B.A. (Hons.) Economics	Money and Financial Markets
	Practicals:	-		
	Tutorials:	Unit – 3: Interest Rate Determination, Term Structure of Interest Rates Unit – 4: Balance Sheet and Portfolio Management		
	<u>Test</u>	Unit -2: Financial Institutions, Money and Capital Markets, Asymmetric Information Unit – 3: Interest Rate Determination, Term Structure of Interest Rates		
APRIL	Theory:	Unit – 5: Central Banking and Monetary Policy	B.A. (Hons.) Economics	Money and Financial Markets
	Practicals:	-		
	Tutorials:	Unit – 5: Central Banking and Monetary Policy		



SEMESTER WISE TEACHING PLAN (2017-2018)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Rajbir Kaur

Department: History

Semester: IV, VI

Month		Topics	Course	Paper Code/ Name
JANUARY	Theory:	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.) IIInd Year	Core - History of India – VI (c.1750-1857)
		I. Pre-colonial History of written records & modalities of dissemination	B.A. (Prog.) IIIrd Year	GE –History of Indian Journalism: Colonial and Post-Colonial Period
		III. Social inequality & Gender	B.A. (Prog.) IIIrd Year	SEC – Indian History & Culture
	Tutorials:	Introducing the course and its themes.		
		Discussion		
FEBRUARY	Theory:	III. Colonial state and ideology: emergence of the Company State IV. Law and education	B.A. (Hons.) IIInd Year	Core - History of India – VI (c.1750-1857)
		II. Advent of Print media : Imperialist Ideologies	B.A. (Prog.) IIIrd Year	GE –History of Indian Journalism: Colonial and Post-Colonial Period
		IV. Cultural Heritage	B.A. (Prog.) IIIrd Year	SEC – Indian History & Culture
	Tutorials:	Discussion with the tutorial groups on the topics already taken up in the lectures		

	<u>Assignment:</u>	<p>Have the recent writings on the eighteenth century radically changed our understanding of that period? Or In what ways did the different ideologies shaped or influenced the colonial rule during the 19th Century? Or “The Revolt of 1857 in India was much more than the First War of Independence.” Do you agree?</p>	B.A. (Hons.) IInd Year	Core - History of India – VI (c.1750-1857)
		Critically examine the advent of print media during Colonial period in Indian history?	B.A. (Prog.) IIIrd Year	GE –History of Indian Journalism: Colonial and Post-Colonial Period
		Group Projects on themes of Indian Culture and historical aspects of it with field work assigned to students.	B.A. (Prog.) IIIrd Year	SEC – Indian History & Culture
MARCH	Theory:	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)
		III. Nationalism & Print Culture: Selective study of prominent newspapers: Tribune, Amrita Bazar Patrika, and Hindustan Times	B.A. (Prog.) IIIrd Year	GE –History of Indian Journalism: Colonial and Post-Colonial Period
		V. Cultural Forms & Cultural Expressions	B.A. (Prog.) IIIrd Year	SEC – Indian History & Culture
	Tutorials:	Discussion with regard to specific readings given for study		
		Discussion group for Hindi medium students		
	<u>Mid Term Test:</u>	Internal Class Test held on 11 th April 2018	B.A. (Hons.) IInd Year	Core - History of India – VI (c.1750-1857)

		Internal Class Test held on 12 th April 2018	B.A. (Prog.) IIIrd Year	GE –History of Indian Journalism: Colonial and Post-Colonial Period
APRIL	Theory:	VII. Popular resistance	B.A. (Hons.) IIInd Year	Core - History of India – VI (c.1750-1857)
		IV. Writing & Reporting: Field Work	B.A. (Prog.) IIIrd Year	GE –History of Indian Journalism: Colonial and Post-Colonial Period
		Revision and Project presentations	B.A. (Prog.) IIIrd Year	SEC – Indian History & Culture
	Tutorials:	Revision of the courses Discussion on previous year's question papers		



SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
January - April, 2018

Name of the Faculty: NEERAJ SAHAY

Department: HISTORY

Semester: II

Month		Topics	Course	Paper Code/Name
JANUARY	Theory:	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
	Practicals:	N/A		
	Tutorials:	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	

FEBRUARY	Theory:	<p>UNIT II</p> <ol style="list-style-type: none"> 1. Changing Political Formations (c. 600 BCE to c. 300CE): <i>Mahajanapadas: Monarchies and Gana/samghas</i> 2. The Mauryan Empire: Political Structure 3. Economy and Society (c.600 BCE to c. 300CE): Agrarian and Urban Economy with Reference to Indo-Roman Trade <p>UNIT III</p> <ol style="list-style-type: none"> 1. Changes in the Post-Gupta period and characterization of early medieval period <p>UNIT IV</p> <ol style="list-style-type: none"> 1. Vardhans, Pallavas and Chalukyas: Political and cultural developments 	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
	Practicals:	N/A		
	Tutorials:	<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	Theory:	<p>UNIT II</p> <ol style="list-style-type: none"> 1. Mauryan Polity: <i>Dhamma</i> 2. Post Mauryan Polities: Kushanas and Satavahanas 3. Tamilakam <p>UNIT III and IV</p> <ol style="list-style-type: none"> 1. Society(c.600 BCE-300CE) and Social Stratification 2. Gupta Polity <p>UNIT V</p> <ol style="list-style-type: none"> 1. Palas, Pratiharas and Rashtrakutas: Introduction; tripartite conflict 	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
	Practicals:	N/A		

	Tutorials:	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
	<u>Assignment</u>	<ol style="list-style-type: none"> Trace the social developments in Mauryan and Post Mauryan period <p><u>Any one of the following:</u></p> <ol style="list-style-type: none"> Discuss the cultural developments during Gupta and Vakataka period. Describe the ways in which Gupta period was a watershed between past and future polities. Underlining the changes that occurred in early medieval centuries, critically discuss their characterization 	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
	<u>Mid Term Test</u>			
APRIL	Theory:	<p>UNIT IV</p> <ol style="list-style-type: none"> Defining Early Medieval Post Gupta polities Society and Economy <p>UNIT V</p> <ol style="list-style-type: none"> Buddhism and Jainism Consolidation of Brahmanical Tradition Puranic Hinduism <p>UNIT VI</p> <ol style="list-style-type: none"> Art and Architecture <p>UNIT VI</p> <ol style="list-style-type: none"> Emergence of Rajput States in North India; foundations <p>UNIT VII</p> <ol style="list-style-type: none"> Cholas State and administration, economy and culture <p>UNIT VIII</p> <ol style="list-style-type: none"> Arabs, Ghazanavites, trans-regional exchnage 	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, 2018

Name of the Faculty: Dr. Ningmuanching

Department: History

Semester: II and IV

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

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



SEMESTER WISE TEACHING PLAN (2017-18)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Nuti Namita

Department: History

Semester: II/IV/VI

Even Semester

Month		Topics	Course	Paper Code/Name
JANUARY	Theory	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
	Theory	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)
	Tutorials	Discussion, Question answer session		
FEBRUARY	Theory:	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
	Theory	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.A(Hons.) third year V1 Semester History	DSE X11 History of Modern Japan and Korea(1868-1950s)
	Tutorials:	Assignment: GE-3 1. What id decolonization? Discuss the process in ALGERIA.		

	Assignment:	1. Discuss the internal and external causes for the crisis of the Tokugawa regime?		
MARCH	Theory:] 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	General Elective 111 Semester 2	Paper -3 Issues In the Contemporary World: 1945-2000
	Theory	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.A(Hons.) third year V1 Semester History	DSE X11 History of Modern Japan and Korea(1868-1950s)
	Tutorials:	Discussion, Question answer session		
	Test	<ol style="list-style-type: none"> 1. Discuss the Ecological struggles in the Brazil Forests of South America 2. Discuss the rise of Militarism in Japn? 		
APRIL	Theory:	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	General Elective 111 Semester 2	Paper -3 Issues In the Contemporary World: 1945-2000
	Theory	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.A(Hons.) third year V1 Semester History	DSE X11 History of Modern Japan and Korea(1868-1950s)
	Tutorials:	Revision		

MAY	Theory:	EXAMS		
	Practicals:			
	Tutorials:			



SEMESTER WISE TEACHING PLAN (2017-2018)
SRI VENKATESWARA COLLEGE

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

Department: History

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

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

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

Practicals:	NA		
Tutorials:	Question Answer/Discussion		

MAY	Theory:	1 Revision		
		2. Revision		
	Practicals:	NA		
	Tutorials:	Revision		



**SEMESTER WISE
TEACHING PLAN
SRI VENKATESWARA
January - May, 2017-18**

Name of the Faculty: Dr. Vandana Joshi

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

Month		Topics	Course	Paper Code/Name
January	Theory:	I. Varieties of Nationalisms and the remaking of states in the 19 th and 20 th 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	BA HON Core Course XIV	History of Modern Europe-II 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
	Practicals:			
	Tutorials:	Presentations		
		Presentation		

February	Theory:	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	BA HON Core Course XIV	History of Modern Europe-II 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
	Practicals:			
	Tutorials:			
March	Theory:	[c] Fascism and Nazism: origins and forms; nature of the fascist state	BA HON Core Course XIV	History of Modern Europe-II
		[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
	Practicals:			

	Tutorials:	presentations		
	<u>Assignment</u>			
April	Theory	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	BA HON Core Course XIV	History of Modern Europe-II
		[c] Changing mentalities and popular protests: Jacqueries, food riots and the crowd	BA Programme DSE	Cultural transformation in Early Modern Europe
	Practicals:			
	Tutorials:			
	<u>Mid Term Test</u>			

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



**SEMESTER WISE TEACHING PLAN
(2017-2018)
SRI VENKATESWARA COLLEGE**

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

Name of the Paper: **Politics of Globalization GE-II SEM**

Month		Topic	Course	Paper Code/Name
January	Theory	Concept of Globalization: Globalization debate; for and against. Approaches to understanding globalization: a. Liberal approach b. Radical approach	GE – II SEM	Politics of Globalization
	Practicals			
	Tutorials	Liberal & Radical Approaches		
February	Theory	International Institutions/Regimes a. World Bank b. International Monetary Fund c. The World Trade Organization		
	Practicals			
	Tutorials			
	Assignment	Debates for & against Globalisation		
March	Theory	Issues in Globalization: Alternative Perspectives on its nature and character, critical dimensions: economic, political and cultural Globalization and democracy: State, sovereignty and the civil society		
	Practicals			
	Tutorials	Other dimensions of Globalization		
April	Theory	Globalization and democracy: State, sovereignty and the civil society. Globalization and Politics in developing countries Globalization and social movements Globalization and the demise of Nation State		
	Practicals			
	Tutorials	Globalization & the State		
	Test	Unit I & II		
May	Theory	Globalization and human migration The inevitability of globalization: Domestic and Global responses		
	Practicals			
	Tutorials	Revision		

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

Month		Topic	Course	Paper Code/Name
January	Theory	Rule of Law and the Criminal Justice system in India	Honours SEC Paper	12323901_OC
	Practicals			
	Tutorials	Criminal Justice		
February	Theory	Laws Relating to Criminal Justice Administration in India		
	Practicals			
	Tutorials			
	Assignment	FIR		
March	Theory	How to file a complaint, First Information Report (FIR) Detention, arrest and bail		
	Practicals			
	Tutorials			
April	Theory	Gender: The protection of women against domestic violence, rape and sexual harassment Caste: Laws abolishing untouchability and providing protection against atrocities		
	Practicals			
	Tutorials	Domestic Violence		
	Test	Unit I & II		
May	Theory	Class: laws concerning minimum wages d. Disability and equality of participation and opportunity		
	Practicals			
	Tutorials			

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

Month		Topic	Course	Paper Code/Name
January	Theory	Colonialism & Nationalism: 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	12327905
	Practicals			
	Tutorials	Subaltern Approach		
February	Theory	Colonial Rule in India and its impact: a. Constitutional developments and the colonial state b. Colonial ideology of civilizing mission: Utilitarians and Missionaries c. Impact on agriculture, land relations, industry and ecology		
	Practicals			
	Tutorials	Civilizing Mission		
	Assignment	Any Topic in the Syllabus		

March	Theory	Reform and Resistance: a. The 1857 rebellion b. Major social and religious movements c. Education and the rise of the new middle class		
	Practicals			
	Tutorials	Rise of Middle Class		
April	Theory	Nationalist Politics and Expansion of its Social Base 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		
	Practicals			
	Tutorials			
	Test	Unit I & II		
May	Theory	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		
	Practicals			
	Tutorials	Tribal Movements		

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

Month		Topic	Course	Paper Code/Name
January	Theory	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
	Practicals			
	Tutorials			
February	Theory	Measuring Public Opinion with Surveys: Representation and sampling What is sampling? Why do we need to sample? Sample design. Sampling error and non-response		
	Practicals			
	Tutorials			
	Assignment	Any topic on Unit I, II & III		
March	Theory	Types of sampling: Non random sampling (quota, purposive and snowball sampling); random sampling: simple and stratified		
	Practicals			
	Tutorials			
April	Theory	Survey Research		

		Interviewing: Interview techniques pitfalls, different types of and forms of interview		
	Practicals			
	Tutorials			
	Test			
May	Theory	Questionnaire: Question wording; fairness and clarity.		
	Practicals			
	Tutorials			

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



SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
Even Semester 2017-18

Name of the Faculty: Ms. Raj Kumari
Semester: II,IV,VI

Department: Statistics

Month		Topics	Course	Paper Code/Name
Jan.	Theory:	Random variables: discrete and continuous random variables, p.m.f., p.d.f. and c.d.f., illustrations and properties of random variables, univariate transformations with illustrations. Two dimensional random variables: discrete and continuous type, joint, marginal and conditional p.m.f, p.d.f., and c.d.f., independence of variables, bivariate transformations with illustrations.	B Sc (H.) Statistics	STAT-C-201 Probability and Probability Distributions
	Practicals:			
	Tutorials:			
Feb.	Theory:	Mathematical Expectation and Generating Functions: Expectation of single and bivariate random variables and its properties. Moments and Cumulants, moment generating function, cumulant generating function and characteristic function. Uniqueness and inversion theorems (without proof) along with applications. Conditional expectations	B Sc (H.) Statistics	STAT-C-201 Probability and Probability Distributions
	Practicals:	Fitting of binomial distributions for n and $p = q = \frac{1}{2}$, Fitting of binomial distributions after computing mean and variance	B Sc (H)Statistics	STAT-C-201 Probability and Probability Distributions
	Tutorials:			
March	Theory	Discrete Probability Distributions: Uniform, Binomial, Poisson, Geometric, Negative Binomial and Hypergeometric distributions along with their characteristic properties and limiting/approximation cases.	B Sc (H.) Statistics	STAT-C-201 Probability and Probability Distributions
	Practicals:	Fitting of Poisson distributions for given value of λ , Fitting of Poisson distributions after computing mean. Fitting of negative binomial. Fitting of suitable distribution	B Sc (H.) Statistics	STAT-C-201 Probability and Probability Distributions
	Practicals:	Application problems based on binomial distribution. Application problems based on Poisson distribution. Application problems based on negative binomial	B Sc (H.) Statistics	STAT-C-201 Probability and Probability

	Tutorials:	distribution		Distributions
April	Theory:	Continuous probability distributions: Normal, Exponential, Uniform, Beta, Gamma, Cauchy, lognormal and Laplace distributions along with their characteristic properties and limiting/approximation cases	B Sc (H.) Statistics	STAT-C-201 Probability and Probability Distributions
	Practicals:	Problems based on area property of normal distribution. To find the ordinate for a given area for normal distribution. Application based problems using normal distribution. Fitting of normal distribution when parameters are given.. Fitting of normal distribution when parameters are not give	B Sc (H.) Statistics	STAT-C-201 Probability and Probability Distributions
	Tutorials:			



SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
Even Semester 2017-18

Name of the Faculty: Dr. M. V. R. Prasada Rao
Semester: IV, VI

Department: Statistics

Month		Topics	Course	Paper Code/Name
January	Theory:	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
		Sequential Analysis: Sequential probability ratio test (SPRT) for simple vs simple hypotheses. Fundamental relations among α , β , A and B,		STAT-C-602 Multivariate Analysis and Nonparametric Methods
	Practicals:	Based on estimation, Cramer-Rao inequality and MVB estimators		
	Tutorials:			
February	Theory:	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
		determination of A and B in practice. Wald's fundamental identity and the derivation of operating characteristics (OC) and average sample number (ASN) functions, examples based on normal, Poisson, binomial and exponential distributions		STAT-C-602 Multivariate Analysis and Nonparametric Methods
	Practicals:	Based on Methods of Estimation		
	Assignment	Methods of Estimation and Concepts of estimation		

	:			
March	Theory:	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
		Nonparametric Tests: Introduction and Concept, Test for randomness based on total number of runs, Empirical distribution function		STAT-C-602 Multivariate Analysis and Nonparametric Methods
	Practicals:	Based on , most powerful test, uniformly most powerful test and Likelihood ratio test		
	Tutorials:			
	Test-	Mid Term Unit-I, Unit-II and Unit-III		
April	Theory	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
		Kolmogrov Smirnov test for one sample, Sign tests-one sample and two samples, Wilcoxon-Mann-Whitney test, Kruskal-Wallis test		STAT-C-602 Multivariate Analysis and Nonparametric Methods
	Practicals:	Based on Interval estimation, Confidence interval		
	Tutorials:	Discussion and revision		



SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
Even Semester -2016-17

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

Department: Statistics

Semester: II/IV/VI

Month		Topics	Course	Paper
JANUARY	Theory	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.	B.Sc. (H) Statistics	STAT C-402 Linear Models
	Practicals	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 Linear Models
	Tutorials			
FEBRUARY	Theory:	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,	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,	B.Sc. (H) Statistics	STAT C-402 Linear Models
	Practicals:	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 Linear Models
	Tutorials:			

	Assignment		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 Linear Models
MARCH	Theory:	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	B.Sc. (H) Statistics	STAT C-402 Linear Models
	Practicals:	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	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	B.Sc. (H) Statistics	STAT C-402 Linear Models
			B.Sc. (H) Statistics	STAT C-202 Algebra
	Test	Will be based on Units covered before mid term break	B.Sc. (H) Statistics	STAT C-402 Linear
	Tutorials:			
APRIL	Theory:	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	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	B.Sc. (H) Statistics	STAT C-402 Linear Models
	Practicals:	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 Residual Analysis, Orthogonal Polynomials.	B.Sc. (H) Statistics	STAT C-202 Algebra
			B.Sc. (H) Statistics	STAT C-402 Linear



SEMESTER WISE TEACHING PLAN

SRI VENKATESWARA COLLEGE

Eve Semester 2017-18

Name of the Faculty: Akash Varshney

Department: Statistics

Semester : II/IV/VI

Month		Topics	Course	Paper
JANUARY	Theory	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.	B. Sc.(H) Statistics Sem - II	STAT C-202: Algebra
	Practicals	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
	Tutorials			
FEBRUARY	Theory:	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	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

	Practicals:	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 $A = (I_n - X(X'X)^{-1}X')$ is idempotent. Also, determine its rank and characteristic root. . Symmetric Determinants	B. Sc.(H) Statistics Sem - II	STAT C-202: Algebra
	Tutorials:			
	Assignment	1. Assignment based on 10 different option trading strategies 2. Assignment based on discrete and continuous Stochastic Process.	B. Sc.(H) Statistics Sem - VI	STAT-DSE-4(A): Financial Statistics
		Theory of Equations :Problems and Results based Relation between roots and Coefficients and Symmetric functions of roots of a Polynomial Equation	B. Sc.(H) Statistics Sem - II	STAT C-202: Algebra
MARCH	Theory:	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	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
	Practicals:	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. Characteristic Roots and Characteristic Vectors	B. Sc.(H) Statistics Sem - II	STAT C-202: Algebra
	Tutorials:			

	Test	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 , Characteristic Roots and Characteristic Vectors ,System of linear Equations.	B. Sc.(H) Statistics Sem - II	STAT C-202: Algebra
APRIL	Theory:	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	B. Sc.(H) Statistics	STAT C-202: Algebra
	Practicals:	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
	Tutorials:			
MAY	Theory:	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
	Practicals:	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
	Tutorials:			



SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE

Even Semester -2017-18

Name of the Faculty: Dr. Dipika

Department: Statistics

Semester: II, IV, VI

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
		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
		Introduction to quality, dimensions of quality, Its concept, application and importance. Historical perspective of quality control.	B.A. (Program me)	DSE1-(i): Demography
	Practicals	Fitting of binomial distributions for n and p = q = ½ given, Fitting of binomial distributions for n and p given.	Generic Elective	STAT-GE-2: Introductory Probability
		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. (Program me)	DSE1-(i): Demography
	Tutorials			
February	Theory	Conditional Probability, laws of addition and multiplication, independent events, theorem of total probability.	Generic Elective	STAT-GE-2: Introductory Probability
		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,	B.Sc. (H) Statistics	STAT-C-601: Design of Experiments

		Derived BIBD.		
		Quality system and standards: Introduction to ISO quality standards, Quality registration.	B.A. (Program me)	DSE1-(i): Demography
	Practicals	Fitting of binomial distributions computing mean and variance, Fitting of Poisson distributions for given value of lambda, Fitting of Poisson distributions after computing mean.	Generic Elective	STAT-GE-2: Introductory Probability
		Intra block analysis of BIBD, Intra block analysis of a symmetric BIBD.	B.Sc. (H) Statistics	STAT-C-601: Design of Experiments
	Construction of p-chart (fixed & (variable sample size)	B.A. (Program me)	DSE1-(i): Demography	
	Tutorials			
March	Theory	Bayes' theorem and its applications. Random Variables: Discrete and continuous random variables, pmf, pdf, cdf. Illustrations of random variables and its properties.	Generic Elective	STAT-GE-2: Introductory Probability
		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
		Process and product control, Seven tools of SPC	B.A. (Program me)	DSE1-(i): Demography
	Practicals	Application problems based on binomial distribution, Application problems based on Poisson distribution, Problems based on area property of normal distribution.	Generic Elective	STAT-GE-2: Introductory Probability
		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
		Construction of d-chart, Construction of c- chart, Construction of u-chart.	B.A. (Program me)	DSE1-(i): Demography
	Tutorials			
	Assignment	Based on problems of Probability and distributions.		STAT-GE-2: Introductory

				Probability
		Based on problems of LSD & MSPT	B.Sc. (H) Statistics	STAT-C-601: Design of Experiments
		Based on unsolved problem	B.A. (Program me)	DSE1-(i): Demography
	Test	Test will be based on syllabus covered before midterm break	Generic Elective	STAT-GE-2: Introductory Probability
		Test will be based on syllabus covered before midterm break	B.Sc. (H) Statistics	STAT-C-601: Design of Experiments
		Test will be based on syllabus covered before midterm break	B.A. (Program me)	DSE1-(i): Demography
April	Theory	Expectation, variance, moments and moment generating function, Convergence in probability, almost sure convergence, Chebyshev's inequality, weak law of large numbers, De-Moivre Laplace and Lindeberg-Levy Central Limit Theorem (C.L.T.).	Generic Elective	STAT-GE-2: Introductory Probability
		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
		Chance and Assignable causes of quality variation. Examples of patterns on control chart.	B.A. (Program me)	DSE1-(i): Demography
	Practicals	To find the ordinate for a given area for normal distribution, Application based problems using normal distribution, Fitting of normal distribution when parameters are given and not given both.	Generic Elective	STAT-GE-2: Introductory Probability
		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
			Single sampling inspection plan, OC functions and OC curves, Determination of the best plan on the ASN.	B.A. (Program me)



SRI VENKATESWARA COLLEGE
SEMESTER WISE TEACHING PLAN
Even Semester 2017-18

Name of the Faculty: Dr. Alok Kumar Singh

Department: Statistics

Semester: IV

Month		Topics	Course	Paper Code/Name
January	Theory:	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- σ 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	GE-IV	STAT-GE-IV Applied Statistics
	Practicals:	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	GE-IV	
	Tutorials:	--		
February	Theory:	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	GE-IV	STAT-GE-IV Applied Statistics
	Practicals:	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.	GE-IV	
	Tutorials:	--		
March	Theory:	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
	Practicals:	Construction of u chart, OC curve	B.Sc. (Hons) Statistics	
		Computation of measures of mortality. Computation of measures of fertility and population growth.	GE-IV	
	Tutorials:			
	Assignment	Based on Unit 1 to 3.		
	Theory	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

April	Practicals:	Construction of Various type of Index Numbers.		
	Tutorials:			



SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
Even Semester 2017-18

Name of the Faculty: Dr. Ramesh Kumar

Department: Statistics

Semester: III

Month		Topics	Course	Paper Code/Name
JULY	Theory:	Limit laws, different types of convergence and their inter relations,	Bachelor of Statistics (Hons.)	STAT-C-301: SAMPLING DISTRIBUTIONS
		Central Limit Theorem (CLT), applications and examples based on CLT		
	Practicals:	Practical based on different types of convergence and Central Limit Theorem (CLT)		
	Tutorials:	Discuss problems related to theory		
AUGUST	Theory:	Order statistics: distribution of rth order, largest and smallest order statistics and joint distribution of two order statistics, distribution of sample median and range. Examples based on theory	Bachelor of Statistics (Hons.)	STAT-C-301: SAMPLING DISTRIBUTIONS
		Sampling distributions: definition of parameter, statistic, standard error and their concepts, Sampling distribution of various statistics.		
	Practicals:	Practical based on Sampling distributions		
	Tutorials:			
SEPTEMBER	Theory:	Introduction to hypothesis testing (classical and p value approach): formulation of null and alternative hypothesis, type I and Type II errors, level of significance and critical region.		

		Examples based on these		
		Large sample tests: for single mean, single proportion, difference of two means, difference of two proportions, difference of two standard deviations all with examples Examples and practical work based on	Bachelor of Statistics (Hons.)	STAT-C-301: SAMPLING DISTRIBUTIONS
	Practicals:	Practical based on theory		
	Tutorials:			
	<u>Assignment</u>	Assignment related to testing of significance		
OCTOBER	Theory	Chi square distribution: Definition and derivation of p.d.f. of χ^2 with n degrees of freedom (d.f.) using m.g.f., nature of p.d.f. curve for different degrees of freedom, mean, variance, m.g.f., cumulant generating function, mode, additive property and limiting form of χ^2 distribution. Tests of significance and confidence intervals based on Chi-Square Distribution. Includes examples and practical work	Bachelor of Statistics (Hons.)	STAT-C-301: SAMPLING DISTRIBUTIONS
	Practicals:	Practical based on Sampling distributions Chi square distribution		
	Tutorials:			
	<u>Mid Term Test</u>	Test based on Unit-I and Unit-II		
NOVEMBER	Theory:	Student's and Fishers t-distribution: Derivation of p.d.f., nature of probability curve with different degrees of freedom, mean, variance, moments and limiting form of the distribution, Distribution of sample correlation coefficient when population correlation coefficient is zero. Tests of significance and confidence intervals based on t distribution. Includes examples and practical work	Bachelor of Statistics (Hons.)	STAT-C-301: SAMPLING DISTRIBUTIONS

		Distribution of F statistic: derivation of p.d.f., nature of probability curve with different degrees of freedom, mean, variance, moments, mode and limiting form of the distribution, points of inflexion. Distribution of $1/F(n_1, n_2)$. Relationship between t, F and χ^2 distributions. Test of significance and confidence intervals based on F		
	Practicals:	Test of significance and confidence intervals based on F distribution		
	Tutorials:			