CRITERIA-1

CURRICULAR ASPECTS

1.3: Curriculum Enrichment

1.3.1: Syllabi of the courses which includes Human Values, Professional Ethics, Environmental Issues and Gender Parity

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A. HUMAN VALUES & PROFESSIONAL ETHICS					
Sl.No.	**Programme**	**Subject**	**Semester**	**Course code**	**Module**
1	Audit course For all UG programmes	Human Rights/Intellectual Property Rights/ Consumer Protection	III	AUD3E03	I,II,III,IV
2	BSc Chemistry	Chemistry as a discipline of science.	I	CHE1BO1	I
3	BSc Chemistry	Laboratory hygiene and safety practices.	I	CHE1BO1	I1
4	BSc Chemistry	The elements of life and the periodic table.	I	CHE1BO1	III
5	BSc Chemistry	Quantum chemistry in everyday life.	11	CHE2B02	I,II,III,IV
6	BSc Chemistry	Possible ethical imperative based on the entropy law.	111	CHE3B03	111, 1V
7	BSc Chemistry	Thermodynamics and ethics.	111	CHE3B03	111,1V
7 **8**	BSc Chemistry	Impact of organic chemistry in our daily life.	1V,V,V1	CHE4B04 CHE5BO7 CHE6B12	V1,VII
8 **9**	BSc Chemistry	Ethical and social dimensions of physical chemistry.	V,VI	CHE5B08 CHE6B11	
10	BA Economics	Indian Economic Development	V	ECO5B08	V
11	BA Economics	Economics of Capital Market	V	ECO5B09	V
12	BA Economics	Economics of Growth and Development	VI	ECO6B11	III , IV
13	BA Mass communication	Reporting for the print	III	JOU3B03	II
14	BA Mass communication	Editing for the print	III	JOU3B04	I,II
15	BA Mass communication	Radio production	IV	JOU4B06	III
16	BA Mass communication	Mass communication theories	V	JOU5B07	I,II,III,IV,V
17	BA Mass communication	Public relation & Corporate communication	V	JOU5B09	II,III
18	BA Mass communication	Advertising	V	JOU5B10	VI

19	BA Mass communication	Media law & ethics	VI	JOU6B12	I,II,III,IV,V,VI
20	BA Mass communication	Online journalism	VI	JOU6B13	IV
21	MSW	History, Philosophy and field of social work	I	SOW1C01	III, IV, V
22	MSW	Sociology and Economics for Social	I	SOW1C02	II, III, IV, V
23	MSW	Professional Skills for Social Workers	I	SOW1C04	II, III, IV, V
24	MSW	Social Legislation and Human Rights	I	SOW1C05	I, II, III, IV, V
25	MSW	Social Case Work	II	SOW2 C06:	II
26	MSW	Social Group Work	II	SOW2 C 07	II, V
27	MSW	Community Organization and Social Action	III	SOW2 C 08	II, III, IV, V
28	MSW	Psychology for Social Work	II	SOW2 C 09	II, III, IV
29	MSW	Theory and Practice of Counselling	II	SOW2 C 10	II, III, V
30	MSW	Participatory Project Planning and Training	III	SOW3 C 12	II, III, IV, V
31	MSW	Medical and Psychiatric Social Work	III	SOW3 E1 01	III, IV, V
32	MSW	Rural Community Development and Governance	III	SOW3 E2 01	I,III,IV,V
33	MSW	Urban Community Development and Governance	III	SOW3 E2 02	III, IV, V
34	MSW	Administration of Human Service Organizations	IV	SOW4 C 14	I,II,III,IV,V
35	MSW	Social Work with Vulnerable groups	IV	SOW4 C 15	I,II,III,IV,V
36	MSW	Social Work Practice with Families	IV	SOW4 E1 04	IV, V
37	Ability Enhancement Course (AEC)	Working with Older Persons	I	SOW 1 A 01	

38	Professional Competency Course (PCC)	Child Protection	II	SOW 2 A 02	
39	BSc Physics	Non-Conventional Energy sources	V	PHY5 D01(1)	
40	A01, A04, A05 & A06 (Common for all streams) have modules incorporating Human values and issues of Gender, Human Values and Environment and Sustainability				

B. ENVIRONMENTAL SUSTAINABILITY					
Sl.No.	**Programme**	**Subject**	**Semester**	**Course code**	**Module**
1	Audit course for all UG Programmes	Environment Studies	I	AUD1E01	I,II,III, IV
2	Audit course for all UG Programmes	Disaster Management	II	AUD2E02	I,II,III, IV
3	BSc Chemistry	Environmental pollution	V	CHE5B06	V
4	BSc Chemistry	Solid waste management	V	CHE5B06	VI
5	BSc Chemistry	New vistas in chemistry-Green chemistry approach	VI	CHE6B12	II
6	Open Course	Environmental chemistry-green chemistry-air,water,soil,noise,thermal and radioactive pollutants-pollution control measures	V	CHE5DO1	I,II,111,1V,V,VI
7	BA Economics	Economics of Growth and Development	VI	ECO6B11	VI
8	BA Economics	Indian Economic Development	V	ECO5B08	V
9	MSW	Participatory Project Planning and Training	III	SOW3 C 12	I
10	MSW	Urban Community Development and Governance	III	SOW3 E2 02	II
11	MSW	Environmental Studies and Disaster Management	IV	SOW4 E2 03:	V

C. GENDER PARITY					
Sl.No.	**Programme**	**Subject**	**Semester**	**Course code**	**Module**
1	Audit course for all UG Programmes	Gender Studies	IV	AUD4E06	I,II,III,IV
2	BA Economics	Indian Economic Development	V	ECO5B08	V
3	BA Economics	Economics of Growth and Development	VI	ECO6B11	IV
4	MSW	Psychology for Social Work	II	SOW2 C 09	II
5	MSW	Participatory Project Planning and Training	III	SOW3 C 12	IV, V
6	MSW	Rural Community Development and Governance		SOW3 C 12	V
7	MSW	Urban Community Development and Governance	III	SOW3 E2 02	
8	MSW	Social Work with Vulnerable groups	IV	SOW4 C 15	II
9	MSW	Environmental Studies and Disaster Management	IV	SOW4 E2 03	II
10	MSW	Social Work Practice and Gender	IV	SOW4 E2 04	I, II, III, IV, V
11	MSW	Gender Studies/Gerontology	IV		
12	BA Mass communication	Advertising	V	JOU5B10	VI
13	BA Mass communication	Media law & ethics	VI	JOU6B12	IV,V
14	BA Mass communication	Online journalism	VI	JOU6B13	IV

SYLLABI OF COURSES ON HUMAN VALUES & PROFESSIONAL ETHICS

File Ref.No.8074/GA - IV - B1/2012/CU

UNIVERSITY OF CALICUT

Abstract

General and Academic - Faculty of Humanities -Syllabus of the Audit Course, Human Rights (4 credits) for III semester CBCSS UG Programmes -Implemented wef 2019 Admn onwards - Subject to ratification by the Academic Council - Orders issued

G & A - IV - B

U.O.No. 8672/2021/Admn Dated, Calicut University.P.O, 01.09.2021

Read:-1. U.O.No. 4368/2019/Admn dated 23.03.2019
2. U.O No. 10662/2020/Admn dated 13.11.2020.
3. Item No.2 of the minutes of the meeting of BoS, in Political Science UG ,held on 28.07.2021
4. Remarks of the Dean, Faculty of Humanities dated 10.08.2021.
5. Orders of the Vice Chancellor dated 10.08.2021.

ORDER

1. The Regulations for Choice Based Credit and Semester System for Under Graduate (UG) Curriculum- 2019 (CBCSS UG Regulations 2019) for all UG Programmes under CBCSS-Regular and SDE/PrivateRegistration w.e.f. 2019 admission has been implemented, vide paper read (1), and the same was modified vide paper read (2) above.
2. As per the Clause 4.10 of the CBCSS UG Regulations 2019, there shall be one Audit Course each in the first four semesters and at the end of each semester there shall be examination conducted by the college from a pool of questions (QuestionBank) set by the University.
3. The Board of Studies in Political Science UG, vide paper read as (3) above , has resolved to approve the syllabus of the Audit course "Human Rights" for the III Semester CBCSS UG Programmes w e f 2019 Admission onwards.
4. The Dean, Faculty of Humanities vide paper read as (4) above has approved Item no. 2 of the minutes of the meeting of the Board of Studies in Political Science UG, held on 28.07.2021 .
5. Considering the urgency, the Vice Chancellor has approved Item no. 2 of the minutes of the meeting of the Board of Studies in Political Science UG, held on 28.07.2021 and has accorded sanction to implement the Syllabus of the Audit Course- Human Rights, subject to the ratification by the Academic Council.
6. The Syllabus of the Audit Course, Human Rights(4 credits) for III semester CBCSS UG Programmes is therefore implemented wef 2019 Admission onwards.
7. Orders are issued accordingly. (Syllabus appended)

Arsad M

Assistant Registrar

To

The Principals of all Affliated Colleges.
Copy to: PS to VC/ PA to Registrar/PA to CE/JCE I/JCE II/JCE III/JCE IV/JCE VIII/ Digital Wing/SF/DF

Forwarded / By Order

Section Officer

IIIrd SEMESTER CBCSS UG

(2019 admission onwards)

ABILITY ENHANCEMENT COURSE/ AUDIT COURSE

AUD3E03- HUMAN RIGHTS

CREDITS :4

Course outcomes

1. Understand the importance and different approaches to Human rights

2. Understand the different mechanisms of United Nations to ensure and protect the Human Rights

3. Understand the different Constitutional provisions and legislations to protect Human Rights in India

4. Analyse the functions of NHRC, Judiciary and PIL for protecting Human Rights in India

5. Examine the challenges to Human Rights of different vulnerable sections

MODULE –I

HUMAN RIGHTS; Meaning, Evolution and Importance

Approaches; Western, Marxian, Feminist and Third World

MODULE – II

U N O AND HUMAN RIGHTS

(a) Universal Declaration of Human Rights
(b) International Covenants on Civil and Political Rights(ICCPR), International Covenant on Social Economic and Cultural Rights(ICSECR)

(c) The Office of the United Nations High Commissioners for Human Rights(UNHCHR)

MODULE- II

HUMAN RIGHTS IN INDIA

(a) Constitutional Provisions- Fundamental Rights, Directive Principles of State Policy

(b) Some important Legislations

1) Protection of Civil Rights Act-1955

2) Prevention of Atrocities (SC and ST) Act 1989

3) Sexual Harassment of Women at workplace (Prevention, Prohibition and Redressal) Act, 2013

4) The Rights of Persons with Disabilities Act-2016

5) Right to information Act 2005

(c) Agencies Protecting Human Rights ; Judiciary, Public Interest Litigation, National Human Rights Commission and Media

MODULE- IV

CHALLENGES TO HUMAN RIGHTS

Human Rights Violations against Women, Children, Other marginalised sections like Minorities, Dalits, Adivasis and Women, Refugees

BOOKS AND REFERENCES

1 Andrew Clapham, Human Rights: A Very Short Introduction, Oxford University Press, New York, 2007
2 Darren J O Byrne,(ed), Human Rights: An Introduction, Pearson, New Delhi,2004
3 Chiranjeevi Nirmal, Human Rights in India, Oxford University Press, New Delhi,1997.
4 Pavithran K S,(ed), Human Rights in India: Discourse and Contentions, Gyan books, NewDelhi,2018
5 Ujwal Kumar Singh, (ed), Human Rights and peace: Ideas, Laws, Institutions and Movements, Sage, New Delhi,2009

6 Upendra Bax,: The RIGHT to be Human Lasncer International New Delhi, 1987.
7 Johari J.C Human Rights and New World Order Anmol Publications , New Delhi, 0998

SEMESTER I

Course Code: CHE1B01

Core Course I: Theoretical and Inorganic Chemistry- I

Total Hours: 32; Credits: 2; Hours/Week: 2; Total Marks 75 (Internal 15 & External 60)

CHE1B01	Theoretical and Inorganic Chemistry-I	L*	T**	P***	C#
		2	0	0	2
Objective (s)	To gain detailed knowledge of the principle of volumetric analysis and properties of *s* and *p* block elements. To give a basic understanding of groundwork for a research project. Student will be able to analyse basic theory of acid base concept.				
Course outcome (s)					
CO1	To apply the methods of a research project				
CO2	To understand the principles behind volumetry				
CO3	To analyse the characteristics of different elements				
CO4	To distinguish between different acid base concepts				
CO5	To analyse the stability of different nuclei				

*Lecture, **Tutorial, ***Practical, #Credit

Module I: Chemistry as a discipline of science (3 hrs)

What is Science? - Scientific statements - Scientific methods – Observation - Posing a question - Formulation of hypothesis – Experiment – Theory – Law - Revision of scientific theories and laws. Scientific research. Introduction, review of literature, scope, materials and methods, results and discussion, conclusions and bibliography.

References

1. J. A. Lee, *The Scientific Endeavor: A Primer on Scientific Principles and Practice*, Pearson Education, 1999.
2. C. N. R. Rao, *Understanding Chemistry*, Universities Press India Ltd., Hyderabad, 1999.
3. George Gamow, *One, Two, Three...Infinity: Facts and Speculations of Science*, Dover Publications, 1988.
4. *Resonance – Journal of Science Education*, Indian Academy of Sciences.
5. *Nature Chemistry*, Nature Publishing Group.
6. BBC documentary, *Chemistry: A Volatile History*.

Further reading

1. T. F. Gieryn, *Cultural Boundaries of Science*, University of Chicago Press, Chicago, 1999.
2. H. Collins and T. Pinch, *The Golem: What Everyone Should Know about Science*, Cambridge University Press, Cambridge, 1993.
3. C.R. Kothari, *Research Methodology: Methods and Techniques*, 2nd Revised Edition, New Age International Publishers, New Delhi, 2004.

Module II: Analytical Principles – I (10 hrs) 11

Laboratory Hygiene and Safety: Awareness of Material Safety Data Sheet (MSDS). Storage and handling of chemicals. Simple first aids: Electric shocks, fire, cut by glass and inhalation of poisonous gases - Accidents due to acids and alkalies -Burns due to phenol and bromine. Disposal of sodium and broken mercury thermometer - Use of calcium chloride and silica gel in desiccators. – R & S Phrases (elementary idea only) – Safe laboratory practices – Lab safety signs. Personal Protective Equipment (PPE).

Accuracy, precision, Types of error-absolute and relative error, methods of eliminating or minimizing errors. Methods of expressing precision: mean, median, deviation, average deviation and coefficient of variation. Significant figures and its application.

Mole concept. Equivalent mass. Methods of expressing concentration: Weight percentage, molality, molarity, normality, mole fraction, ppm and millimoles. Numerical Problems related to basic concepts.

Volumetric Analysis: Introduction - Primary and secondary standards – Standard solutions - Theory of titrations involving acids and bases, $KMnO_4$, $K_2Cr_2O_7$, I_2 and liberated I_2 - Complexometric titrations. Indicators: Theory of acid-base, redox, adsorption and complexometric indicators. Double burette method of titration: Principle and advantages.

References

1. B. R. Puri, L. R. Sharma and K. C. Kalia, *Principles of Inorganic Chemistry*, 31st Edn., Milestone Publishers and Distributors, New Delhi, 2013.
2. Satya Prakash, *Advanced Inorganic Chemistry*, *Volume 1*, 5th Edn., S. Chand and Sons, New Delhi, 2012.
3. J. Mendham, R. C. Denney, J. D. Barnes and M. Thomas, *Vogel's Text Book of Quantitative Chemical Analysis*, 6th Edn., Pearson Education, Noida, 2013.

Further reading

1. *Guidance in a Nutshell - Compilation of Safety Data Sheets*, European Chemicals Agency, Finland, Version 1.0, December 2013.
2. D. A. Skoog, D.M. West, F.J. Holler and S.R. Crouch, *Fundamentals of Analytical Chemistry*, 8th Edn., Brooks/Cole, Thomson Learning, Inc., USA, 2004.
3. R. H. Hill and D. Finster, *Laboratory Safety for Chemistry Students*, 1st Edn., Wiley, Hoboken, NJ, 2010.
4. M. C. Day and J. Selbin, *Theoretical Inorganic Chemistry*, East West Press, New Delhi, 2002.

Module III : Periodic Properties (3 hrs)

[Prerequisites: Name and symbol of elements, Law of triads, octaves, Mosleys periodic law - Modern periodic law – Long form periodic table. Periodicity in properties: Atomic and ionic radii.]

Ionization enthalpy - Electron affinity (electron gain enthalpy) – Electronegativity: Pauling and Mullikan scales. Effective nuclear charge – Slater rule and its applications – Polarising power – Fajans rule.

Module IV: Representative Elements (8 hrs)

[Prerequisites: *Comparative study of s and p block elements based on* electronic configuration, size, melting point, boiling point, density, ionization energy, electronegativity and oxidation state.]

Standard electrode potential, Flame colour of s block elements, Diagonal relationships- Inert pair effect.

Comparison of Lewis acidity of boron halides - Preparation, properties, structure and uses of Diborane, Boric acid, Borazine and Boron nitride – Structure of $AlCl_3$.

Structures of oxides N and P. Oxy acids of N and P. Structure of SO_2 and SO_3 - Oxy and peroxy acids of sulphur, Oxy acids of chlorine (structure and acidic strength only). Preparation, properties and uses of ammonia, nitric acid, ozone, hydrogen peroxide, sulphuric acid and hydrochloric acid.

References

1. B. R. Puri, L. R. Sharma and K.C. Kalia, *Principles of Inorganic Chemistry*, 31st Edn., Milestone Publishers and Distributors, New Delhi, 2013.
2. Satya Prakash, *Advanced Inorganic Chemistry,* Volume 1, 5th Edn., S. Chand and Sons, New Delhi, 2012.
3. W. U. Malik, G. D. Tuli and R.D. Madan, *Selected Topics in Inorganic Chemistry,* S. Chand and Co., New Delhi, 2010.
4. J. D. Lee, *Concise Inorganic Chemistry*, 5th Edn., Blackwell Science, London.

Further reading

1. D. F. Shriver and P. W. Atkins, *Inorganic Chemistry*, 3rd Edn., Oxford University Press.
2. M. C. Day and J. Selbin, *Theoretical Inorganic Chemistry*, East West Press, New Delhi, 2002.
3. J. E. Huheey, E. A. Keitler and R. L. Keitler, *Inorganic Chemistry – Principles of Structure and Reactivity,* 4th Edn., Pearson Education, New Delhi, 2013.

Module V: Acid Base Concepts (3 hrs)

[Prerequisites: Arrhenius definition, Bronsted- Lowry definition and conjugate acid –base pairs.]

Lux- Flood Definition, Solvent System Definition, Lewis definition, Usanovich definition.

Hard and soft acids and bases. Classification of acids and bases as Hard and Soft. Applications of HSAB concept, Limitations of HSAB concept.

References

1. W. U. Malik, G. D. Tuli and R.vD. Madan, *Selected Topics in Inorganic Chemistry,* S. Chand and Co., New Delhi, 2010 (Reprint).
2. J. D. Lee, *Concise Inorganic Chemistry*, 5th Edn., Blackwell Science, London.
3. D. F. Shriver and P. W. Atkins, *Inorganic Chemistry*, 3rd Edn., Oxford University Press

Further reading

1. J. E. Huheey, E. A. Keitler and R. L. Keitler, *Inorganic Chemistry – Principles of Structure and Reactivity,* 4th Edn., Pearson Education, New Delhi, 2013.
2. M. C. Day and J. Selbin, *Theoretical Inorganic Chemistry*, East West Press, New Delhi, 2002.

Module VI: Nuclear Chemistry (5 hrs)

[Prerequisites: Nuclear stability – N/P ratio – Packing fraction – Mass defect – Binding energy- Nuclear fission - Atom bomb – Nuclear fusion – Hydrogen bomb]

Nuclear forces – Exchange theory and nuclear fluid theory –- Nuclear reactors. Decay series – group displacement law - Isotopes: Detection – Aston's mass spectrograph – Separation of isotopes by gaseous diffusion method and thermal diffusion method – Application of radioactive isotopes – ^{14}C dating – Rock dating – Isotopes as tracers – Study of reaction mechanism (ester hydrolysis) – Radio diagnosis and radiotherapy.

References

1. H. J. Arnikar, *Essentials of Nuclear Chemistry*, 4th Edn., New Age International (P) Ltd., New Delhi, 1995.

Further reading

1. S. Glasstone, *Source Book on Atomic Energy*, 3rd Edn., East-West Press Pvt. Ltd., NewDelhi, 1967.
2. J. B. Rajam and L. D. Broglie, *Atomic Physics*, 7th Edn., S. Chand and Co. Pvt. Ltd., New Delhi, 1999.

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SEMESTER II

Course Code: CHE2B02

Core Course II: Theoretical and Inorganic Chemistry- II

Total Hours: 32; Credits: 2; Hours/Week: 2; Total Marks 75 (Internal 15 & External 60)

CHE2B02	Theoretical and Inorganic Chemistry- II	L	T	P	C
		2	0	0	2
Objective(s)	Module I - The failures of classical physics theories in explaining many experiments and the emergence of quantum theory with which all of them could be satisfactorily explained. Module II – The basic postulates of quantum mechanics and how to solve the time-independent Schrödinger wave equation of different systems including H atom. Module III - The quantum mechanical treatment of chemical bonding in diatomic molecules using VB and MO theories. Module IV - The quantum mechanical treatment of hybridisation and bonding in polyatomic systems.				
Course outcome (s)					
CO1	To realize the importance and the impact of quantum revolution in science.				
CO2	To understand and apply the concept that the wave functions of hydrogen atom are nothing but atomic orbitals.				
CO3	To realize that chemical bonding is the mixing of wave functions of the two combining atoms.				
CO4	To understand the concept of hybridization as linear combination of orbitals of the same atom.				
CO5	To inculcate an atomic/molecular level philosophy in the mind.				

[Pre-requisite: Early atom models – John Dalton's atomic theory, the discharge tube experiment and discovery of electron, the plum-pudding model, the gold foil experiment and the invention of the nucleus. The nuclear model. Failures of the nuclear model.]

Module I: The Quantum revolution and its early impact in atomic structure (6 hrs)

Experiments which led to the development and generalisation of quantum theory – black body radiation, Planck's quantum hypothesis, photoelectric effect, Einstein's generalisation of quantum theory.

Atomic model partly based on quantum theory – Bohr's theory of the atom, calculation of Bohr radius, velocity and energy of an electron. Atomic spectra of hydrogen and hydrogen like systems. Limitations of Bohr's theory. Louis de Broglie's matter waves – wave-particle duality. Electron diffraction.

Module II: Introductory Quantum Chemistry and the quantum mechanical model of the atom (10 hrs)

Operator algebra – linear and Hermitian operators, Laplacian and Hamiltonian operators, eigen functions and eigen values of an operator. Non-commuting operators and the Heisenberg's uncertainty principle.

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Postulates of quantum mechanics. Well behaved functions. Time independent Schrödinger wave equation for conservative systems. Application to particle in a one dimensional box – normalization of wave function. Particle in a three-dimensional box – separation of variables, degeneracy.

Application of Schrödinger wave equation to hydrogen atom. The wave equation in spherical polar coordinates. Separation of variables. Wave functions or atomic orbitals, Radial and angular parts of atomic orbitals. Quantum numbers (n, l, m). Radial functions, Radial distribution functions and their plots, Angular functions and their plots (1s, 2s and $2p_z$ only).

The Stern-Gerlach experiment and the concept of electron spin, spin quantum number, spin orbitals (elementary idea only). Pauli's exclusion principle.

Module III: Bonding in diatomic molecules (10 hrs)

Need for approximation methods in multi-electron systems. Born-Oppenheimer approximation. Variation theorem (elementary idea only).

Quantum mechanical concept of bonding – (mixing of wave functions of different atoms). Valence bond theory of H_2 molecule (derivation not required). Molecular orbital theory of H_2^+ ion H_2 molecule - linear combination of atomic orbitals (LCAO) and coefficients in the linear combination (derivation not required). Potential energy diagram of H_2 molecule formation – equilibrium geometry. Bonding and antibonding molecular orbitals, bond order. MO diagrams of homonuclear and heteronuclear diatomic molecules – He_2, Li_2, Be_2, B_2, C_2, N_2, O_2, F_2, CO and NO. Comparison of VB and MO theories.

Module IV: Bonding in polyatomic molecules (6 hrs)

Concept of Hybridization: Need of hybridization, Definition (mixing of wave functions of the same atom), LCAO of the central atom – coefficients of atomic orbitals in the linear combination of sp (BeH_2), sp^2 (BH_3) and sp^3 (CH_4) hybridisation (derivation not required). Other examples hybridization – Geometry of molecules like PCl_5, SF_6 and IF_7.

Reference

1. D. A. McQuarrie and J.D. Simon, *Physical Chemistry – A Molecular Approach*, Viva, 2001.

2. I. N. Levine, *Quantum Chemistry*, 6th Edn., Pearson Education Inc., 2009.

3. P.W. Atkins and R.S. Friedman, *Molecular Quantum Mechanics*, 4th Edn., Oxford University Press, 2005.

4. R.K. Prasad, *Quantum Chemistry*, 3rd Edn., New Age International, 2006.

Further reading

1. A.K. Chandra, *Introductory Quantum Chemistry*, 4th Edn., Tata McGraw Hill Publishing Company, Noida, 1994.

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SEMESTER III

Course Code: CHE3B03

Core Course III: PHYSICAL CHEMISTRY - I

Total Hours: 48; Credits: 3; Hours/Week: 3; Total Marks 75 (Internal 15 & External 60)

CHE3B03	PHYSICAL CHEMISTRY - I	L	T	P	C
		3	0	0	3
Objective (s)	To understand the concepts of chemical thermodynamics, equilibria and group theory.				
Course outcome (s)					
CO1	To understand the properties of gaseous state and how it links to thermodynamic systems				
CO2	To understand the concepts of thermodynamics and it's relation to statistical thermodynamics				
CO3	To apply symmetry operations to categorize different molecules				

Module I: Gaseous State (8 hrs)

[Prerequisites: Fundamentals of Gaseous state. Postulates of kinetic theory of gases - Derivation of kinetic gas equation - Maxwell's distribution of molecular velocities - Root mean square, average and most probable velocities.]

Collision number - Mean free path - Collision diameter - Deviation from ideal behavior - Compressibility factor – van der Waals equation of state (derivation required) - Virial equation - Expression of van der Waals equation in virial form and calculation of Boyle temperature - PV isotherms of real gases - Continuity of states - Isotherm of van der Waals equation - Critical phenomena - Critical constants and their determination - Relationship between critical constants and van der Waals constants.

References

1. B. R. Puri, L. R. Sharma, M. S. Pathania, *Principles of Physical Chemistry*, 46th Edn., Vishal Publishing Company, New Delhi, 2013.

2. P. W. Atkins, J. de Paula, *Atkin's Physical Chemistry* 8th Edn., Oxford University Press, 2006.

3. D. A. McQuarrie, J. D. Simon, *Physical Chemistry: A Molecular Approach*, University Science Books: Sausalito, CA; 1997.

4. K. L. Kapoor, *Physical Chemistry*, Volumes II and III, Macmillan Publishers, Noida, 2004.

Further reading

1. G. M. Barrow, *Physical Chemistry*, 5th Edn., Tata McGraw Hill Education, New Delhi, 2006.

2. S. Glasstone, D.H. Lewis, *Elements of Physical Chemistry*, 2nd Edn., Macmillan & Company, UK, 1962.

3. F. Daniels, R. A. Alberty, *Physical Chemistry*, 5th Edn., John Wiley and Sons, Canada, 1980.

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4. P. Atkins, J. de Paula *The Elements of Physical Chemistry* 7th Edn., Oxford University Press, Oxford, 2016.

Module II: Chemical Thermodynamics – I (16 hrs)

[Prerequisites: Fundamentals of Chemical Thermodynamics. Path function and state function - Thermodynamic terms for defining System – Surroundings - Types of systems - intensive and extensive properties - Steady state and equilibrium state. Concept of thermal equilibrium - Zeroth law of thermodynamics.]

First law of thermodynamics – Concept of heat, work, internal energy and enthalpy - Heat capacities at constant volume and at constant pressure & their relationship - Expansion of an ideal gas under isothermal and adiabatic conditions - Work done in isothermal expansion and reversible isothermal expansion - Joule-Thomson effect- significance of term $(\delta U/\delta V)_T$ - Liquefaction of gases - Derivation of the expression for Joule Thomson coefficient – Inversion temperature. Maxwell's relations.

Thermochemistry: Heat changes during physicochemical processes. Kirchoff's relations. Bond dissociation energies. resonance energy from thermochemical data- Changes of thermodynamic properties in different chemical changes. (work out problems)

Second law of thermodynamics - Need for the law - Kelvin – Planck and Clausius statements and equivalence of the two statements with entropic formulation. Calculation of entropy change for reversible and irreversible processes. Entropy change of systems and surroundings for various processes and transformations. Entropy change during the isothermal mixing of ideal gases. Entropy and unavailable work. free energy functions (G and A) and their variation with T, P and V. Criteria for spontaneity and equilibrium.as a criteria of spontaneity and equilibrium. Carnot's theorem - Carnot's cycle and its efficiency.

Module III: Chemical Thermodynamics – II (8 hrs)

Gibbs-Helmholtz equation - Partial molar free energy - Concept of chemical potential - Gibbs-Duhem equation. Maxwell relations.

Fundamental concepts of Statistical Thermodynamics – Probability – Partition function – ensembles- Boltzmann distribution derivation- Relation between entropy and probability - Stirling's approximation - Residual entropy and absolute entropy. Third law of thermodynamics - Nernst heat theorem - Statement of third law.

References

1. B. R. Puri, L. R. Sharma, M.S. Pathania, *Principles of Physical Chemistry*, 46th Edn., Vishal Publishing Company, New Delhi, 2013.

2. P. W. Atkins, J. de Paula, *Atkin's Physical Chemistry* 8th Edn., Oxford University Press (2006).

3. D. A. McQuarrie, J. D. Simon, Physical Chemistry: A Molecular Approach University Science Books: Sausalito, CA; 1997.

4. K. L. Kapoor, *Physical Chemistry*, Volumes II and III, Macmillan Publishers, Noida, 2004.

Further reading

1. G. M. Barrow, *Physical Chemistry*, 5th Edn., Tata McGraw Hill Education, New Delhi, 2006.

2. S. Glasstone, D. H. Lewis, *Elements of Physical Chemistry*, 2nd Edn., Macmillan & Company, UK, 1962.

3. F. Daniels and R. A. Alberty, *Physical Chemistry*, 5th Edn., John Wiley and Sons, Canada, 1980.

4. P.W. Atkins and J. de Paula *The Elements of Physical Chemistry* 7th Edn., Oxford University Press, Oxford, 2016.

5. T. Engel, P. Reid, *Thermodynamics, Statistical Thermodynamics, & Kinetics* Pearson Education, Inc: New Delhi (2007).

6. D. A. McQuarrie, *Statistical Mechanics* University Science Books 2000.

7. J. Rajaram, J.C. Kuriacose, *Chemical Thermodynamics*, Pearson Education, New Delhi, 2013.

Module IV: Chemical Equilibria (8 hrs)

Law of mass action thermodynamic derivation of Law of chemical equilibrium. Relation between Gibbs free energy of reaction and reaction quotient. Equilibrium constants and their quantitative dependence on temperature, pressure and thermodynamic derivation of relations between the various equilibrium constants Kp, Kc and Kx. (using chemical potential) Van't Hoff's equation - Le Chatelier principle (quantitative treatment). Homogeneous and heterogenous equilibria.

References

1. B. R. Puri, L. R. Sharma, M.S. Pathania, *Principles of Physical Chemistry*, 46th Edn., Vishal Publishing Company, New Delhi, 2013.

2. P. W. Atkins, J. de Paula, *Atkin's Physical Chemistry* 8th Ed., Oxford University Press, 2006.

3. D. A. McQuarrie, J. D. Simon, *Physical Chemistry: A Molecular Approach*, University Science Books: Sausalito, CA; 1997.

Further reading

1. G. M. Barrow, *Physical Chemistry*, 5th Edn., Tata McGraw Hill Education, New Delhi, 2006.

2. K. L. Kapoor, *Physical Chemistry*, Volumes II and III, Macmillan Publishers, Noida, 2004.

3. S. Glasstone, D. H. Lewis, *Elements of Physical Chemistry*, 2nd Edn., Macmillan & Company, UK, 1962.

4. F. Daniels, R. A. Alberty, *Physical Chemistry*, 5th Edn., John Wiley and Sons, Canada, 1980.

5. P. W. Atkins, J. de Paula *The Elements of Physical Chemistry* 7th Edn., Oxford University Press, Oxford, 2016.

6. J. Rajaram, J. C. Kuriacose, *Chemical Thermodynamics*, Pearson Education, New Delhi, 2013.

Module V: Molecular Symmetry and Group Theory (8 hrs)

Elements of symmetry of molecules (Identity, proper axis of rotation, plane of symmetry, centre of symmetry and improper axis of rotation) – corresponding symmetry operations – Schonflies notation – binary combinations of symmetry operations.

Rules for a set of elements to form a Mathematical group - point group classification of simple molecules – C_{nv}, C_{nh}, D_{nh}. Group multiplication table for C_{2v}, and C_{2h}.

References

1. B. R. Puri, L. R. Sharma, M. S. Pathania, *Principles of Physical Chemistry*, 46th Edn., Vishal Publishing Company, New Delhi, 2013.

2. P. W. Atkins, J. de Paula, *Atkin's Physical Chemistry* 8th Edn., Oxford University Press (2006).

3. D. A. McQuarrie, J. D. Simon, *Physical Chemistry: A Molecular Approach*, University Science Books: Sausalito, CA; 1997.

4. K. L. Kapoor, *Physical Chemistry*, Volumes II and III, Macmillan Publishers, Noida, 2004.

5. B. S. Garg, *Chemical Applications of Molecular Symmetry and Group Theory*, Macmillan Publishers India Ltd., 2012.

Further reading

1. G. M. Barrow, *Physical Chemistry*, 5th Edn., Tata McGraw Hill Education, New Delhi, 2006.

2. S. Glasstone, D. H. Lewis, *Elements of Physical Chemistry*, 2nd Edn., Macmillan & Company, UK, 1962.

3. F. Daniels, R. A. Alberty, *Physical Chemistry*, 5th Edn., John Wiley and Sons, Canada, 1980.

4. P. W. Atkins, J. de Paula *The Elements of Physical Chemistry*, 7th Edn., Oxford University Press, Oxford, 2016.

5. P. K. Bhattacharya, *Group Theory and its Chemical Applications*, Himalaya Publishing House, New Delhi, 1986.

6. F. A. Cotton, *Chemical Applications of Group Theory*, 3rd Edn., John Wiley & Sons, New Delhi.

SEMESTER IV

Course Code: CHE4B04

Core Course IV: ORGANIC CHEMISTRY– I

Total Hours: 48; Credits: 3; Hours/Week: 3; Total Marks 75 (Internal 15 & External 60)

CHE4B04	ORGANIC CHEMISTRY– I	L	T	P	C
		3	0	0	3
Objective (s)	Student will be able to analyse basic theory and concepts of organic chemistry and appreciate different organic reaction mechanism and their stereochemistry				
Course outcome (s)					
CO1	To apply the concept of stereochemistry to different compounds				
CO2	To understand the basic concepts of reaction mechanism				
CO3	To analyse the mechanism of a chemical reaction				
CO4	To analyse the stability of different aromatic systems				

Module I: Reaction Mechanism: Basic Concepts (10 hrs)

[Prerequisites: Homolytic and heterolytic bond breaking – Curved arrow notation, drawing electron movements with arrows, half-headed and double headed arrows. Types of reagents: Electrophiles and nucleophiles.]

Electron Displacement Effects: Inductive effect: Definition – Characteristics - +I and –I groups. Applications: Comparison of acidity of (i) formic acid and acetic acid (ii) chlorobutanoic acids. Mesomeric effect: Definition – Characteristics - +M and –M groups. Applications: Comparison of basicity of aniline, p-nitroaniline and p-anisidine. Hyperconjugation: Definition – Characteristics. Examples: Propene, ethyl carbocation and ethyl free radical. Applications: relative stability of alkenes, comparison of stabilities of (i) 1-butene and 2-butene (ii) toluene, ethyl benzene and tert-butyl benzene. Electromeric effect: Definition – Characteristics - +E effect (addition of H^+ to 21aloge) and –E effect (addition of CN- to acetaldehyde). Comparison of electron density in benzene, toluene, phenol, chlorobenzene and nitrobenzene. Steric effect: Definition, reason and examples.

Reaction Intermediates: Carbocations, carbanions, free radicals and carbenes (21alogenations, structure, formation and stability).

References

1. Peter Sykes, *A Guide book to Mechanism in Organic Chemistry*: 6th Edition, Pearson Education.
2. S. M. Mukherjee, S.P. Singh, *Reaction Mechanism In Organic Chemistry*, Macmillan.
2. P. S. Kalsi, *Organic Reactions and their Mechanisms*, New Age International Publishers.
3. K. S. Tewari, N.nK. Vishnoi, *Organic Chemistry*, 3rd Edition, Vikas Publishing House.
4. M. K. Jain, S. C. Sharma, *Modern Organic Chemistry*, 3rd Edition, Vishal Publishing Company Co.
5. R. T. Morrison, R. N. Boyd, *Organic Chemistry*, 6th Edition – Prentice Hall of India.
6. I. L. Finar, *Organic Chemistry*, 6th Edition. Vol.- I, Pearson.

Further Reading

1. J. March, *Advanced Organic Chemistry*, IV Edn, John Wiley & Sons, NY.

2. Reinhard Bruckner, *Advanced Organic Chemistry*, Elsevier.
4. J. Clayden, N. Greeves, S. Warren, P. Wothers, *Organic Chemistry*, Oxford University Press.
5. V. K. Ahluwalia, *Green Chemistry*, Ane Books India.

Module II: Stereochemistry (13 hrs)

[Prerequisites: *Concept of isomerism*: Types of isomerism–constitutional isomerism (chain, position and functional) and stereoisomerism. *Stereoisomerism*: Classification into conformational isomerism and configurational isomerism. Elements of symmetry of molecules (Identity, proper axis of rotation, plane of symmetry, centre of symmetry and improper axis of rotation).]

Representation of organic molecules: Fischer, Flying wedge, Sawhorse and Newman projections. Inter conversion of different representations.

Conformational Isomerism: Conformations – Conformational analysis of ethane and n-butane including energy diagrams. Baeyer's strain theory. Conformations of cyclohexane (chair, half chair, boat and twist) – Axial and equatorial bonds –diaxial and flagpole interactions.

Configurational isomerism: Optical isomerism and Geometrical isomerism.

Optical Isomerism: Optical activity – Concept of chirality – Chirality in organic molecules: Enantiomers, Diastereomers and Meso compounds. Optical isomerism in 22alogenations22s, lactic acid and tartaric acid. Relative and absolute configuration- DL system, R- S systems of nomenclature for acyclic optical isomers with one and two asymmetric carbon atoms – sequence rules. Erythro and threo representations(basic idea only). Racemic mixture – Resolution methods – Enantiomeric excess. Asymmetric synthesis (partial and absolute).

Geometrical Isomerism: Definition, condition, geometrical isomerism in but-2-ene, fumaric & maleic acid. cis-trans, syn-anti and E-Z notations with examples.

References:

1. D. Nasipuri, *Stereochemistry of Organic Compounds*, New Age International Publishers.
2. P. S. Kalsi, *Stereochemistry, Conformation and Mechanisms*, New Age International Publishers.
1. R. T. Morrison, R. N. Boyd, *Organic Chemistry*, 6th Edition – Prentice Hall of India.
2. I. L. Finar, *Organic Chemistry* – Vol.1- 6th Edition, Pearson Education.
3. M. K. Jain, S. C. Sharma, Modern, *Organic Chemistry*, 3rd Edition, Vishal Publishing Company Co.
4. K. S. Tewari, N. K. Vishnoi, *Organic Chemistry*, 3rd Edition, Vikas Publishing House.

Further Reading

3. C. N. Pillai, *Organic Chemistry*, Universities Press.
4. P. Y. Bruice, *Organic Chemistry* – 3rd Edn. Pearson Education.
5. J. Clayden, N. Greeves, S. Warren, P. Wothers, *Organic Chemistry*, Oxford University Press

Module III: Aliphatic Hydrocarbons and alkyl halides (16 hrs)

[Prerequisites: Nomenclature of hydrocarbons and alkyl halides].

Alkanes: Preparation from alkyl halides (Reduction of alkyl halides, Wurtz reaction and Corey-House synthesis), from carbonyl compounds (Clemmensen reduction, Wolf-kishner reduction and Kolbe electrolysis). Chemical reactions: Halogenation–Mechanism of free radical chlorination.

Alkenes: Preparation: dehalogenation of dihalides (stereochemistry expected) and dehydration of alcohols. Dehydrohalogenation of alkyl halides (Saytzeff's rule). Chemical reactions: Addition of halogens (electrophilic addition with mechanism), addition of hydrogen halides (Markownikov and Anti-Markownikov addition with mechanism) and addition of water (mechanism expected) – conversion to alcohol (oxymercuration-reduction and hydroboration-oxidation) – Oxidation of alkenes– Epoxidation, dihydroxylation (cis and trans hydroxylation) and oxidative cleavage (permanganate cleavage and ozonolysis).

Alkynes: Preparation from dihalides and acetylides. Chemical reactions: Addition of hydrogen using Lindlar's catalyst and Na/liquid ammonia –Electrophilic addition of halogens and hydrogen halides – Acidity of alkynes – test for terminal alkynes – Oxidation – (Ozonolysis and reaction with alkaline $KmnO_4$). Chemistry of the test for unsaturation: Bromine water and Baeyer's reagent.

Alkyl halides: Preparation – From alkenes and alcohols. Reactions – Types of aliphatic nucleophilic substitution reactions – $S_N1$and S_N2 mechanisms with stereochemical aspects and effects of substrate structure, solvent, nucleophile and leaving group. Elimination reactions: E1 & E2 mechanisms.

References

1. Peter Sykes, *A Guide book to Mechanism in Organic Chemistry*: 6th Edition, Pearson Education.

2. K. S. Tewari, N. K. Vishnoi, *Organic Chemistry*, 3rd Edition, Vikas Publishing House.

3. M. K. Jain, S.C. Sharma, *Modern Organic Chemistry*, 3rd Edition, Vishal Publishing Company Co.

4. R. T. Morrison, R. N. Boyd, *Organic Chemistry*, 6th Edition – Prentice Hall of India,

5. I. L. Finar, *Organic Chemistry*, 6th Edition. Vol.- I, Pearson

Further Reading

1. J. March, *Advanced Organic Chemistry*, 4th Edn, John Wiley & Sons, NY.

2. J. Clayden, N. Greeves, S. Warren, P. Wothers, *Organic Chemistry*, Oxford University Press.

3. V. K. Ahluwalia, *Green Chemistry*, Ane Books India.

Module IV: Aromaticity (3 hrs)

[Prerequisites: Structure of benzene – Huckel's $(4n+2)\pi$ electron rule].

Applications of Huckel's rule to aromatic – anti-aromatic – non aromatic compounds. Aromaticity of benzenoid (benzene, naphthalene and anthracene) nonbenzenoid (furan, thiophene, pyrrole, pyridine) and other cyclic systems – cyclopropene and cyclopropenyl ions, cyclopentadiene and cyclopentadienyl ions, cycloheptatriene and tropylium ion, cyclooctateraene, azulene and annulenes.

References:

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1. R. T. Morrison, R.N Boyd, *Organic Chemistry*, 6th Edn., Prentice Hall of India.
2. I. L. Finar, *Organic Chemistry* – Vol.-1, 6th Edn., Pearson Education.
3. M. K. Jain, S.C. Sharma, *Modern Organic Chemistry*, 3rd Edn., Vishal Publishing Company Co.
4. K. S. Tewari, N. K. Vishnoi, *Organic Chemistry*, 3rd Edn., Vikas Publishing House.
5. Peter Sykes, *A Guide book to Mechanism in Organic Chemistry*, 6th Edn., Pearson Education.

Further Reading

1. P. S. Kalsi, *Organic Reactions and their Mechanisms*, New Age International Publishers.
2. S. H. Pine, *Organic Chemistry*, McGraw Hill.
3. J. March, *Advanced Organic Chemistry*, 4th Edn, John Wiley & Sons, NY
4. Paula Y. Bruice, *Organic Chemistry*, 3rd Edn. Pearson Education.
5. J. Clayden, N. Greeves, S. Warren, P. Wothers, *Organic Chemistry*, Oxford University Press.

Module V: Aromatic Hydrocarbons and Aryl halides (6 hrs)

[Prerequisites: Module IV: Aromaticity. Electrophile and nucleophile].

Nomenclature of benzene derivatives – Structure and stability of benzene (Kekule, Resonance and Molecular Orbital concepts). Aromatic Electrophilic substitution. Mechanism of nitration, 24alogenations, sulphonation, Friedel-Craft's alkylation and acylation. Orientation of aromatic substitution – Ring activating and deactivating groups with examples – ortho, para and meta directing groups. Birch reduction of benzene.

Aryl halides: Aromatic nucleophilic substitutions – bimolecular displacement mechanism, elimination-addition (benzyne intermediate) mechanism.

References:

1. R. T. Morrison, R.N Boyd, *Organic Chemistry*, 6th Edn., Prentice Hall of India.
2. I. L. Finar, *Organic Chemistry* – Vol.-1, 6th Edn., Pearson Education.
3. M. K. Jain, S.C. Sharma, *Modern Organic Chemistry*, 3rd Edn., Vishal Publishing Company Co.
4. K. S. Tewari, N. K. Vishnoi, *Organic Chemistry*, 3rd Edn., Vikas Publishing House.
5. Peter Sykes, *A Guide book to Mechanism in Organic Chemistry*, 6th Edn., Pearson Education.

Further Reading

1. P. S. Kalsi, *Organic Reactions and their Mechanisms*, New Age International Publishers.
2. S. H. Pine, *Organic Chemistry*, McGraw Hill.
3. J. March, *Advanced Organic Chemistry*, 4th Edn, John Wiley & Sons, NY
4. Paula Y. Bruice, *Organic Chemistry* – 3rd Edn. Pearson Education.
5. J. Clayden, N. Greeves, S. Warren, P. Wothers, *Organic Chemistry*, Oxford University Press.

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References

1. R. C. Brunner, *Hazardous Waste Incineration*, McGraw Hill Inc. 1989.
2. A. K. De., *Environmental Chemistry*, 6th Edn., New Age International (P) Ltd., New Delhi, 2006.

SEMESTER V

Course Code: CHE5B07

Core Course VII: ORGANIC CHEMISTRY – II

Total Hours: 48; Credits: 3; Hours/Week: 3; Total Marks 75 (Internal 15 & External 60)

CHE5B07	ORGANIC CHEMISTRY – II	L	T	P	C
		4	0	0	3
Objective (s)	To give the students a thorough knowledge about the chemistry of selected functional groups and their applications in organic preparations				
Course outcome (s)					
CO1	To understand the difference between alcohols and phenols				
CO2	To understand the importance of ethers and epoxides				
CO3	To apply organometallic compounds in preparation of different functional groups				
CO4	To apply different reagents for the inter conversion of aldehydes, carboxylic acids and acid derivatives				
CO5	To apply active methylene compounds in organic preparations				

Module I: Alcohols and Phenols (14 hrs)

[Prerequisites: Monohydric alcohols – Nomenclature, Hydrogen bonding].

Methods of formation of alcohols by reduction of carbonyl compounds. Reaction of carbonyl compounds with Grignard reagent. From alkenes (hydration, hydroboration oxidation and oxymercuration-demercuration reactions). Reactions of alcohols: Acidic and basic nature of alcohols, formation of ester, reaction with hydrogen halides (Lucas test), oxidation (with PCC and $KmnO_4$) – pinacol-pinacolone rearrangement (mechanism expected). Victor Meyer's test. Phenols–Nomenclature, preparation of phenols (from cumene and aromatic sulphonic acid) and acidity of phenol (substituent effects). Reactions of phenols – electrophilic aromatic substitution (Bromination, Nitration and sulphonation) and carboxylation (Kolbe Schmitt reaction). Riemer-Tiemann reaction (mechanism expected), Liebermann's nitroso reaction and Hauben-Hoesch reaction. Preparation of phenolphthalein and fluorescein and colour change of phenolphthalein with pH.

References

1. R. T. Morrison, R. N. Boyd, *Organic Chemistry*, 6th Edn., Prentice Hall of India,
2. I. L. Finar, *Organic Chemistry* – 6th Edn., Vol- I, Pearson.
3. M. K. Jain, S. C. Sharma, *Modern Organic Chemistry*, 3rd Edn., Vishal Publishing Company Co.
4. K. S. Tewari, N K Vishnoi, *Organic Chemistry*, 3rd Edn., Vikas Publishing House.

Further reading

1. B. S. Bahl, *Advanced organic Chemistry*, S. Chand.
2. John McMurry, *Organic Chemistry* – 5th Edn., Thompson Asia Pvt Ltd.
3. C. N. Pillai *Organic Chemistry*, Universities Press.

Module II: Ethers and Epoxides (5 hrs)

[Prerequisites: Ethers-Nomenclature – Isomerism – Preparation by Williamson's synthesis].

Reactions of ethers: Acidic cleavage and Claisen rearrangement (mechanism expected) – Zeisel's method of estimation of methoxy groups. Crown ethers: Nomenclature – importance in organic synthesis and phase transfer catalysis (PTC).

Epoxides: Synthesis from alkenes – acid catalyzed ring opening of epoxides, orientation of epoxide ring opening, reactions of Grignard and organolithium reagents with epoxides.

References

1. R. T. Morrison, R. N. Boyd, *Organic Chemistry*, 6th Edn., Prentice Hall of India,
2. I. L. Finar, *Organic Chemistry* – 6th Edn., Vol- I, Pearson.
3. M. K. Jain, S. C. Sharma, *Modern Organic Chemistry*, 3rd Edn., Vishal Publishing Company Co.
4. K. S. Tewari, N K Vishnoi, *Organic Chemistry*, 3rd Edn., Vikas Publishing House.

Further reading

1. B. S. Bahl, *Advanced organic Chemistry*, S. Chand.
2. John McMurry, *Organic Chemistry*, 5th Edn., Thompson Asia Pvt Ltd.
3. C. N. Pillai *Organic Chemistry*, Universities Press.

Module III: Organometallic Compounds (2 hrs)

Preparation and synthetic applications of Grignard reagent and organozinc compounds.

References

1. R. T. Morrison, R. N. Boyd, *Organic Chemistry*, 6th Edn., Prentice Hall of India,
2. I. L. Finar, *Organic Chemistry*, 6th Edn., Vol- I, Pearson.
3. M. K. Jain, S. C. Sharma, *Modern Organic Chemistry*, 3rd Edn., Vishal Publishing Company Co.
4. K. S. Tewari, N K Vishnoi, *Organic Chemistry*, 3rd Edn., Vikas Publishing House.
5. B. S. Bahl, *Advanced organic Chemistry*, S. Chand.

Further reading

1. Paula Y. Bruice, *Organic Chemistry*, 3rd Edn., Pearson Education Asia.
2. John McMurry, *Organic Chemistry*, 5th Edn., Thompson Asia Pvt Ltd.

Module IV: Aldehydes and Ketones (11 hrs)

[Prerequisites: Nomenclature – Isomerism. Preparation: From alcohols, cyanides, acid chlorides, calcium carboxylates and Etard's reaction].

Nucleophilic addition reactions – Carbon nucleophiles (addition of HCN, wittig reaction), Oxygen nucleophiles (H_2O, alcohols,), Nitrogen nucleophiles (NH_3, hydroxyl amine,

hydrazine, semicarbazide and DNP reagent) and Sulfur nucleophiles (sodium bisulfate). Oxidation – acidified $K_2Cr_2O_7$, $KmnO_4$, CrO_3; Oppenauer oxidation. Distinguishing aldehydes and ketones (Tollen's reagent, Fehling's solution); Reduction – Catalytic hydrogenation, Wolf-Kishner, Clemmensen, metal hydride ($LiAlH_4$ and $NaBH_4$), and MPV reduction. Reactions involving α carbons of carbonyl compounds – Aldol condensation, Cannizzaro reaction Benzoin condensation and Perkin's reactions. Haloform reaction (mechanism expected). Synthetic utility of Wittig reaction, Reformatsky reaction and Beckmann rearrangement.

References

1. R. T. Morrison and R. N. Boyd, *Organic Chemistry*, 6th Edn., Prentice Hall of India.
2. I. L. Finar, *Organic Chemistry*, 6th Edn., Vol.- I, Pearson.
3. M. K. Jain, S. C. Sharma, *Modern Organic Chemistry*, 3rd Edn., Vishal Publishing Company Co.
4. K. S. Tewari, N. K. Vishnoi, *Organic Chemistry*, 3rd Edn., Vikas Publishing House.
5. B. S. Bahl, *Advanced organic Chemistry*, S. Chand.

Further reading

1. Paula Y. Bruice, *Organic Chemistry*, 3rd Edn., Pearson Education Asia.
2. John McMurry, *Organic Chemistry*, 5th Edn., Thompson Asia Pvt Ltd.
3. C. N. Pillai, *Organic Chemistry*, Universities Press.

Module V: Carboxylic Acids and Sulphonic Acids (14 hrs)

[Prerequisites: Carboxylic Acids: Nomenclature – Isomerism. Preparation.]

Carboxylic acids – Hydrolysis of nitrile and carboxylation of Grignard reagent. Chemical properties: Acidity (effect of substituent on the acidity of aliphatic and aromatic carboxylic acids). Reactions of carboxylic acids – conversion to acid chlorides, esters, amides and acid anhydrides. Relative reactivity of carboxylic acid derivatives (acid chlorides, esters, amides and acid anhydrides). Fisher esterification (mechanism expected) HVZ reaction – Decarboxylation – Kolbe electrolysis (mechanism expected). Hydroxy acids – Citric acid– preparation by Reformatsky reaction and uses. Lactic acid, Malic acid and Tartaric acid (Structure only). Methods of formation and chemical reactions of unsaturated monocarboxylic acids (Cinnamic acid and crotonic acid). Ascend and descend in carboxylic acid series.

Sulphonic Acids: Preparation and properties of benzene sulphonic acid – Tosylation.

Comparison of acidity of alcohols, phenols, carboxylic acids and sulphonic acids.

References

1. R. T. Morrison and R. N. Boyd, *Organic Chemistry*, 6th Edn., Prentice Hall of India.
2. I. L. Finar, *Organic Chemistry*, 6th Edn., Vol.- I, Pearson.
3. M. K. Jain, S. C. Sharma, *Modern Organic Chemistry*, 3rd Edn., Vishal Publishing Company Co.
4. K. S. Tewari, N. K. Vishnoi, *Organic Chemistry*, 3rd Edn., Vikas Publishing House.
5. B. S. Bahl, *Advanced organic Chemistry*, S. Chand.

Further reading

1. A. K. Bansal, *A Textbook of Organic Chemistry*, New Age International.
2. John McMurry, *Organic Chemistry*, 5th Edn.,Thompson Asia Pvt Ltd.
3. C. N. Pillai, *Organic Chemistry*, Universities Press.

Module VI: Nitrogen Compounds (14 hrs)

[Prerequisites: Nitro-aci tautomerism – Difference between alkyl nitrites and nitro alkanes. Diazotization and coupling.]

Nitro Compounds: - Ketones from nitro compounds – Nef's reaction (mechanism not required) – Reduction products of nitrobenzene in acidic, neutral and alkaline media.

Amines: Nomenclature – Isomerism. Preparation: From alkyl halides, nitro compounds, nitriles, isonitriles and amides – Hofmann's bromamide reaction, Schmidt reaction and Gabriel phthalmide synthesis. Chemical properties: Basicity (effect of substituents on the basicity of aliphatic and aromatic amines), 35arbylamines reaction, conversion of amine to alkene (Hofmann's elimination with mechanism and stereochemistry), acylation and reaction with nitrous acid. Electrophilic substitution reactions of aniline: Halogenation, nitration and sulphonation. Preparation and uses sulpha drugs – Structural formula of sulphapyridine, sulphadiazine, sulphathiazole and sulphaguanidine. Separation of amines by Hinsberg's method.

Synthetic transformations of aryl diazonium salts, azo coupling. Preparation of methyl orange – Reason for its colour change with pH.

Carbonic Acid Derivatives: Preparation and properties of urea – Estimation of urea (hypobromite method and urease method) – preparation and basicity of guanidine.

References

1. R. T. Morrison and R. N. Boyd, *Organic Chemistry*, 6th Edn., Prentice Hall of India.
2. I. L. Finar, *Organic Chemistry*, 6th Edn., Vol.- I, Pearson.
3. M. K. Jain, S. C. Sharma, *Modern Organic Chemistry*, 3rd Edn., Vishal Publishing Company Co.
4. K. S. Tewari, N. K. Vishnoi, *Organic Chemistry*, 3rd Edn., Vikas Publishing House.
5. B. S. Bahl, *Advanced organic Chemistry*, S. Chand.

Further Reading

1. P. Y. Bruice, *Organic Chemistry*, 3rd Edn., Pearson Education Asia.
2. John McMurry, *Organic Chemistry*, 5th Edn., Thompson Asia Pvt Ltd.
3. C. N. Pillai, *Organic Chemistry*, Universities Press.
4. J. Clayden, N. Greeves, S. Warren, P. Wothers, *Organic Chemistry*, Oxford University Press.

Module VIII: Heterocyclic & Active Methylene Compounds (4 hrs)

Heterocyclic Compounds: Classification – Nomenclature – Preparation and properties of furan and pyridine. Indole – Fischer indole synthesis and resonance structures.

Active Methylene Compounds: Examples – Preparation of ethyl acetoacetate by Claisen condensation (mechanism expected) – Tautomerism – Synthetic applications of ethylacetoacetate.

References

1. R. T. Morrison and R. N. Boyd, *Organic Chemistry*, 6th Edn., Prentice Hall of India.
2. I. L. Finar, *Organic Chemistry*, 6th Edn., Vol.- I, Pearson.
3. M. K. Jain, S. C. Sharma, *Modern Organic Chemistry*, 3rd Edn., Vishal Publishing Company Co.
4. K. S. Tewari, N. K. Vishnoi, *Organic Chemistry*, 3rd Edn., Vikas Publishing House.

Further reading

1. John McMurry, *Organic Chemistry*, 5th Edn., Thompson Asia Pvt Ltd.
2. C. N. Pillai, *Organic Chemistry*, Universities Press.

SEMESTER V

Course Code: CHE5B08

Core Course VIII: PHYSICAL CHEMISTRY – II

Total Hours: 48; Credits: 3; Hours/Week: 3; Total Marks 75 (Internal 15 & External 60)

CHE5B08	PHYSICAL CHEMISTRY – II	L	T	P	C
		3	0	0	3
Objective (s)	To make the student understand the concept of kinetics, catalysis and photochemistry and to familiarize the applications of molecular spectroscopy and phase equilibrium.				
Course outcome (s)					
CO1	To apply the concept of kinetics, catalysis and photochemistry to various chemical and physical processes				
CO2	To characterize different molecules using spectral methods				
CO3	To understand various phase transitions and its applications				

Module I: Kinetics (10 hrs)

[Prerequisites: Fundamentals of Kinetics –Introduction – Derivation of rate constants for first, second (with same and different reactants), third (with same reactants only) and zero order reactions with examples (graphical representations needed) – Half life period (derivation for first and n^{th} order reactions)].

Factors affecting the rate of reactions- Methods to determine the order of a reaction – Steady state approximation – Parallel reactions, opposing reactions, consecutive reactions and chain reactions with examples (elementary idea only) – Arrhenius equation – Effect of temperature on reaction rates Determination and significance of Arrhenius parameters (work out problems) – Theories of reaction rates – Collision theory – Derivation of rate equation for bimolecular reactions using collision theory – Transition state theory – Expression for rate constant based on equilibrium constant and thermodynamic aspects (derivation not required) – Unimolecular reactions – Lindemann mechanism.

Module II: Adsorption and Catalysis (6 hrs)

[Prerequisites: Physical and chemical adsorption, Factors affecting adsorption].

Adsorption isotherms: Freundlich and Langmuir isotherms (derivation required) – Multilayer adsorption – BET equation (derivation not needed) and its applications to surface area measurements. Applications of adsorption.

Catalysis: Homogeneous and heterogenous catalysis – Theories of homogenous and heterogenous catalysis – Enzyme catalysis – Michaelis-Menten equation (derivation not required).

References

1. B. R. Puri, L. R. Sharma, M. S. Pathania, *Principles of Physical Chemistry*, 46th Edn., Vishal Publishing Company, New Delhi, 2013.

2. P. W. Atkins, J. de Paula, *Atkin's Physical Chemistry* 8th Edn., Oxford University Press (2006).

3. Donald A. McQuarrie, John D. Simon, *Physical Chemistry: A Molecular Approach* University Science Books: Sausalito, CA; 1997.

4. K. Laidler, *Chemical Kinetics*, 3rd Edn., Pearson Education, New Delhi, 2004.

5. P. L. Soni, O. P. Dharmarha, U. N. Dash, *Textbook of Physical Chemistry*, 23rd Edn., Sultan Chand & Sons, New Delhi, 2011.

6. K. L. Kapoor, *Physical Chemistry*, Volumes II and III, Macmillan Publishers, Noida, 2004.

Further reading

1. Gordon M. Barrow, *Physical Chemistry*, 5th Edition, Tata McGraw Hill Education, New Delhi, 2006.

2. S. Glasstone, D.H. Lewis, *Elements of Physical Chemistry*, 2nd Edn., Macmillan & Company, UK, 1962.

3. F. Daniels, R.A. Alberty, *Physical Chemistry*, 5th Edn., John Wiley and Sons, Canada, 1980.

4. P. W. Atkins, J. de Paula *The Elements of Physical Chemistry* 7th Edn., Oxford University Press, Oxford, 2016.

Module III: Phase Equilibria (10 hrs)

[Prerequisites: Concept of phase- solid, liquid and gas-homogeneous and heterogeneous phase- component and degree of freedom].

Gibbs phase rule and its derivation. Clausius-Clapeyron equation and its applications to solid-liquid, liquid-vapour and solid-vapour equilibria, phase diagram for one component systems, with applications. One component systems: Water and sulphur systems. Two component systems: Simple eutectic system (lead- silver system) – Pattinson's process – Two component systems involving formation of compounds with congruent melting points (zinc-magnesium system and ferric chloride-water system) – Two component systems involving formation of compounds with incongruent melting points (sodium sulphate-water system). Freezing mixtures – Thermal analysis – Cooling curve method – Deliquescence and efflorescence.

Liquid-liquid equilibria – Partially miscible and immiscible liquid systems – CST – Upper CST and lower CST – Steam distillation. Nernst distribution law: Derivation and applications.

References

1. B. R. Puri, L. R. Sharma, M. S. Pathania, *Principles of Physical Chemistry*, 46th Edn., Vishal Publishing Company, New Delhi, 2013.

2. P. W. Atkins, J. de Paula, *Atkin's Physical Chemistry* 8th Edn., Oxford University Press, 2006.

3. Donald A. McQuarrie, John D. Simon, *Physical Chemistry: A Molecular Approach* University Science Books: Sausalito, CA; 1997.

4. P. L. Soni, O. P. Dharmarha, U. N. Dash, *Textbook of Physical Chemistry*, 23rd Edn., Sultan Chand & Sons, New Delhi, 2011.

Further reading

1. Gordon M. Barrow, *Physical Chemistry*, 5th Edn., Tata McGraw Hill Education, New Delhi, 2006.
2. K. L. Kapoor, *Physical Chemistry*, Volumes II and III, Macmillan Publishers, Noida, 2004.
3. S. Glasstone, D. H. Lewis, *Elements of Physical Chemistry*, 2nd Edn., Macmillan & Company, UK, 1962.
4. F. Daniels, R. A. Alberty, *Physical Chemistry*, 5th Edition, John Wiley and Sons, Canada, 1980.
5. P. W. Atkins, J. de Paula *The Elements of Physical Chemistry* 7th Edn., Oxford University Press, Oxford, 2016.

Module IV: Molecular Spectroscopy I (12 hrs)

[Prerequisites: Electromagnetic spectrum- wavelength, frequency, wavenumber].

Interaction of electromagnetic radiation with matter – Qualitative aspects, Einstein, absorption-emission and factors affecting line width and intensity of signal (elementary idea)- Energy levels in molecules – Born-Oppenheimer approximation.

Rotational Spectroscopy: Introduction – Rigid rotor – Expression for energy – Selection rules – Intensities of spectral lines – Determination of bond lengths of diatomic molecules.

Vibrational Spectroscopy: Simple harmonic oscillator – Energy levels – Force constant – Selection rules

Anharmonicity – Fundamental frequencies – Overtones – Fingerprint region – Group frequency concept – Degree of freedom for polyatomic molecules – Modes of vibrations of CO_2 and H_2O.

Raman Spectroscopy: Basic principles – Qualitative treatment of rotational Raman effect – Vibrational Raman spectra – Stokes & anti-stokes lines and their intensity difference – Selection rules – Mutual exclusion principle.

Electronic Spectroscopy: Basic principles – Frank-Condon principle – Electronic transitions – Beer Lamberts law- Dissociation energy of diatomic molecules – Chromophore and auxochrome – Bathochromic and hypsochromic shifts.

Module V: Molecular Spectroscopy II (4 hrs)

Nuclear Magnetic Resonance (NMR) Spectroscopy: Proton NMR and ^{13}C NMR – Principle – Number and position of signals – Chemical shift – Different scales – Spin-spin coupling (qualitative idea). Eg. NMR spectra of simple molecules.

Electron Spin Resonance (ESR) Spectroscopy: Principle – Hyperfine structure – ESR of methyl, phenyl and cycloheptatrienyl radicals.

References

1. B. R. Puri, L. R. Sharma, M. S. Pathania, *Principles of Physical Chemistry*, 46th Edn., Vishal Publishing Company, New Delhi, 2013.

2. P. W. Atkins, J. de Paula, *Atkin's Physical Chemistry* 8th Edn., Oxford University Press (2006).

3. Donald A. McQuarrie, John D. Simon, *Physical Chemistry: A Molecular Approach* University Science Books: Sausalito, CA; 1997.

4. C. N. Banwell, *Fundamentals of molecular spectroscopy*, McGraw-Hill, 1994.

5. G. M. Barrow, *Introduction to Molecular Spectroscopy*, McGraw Hill, London, 1962.

Further reading

1. Gordon M. Barrow, *Physical Chemistry*, 5th Edn., Tata McGraw Hill Education, New Delhi, 2006.

2. K. L. Kapoor, *Physical Chemistry*, Volumes II and III, Macmillan Publishers, Noida, 2004.

3. S. Glasstone, D. H. Lewis, *Elements of Physical Chemistry*, 2nd Edn., Macmillan & Company, UK, 1962.

4. F. Daniels, R. A. Alberty, *Physical Chemistry*, 5th Edn., John Wiley and Sons, Canada, 1980.

5. Peter Atkins, Julio de Paula, *The Elements of Physical Chemistry*, 7th Edn., Oxford University Press, Oxford, 2016.

6. P. R. Singh, S. K. Dixit, *Molecular Spectroscopy: Principles and Chemical Applications*, S. Chand & Company, New Delhi 1980.

7. P. K. Bhattacharya, *Group Theory and its Chemical Applications*, Himalaya Publishing House, New Delhi, 1986.

8. F. A. Cotton, *Chemical Applications of Group Theory*, 3rd Edn., John Wiley & Sons, New Delhi.

Module VI: Photochemistry (6 hrs)

[Prerequisites: Introduction – Difference between thermal and photochemical processes – Beer Lambert's law].

Laws of photochemistry: Grothus-Draper law and Stark-Einstein's law of photochemical equivalence. Quantum yield and its explanation –Photophysical processes: Jablonski diagram – Fluorescence – Phosphorescence. Non-radiative processes: Internal conversion and inter system crossing. Photosensitization – Chemiluminescence – Photochemical reactions. (hydrogen-chlorine and hydrogen-bromine).

References

1. B. R. Puri, L. R. Sharma, M. S. Pathania, *Principles of Physical Chemistry*, 46th Edn., Vishal Publishing Company, New Delhi, 2013.

2. P. W. Atkins, J. de Paula, *Atkin's Physical Chemistry* 8th Edn., Oxford University Press, 2006.

3. Donald A. McQuarrie, John D. Simon, *Physical Chemistry: A Molecular Approach* University Science Books: Sausalito, CA; 1997.

4. K. K. Rohatgi-Mukherjee, *Fundamentals of Photochemistry*, New Age International, 1978.

Further reading

1. G. M. Barrow, *Physical Chemistry*, 5th Edn., Tata McGraw Hill Education, New Delhi, 2006.

2. K. L. Kapoor, *Physical Chemistry*, Volumes II and III, Macmillan Publishers, Noida, 2004.

3. S. Glasstone, D. H. Lewis, *Elements of Physical Chemistry*, 2nd Edn., Macmillan & Company, UK, 1962.

4. F. Daniels, R. A. Alberty, *Physical Chemistry*, 5th Edition, John Wiley and Sons, Canada, 1980.

5. Peter Atkins, Julio de Paula, *The Elements of Physical Chemistry*, 7th Edn., Oxford University Press, Oxford, 2016.

6. K. Laidler, *Chemical Kinetics*, 3rd Edn., Pearson Education, New Delhi, 2004.

SEMESTER VI

Course Code: CHE6B12

Core Course XII: Advanced and Applied Chemistry

Total Hours: 48; Credits: 3; Hours/Week: 3; Total Marks 75 (Internal 15 & External 60)

CHE6B12	Advanced and Applied Chemistry	L	T	P	C
		3	0	0	3
Objective (s)	Student will be able to 54olymer the role and opportunities of chemistry as a discipline in modern civilization.				
Course outcome (s)					
CO1	To understand the importance of nanomaterials				
CO2	To appreciate the importance of green approach in chemistry				
CO3	To understand the uses and importance of computational calculations in molecular design				
CO4	To realize the extent of chemistry in happiness index and life expectancy				

Module I: Colloids and Nanomaterials (6 hrs)

[Prerequisites: Colloids: Definition – classification- Synthesis – nanometer, micrometer.]

Colloids: Stability – electrical double layer – zeta potential- Aggregation – flocculation – purification of colloids- Properties and applications of colloids.

Nanomaterials: Classification of nanomaterials (0D, 1D, 2D and 3D) – Top down and bottom up approaches in the synthesis – Size dependence of material properties (optical, electrical and catalytic). Variation in electronic and optical properties – Surface area to volume ratio (aspect ratio) and its significance – Metal and semiconductor nanoparticles and carbon nanotubes.

Characterization of nanomaterials.

Applications of nanomaterials (general idea only).

References

1. M.A. Shah, Tokeer Ahmad, *Principles of Nanoscience and Nanotechnology*, Narosa Publishing House, New Delhi, 2010.

2. T. Pradeep, *A Textbook of Nanoscience and Nanotechnology*, McGrawhill, New Delhi, 2012.

3. Paras N. Prasad, *Nanophotonics*, John Wiley & Sons, 2004.

4. P. W. Atkins, J. de Paula, *Atkin's Physical Chemistry*, 8th Edn., Oxford University Press, 2006.

Further reading

1. V.S. Muralidharan, A. Subramania, *Nano Science and Technology*, CRC Press, London.

2. V.R. Raghavan, *Materials Science and Engineering*, Prentice Hall (India) Ltd, 2001.

3. Jonathan W. Steed, David R. Turner, Karl J. Wallace, *Core Concepts in Supramolecular Chemistry and Nanochemistry*, John Wiley & Sons Ltd. 2007.

Module II: New vistas in chemistry (8 hrs)

Green Chemistry: Introduction – need of green chemistry approach – Twelve principles of green chemistry with explanations- Atom economy and microwave assisted reactions – Green solvents –Green synthesis of ibuprofen. Microwave and ultrasound assisted green synthesis: Diels- Alder reaction and Cannizaro reaction.

Supramolecular chemistry: Introduction—types of non- covalent interactions – Molecular recognition – Host-guest interactions.

Combinatorial Chemistry: Introduction – combinatorial synthesis (elementary idea only). Applications of combinatorial synthesis (brief study).

References

1. V. K. Ahluwaliya, *Green Chemistry*, Narosa Publishing House, New Delhi, 2011.

2. P. S. Kalsi, J. P. Kalsi, *Bioorganic, Bioinorganic and Supramolecular Chemistry*, 1st Edn., New Age International Publishers (P) Ltd., New Delhi, 2007.

3. W. Bannwarth, B. Hinzen, *Combinatorial Chemistry – From Theory to Application*, 2nd Edn., Wiley-VCH, 2006.

4. Jonathan W. Steed, David R. Turner, Karl J. Wallace, *Core Concepts in Supramolecular Chemistry and Nanochemistry*, John Wiley & Sons Ltd. 2007.

Further reading

1. Paul T. Anastas, T. C. Williamson, *Green Chemistry – Designing Chemistry for the Environment*, 2nd Edn., 1998.

2. Andrew P. Dicks, *Green Organic Chemistry in Lecture and Laboratory*, CRC Press, Universityof Toronto, Ontario, Canada, 2011.

3. Helena Dodziuk, *Introduction to Supramolecular Chemistry*, Springer, New York, 2002.

Module III: Introduction to Computational Chemistry (6 hours)

Classification of Computational Chemistry methods – Molecular mechanics methods (basic idea of force field) and Electronic Structure methods (basic idea of ab initio and semi empirical methods), potential energy surface – local minima, global minima, saddle point and transition states, Elementary idea of basis functions – Slater type and Gaussian type orbitals.

Reference

1. I. N. Levine, Quantum Chemistry, 6th Edn., Pearson Education Inc., 2009.

2. Frank Jensen, *Introduction to Computational Chemistry*, John Wiley & Sons LTD 1999.

3. C. J. Cramer, *Essentials of Computational Chemistry: Theories and models*, John Wiley & Sons 2002.
4. P. W. Atkins, *Molecular Quantum Mechanics*, Oxford University Press, New York, 2005.
5. R. K. Prasad, *Quantum Chemistry*, Oscar Publications, New Delhi, 2000.

Further reading

1. E. G. Lewars, *Computational Chemistry: Introduction to the theory and applications of molecular quantum mechanics*, 2nd Edn., Springer 2011.
2. Andrew R. Leach, *Molecular Modelling: Principles and Applications*, 2nd Edn., Prentice Hall, 2001.
3. S. Wilson, *Chemistry by Computer: An Overview of the Applications of Computers in Chemistry*, Plenum Publishing, New York, 1986.

Module IV: Synthetic polymers (4 hrs)

Classification – Tacticity –Synthesis and applications of addition polymers (polythene, polystyrene, 56olyme and PMMA) and condensation polymers (nylon 6, nylon 66, and terylene) – thermosets – 56olymeri. Zeigler Natta 56olymerization—advantages. Plastic identification codes. Biodegradable polymers: PLA, PGA and PHBV.

References

1. V. R. Gowarikar, *Polymer Chemistry*, New Age International (P) Ltd., New Delhi, 2010.
2. Fred. W. Billmeyer, *Textbook of Polymer Science*, 3rd Edn., Wiley India, Delhi, 2008.
3. Jeol R. Fried, *Polymer Science and Technology*, Prentice Hall of India Private Limited, New Delhi, 1999.

Further reading

1. Premamoy Ghosh, *Polymer Science and Technology: Plastics, Rubbers, Blends and Composites*, 3rd Edn., McGraw Hill Education (India) Private Limited, 2011.

Module V: Applied inorganic chemistry (8 hrs)

Cement: Manufacture, composition and setting.

Glass: Manufacture, annealing, types of glasses and uses.

Refractory materials: borides and carbides.

Inorganic fertilizers: Essential nutrients for plants – nitrogeneous, phosphatic and potash fertilizers – examples with formula.

Rocket propellants: Classification with examples

Tooth paste and Talcum powder: Composition and health effects.

Chemical industries in kerala: Location, raw materials, chemistry involved in the preparation and uses of the following. Caustic soda and chlorine – Travacore Cochin Chemicals Ltd., TiO_2 pigment from ilmenite – Travancore Titanium Products Ltd.

References

1. E. Stocchi: *Industrial Chemistry*, Vol-I, Ellis Horwood Ltd. UK.

2. R. M. Felder, R. W. Rousseau: *Elementary Principles of Chemical Processes*, Wiley Publishers, New Delhi.

Further reading

1. W. D. Kingery, H. K. Bowen, D. R. Uhlmann: *Introduction to Ceramics*, Wiley Publishers, New Delhi.

2. J. A. Kent, *Riegel's Handbook of Industrial Chemistry*, CBS Publishers, New Delhi.

3. P. C. Jain, M. Jain, *Engineering Chemistry*, Dhanpat Rai & Sons, Delhi.

4. R. Gopalan, D. Venkatappayya, S. Nagarajan, *Engineering Chemistry*, Vikas Publications, New Delhi.

5. B. K. Sharma, *Engineering Chemistry*, Goel Publishing House, Meerut.

6. S. L. Tisdale; W. L.Nelson, J. D. Beaton, *Soil Fertility and Fertilizers*, Macmillan Publishing Company, New York, 1990.

Module VI: Applied organic chemistry – I (8 hrs)

Petroleum: Carbon range and uses of various fractions of petroleum distillation – Petrol – Knocking – Octane number – Anti-knocking compounds – Diesel oil – Cetane number – Flash point – Composition and uses of LPG and CNG.

Pharmaceuticals: Medicinal chemistry – Drugs (chemical, generic and trade names with examples).

Terminology: Prodrug, pharmacy, pharmacology, pharmacodynamics and pharmacokinetics (elementary idea only). Antipyretics, analgesics, antacids, antihistamines, antibiotics, antiseptics, disinfectants, (definition and examples, structures not expected) – Preparation of paracetamol and aspirin.

Cleansing Agents: Soaps and detergents: Preparation soap by saponification of oils and fats, classification, advantages and disadvantages of soaps and detergents – TFM of soap – Cleaning action. Shampoos: Ingredients and functions.

Pesticides: Insecticides, rodenticides and fungicides (definition and examples) – Organo chlorine pesticides – Structure of Endosulfan, DDT and BHC. Organo phosphorus pesticides – malathion, parathion. Harmful effects of pesticides. Herbicides – glyphosate – side effects.

References

1. M. K. Jain, S. C. Sharma, *Modern Organic Chemistry*, 3rd Edn., Vishal Publishing Company Co.

2. K. S. Tewari, N. K. Vishnoi, *Organic Chemistry*, 3rd Edn., Vikas Publishing House.

3. Jayashree Ghosh, *A Textbook of Pharmaceutical Chemistry*, 3rd Edn., S. Chand andCompany Ltd., New Delhi, 1999.

4. A. W. A. Brown, *Insect Control by Chemicals*, New York: Wiley; London: Chapman & Hall, 1951.

Further reading

1. K. H. Buchel, *Chemistry of Pesticides*, John Wiley & Sons, New York, 1983.

2. G. Thomas, *Fundamentals of Medicinal Chemistry*, John Wiley & Sons Ltd., 2006.

Module VII: Applied organic chemistry – II (8 hrs)

Dyes: Definition – Requirements of a dye – Theories of colour and chemical constitution – Classification based on structure and mode of application to the fabric – Preparation and uses of Rosaniline and Indigo. Composition of hair dyes.

Food adulterants: Common food adulterants in various food materials and their identification: Milk, vegetable oils, tea, coffee powder and chilli powder.

Food additives: Food preservatives, artificial sweeteners and antioxidants (definition and examples, structures not required) – Structure of BHT, BHA and Ajinomoto – Common permitted and non-permitted food colours (structures not required) – Artificial ripening of fruits.

Modern food: Definition of fast foods, instant foods, dehydrated foods, junk foods and condiments – Composition of chocolate, milk powder and soft drinks.

References

1. K. S. Tewari, N. K. Vishnoi, S. N. Mehrotra, *A Textbook of Organic Chemistry*, 2nd Edn., Vikas Publishing House (Pvt.) Ltd., New Delhi, 2004.

2. B. Srilakshmi, *Food Science*, 5nd Edn., New Age Publishers, New Delhi, 2010.

Further reading

SEMESTER VI

Course Code: CHE6B11

Core Course XI: PHYSICAL CHEMISTRY – III

Total Hours: 48; Credits: 3; Hours/Week: 3; Total Marks 75 (Internal 15 & External 60)

CHE6B11	**PHYSICAL CHEMISTRY – III**	L	T	P	C
		3	0	0	3
Objective (s)	To get a thorough knowledge of electrochemistry, colligative properties and solid state				
Course outcome (s)					
CO1	To understand the basic concepts of electrochemistry				
CO2	To realize the importance of colligative properties				
CO3	To relate the properties of material/solids to the geometrical properties and chemical compositions				

Module I: Electrochemistry – I (12 hrs)

[Prerequisites: Fundamentals of Electrochemistry. Introduction (Faradays law, types of conductance) – Measurement of equivalent conductance – Variation of conductance with dilution – Kohlrausch's law – Arrhenius theory of electrolyte dissociation and its limitations.] Weak and strong electrolytes – Ostwald's dilution law, its uses and limitations – Debye-Huckel-Onsager's equation for strong electrolytes (elementary treatment only, derivation is not required) – Debye-Falkenhagen and Wein effects – Migration of ions and Transport number (work out problems) and its determination by Hittorf's and moving boundary methods. Applications of conductivity measurements: Determination of degree of dissociation, ionic product of water and solubility product of sparingly soluble salts (work out problems) – Conductometric titrations, strong acid – strong base, weak acid-strong base, strong acid –weak base and weak acid –weak base.

Module II: Electrochemistry – II (10 hrs)

[Prerequisites: Module I – Electrochemistry. Basics of thermodynamics.]
Introduction – types of cell and electrodes (Reversible- SHE, calomel and quinhydrone electrode) – Standard electrode potential – Electrochemical series – Nernst equation for electrode potential and EMF of a cell (Review) – Relationship between free energy and electrical energy (work out problems).

Gibbs Helmholtz equation to galvanic cells. Concentration cells: Concentration cells with and without transference – Liquid junction potential. Application of EMF measurements: Solubility of sparingly soluble salts – Determination of pH – pH measurement using glass electrode – Potentiometric titrations – Hydrogen-oxygen fuel cell – Electrochemical theory of corrosion of metals.

References

1. B. R. Puri, L. R. Sharma, M. S. Pathania, *Principles of Physical Chemistry*, 46th Edition, Vishal Publishing Company, New Delhi, 2013.

2. P. W. Atkins, J. de Paula, *Atkin's Physical Chemistry*, 8th Edn., Oxford University Press (2006).

3. Donald A. McQuarrie, John D. Simon, *Physical Chemistry: A Molecular Approach* University Science Books: Sausalito, CA; 1997.

4. S. Glasstone, *An Introduction to Electrochemistry*, East-West Press Pvt. Ltd., New Delhi, 2007.

Further reading

1. G. M. Barrow, *Physical Chemistry*, 5th Edn., Tata McGraw Hill Education, New Delhi, 2006.

2. K. L. Kapoor, *Physical Chemistry*, Volumes II and III, Macmillan Publishers, Noida, 2004.

3. S. Glasstone, D.H. Lewis, *Elements of Physical Chemistry*, 2nd Edition, Macmillan & Company, UK, 1962.

4. F. Daniels, R. A. Alberty, *Physical Chemistry*, 5th Edition, John Wiley and Sons, Canada, 1980.

5. Peter Atkins, Julio de Paula, *The Elements of Physical Chemistry* 7th Edition, Oxford University Press, Oxford, 2016.

6. J. Bockris, A. K. N. Reddy, *Modern Electrochemistry*, Kluwer Academic/Plenum Publishers, New York, 2000.

Module III: Solutions (10 hrs)

[**Prerequisites:** Fundamentals of solutions. Solute, solvent, kinds of solutions – Vapour pressure- Solubility of gases in liquids – Henry's law and its applications – Raoult's law – Ideal and non ideal solutions – Dilute solutions.]

Colligative properties – Qualitative treatment of colligative properties – Relative lowering of vapour pressure – Elevation of boiling point – Depression in freezing point – Osmotic pressure – Reverse osmosis and its applications – Application of colligative properties in finding molecular weights (thermodynamic derivation not needed) – Abnormal molecular mass – Van't Hoff factor. Surface tension: Explanation and its determination. Viscosity: Determination of molecular mass from viscosity measurements. Refraction: Refractive index – Molar refraction and optical exaltation – Application.

References

1. B. R. Puri, L. R. Sharma, M. S. Pathania, *Principles of Physical Chemistry*, 46th Edition, Vishal Publishing Company, New Delhi, 2013.

2. P. W. Atkins, J. de Paula, *Atkin's Physical Chemistry*, 8th Edn., Oxford University Press (2006).

3. Donald A. McQuarrie, John D. Simon, *Physical Chemistry: A Molecular Approach* University Science Books: Sausalito, CA; 1997.

4. P. L. Soni, O. P. Dharmarha, U. N. Dash, *Textbook of Physical Chemistry*, 23rd Edn., Sultan Chand & Sons, New Delhi, 2011.

Further reading

1. G. M. Barrow, *Physical Chemistry*, 5th Edn., Tata McGraw Hill Education, New Delhi, 2006.
2. K. L. Kapoor, *Physical Chemistry*, Volumes II and III, Macmillan Publishers, Noida, 2004.
3. S. Glasstone, D.H. Lewis, *Elements of Physical Chemistry*, 2nd Edition, Macmillan & Company, UK, 1962.
4. F. Daniels, R. A. Alberty, *Physical Chemistry*, 5th Edition, John Wiley and Sons, Canada, 1980.

Module IV: Ionic Equilibria (3 hrs)

[Prerequisites: Introduction to acid base theories – pKa, pKb and pH – Buffer solutions.]
Mechanism of buffer action – Buffer index – Henderson equation – Applications of buffers- Hydrolysis of salts of all types – Degree of hydrolysis – Hydrolysis constant and its relation with k_W.- Solubility product and common ion effect. (Work out problems).

References

1. B. R. Puri, L. R. Sharma, M. S. Pathania, *Principles of Physical Chemistry*, 46th Edition, Vishal Publishing Company, New Delhi, 2013.
2. P. W. Atkins, J. de Paula, *Atkin's Physical Chemistry*, 8th Edn., Oxford University Press (2006).
3. Donald A. McQuarrie, John D. Simon, *Physical Chemistry: A Molecular Approach* University Science Books: Sausalito, CA; 1997.
4. P. L. Soni, O. P. Dharmarha, U. N. Dash, *Textbook of Physical Chemistry*, 23rd Edn., Sultan Chand & Sons, New Delhi, 2011.

Further reading

1. G. M. Barrow, *Physical Chemistry*, 5th Edn., Tata McGraw Hill Education, New Delhi, 2006.
2. K. L. Kapoor, *Physical Chemistry*, Volumes II and III, Macmillan Publishers, Noida, 2004.
3. S. Glasstone, D.H. Lewis, *Elements of Physical Chemistry*, 2nd Edition, Macmillan & Company, UK, 1962.
4. F. Daniels, R. A. Alberty, *Physical Chemistry*, 5th Edition, John Wiley and Sons, Canada, 1980.
5. Peter Atkins, Julio de Paula, *The Elements of Physical Chemistry* 7th Edition, Oxford University Press, Oxford, 2016.

Module V: Solid State – I (10 hrs)

[Prerequisites: Introduction (Amorphous and crystalline solids – Law of constancy of interfacial angles and rational indices) – Space lattice and unit cell.]
Direct and reciprocal lattice (Miller indices) – Seven crystal systems and fourteen Bravais lattices – X-ray diffraction – Bragg's law (derivation required) –Planes- Simple account of rotating crystal method and powder pattern method – Analysis of powder patterns of NaCl, CsCl and KCl – Simple, face centered and body centered cubic systems – Identification of cubic crystals from inter-planar ratio – Close packing of spheres – Structure of simple ionic compounds of the type AB (NaCl and CsCl) and AB_2 (CaF_2).

Module V: Solid State – II (3 hrs)

Band theory (qualitative idea) for Metal Insulators and Semiconductors: Intrinsic and extrinsic conduction (elementary idea). Non-stoichiometric defects. Liquid crystals: Classification and applications (elementary idea).

References

1. B. R. Puri, L. R. Sharma, M. S. Pathania, *Principles of Physical Chemistry*, 46th Edn., Vishal Publishing Company, New Delhi, 2013.

2. P. W. Atkins, J. de Paula, *Atkin's Physical Chemistry*, 8th Edn., Oxford University Press. 2006.

3. Donald A. McQuarrie, John D. Simon, *Physical Chemistry: A Molecular Approach* University Science Books: Sausalito, CA; 1997.

4. Anthony R. West, *Solid State Chemistry and its Applications*, 2nd Edn., Student edition Wiley-Blackwell, 2014.

Further reading

1. Gordon M. Barrow, *Physical Chemistry*, 5th Edn., Tata McGraw Hill Education, New Delhi, 2006.

2. K. L. Kapoor, *Physical Chemistry*, Volumes II and III, Macmillan Publishers, Noida, 2004.

3. S. Glasstone, D. H. Lewis, *Elements of Physical Chemistry*, 2nd Edn., Macmillan & Company, UK, 1962.

4. F. Daniels, R. A. Alberty, *Physical Chemistry*, 5th Edn., John Wiley and Sons, Canada, 1980.

5. Peter Atkins, Julio de Paula, *The Elements of Physical Chemistry*, 7th Edn., Oxford University Press, Oxford, 2016.

6. L. V. Azaroff, *Introduction to Solids*, Tata McGraw Hill Publishing Company, New Delhi, 1960.

Semester V

Course Category: Core Course 8
Course Title and Code: India's Economic Development: National and Regional, ECO5 B08
No. of Credits: 4
No. of Contact Hours: 108

India's Economic Development: National and Regional

Objectives

To expose the learners to some of the key issues facing the Indian economy both at national and regional levels. In this process, as young adults, students are expected to be sensitised about these issues, appreciate and learn to critically assess the role of the government in various economic spheres. The learners are also exposed to numerical information relating to various aspects of Indian economy and India's economic policies. They are expected to develop analytical skills, interpret the economic events and visualise the economic future of India. For all these to happen, teachers are requested to take special care to instruct the students to read the
suggested reference books, collect clippings and articles from news papers and magazines and also develop the habit of following economic survey, economic review and RBI Bulletin. Besides, as against the conventional assignments, each module has **'Suggested Additional Activities'** at the end. Teachers need to encourage the learners to explore beyond the texts while attempting these activities.

Report Based on Study Tour: *A study tour is recommended because it may add direct experience to learners about different economic culture of the country. All the final year students need to prepare a report of the tour that includes the places they visited, its importance etc and submit it to the Head of the Department soon after the completion of the tour.*

Module I - Development Policies and Experience (1947-1990).

Low Level of Economic Development under the Colonial Rule- Development and Structural Change of Indian Economy Since Independence: Economic policies Perused between 1950's and 1980's: Mixed Economic framework; Market intervention policy and import substitution; Objectives and strategy of planning: Failures and achievements of plans – Performance of 11^{th} plan – Current plan.

Suggested Additional Activities

1. Find out and prepare a list of items that India used to import and export during 1950-51 and 1990-91
a. Observe the difference

b. Do you see the impact of self reliance? Discuss. Details can be collected from latest Economic Survey.
2. Find out the Deputy Chairman and members of the first Planning Commission of India
3. Find out the commodities which India Government permitted to import till 1980.
4. Explain how import substitution can protect domestic industry?

Module II - Economic Reforms since 1991
Background for the introduction of New Economic Reforms of 1991; Liberalisation, Privatisation and Globalisation: An Appraisal- Indian Economy during Reforms with Special focus on trends in FDI, FII and Disinvestment- Centre-State Financial Relations: Finance Commission, its structure and Functioning (with emphasis on Latest Finance Commission).

Suggested Additional Activities
1. Prepare arguments for and against subsidies. Explain your view.
2. Do you think only loss making companies should be privatised? Why?
3. Construct a pie chart for the sectoral contribution of GDP for the period1950-51 and 2012- 13. What would you observe? Is there a structural change? Explain in your own words
4. Prepare a list showing the latest data on the number of banks- nationalised, private, private foreign and New Generation Banks.
5. Discuss the different formulae used for Finance Commission awards.
6. Find out who all are there in the First Finance Commission of India?

Module III - Gross Domestic Product and Sectors.
a. Indian Agriculture: The place of Agriculture in the National Economy; Recent Trends in Investment, Credit and Agricultural Subsidy Policy, Agricultural Marketing and Price- New Agricultural Strategy of 1960s (Green Revolution)- Food Security, PDS and TPDS in India; The Need, Scope and Appraisal of Land Reforms in a Developing Country like India.
b. Indian Industries: Review of Industrial Growth under Planning- Industrial Structure: Traditional, SSI, Village, Cottage and Modern Industries- Industrial Sickness-Industrial Policy Resolutions: 1956, 1977, 1980, 1991; an Analysis of Current Industrial Policy- Infrastructure Development in India.

Suggested Additional Activities.
1. Why, despite the implementation of green revolution, 65% of our population continued to be engaged in the agricultural sector till 1990?
2. Why was public sector given a leading role in industrial development during the plan period?
3. „Losses incurred by public sector undertakings are to be met out of the public budget"- Do you agree with this statement? Discuss.
4. Find out the method of estimating inflation in India. Compare it with other countries.

Module IV Current Challenges Facing the Indian Economy.
a. Poverty: Who are Poor?, Causes and Measurement of Poverty, Number of Poor in India; Policies and Programmes Towards Poverty Alleviation with Special Emphasis on Recent Policies like- Food as a Right: The Food Security Act of 2013 & MGNREGS.

b. Unemployment: Nature, Trends and Estimates of Unemployment in India, Informalisation of Indian Work Force; Employment Prospective of the latest Five Year Plan; Recent Schemes to Reduce Unemployment and Underemployment.

Suggested Additional Activities.

1. Find out from your parents and teachers types of tax payments they are making. Classify the taxes and observe the differences.
2. On the basis of the definition of poverty line, analyse whether categorisation of people into BPL/APL is done in the correct way. Explain in your own words.
3. Analyse whether the dream programme of MGNREGP is carrying out in the right way. If „No", suggest ways to make the programme more effective.
4. In some communities, you might have noticed that even if the males do not earn high income, they do not send women to work. Why?
5. Prepare a list of recent schemes and objectives to strengthen the rural areas from the government website *http://www.rural.nic.in*

Module V Kerala's Economic Development

Growth and Structure- Primary, Secondary and Tertiary Sectors-Economic Development Vs Social Development-Poverty Profile of Kerala- Indicators of Human Development: PQLI and HDI- Demographic Transition of Kerala- Trends in Employment and Unemployment in Kerala- Sustainability of "Kerala Model of Development" with a Special Mention on Recent Sen- Bhagawati Debate- Decentralised Planning and Development of Kerala- Land Reforms in Kerala- Migration: Concepts in Migration- Emigration to the Gulf- Remittance and its Impact on the Economy of Kerala- Return Migration: Causes, Problems and Policies.

Suggested Additional Activities.

1. Find out the history of emigration from Kerala.
2. „Foreign remittance is the backbone of Kerala"s socio-economic development". Discuss.
3. What is Nitaqat and Saudization? In what ways it is harmful to the economy of Kerala.
4. Find out the reasons for the existing controversy in poverty estimation.
5. Observe the functioning of „ayalkoottams" (SHGs) in your locality and write how far it is successful in empowering women.

Basic Readings

1. ECONOMIC DEVELOPMENT IN INDIA-Problems and Prospects, N.P. Abdul Azeez (Ed), Regal Publications, New Delhi.
2. Indian Economy, Gopalji Gupta, PEARSON, New Delhi.
3. Ahulwalia, I.J. and I.M.D. Little (Eds) (1999), *India's Economic Reforms and Development*, (Essays in honour of Manmohan Singh), Oxford University Press, New Delhi.
4. Bardhan, P .K. (1999), The Political Economy of Development in India, Oxford University Press, New Delhi
5. Chakravarty S, (1987), Development Planning: The Indian Experience, Oxford University Press, and New Delhi
6. Acharya Shanker, Mohan Rakesh (Eds) (2011), India"s Economy: Performance and Challanges, Oxford University Press, New Delhi

7. Uma, Kapila (2013), Indian Economy: Performance & Policies, Academic Foundation, New Delhi.
8. Amit Badhuri, Development with Dignity (2005), NBT New Delhi.
9. Brahmananda, P.R. and V.R. Panchmukhi (Eds) (1987), *The Development Process of Indian Economy*, Himalaya Publishing House, Bombay.
10. M.P Todaro, Economic Growth (2nd Edition), PEARSON, New Delhi
11. Jalan, B. (1992), The *Indian Economy – Problems and Prospects*, Viking, New Delhi.
12. Joshi, V. and I.M.D. Little (1999), *India: Macro Economics and Political Economy*, 1964-1991, Oxford University Press, New Delhi.
13. Kaushik Basu (Ed) (2004), *India's Emerging Economy*, Oxford University Press, New Delhi.
14. Centre for Development Studies, 1977, Poverty, Unemployment and Development Policy: A case study of selected issued with reference to Kerala, Orient Longman, Bombay.
15. B.A. Pakash (Ed) 2004, Kerala"s Economic Development: Performance and Problems in the post liberalization period, Sage Publications, New Delhi.
16. B.N Ghosh &Patmaja D. Namboodiri, 2009 (Eds),The Economy of Kerala Yesterday, Today and Tomorrow, Serial Publications, New Delhi.
17. K.C. Zachariah, K.P. Kannan, S. Irudaya Rajan, 2002 (Ed). Kerala"s Gulf Connections, C.D.S, Trivandrum.
18. Rajasenan, D. and Gerard De Groot (Ed) 2005, Kerala Economy: Trajectories, Challenges and Implications, CUST, Kochi.

Semester V

Course Category: Core Course 9
Course Title and Code: Economics of Capital Market, ECO5 B09
No. of Credits: 4
No. of Contact Hours: 90

Economics of Capital Market

Learning Objective:

In the present Globalised world financial institutions and markets play a significant role. The financial sector liberalization across the world including India has led to unprecedented growth in the financial sector, especially capital market, leading to the introduction of new and diversified financial instruments and financial practices, providing ample career opportunities to the students of economics. This course is designed to give an exposure to the students of economics to the changing world of financial markets and to give them an opportunity to familiarize with the basic concepts related to capital market which they read in newspapers and hear and see through electronic media in their daily walks of life, and to understand the economics of capital market. The course also aim at providing a platform to students of economics in developing the skills required to take up a career in financial sector and to provide them an opportunity to think of higher studies in finance which may open them the vast career opportunities in the field of finance.

Module I – Financial Assets

Financial Assets – Tangible and Intangible Assets – Debt Vs Equity – Properties of Financial assets – Financial markets – Classification of Financial Markets – Financial System and Economic Development – Weakness of Indian Financial System.

References:

1. Frank J. Fabozzi and Franco Midiglian, "Capital Markets – Institutions and Instruments", Pearson Prentice Hall, New Delhi (Latest Edition).
2. Gordan K. Natarajan , "Financial Markets and Services", Himalaya Publishing House, Mumbai (Latest Edition).

Module II – Capital Market

Capital market – Meaning, Characteristics and Functions – Importance of Capital Markets in an economy – The structure of Indian capital market – Capital market instruments – Equity shares (rights shares, bonus shares, bluechip shares), Debentures or Bonds (Convertible, non-convertible, partly convertible, fully convertible, redeemable and irredeemable), Government securities, Euro Issues – GDRs, ADRs, Foreign Currency Convertible Bonds (FCCB) – Capital Market Institutions

– DIIs, FIIs, Mutual Funds – Securities and Exchange Board of India (SEBI) – Objectives, Functions and Powers.

References:

1. S. Gurusamy, 'Capital Markets', Vijay Nicole Imprints Private Limited, Chennai (Latest edition)
2. Shashi K Gupta, Nisha Aggarwal and Neeti Gupta, 'Financial Markets and Institutions, 'Kalyani publishers, New Delhi (Latest edition)
3. M.Y. Khan, 'Indian Financial System', Tata McGraw Hill Education Private Limited, New Delhi (Recent edition)
4. Online Resource: www.sebi.gov.com

Activities/Assignments:

1. Students may be asked to note down the important mutual funds operating in India and different schemes offered by some of them and their descriptions. (eg: Growth Funds, Open end Funds etc.)

Module III – The Primary Market (New Issues Market)

Meaning and Functions of Primary Market – Methods of Floating New Issues – Pure Prospectus method, Private Placement Method, IPO Method, Rights Issue Method, Bonus Issue Method, Book Building Method, Employee Stock Option (ESOP) – Intermediaries in New Issues Market – Merchant Bankers/Lead Managers, Registrars to an Issus, Underwriters, Bankers to an Issue, Brokers to an Issue, Debenture Trustees – Causes for Poor performance of New Issues Market.

References:

1. S. Gurusamy, 'Capital Markets', Vijay Nicole Imprints Private Limited, Chennai (Latest edition)
2. Shashi K Gupta, Nisha Aggarwal and Neeti Gupta, 'Financial Markets and Institutions, 'Kalyani publishers, New Delhi (Latest edition)
3. S. Gurusamy, 'Financial Markets and Institutions', Vijay Nicole Imprints Private Limited, Chennai (Latest edition)
4. S.N. Sasidharan and S. Aiyappan Pillai, 'An Introduciton to Capital Market', Right Publishers, Kudavechoor (Latest edition)
5. L.M. Bhole, 'Financial Institutions and Markets-Structure, Growth and Innovations', Tata McGraw Hill Publishing Company Limited, New Delhi (Latest edition)

Activities/Assignments:

1. Show specimen of share application form (IPO) and ask the students to note down the important terms mentioned in the form. Tell them to write down the meaning of all such terms (eg: QIB, Retail Investor, Cap Price etc) and institutions related to IPO.
2. Ask the students to fill up the share application form so as to acquire some practical skills in the subject.

3. Students may be introduced to a specimen of Demat Account opening Form. (Available with DPs like Geojith Securities, JRG Securities, Stock Holding Corporation of India or other Stock Broking firms)

Module IV – The Secondary Market – Stock Exchanges

The Secondary Market – Difference between Primary market and Secondary Market – Listing of Securities – Physical Shares and Demat Shares – Depository Participant (DP) – NSDL and CSDL – Meaning and Definition of Stock Exchanges – Functions of Stock Exchanges – Origin and Development of Stock Exchanges in India – Bombay Stock Exchange (BSE) - National Stock Exchange (NSE) – Over the Counter Exchange of India (OTCEI) – Stock Market Index in India and Abroad: SENSEX and Nifty – NASDAQ, DOWJONES, FTSE, Nikkei.

References:

1. S. Gurusamy, 'Capital Markets', Vijay Nicole Imprints Private Limited, Chennai (Latest edition)
2. Shashi K Gupta, Nisha Aggarwal and Neeti Gupta, 'Financial Markets and Institutions, 'Kalyani publishers, New Delhi (Latest edition)
3. S. Gurusamy, 'Financial Markets and Institutions', Vijay Nicole Imprints Private Limited, Chennai (Latest edition)
4. S.N. Sasidharan and S. Aiyappan Pillai, 'An Introduciton to Capital Market', Right Publishers, Kudavechoor (Latest edition)
5. L.M. Bhole, 'Financial Institutions and Markets-Structure, Growth and Innovations', Tata McGraw Hill Publishing Company Limited, New Delhi (Latest edition)
6. Online resources: i) www.nseindia.com ii) www.bseindia.com

Activities/Assignments:

1. Ask students to visit SEBI website and collect data on purchase, sale and net investment in equity and debt instruments by FIIs in Indian Stock Market (Also available in financial dailies like Economic Times, Businessline etc.)
2. Ask students to visit the BSE website and note down the shares of companies included in SENSEX and their relative weightage in the index.
3. Ask students to visit the NSE website and note down the shares of companies included in NSE Nifty and their relative weightage in the index.
4. Students may be asked to find out other different indices published by BSE and make a short note of these indices from BSE website (eg: BSE PSU Index, BSE TECH Index etc.
5. Students may be directed to study the share holding pattern of some of the shares of companies listed at BSE or NSE. (Available also at www.moneycontrol.com)

Note:

1. **Students may be motivated to read financial dailies like Economic Times, Business Line, Business Standard, Dhanam etc regularly in order to get a proper understanding of the terms and concepts and the working of capital markets.**

2. **Students may be encouraged to watch exclusive financial channels like CNBC TV 18, NDTV PROFIT etc, to get an idea of stock trading and capital market activities.**
3. **If possible students may be taken to a stock trading terminal so as to get an idea of the online buying and selling of shares.**

Additional Reading:

1. M. Y. Khan, 'Indian Financial System', Tata McGraw Hill Education Private Limited, New Delhi (Latest Edition)
2. L.M. Bhole and Jitendra Mahakud, 'Financial Institutions and Markets – Structure, Growth and Innovations', Tata McGraw Hill Educaiton Private Limited, New Delhi (Latest Edition)
3. Bharathi V. Pathak, 'The Indian Financial System – Markets, Institutions and Services, Pearson, New Delhi (latest edition)
4. K.L. Garg, 'Stock Exchanges in India', Bookland Limited, Calcutta.
5. V.A. Avadhani, 'Investment and Securities Market in India', Himalaya Publishing House, Bombay (Latest edition)

Semester VI

Course Category: Core Course 11
Course Title and Code: Macroeconomics – II, ECO6 B11
No. of Credits: 5
No. of Contact Hours: 90

Macroeconomics- II

Introduction:
Policy makers all over the world use macroeconomic theories and related empirical results to frame policies. Similarly, business firms, use these theories and results to formulate their strategies. A sound understanding of macroeconomic principles and their applications is essential for students of Economics.

Objectives:
The objective is to familiarise the students in the application of principles of macroeconomic analysis to the day-to-day decision-making in the aggregate economy.

Learning Outcome :
This course is expected to develop skill in economic reasoning, This vital skill is expected to help them in understanding and solving aggregate economic problems.

Syllabus

Module I: Theories of Money
Nature and Functions of Money - Types of Money: Near money, inside money and outside money.
1. Theories of Demand for money - Defining demand for money - Classical theory of demand for money - Friedman's re-statement of Quantity Theory of Money - Liquidity Preference theory and Keynesian Liquidity Trap.
2. Theories of Supply of money - Defining supply of money - Measuring supply of money - High powered money & money multiplier

Module II: Theories of Inflation and Unemployment
Inflation – Definition - Types of Inflation - Measurement of inflation in India - Effects of inflation- Sacrifice ratio-Inflationary gap-Theories of inflation- Demand pull versus cost push inflation-Mixed inflation-Structural inflation- Measures to control inflation-Meaning and types of unemployment - Cost of unemployment and Okun's law - Phillips curve - Modified Phillips curve - Long run Phillips curve - Stagflation - reasons.

Module III: Macro economic Instability and Policy:

Business Cycle- meaning- types and phases- Theories of trade cycles- Hawtrey's theory- Hayek's theory- Keynesian theory-Monetarist interpretation of trade cycles-Contracyclical policy measures-Monetary, fiscal, and income policy - Meaning and Instruments.

Module IV: Open Economy Macro Economics:

Definition and derivation of IS curve - Shift in the IS curve - Definition and derivation of LM curve - Shift in the LM curve - General equilibrium in the IS-LM model - Relative effectiveness of monetary and fiscal policy - Derivation of IS and LM curves for an open economy - Definition and derivation of the BP curve - Shift in the BP curve - General equilibrium of an open economy using IS-LM-BP curves.

References:

1. Edward Shapiro – 'Macro economics' Oxford University press.
2. Gregory Mankiw – 'Macro economics' – 6th Edn. Tata McGraw Hill.
3. Richard T. Froyen – 'Macro economics', Pearson education.
5. Eugene Duilio – Macro economic Theory, Shaum's Outline series. Tata McGraw Hill
6. Errol D'Souza – 'Macro Economics' – Pearson Education 2008.
7. Abhijit Kundu (2009) : Methodology and Perspectives of Social Science – Pearson Education
8. Dornbusch, Fischer and Startz-MacroEconomics-Tata McGraw –Hill

Additional Readings

9. Dominick Salvatore :'Macroeconomic Theory' Schaum's Outline series : Tata Magrahill.
10. Lipsey R. and A Chrytal – Economics (11th Edition) Oxford University Press Newdelhi.
11. Glenn Hubbard and Anthony Patrick O'Brien: **Macroeconomics**-Pearson Education

Note: Case study analysis may be included while teaching various topics, wherever relevant. This may be used for assignments and internal examinations only.

BA Journalism and Mass Communication.
Semester III Course 13 Code: JOU3B03

Reporting for the Print

Contact Hours 5 Credits 4

Objective:

To make students exposed to the concept of news, types of and news values.

To introduce the students to news reporting practice.

Course Outcome:

1. Make students reporters having news sense
2. Prepare reporters with the acquaintance of Journalistic Principles
3. Provide practical experiences to the students

Module I

What is news – Definitions of News – News Values (Determinants): Proximity, prominence, oddity, conflict, controversy, consequence, timeliness and human Interest - News and views

Module II

Qualities and responsibilities of a reporter – Nose for news- resourcefulness - Principles of reporting: Accuracy, objectivity, attribution, fairness and newsworthiness – Keeping deadlines- Source confidentiality.

Module III

Structure of News – Chronological and logical (inverted pyramid) formats in writing – Intro – Importance of Intro – types of Intro – Elements of News – 5 W s and One H ingredients – Hard News – Soft News – human interest stories – Infotainment

Module IV

News sources – Expected and unexpected sources – finding out and making use of sources –tip off – News conferences and Meet- the- presses – Interviews – pre interview home works for special interviews – hand outs and press releases – Other media – Internet - Social media – News agencies.

Module V

Types of reporting – Basics of reporting - On (from) the spot reporting – gathering information through various channels – arm chair journalism — Beats and assignments – Reporting accidents, tragedies, natural disasters, crime, court, sports, speech, functions, seminars, entertainment, etc. – Investigative reporting - Specialised reporting.

Books for Reference

1. Melvin Mencher, News Reporting and Writing, New York, Oxford University Press, 2007.
2. Jerry Lanson and Mitchell Stephens, Writing and Reporting the News, New York: Oxford University Press, 2008.
3. Fred Fedler and John Bender, Reporting for the Media, New York: Oxford University Press, 2001.
4. Ambrish Saxena, Fundamentals of Reporting and Editing, New Delhi: Kanishka Publishers, 2007.
5. Joan Clayton, Interviewing for Journalists, London: Piatkus Publishers, 1994.
6. Hugo de Burgh, Investigative Journalism: Context and Practice, London: Routledge, 2000.
7. Straubhaar Larose, Media Now, New York: Thomson Wadsworth, 2004.
8. M.V. Kamath, Professional Journalism, New Delhi, Vikas Publishers, 1980.

Books For Further Reading

1. B.G. Verghese (Ed.), Breaking the Big Story; Great Moments in Indian Journalism, New Delhi: Penguin Books, 2003.
2. David Randall, The Great Reporters, London: Pluto Press, 2005.
3. T.J.S. George, Lessons in Journalism: The Story of Pothan Joseph, New Delhi: Viva Books, 2007.
4. Anita Pratap, Island of Blood, New Delhi: Penguin Books, 2002.
5. B. G. Verghese, Warrior of the Fourth Estate: Ramnath Goenka of the Express, New Delhi: Penguin Books, 2005.

6. Kuldip Nayar, Scoop: Inside Stories from the Partition to the Present, New Delhi: Harper Collins Publishers, 2006.

7. P. Sainath, Everybody Loves a Good Drought, New Delhi: Penguin Books, 2004.

I. **Continuous Assessment: 20 Marks**

As per the CBCSSUG Regulation 2019, Components with percentage of marks of Internal Evaluation of Theory Courses are- Test paper 40%, Assignment 20%, Seminar 20% and Class room participation based on attendance 20%.

1. Class Tests: 8
2. Assignment: 4
3. Seminar Presentation: 4
4. Class room participation based on attendance: 4

II. Semester end examination: 80 Marks

BA Journalism and Mass Communication
Semester III Course 14 Code JOU3B04

Editing for the Print

Contact Hours: 4 Credits 4

Objective:

To make students aware of the importance of error free copy and principles of editing.

To expose students to news editing practices

Outcomes:

1. Produce students with the thorough knowledge in the need for editing
2. Prepare editors having practical knowledge in all the aspects related to editing

Module I

What is editing – Need and importance – General principles of editing – Structure of a news story – News-person's language – Copy tasting – Editing for clarity– Editing for accuracy, objectivity, consistency, fairness, taste, balance and legal propriety – Euphemism – Policy of the paper – Keep it short and simple (KISS) – stylebook

Module II

News-room of a paper – Organisational structure of news desk – Editor, managing editor, associate editor, deputy editor, news editor, assistant editor, chief sub editor, senior sub editor, sub editor, proof reader – role and responsibility of news editor – functions and qualities of sub editor

Module III

Copy editing – Handling copies of reporters, correspondents, stringers, agents, citizen journalists and news agencies – Hand outs and press releases – Translating: English to Malayalam and vice versa – Trimming human interest stories – Editing and DTP- Editing online.

Module IV

Headlines and captions – Importance – Functions of headlines – Language of headline –

Action in headline – Punch and topical – Types of headlines : banner, skyline, kicker, deck, subheads, editorial and feature headlines, Caption and catchwords – Changes and trends in headlining Photographs and cartoons – Picture editing - Cropping and blowing ups

Module V

Various pages - Features and functions of different pages: Front page – news and make up –editorial page: editorial, articles, middle pieces, columns, letters to editors – Other news pages: Sports, local, national, international, financial and obituary pages – Feature pages and supplements.

Books for Reference

1. Bruce Westley, News Editing, Boston: Houghton Mifflin Company, 1972.
2. Harold Evans, Newsman's English, Handling Newspaper Text, News Headlines, Pictures on a Page, Newspaper Design (A Five-Volume Manual of English, Typography and Layout) London: National Council for the Training of Journalists, 1984.
3. Floyd Baskette and Jack Sissors, The Art of Editing, New York: Macmillan Publishing Co, 1986.
4. Jerry Lanson and Mitchell Stephens, Writing and Reporting the News, New York: Oxford University Press, 2008.
5. Sunil Saxena, Headline Writing, New Delhi: Sage Publications, 2006.
6. Ambrish Saxena, Fundamentals of Reporting and Editing, New Delhi: Kanishka Publishers, 2007.
7. Carl Sessions Stepp, Writing as Craft and Magic, New York: Oxford University Press, 2007.
8. Rothsteine, Photojournalism, Amphoto Books, 1974.
9. K.M. Sreevastava, News Reporting and Editing, New Delhi; Sterling Publications, 1987

Books for further reading

1. T.J.S. George, Editing: A handbook for Journalists, New Delhi: Indian Institute of Mass Communication, 1989.
2. M.L. Stein and Susan Paterno, The News Writer's Handbook, New Delhi: Surjeet Publications, 2003.
3. George Hough, News Writing, New Delhi: Kanishka Publishers, 2004.

4. Jan Hakemulder and Fay Jonge, News Reporting and Editing, New Delhi: Anmol Publications, 2002.

5. Ron Smith and Loraine O'Connell, Editing Today, New Delhi: Surjeet Publications, 2004.

6. M.K. Joseph, Outline of Editing, New Delhi: Anmol Publications, 2002.

I. **Continuous Assessment: 20 Marks**

As per the CBCSSUG Regulation 2019, Components with percentage of marks of Internal Evaluation of Theory Courses are- Test paper 40%, Assignment 20%, Seminar 20% and Class room participation based on attendance 20%.

1. Class Tests: 8
2. Assignment: 4
3. Seminar Presentation: 4
4. Class room participation based on attendance: 4

II. Semester end examination: 80 Marks

III Suggested Activity: Students shall visit a Newspaper, understand the bureau activities as well as Desk activities and prepare a report.

BA Journalism and Mass Communication

Semester IV Course 16 Code JOU4B06

Radio Production

Contact Hours: 5 Credit: 4

Objective

The course is intended to explore the art of radio-production. The students are made familiar with the aesthetics of sound and its application in various programme formats.

Course Outcomes:

1. Develops an awareness on the role of radio as a mass medium
2. Gathers knowledge on the historical evolution of the medium.
3. Understands the technology behind radio production
4. Develops the ability to produce short radio programmes.

Module I

Characteristics of the medium, impact of digital technology on radio broadcasting, fall and rise of radio, broadcasting and narrowcasting, scope and challenges of radio as a mass medium.

Module II

Introducing radio formats: radio talk - interview - radio drama – chat shows – phone – in/phone – out programmes – running commentaries, news bulletins – features and documentaries – special abilities required for each format – writing for radio.

Module III

Radio news – news room management – news coverage – news formats – news presentations – structure and content of news bulletins.

Module IV

Radio programme production – theory of sound - frequency – spectrum – AM, FM, SW, long wave, sound formats – recordings softwares - sound effects – mixing and dubbing – satellite radio and internet radio.

Module V

Role of Radio broadcaster, announcer, disc jockey, radio host, on air techniques – performance, art of interviewing, 7 Ps, speed breathing – emphasis and pitch.

Books for Reference

1. Sound Engineering Explained, 2nd Edition – Michael Talbot-Smith.
2. Radio Production, 3rd Edition – Robert McLeish.
3. Other Voices – VinodPavarala and Kanchan K. Malik.

Books for Further Reading

1. Basic Radio Journalism – Paul Chantler and Peter Stewart (Focal Press).
2. This is All India Radio – U. L. Baruah.
3. Broadcast Journalism, Techniques of Radio and Television News, 5th Edition – Andrew Boyd.
4. Writing and Producing Radio Dramas – Esta De Fossard (Sage Publications).
5. Beginning Radio – TV News Writing, 4th Edition – K. Tim Wulfemeyer (Surjeet Publications).
6. Radio – TV News Writing, A work book, 2nd Edition – K. Tim Wulfemeyer (Surjeet Publications).
7. Modern Radio Production, Programming and Performance – Carl Hausman, Philip Benoit, Lewis B O Donnell.

I. **Continuous Assessment: 20 Marks**

As per the CBCSSUG Regulation 2019, Components with percentage of marks of Internal Evaluation of Theory Courses are- Test paper 40%, Assignment 20%, Seminar 20% and Class room participation based on attendance 20%.

1. Class Tests: 8
2. Assignment: 4
3. Seminar Presentation: 4
4. Class room participation based on attendance: 4

II. Semester end examination: 80 Marks

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BA Journalism and Mass Communication
Semester V Course Code: 17 JOU5B 07
Mass Communication Theories
Contact Hours: 5 Credit: 4

Objective:
This course builds a theoretical framework for students and enables them to understand the different perspectives of media from different contexts. The course is a stepping stone to the academic knowledge in communication studies.

Course Outcome

1. To attain the basic knowledge of the important communication theories and their applications.
2. To attain a theoretical framework of media and also to contextualize the media theories.
3. To effectively assess the changing media scenario and accordingly to expand and redefine the existing media theories with an interdisciplinary approach.

Module 1: Communication studies
Origin of communication studies – communication studies as social science – psychological perspectives of communication, Concept of "Mass" in mass communication. Media audience – the public and the public opinion, public sphere, persuasion and propaganda, attitudinal changes, basics of semiotics

Module 2: Media-audience interaction
Stimulus Response theory, perspectives of individual differences, social categories and social relations; concept of selectivity; One-step, two-step and multi-step flow.

Module 3: Gatekeeping functions
Concept of Gate keeping; Gate keeping models of White, Galtung and Ruge, News flow models of McNelly, Bass and Mowlana.

Module 4: Normative theories
Normative theories of the press/media: Authoritarian theory, Libertarian theory, Soviet media theory, Social responsibility theory, Development communication theory, Democratization theory.

Module 5: Media effects theories
Media dependency theory; Agenda-setting and agenda building; uses and gratifications theories; Media effects – cognitive, affective and behavioural effects. Cultivation theory, cognitive dissonance, spiral of silence.

Books for Reading:

1. Agee, Warren K., Ault, Philip H. and Emery, Edwin: Introduction to Mass Communications.
2. Stephen W Littlejohn & Karen A Foss (Editors): Encyclopedia of Communication Theory, Sage
3. Fiske, John (1996), Introduction to Mass Communication Studies, London, Routledge
4. McQuail, Denis: McQuail's mass communication theory.
5. McQuail, Denis and Windahl, Sven: Communication models for the study of mass communications.
6. De Fleur, Melvin L. and Ball-Rokeach, Sandra J: Theories of mass communication.
7. Kumar, Keval J: Mass communication in India.
8. Hasan, Seema (2010), Mass Communication: Principles and Concepts, New Delhi, CBS Publishers
9. Watson, James and Hill, Anne: Dictionary of Media and Communication Studies.
10. Berger, Arthur Asa (2012), Media Analysis Techniques, New Delhi, Sage

I. **Continuous Assessment: 20 Marks**

As per the CBCSSUG Regulation 2019, Components with percentage of marks of Internal Evaluation of Theory Courses are- Test paper 40%, Assignment 20%, Seminar 20% and Class room participation based on attendance 20%.

1. Class Tests: 8
2. Assignment: 4
3. Seminar Presentation: 4
4. Class room participation based on attendance: 4

II. Semester end examination: 80 Marks

BA Journalism and Mass Communication

Semester V Course Code: 19 JOU 5B 09

Public Relations & Corporate Communication

Contact Hours: 4 Credit 4

Objective:

To furnish the students with fundamentals of PR and Corporate Communication.

Course Outcomes:

1. Introduce the students the concept of Public Relations
2. Introduce a wider and new concept namely Corporate relations
3. Provide the students with practical experience in PR and Corporate communication

Module I

Public Relations – definitions, origin and development of public relations, objectives and functions of public relations – qualities of a PRO- key personalities, Ivy Lee, Edward L Burneys, Paul Garret. History; of PR in India.

Module II

Propaganda and public relations – publicity and PR – advertising versus public relations – PR campaigns – public opinion in PR- lobbying and pressure groups- PR and social responsibilities.

Module III

PR management tools, reputation management, media relations and crisis management tools, online PR and online PR tools. PR activities by Govt.: DAVP, IPRD. PR services and political parties; Code of ethics for PR, IPRA and PRSI

Module IV

Corporate communication - scope, nature, role and evolution of corporate communication - internal and external audiences, CSR.

Module V

Corporate Identity- Key concepts of corporate identity, corporate identity planning, corporate image, corporate personality, corporate communication tools – house journals.

Module VI

Business communication, writing memos- report writing – writing proposals- preparing press releases, writing for the web, website and social media management.

Books for reference

1. Joep P Cornelissen: Corporate Communication, A Guide to Theory and Practice.
2. John Foster: Effective Writing Skills for Public Relations.
3. Joseph Fernandez, Corporate communications at 21st century primer.
4.J V Vilanilam: Public Relations in India
5. Robert L Heath: Encyclopedia of Public Relations
6. CEO's of leading PR Firms. The Art of Public Relations
7. David Phillips*: Online Public Relations*

Books for further reading

1. Kieth Butterik, Public relations theory and practice. Sage
2. B.N. Ahuja & S.S. Chhabra, Advertising & Public Relations. Delhi, Surjeet Publications.
3. Alison Theaker. The Public Relations Handbook. New Delhi – Vikas Publishing House Pvt. Ltd.
4. Scott M. Cutlip, Allen H. Center, Effective Public Relations. New Jersy- Pentice Hall Books.

I. **Continuous Assessment: 20 Marks**

As per the CBCSSUG Regulation 2019, Components with percentage of marks of Internal Evaluation of Theory Courses are- Test paper 40%, Assignment 20%, Seminar 20% and Class room participation based on attendance 20%.

1. Class Tests: 8
2. Assignment: 4
3. Seminar Presentation: 4
4. Class room participation based on attendance: 4

II. Semester end examination: 80 Marks

III. Suggested activity: Visiting a PR department and filing a ten page report.

Model question paper

Fifth Semester BA Degree Examination

JOU5B09

Public Relations and Corporate Communication

Time: 2.5 hrs **Max. Marks: 80**

Section A

Each question carries 2 marks ***Ceiling 25***

1. Lobbying
2. Ivy Lee
3. PRSI
4. "Crystallizing Public Opinion"
5. House Journals
6. Open house
7. 'Kerala Calling'
8. Spin
9. Trial balloon
10. Organized P.R. Campaign
11. Media Kit
12. Press Release
13. DAVP
14. Corporate Identity
15. IPRA

Section B

Each question carries 5 marks ***Ceiling 35***

16. Write a short note on house journals and its relevance in PR
17. What do you mean by CSR? Explain.
18. Differentiate between publicity and public relations.
19. What are the qualities of a good PRO? Explain.
20. How advertising is different from PR? Explain.

21. Trace a short history of PR in India.
22. Write a short note on the various tools of PR.
23. Explain the term ‘enlightened self interest’ and what are the contributions of Paul Garret to PR?

Section C

Answer any 2 questions. Each question carries 10 marks

24. “Corporate Communication has its roots in public relations but enjoys wider scope.” Comment.
25. What do you mean by crisis communication? Explain with an example.
26. What is Business Communication? What are the different aspects of business writing?
27. What do you mean by corporate Communication? Also explain the concepts corporate identity, corporate image, and corporate personality with examples.

(2x10=20)

BA Journalism and Mass Communication

Semester V Course Code: 20 JOU5B10

Advertising

Contact Hours: 4 Credits: 4

Objective:

To enable students to critically analyze advertisements and also to give them an introduction to the world of advertising.

Course Outcome

1. To gain an overview of the world of advertising both in theory and practice.
2. To prepare advertising copies that can effectively and convincingly convey selling ideas, brands and images.
3. To effectively assess the effects of advertising on a larger perspective on a given society.

Module I

Definition, features, evolution and functions of advertising – kinds of advertising – product, consumer, co- operative, prestige, corporate, public service, national, regional, global – advertising agencies in India and World – trends in global advertising

Module II

Media planning, market analysis – product research, media reach and frequency, media schedule, segmentation, positioning, niche, media mix – ad campaign and its elements. Ad personalities: David Ogilvy, Alyque Padamsee and Piyush Pandey – top agencies in world, India, and Kerala

Module III

Brand awareness and attitudes- brand identity- brand equity- Brand image- brand loyalty- top national and international brands- Rossiter and Percy model

Module IV

Print ads- principles and components- classified and display ads, television advertising principles, components and production. Radio ads- principles, components and production. Internet ads- principles and components

Module V

Visualization – copy writing for print, radio, television and online advertisements

Module VI

[Type text]

Effects of advertising – advertising and cultural values- cultural jamming –economic, social and ethical issues of advertising- professional organizations and code of ethics – ABC, ASCI, AAAI

Books for reference

1. S.A. Chunnawalla, Advertising: An Introductory Text. Mumbai, Himalaya Publishing House.
2. Subrata Banerjee, Advertising as a Career, New Delhi: National Book Trust.
3. J.V. Vilnilam and A.K. Varghese, Advertising Basics: A Resource Guide for Beginners, NewDelhi: Sage Publications.
4. Frank Jefkins Advertising Prentice Hall
5. Gerald J Tellis Effective advertising: understanding when, how and why advertising wakes 2004. Response Books New Delhi.
6. Lary Percy and Richard Elliot, Strategic Advertising management (2009) Oxford.

Books for further reading

7. George Belch, Advertising and Promotion, Tata McGraw-Hill.
8. S.H.H.Kazmi and Satish Batra, Advertising and Sales Promotion, Excel Books.
9. Wells Burnett Moriarty, Advertising: Principles and Practice, Pearson Education.
10. S.N.Murthy and U Bhojana, Advertising: An IMC Perspective.

I. **Continuous Assessment: 20 Marks**

As per the CBCSSUG Regulation 2019, Components with percentage of marks of Internal Evaluation of Theory Courses are- Test paper 40%, Assignment 20%, Seminar 20% and Class room participation based on attendance 20%.

1. Class Tests: 8
2. Assignment: 4
3. Seminar Presentation: 4
4. Class room participation based on attendance: 4

II. Semester end examination: 80 Marks

III. **Suggested activity:**
1. Advertising review.
2. **Preparation of print ads – classified and display**
3. **Ad agency visit.**

BA Journalism and Mass Communication
Semester VI Course 22 Code JOU6B12

Media Laws and Ethics

Contact Hours: 5 Credit : 4

Objective:
To give the students an exposure to the fundamentals of Media Laws.

Course Outcome

1. To gain basic understanding of the legal system and important media laws.
2. To assess the implications of freedom of speech and expression and perils of the restrictions on this freedom.
3. To obtain the capacity to examine the actual working of the media from an ethical perspective.

Module I
Basic Legal concepts - Judicial system in India - Indian Penal Code, role of Macaulay. Fundamental rights - directive principles. Basic legal terms such as writ, FIR, habeas corpus, suo moto, judicial review, PIL, bail, amicus curie etc

Module II
Freedom of the press - evolution of the concept of freedom of the press, Types of censorships. Freedom of speech and expression in Indian Constitution - article 19 (1) (a) and reasonable restrictions. India's ranking in the press freedom index.

Module III
Defamation – libel, slander and defenses of media professional - Privacy and Cyber laws - Right to Information Act - Whistle Blower's Protection Act.

Module IV
Press Laws: Official Secrets Act - PRB Act - Copyright Act - Contempt of Court Act - Young Person's Harmful Publication Act - Indecent Representation of Women's Act - Drug & Magic Remedies Act - Working Journalists Act - Wage Boards, Film Certification Rules - Intellectual Property Rights- Information Technology Act; Child rights and POCSO.

Module V
Media Ethics and Issues - code of ethics for media personnel - Press Council of India- Paid News and Cheque-book Journalism. Impact of Indian emergency (1975-77) on mass media. Internet censorship, data mining by internet service providers, privacy versus public good, privacy in the digital age, embedded journalism, ethics of sting journalism. Corporatisation of media.

Books for Reference

1. Naresh Rao &SuparnaNaresh, '**Media Laws, an appraisal',** Premier Publishing Company, Bangalore.
2. Kundra.S, **'Media Laws & Indian Constitution'**, Anmol Publications Ltd, New Delhi.
3. Vakul Sharma, '**Handbook of Cyber Laws',** Macmillan, 2002.
4. NirmalaLakshman,'**Writing a Nation, an Anthology of Indian Journalism'.**
5. NaliniRajan, '**Practising Journalism',** Sage Publications.
6. Hamid Moulana, '**International Information Flow'.**
7. Karen Sandars, '**Ethics & Journalism',** Sage Publications.

Books for Further Reading

1. AravindSinghal& Everett M.Rogers, '**India's Communication Revolution',** Sage Publications.
2. Edward S. Herman & Noam Chomsky, '**Manufacturing Consent',** Vintage Publications.
3. Dr. Jan R. Hakemuldar et.al, 'Principles **& Ethics of Journalism',** Anmol Publications.
4. Patrick Lee Plaisance, '**Media Ethics',** Sage Publications.

I. **Continuous Assessment: 20 Marks**

As per the CBCSSUG Regulation 2019, Components with percentage of marks of Internal Evaluation of Theory Courses are- Test paper 40%, Assignment 20%, Seminar 20% and Class room participation based on attendance 20%.

1. Class Tests: 8
2. Assignment: 4
3. Seminar Presentation: 4
4. Class room participation based on attendance: 4

II. Semester end examination: 80 Marks

BA Journalism and Mass Communication

Semester VI Course 23 Code JOU6B13

Online Journalism

Contact Hours 5 Credits 4

Course Outcomes:

1. Understanding the effectiveness of Digital Medium.
2. To achieve the capacity to evaluate the role of Internet in the contemporary society.
3. To involve and participate in the functional world of Internet in personal capacity.

(The program intends to create a basic conceptual understanding about the function and use of Internet and does not engage in an act of transacting technical competence)

Module 1

Internet as a medium of communication - history and evolution of internet- Various popular formats of Online Media- Earlier forms of Communication that led to the invention of Internet.

Module 2

Features of online journalism –Interactive, Participative, Virtual- Continuity, Anonymity and Convergent Characteristics, Hypertext, Multimedia - Online Aesthetics – content, design, colours, font, templates, navigation bars, and hyperlinks

Module 3

Annotative reporting and strengths and limitations - Citizen Journalism, Absence of Gatekeeping/Gate viewing, Timely Feedback- Portals; Styles of Involvement like Blogging– Podcasting – Vodcasting.

Module 4

Internet culture, Subjectivity and Objectivity of Facts– Media both as Social and Personal, Cybercrime and Regulations, Article 66 A of IT Act

Module 5

World Wide Web - web pages - e-groups - e-governance – e learning- Online advertisements.

Module 6

Technical writing -Definition and Types - Objectives in Technical Writing - Guidelines for effective writing - prewriting, writing and re-writing. Structure and Content of Trolls and Memes.

Books for Reference

1. Online Journalism: A Basic Text, Tapas Ray, Cambridge University Press.

2. The New Media Handbook – Andrew Dewdney and Peter Ride.

3. The Cyberspace Handbook – Jason Whittaker.

4. Breaking News, Sunil Saxena, Tata McGraw-Hill.

Books for Further Reading

1. Media and Power – James Curran.

2. Media, Technology and Society – Brian Winston.

3. Journalism Online – Mike Ward.

4. Managing Media Convergence – Kenneth C. Killebrew

I. **Continuous Assessment: 20 Marks**

As per the CBCSSUG Regulation 2019, Components with percentage of marks of Internal Evaluation of Theory Courses are- Test paper 40%, Assignment 20%, Seminar 20% and Class room participation based on attendance 20%.

1. Class Tests: 8
2. Assignment: 4
3. Seminar Presentation: 4
4. Class room participation based on attendance: 4

II. Semester end examination: 80 Marks

MSW Semester I

SOW 1 C 01: History, Philosophy and Fields of Social Work

Credits: 4
Hours/week: 4

Learning Objectives

1. **Understand the history of Social work and Social Work education in India and abroad**
2. **Learn the basic concepts, methods and functions of Social Work**
3. **Understand the philosophical assumptions and values of Social Work.**
4. **Understand social work as a profession**
5. **Identify various fields of Social Work practice**

Module I **(10 Hours)**

Historical development of social work: U.K. and U.S.A, Historical development of Social Work in India - Social Reform Movements and their contribution to Social Welfare. Welfare activities in India by Governmental and nongovernmental agencies in the Post Independent Era

Social Work-related concepts: Social Service, Social Reform, Social Welfare, Social Policy, Social justice, Social Defense

Module II **(14 Hours)**

Concept, Philosophy and approaches to Social Work

Social Work- Definition**,** Principles, Core values and Functions.

Philosophical assumptions of Social Work - Democratic frame work, worth and dignity of individual, interacting forces of human behaviour, uniqueness of individuality, change and the potentiality to change, the right for self direction, participation of clients in the helping process, right to self fulfillment to the extent of his capacity and within the limits, Society's responsibility to facilitate self- fulfillment of the individual, group or community. Operationalising cardinal social work values, challenges in embracing values.

Sources of Social Work Philosophy: Moral & Religious values in Social work philosophy- Christian, Hindu, Muslim, Buddhist, Gandhian traditions. Secular humanism, Rationalism, Welfarism, Liberalism and democracy, Socialism and human rights

Module III **(14 Hours)**

Social Work Theories, perspectives and Methods

Introduction to theories of Social Work: Importance - Systems Theory, Humanistic, Psychosocial development theories, Social Learning Theory**,** Conflict Theory.

Major Perspectives in Social Work: Strengths and Ecological Systems Perspectives

Overview of Social Work Practice Models: Crisis Intervention and Task-Centered, Cognitive-Behavioral, Strengths and Solution – Focused, Narrative, Anti oppressive, Cultural Competence

Methods of Social Work- Social Case Work, Social Group Work, Community Organisation, Social work Research, Social work Administration, and Social Action

Role of professional social worker. Core skills of Social Work

Module IV **(10 Hours)**

Social Work profession-issues and concerns, Social Work Education

Identification of Social Work as a Profession, Code of Ethics in Social Work, Issues and concerns of Social work Profession. Professional Associations for social workers, Importance of continuing professional development of social workers, International Social Work

Social Work education- Multidisciplinary foundation of Social work education, curriculum, courses and specializations.

Field work –objective, components, Supervision-functions and methods, Field work recording-Need and importance, Current trends in social work education.

Module V **(12 Hours)**

Fields of Social Work

Primary and secondary settings, Role of professional social worker. Core skills for Social Work.

Family and child welfare Settings, Medical and Psychiatric Settings, Industrial Settings, Educational Setting, Correctional setting, Community Development Settings.

Social Work with Children, Adolescents and youth, Women, Gender issues, Aged, Differently abled, SC/ST, migrants, unorganized labourers, abuse, sexual assault, and Domestic violence victims, HIV/AIDS, sexual minorities.

References:

1. Banerjee .G.R (1973) : Papers on Social Work: An Indian Perspective
2. Choudhary, Paul. (1983): Introduction to Social work. New Delhi: Atma Ram & Sons,
3. Gore, M. S. (1965): Social Work and Social Work Education, P. S. Jayasinghe, Bombay :Asia Publication House
4. Batra, Nitin (2004): Dynamics of Social Work in India, Jaipur : Raj Publishing House.
5. Dinitto, Diana, M. (2008): Social Work Issues and Opportunities in a challenging profession (3rd edition). Chicago: Lyceum Books
6. Fink, Arthur et al (1985).The fields of Social Work. Beverly Hills, Calif: Sage Publications
7. Hepworth, Dean H (2010): Direct Social Work Practice-Theory and skills (8th edition). New York: Brooks/Cole.
8. Friedlander, Walter A. (1977) : Concepts and Methods of Social Work, New Delhi : Prentice Hall of India Pvt. Ltd.
9. Nair, T. Krishnan (1981): Social Work Education and Social Work Practice in India, Madras: Association of School of Social Work in India
10. Singh, R.R. (1985): Field Work in Social Work Education, A Perspective for Human Service Profession, New Delhi : Concept Publishing Company
11. Wadia. A.R (1961): History and Philosophy of Social Work in India. Allied Publishers, Bombay
12. Desai, Murli (2002): Ideologies and social Work. Rawat Publications, Jaipur
13. Patel, Chhaya(Ed): Social Work Practice Religio-Philosphical Foundations. Rawat Publications Jaipur
14. Terry Mizrahi, Larry E. Davis (2008) : Encyclopedia of Social Work (20th Edition), Oxford University Press, New York.
15. Upadhay Ashok K., John Rawls (1999)– Concept of Justice, Rawat Publications, Jaipur
16. Viviene Cree and Steve Myers (2009): Social Work: Making a Difference, Rawat Publications, Jaipur.
17. Payne, Malcom (2014) Modern Social Work Theory, Palgrave Macmillan London
18. Gray, Mel and Webb, A. Stephen (ed.) (2013) Social Work Theories and Methods, Sage London
19. Healy, Karen (2014) Social work Theories in Context Creating Frrameworks for Practice, Palgrave Macmillan London
20. Maclean, Siobhan and Harrison, Rob (2001); Theory and Practice: A Straightforward Guide for Social Work Students, Kirwin Maclean Associates

MSW Semester I

SOW I C 02 : Sociology and Economics for Social Work Practice

Credits: 4
Hours/week: 4

Learning Objectives:

1. **Understand the sociological concepts to examine social phenomena.**
2. **Understand the various social problems and its impact on the society, various issues and challenges**
3. **Understand social and economic processes and systems.**
4. **Understand economics of development.**

Module I: **Sociological Perspectives and theoretical contributions to Sociology (12 Hours)**

Sociological perspectives: Functionalist perspective, Conflict perspective, interactionist perspective.

Contributions of theorists: Durkheim, Aguste Comte, Max Weber, Foucault and Talcott parson, Amartya Sen.

Module II: **Sociological concepts for social work I (12 hours)**

Definition of sociology, relationship between Sociology and Social Work
Society: Definition, Society as system of relationships, meaning and characteristics,
Culture: Definition, characteristics, cultural change

Status & Role: Types and Characteristics

Socialization: Meaning, theories of socialization, process and agents
Social process: Associative and dissociative process
Social institutions – Marriage, family, religion, kinship, education, economic institutions and legal system

Module III: **Sociological concepts for social work II (10 hours)**

Social Stratification: Characteristics, Gender, caste, class.
Social control: Conformity and deviance; Characteristics, agencies and means of social control
Social change: Nature, characteristics, factors and theories related to social change
Social Problems : Meaning, natures and factors responsible for social problems, Major Social problems in India.

Module IV: **Introduction to basic economic concepts (12 Hours)**

Significance of studying Economics in social work. Basic Economic concepts: Needs, Resources, Production, Distribution and Consumption. Demand and supply.
Contemporary economic systems: Capitalism, Socialism and Mixed economy, their features, merits and demerits.

Module V: **Development Economics (14 Hours)**

Economic Development: Concept, Meaning, under development - Characteristics, causes and consequences

Poverty and unemployment in India: Types, Causes, effects and implications. World Hunger-myths, magnitude, causes and remedies.

New Economic Policy: Structural adjustment programmes (LPG) and Stabilization programmes, Impact of NEP

Planning for Development – Economic Planning, meaning, Objectives of Indian Planning, NITI Aayog,

References

1. M, A. F. (2006). *"Contemporary Sociology" – An Introduction to Concepts and Theories.* USA: Oxford University Press.
2. Béteille, A. (2002). *SociologY:Essays on approach and method.* New Delhi : Oxford University Press.
3. Giddens, A. (2005). *Sociology-Introductory Readings.* Excel Media: New Delhi.
4. Rao, C. S. (2005). *Sociology* . New Delhi: S. Chand Co.
5. Singh, Y.(2004).*Ideology and Theory in India Sociology*, Rawat Publications. New Delhi.
6. Dutt, R.& Sundaram, K.P.M. (2002). *Indian Economy*, S. Chand andCo. ,New Delhi
7. Madan, G.R. (2002) .*Indian Social Problems*, Mumbai : Allied Publishers Pvt. Ltd.

MSW Semester I

SOW I C 04: Professional Skills for Social Workers

Credits: 4
Hours/week: 4

Learning Objectives:

1. **To gain an understanding on concepts of self esteem, self awareness, self development etc.**
2. **To familiarize with managerial skills required for social work practice**
3. **To provide training to enhance competence in interpersonal communication and development communication**
4. **To enhance skills in ICT**

Module I **(10 Hours)**

Intra personal and Interpersonal skills -Significance of understanding self, Meaning of self: Self awareness, self concept, self esteem, self image and self acceptance, Factors affecting self: attitudes and values. Techniques of understanding self, SWOT analysis, Jo-Hari window. Self defeating behaviour and its management. Life skills, Emotional resilience, Emotional Intelligence.

Module II **(13 Hours)**

Relationship skills for social work: Understanding client's situation and perspective-assessment, genograms, ecomaps, Core relationship qualities: warmth, empathy, genuineness, unconditional positive regard, Interviewing skills: creating supportive environment, active listening, silence, reflecting feelings, paraphrasing, clarifying, summarizing, Direct, closed, open ended questions, Professional integrity, Professional boundaries

Module III **(14 Hours)**

Communication Skills- Communication: Definition, Purpose, Types, process, barriers, approaches in communication, non-verbal communication, Transactional Analysis-ego states, transactions, strokes, life positions, Group discussion, Public speaking, Presentation skills, reflective writing, presentation skills, Writing skills: Minutes, reports, letters, Advocacy letters, case notes, Structure of case notes, legal writing, newsletters, press, media, media releases, Letter to the editor, Literature review, academic writing, referencing and plagiarism.

Module IV **(12 Hours)**

Leadership skills: Leadership- Introduction to Leadership, Leadership Power, Leadership Styles, Leadership in social work-Facilitative and transformational Leadership, Motivation, Motivation enhancement, Group dynamics, Team building and team work, Time Management, Stress management, Goal setting, Managing conflict

Module V **(11 Hours)**

ICT Skills: Use of ICT in Social Work, MS Office, Various forms of ICT resources, ICT in teaching and learning, Online Learning resources, Introduction to Cyber laws, Cyber crimes, Cyber ethics

Reference:

1. Stogdon C and Kitleley R (2010) Study skills for social workers, Sage Publications
2. Mohan K, Banerji M, Developing Communication Skills, , Macmillan Publishers India Ltd.
3. Neil T (2009), People Skills, 3rd Ed., Palgrave Macmillan New York
4. Hamer M (2006), The barefoot Helper: mindfulness and creativity in social work and the caring professions, Russell House Publishing Limited
5. Benson, Jarlath B(2001), Working more creatively with groups, Routledge, New York
6. Donald S. (1991), The Reflective Practitioner, How Professionals Think in Action, Basic Books New York [ISBN: 1857423194]

MSW Semester I

SOW I C 05: Social Legislation and Human Rights

Credits : 4
Hours/week : 4

Learning Objectives

1. **To acquaint the students with human rights and organizations to protect human rights**
2. **To familiarize the students with Indian Constitution, and the fundamental rights, duties and directive principles**
3. **To acquaint them with the statutory bodies for the protection of the rights of the individuals in general and women and children in particular**
4. **To understand the provisions of the social legislations and utilize them as a tool for empowerment of the vulnerable and marginalized sections of the society.**

Module I Introduction to Social Legislation (8 Hours)

Social Legislation: Definition, objectives, & Scope. Social Legislation as an instrument for Social change and Social justice. Process of making social legislation

Indian constitution and social Legislation: Fundamental rights, Fundamental duties and Directive Principles of State policy**.** Legal system in India: Courts, Hierarchy of courts.

Module II Human rights (14 hours)

Concept and nature of human rights: Values: Dignity, Liberty, Equality, Justice, and Unity in Diversity.

Human rights as Inherent, Inalienable, Universal and Indivisible,

Universal Declaration of Human Rights 1948 and Universal Declaration of Human Responsibilities 1997.

International Convention on Economic, Social and Cultural Rights 1966 International convention on Civil and Political Right 1966

UN and its Principal Organs: General Assembly, Economic and Social Council, and Security Council, Subsidiary Organ: Human Rights Council, Specialized Agencies: UNICEF, UNESCO, ILO, WHO and various agencies. Inter governmental and non governmental agencies working for human rights.

Statutory Mechanism for Enforcement of Human Rights in India: National Human Rights Commission (NHRC) and State Human Rights Commissions (SHRCs) – Evolution, Composition and their Roles,

Role of a social worker in relation to social legislation and human rights issues – advocacy, campaign, lobbying, networking, educating, guiding, enabling

Module III: Legislations for the Protection of Children and Women- their social relevance, objectives, implications, remedies and critical review (14 hours)

Children

Juvenile justice care and protection act 2015

Laws related to adoption, Child Marriage Act – 2006.

The Protection of Children from Sexual Offences Act, 2012

The Child Labour (Prohibition and Regulation) Amendment Act, 2016

Women

Laws related to atrocities against women as per Indian penal code

The Dowry Prohibition Act –1986.

The Protection of Women from Domestic Violence Act, 2005.

The Immoral Traffic (Prevention) Act, 1986.

The *Nirbhaya Act*, 2013

Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013,

Module IV: Social Legislations for the Aged, Disabled and other weaker Sections, their social relevance, objectives, implications, remedies and critical review (14 hours)

Aged: Maintenance and Welfare of Parents and Senior Citizens Act, 2007.

Disabled: The Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995.

Backward Classes: The Schedule Caste and Schedule Tribes, (Prevention of Atrocities) Act, 1989.

Social security legislations- An overview

Module V Introduction to Legal Aid (10 hours)

Legal Aid- Definition, meaning and scope

Legal services authorities act, 1987 – salient features,

The Schemes and Programmes for Legal Aid Services, Lok Adalats

Public Interest Litigation -Meaning and Definition, Nature and Scope of Public Interest Litigation. Procedure for filing PIL

.

References

1. India Government: Constitution of India. Govt. of India Press, New Delhi
2. Social Legislation in India (2 Vols)Hardcover K .D. Gangrade 2011
3. Mathew PD : Public Interest Litigation, Indian Social Institute, New Delhi, 1999
4. Tapan Bisowal : Human rights, gender and environment Viva books pvt Ltd, New Delhi, 2006
5. Videh Upadhyay, Public Interest Litigation in India: Concepts, Cases and Concerns: Concepts, Cases Concerns – 2007
6. Mamta Rao, Public Interest Litigation Legal Aid and Lok Adalats Paperback – 2015
7. People law and justice : A case book of PIL, Vol 2Orient Longman publishers, New Delhi, 1997
8. Introduction to constitution of India: Vikas publishers house pvt Ltd, New Delhi
9. Legal Education Series : Indian Social Institute, New Delhi, 1999
10. Hebsur, R. K. (Ed.) Social Intervention for Justice, Bombay: TISS.
11. Huttman, E. D. 1981 Introduction to Social Policy, New York: McGraw- Hill.

MSW Semester II

SOW2 C06: Social Case Work

Credits: 4
Hours/week: 4

Learning Objectives

1. **To understand the basic concepts in Social Case Work and its application in practice**
2. **To develop the values and skills to practice Social case work**
3. **To develop competencies to use the method in practice while working with individuals**

Module I: Introduction to Social Case Work (8 hours)

Social Case Work as a Method of Social Work: Definition, scope and objectives of Social Case Work, History and Development of Social Case Work in UK, USA and India, Casework and Counseling. Philosophical assumptions and values of Social Case Work. Caseworker - qualities and skills.

Module II: (10 hours)

Case work relationship: definition, qualities and principles of Case work relationship, (Individualization, Purposeful expression of feelings, controlled emotional involvement, Acceptance, Non-judgmental attitude, Client self determination, Confidentiality)

Tools used in social case work: Relationship, listening, observation, Home visits, Interview, Casework Interview: nature purpose and principles.

Module III: Components and Tools of social casework (16 hours)

Components of casework (Perlman's model):
Person- client, significant others and collaterals.
Problem- need impaired social functioning.
Place- agency, objectives, functions, policies and resources.
Process- Social Casework intervention; psychosocial study, Diagnosis, Treatment, Evaluation, Termination and follow up. Writing a Case work record
Recording: importance, principles and types: Narrative recording, summary recording & verbatim recording,

Module IV: Social Case Work Treatment - Approaches and Models (16 hours)

Environmental modification, Enhancing social support systems, and Direct treatment (Counselling techniques - guidance, clarification, ventilation, psychological, support, reassurance, confrontation, accreditation, suggestion etc.)

Enhancing the client's problem solving - assertiveness, Stress management & social skills

Theoretical approaches relevant to case work. Psychoanalytical, Psychosocial, Diagnostic and Functional approaches.

Models of Casework Practice : Social diagnostic(Richmond), Supportive and modificatory (Hamilton), Problem solving(Perlman), Crisis intervention(Rappaport), Classified treatment method (Florence Hollies),Competence based approach (Elleen Grabrill)

Module V: Case management in Social Case Work (10 hours)

Case management: definition, philosophy, components- Assessment, planning, facilitation, care coordination, evaluation, advocacy, referral, resource management

Settings of social case work: Primary & secondary, Scope of social case work in various settings, Role and function of case worker in all settings

References:

1. Biestek Felix (1957). Case Work Relationship. Chicago: Loyola University Press
2. Grace Mathew (1992). Introduction to Social Case Work. Bombay: Tata Institute of Social Sciences.
3. Perlman, H.H. (1957). Social Case Work: A Problem Solving Process. Chicago: University of Chicago Press.
4. Hepworth & Larsen (2010). Direct Social Work Practice: Theory and Skills (Eighth Edition). Belmont, CA: Brooks/Cole/ Thompson.
5. Hamilton.G : Theory and Practice of Social Case Work
6. Hamilton, Gordon (1970) The New York School of Social Work: Theory and Practice of Social Case Work, New York and London: Columbia University Press
7. Rameshwari Devi, Ravi Prakash (2004) Social Work Methods, Practics and Perspectives (Models of Casework Practice), Vol. II, Ch.3, Jaipur : Mangal Deep Publication
8. Brammer.L.M : The Helping Relationship Process and Skills 1985
9. Upadhay .R.K : Social Casework – A Therapeutic Approach.
10. Garrett, Annett (1972) Interviewing – Its Principles and Methods, Family Service Association of America, New York
11 Compton and Galaway : Social Work Process 1979

MSW Semester II

SOW2 C 07: Social Group Work

Credits: 4

Hours/week: 4

Learning Objectives

1. **To develop an understanding of Social Group Work as a method of Social Work**
2. **To acquaint with the process of Social Group Work to enable them to work with individuals in Groups**
3. **To develop the necessary attitude and competence to practice Social Group Work in various settings**.

Module I: Introduction to Groups (12 Hours)

Understanding groups: Definition, characteristics and significance of groups in society
Types of groups – primary and secondary groups
Task groups (forum, committees and work team)
Treatment groups (support groups, educational groups, socialization groups, therapeutic groups,)
Developmental groups (self help groups and support groups)
Subgroups- meaning and types (Cliques, dyads, triads, isolates)
Tools for assessing group interaction - Sociometry and Sociogram. Functional and nonfunctional role of individuals in group

Module II Group Process (14 Hours)

Typical patterns in group process and interpersonal communication, Group formation, Role, Rank and Relationship, Group norm, Bond, acceptance, isolation, rejection, conflict and control. Impact of group experience on individuals
Group dynamics - Group bond, Sub groups, Decision making, isolation, Leadership, Conflict.
Communication and Interaction pattern, Group cohesiveness, Group control, Group culture.
Stages of group development – Forming, Storming, Norming, Performing and Adjourning
Group morale- meaning determinants and importance and characteristics of groups with high or low morale.

Module III: Introduction to Social Group Work (9 Hours)

Social Group Work: Definition, characteristics and goals of social group work method.
History and evolution of group work as a method – international and Indian context.
Theoretical assumptions underlying social group work, Philosophical assumptions and Values of social group work, Relevance and Scope of Social Group Work

Module IV **(13 Hours)**

Social group work principles and process

Principles of group work.

Group Worker – Qualities, skills, Role and functions,

Steps in group formation: Need Assessment, Formulating objectives, developing plan for group work, Programme planning

Group Formation and Group Development

Group Work Process: Pregroup formation, Beginning Phase, Middle Phase and Ending Phase

Termination phase: Types of termination

Evaluation: Significance of evaluation, types and methods of evaluation

Module V **(12 Hours)**

Recording in group work – Importance, Principles, types, structure of recording, Techniques of recording to analyze group process and plan strategies for intervention

Applications of Group work in various settings – Health (Hospitals, De-addiction centres and Mental health centres), Children and Adolescents(schools and Child Guidance Clinics) Women development, Family welfare (Family counselling centres), Industries, Communities, Correctional institutions

References:

1. Hepworth, D. H. (2010). . *Direct Social Work Practice: Theory and Skills (8th Edition).* Belmont: Brooks/Cole.
2. Konopka, G. (1963). *Social group work. A Helping Process* . New Jersey: Prentice Hall.
3. Rivas, R. W. (2009). *Introduction to social group work practice.* . London : Allyn & Bacon.
4. Siddiqui, H.Y. (2008). *Social group work: Theories and practice.* Jaipur: Rawat Publications.
5. Trecker, H. B. (1972). *Social group work: Principles and Practice.* Chicago: Follett. Publishing Company.
6. Upadhay, R. (2003). *Social Casework: A Therapeutic Approach.* New Delhi: Rawat Publishers.
7. Zander, D. C. (1960). *Group Dynamics.* New York: Peterson and Co.

MSW Semester II

SOW2 C 08: Community Organisation and Social Action

Credits : 4
Hours/week : 4

Learning Objectives:

1. **Understand community organization and social action as methods of social work**
2. **Understand the elements of community organisation practice and social action.**
3. **Learn the models and strategies for community organization and social action**
4. **Develop skills and attitudes for participatory Community work and social action.**

Module I: Understanding Community and Community Dynamics (10 hours)

Concept of community: - Sociological and social work perspectives of community - geographical and functional community.

Functions of community. Concepts of power and authority; sources of power in communities. Understanding community power structure, Powerlessness and empowerment, Cycle of empowerment.

Leadership in Community Organisation**:** Concept and types of leadership. Role and functions of community leaders.

Participation in Community Organisation**:** Meaning, significance and dimensions and levels of participation. Challenges in participation.

Module II: Community Organization as Practice Method (14 hours)

Concepts: - Community organization, community development.

Evolution of community practice in the West and in India

Principles of community organization. Emphasis on human rights, multiculturalism, diversity, pluralism and social justice. Theoretical perspectives relevant to community organisation-Systems theory, Learning Theory, Conflict Theory and Social Exchange Theory

Phases in community organization- Study, analysis, assessment, organization, action, evaluation, modification and continuation.

Approaches and Models: Rothman's approaches to Community Organisation- Locality Development, Social Planning, Social Action. Paulo Freire and Conscientization. Saul Alinsky and Organised Mass Action.

Approaches to Organising communities in the Indian Context: The Gandhian method of organizing: Satyagraha, civil disobedience and the philosophy of non violence.

Module III: Strategies in Community Organization (12 hours)

Formation and capacity building of marginalized groups, community level institutions and organisations (e.g- PRIs, people's organisations), asset-based community development, leadership building and networking, awareness generation, local services development. Advocacy and coalition building.

Skills required in community organization practice: Interaction skills, skills in information gathering and assimilation, community mobilization, resource mobilization (external and

internal), advocacy, conflict resolution, documentation, networking, training and facilitation, Participatory Rural Appraisal (PRA)

Recording: community profiling, recording (administrative and process records; data banks, monitoring report, evaluation reports) and documentation of the community organization processes (documentation of the best practices, case studies)

Module IV: Community Organization Practice in Various Settings (12 hours)

Health, Education, Residential institutions, Livelihood and work, Natural resource management, Sustainable development, Working with tribal population, Disability, Working with rural and urban vulnerable communities, displaced population and rehabilitation, disaster response.

Module V: Social Action (12 Hours)

Social Action: Concept, Objectives, Principles, methods and strategies of social action. Scope of social action in India. Social Movements.

Approaches to Social Action- Freire, Gandhi (Sarvodaya), Alinsky, Radical social work; Rights based approach.

Strategies for social action from various social movements.

Skills- Mediation, advocacy, conflict resolution. Social Action as a method of social work.

References:

1. Ross Murray G, Community Organisation: Theory and Principles, Harper and Row Publication New York, 1985.
2. Arthur Dunham: Community Welfare Organisation.
3. Weil, Mary (Ed) :- Community Practice. Conceptual Methods, New York: The Haworth Press. Inc 1996.
4. Meenai, Zubair: Participatory Community work. Concept Publishing Company, NewDelhi 2008
5. Siddiqui , H.Y. Working with Communities: An Introduction to Community Work. Hira Publications, New Delhi 1997.
6. Tropman, John E, Erlich, John L; and Jack Rothman: Tactics and Techniques of Community Intervention – F.E. Pea cock Publication, Inc, Illinois 1995
7. Hardcastle, David A., Powers, Patricia R. and Wenocur, Stanley : Community Practice- Theories and Skills for Social Workers. Second Edition 2011
8. Hardina, D. : Analytical Skills for Community Organisation practice, Columbia University Press, New York, 2002
9. Weil, Mary (Ed): The Handbook of Community Practice, Sage Publications, New Delhi, 2013.

MSW Semester II

SOW2 C 09: Psychology for Social Work

Credits : 4

Hours/week : 4

Learning Objectives

1. **To develop an understanding regarding individual and collective behaviour and determinants of social behaviour**
2. **To acquire knowledge regarding the concept of mental health and mental health issues in the contemporary society.**
3. **To gain basic knowledge regarding various mental disorders and dysfunctions.**

Module I: Introduction to Social Psychology (8Hours)

Social Psychology: Definition, Nature and Scope and relevance to social work
Social Perception: Nonverbal communication-Attribution-Theories of attribution.
Attitude: Definition , Formation and change of attitudes.

Module II: Individual Behavior in social Context (10 Hours)

Social Cognition: Meaning &definition, Schemas and Heuristics
Prejudice: Definition and characteristics of prejudices
Sex and Gender, Gender identity and gender stereotypes.
Social influence- Types of social influence, Compliance techniques

Module III: Group Behavior in social Context (12 Hours)

Pro-social behaviour.- factors and determinants.
Aggression- factors and determinants.
Propaganda: definition, Psychological basis and techniques. Counteracting misleading propaganda
Collective behavior: Characteristics of Audience & crowd. Classification of crowd and audience.

Module IV: Introduction to Mental Health (14 Hours)

Definition, characteristics and determinants of mental health. Mental Health issues in the contemporary society- Alcoholism and drug addiction, Suicide.
Adjustment disorder-post traumatic stress disorder; Anxiety disorder: specific phobia, social phobias, generalized anxiety disorders, obsessive-compulsive disorder.

Module V: Introduction to major Mental Disorders (16 Hours)

Clinical features of schizophrenia, mood disorders
Somatic Symptom Disorders, Hypochondriasis, Somatization Disorder, Pain Disorder, Conversion Disorder;
Dissociative Disorders - Depersonalization/ Derealization Disorder, Dissociative Amnesia and Dissociative Fugue, Dissociative Identity Disorder (DID).
Major Childhood disorders- Autism spectrum disorders, Conduct disorders, ADHD, LD, Intellectual Disability

References:

Baron, R.A.,& Branscombe, N.R.(2012). *Social Psychology*(13 th ed). New Delhi: Pearson Education.

Baron, R.A., Branscombe, N.R., Byrne, D., & Bhardwaj, G. (2009). *Social Psychology, 12 th ed.* New Delhi: Pearson Education**.**

Baron, R.A., & Byrne, D. (2002). *Social Psychology, 10th ed.* New Delhi: Pearson Education

Butcher, J. N., Hooley, J. M., &Mineka, S. (2014). Abnormal Psychology (16th ed.). U.S.A : Pearson Education, Inc.

Carson, R. C., Butcher, J. N., &Mineka, S. (1996). Abnormal Psychology and Modern life (10th ed.). Newyork : Harper Collins College Publishers.

Myers,D.G.(2006).Social Psychology. New Delhi: Tata MCGraw Hill Inc.

Sadock, B. J., Sadock, V. A., & Ruiz, P. (2015). Kaplan &Sadock's Synopsis of Psychiatry Behavioral Sciences/ Clinical Psychiatry (11th ed.). U.S.A :Wolters Kluwer.

Seligman, M. E. P., Walker, E. P. ,&Rosenhan , D. L. (2001). Abnormal Psychology (4th ed.). Newyork : W. W. Norton & Company, Inc.

Taylor,S.E.,Peplau,L.A., & Sears, D.O.(2006). New Delhi: Pearson Education.

MSW Semester II

SOW2 C 10: Theory and Practice of Counselling

Credits: 4

Hours/week: 4

Learning Objectives:

1. **To acquire knowledge of the theoretical and therapeutic approaches in counseling**
2. **To understand the process of Counselling.**
3. **To gain knowledge and skills for practice of counselling in different settings**

Module 1 **(9 Hours)**

Basics of Counselling Practice

Counselling: definition need and scope, Types of counseling: Individual and Group Counselling, Concepts-similarities & differences: Guidance, Counselling, Social Case Work, Psychotherapy. Elements in counselling: counsellee, counsellor, counselling setting.

Module II **(14Hours)**

Counselling Process

Counselling stages: Relationship building, Exploring, assessment and understanding, goal setting and action, Termination and Evaluation Phase

Attitudes and Skills required for the stages of counseling: Contracting, Attending, Reflecting feelings, paraphrasing, focusing, confronting, summarizing, evaluating, goal setting, building relationships, empathic responding, challenging skills,

Module III **(12 Hours)**

Techniques and skills in Counseling

Personal Qualities of an effective counsellor

Skills and Techniques of counselling: Active listening, questioning, clarification, physical attending skills: non-verbal skills: posture, facial expressions and eye contact

Counsellor as a professional: Code of ethics and legal and ethical aspects of Counseling

Module IV **(14 Hours)**

Theories and approaches in Counseling Practice

Psychoanalysis, Client-centered, Gestalt theory, Rational emotive therapy, Behaviour therapy, Cognitive Behaviour Therapy, Reality therapy and Transactional Analysis, Strengths based approach, Solution focused brief therapy. Mindfulness based stress reduction, Eclectic approach in Counselling

Module V **(11 Hours)**

Counselling practice in different settings

Marriage and Family counselling, Career Counselling, Crisis and Trauma Counseling; Genetic Counselling, Grief Counseling, Stress management, Counselling in the Context of HIV/ AIDS, Counselling services for children and adolescents, Counselling for Elderly, Counselling in Workplace, Counselling for Substance abuse and Addiction

Reference:

1. Fuster, J. M., (2002). Personal Counselling. Mumbai : Better Yourself Books
2. Gladding, S. (2013). *Counseling : a comprehensive profession*. Boston: Pearson
3. Nelson-Jones, R., (2000). Practical Counselling and Helping Skills. Mumbai : Better Yourself Books
4. Yeo, Anthony, (1993). Counselling a Problem Solving Approach. Boa Vista : APECA publications in India
5. Carroll, Michael., (1996). Workplace Counseling: A systematic Approach to Employee Care. London : Sage Publications
6. Patri, V.R., (2005). Counselling Psychology. New Delhi : Authors Press
7. Rao, S.N., (2002). Counselling and Guidance. New Delhi : Tata McGraw Hill Publishing Company Ltd
8. Theory and Practice of Counselling; Richard Nelson-Jones, Sage South Asia Edition2011
9. Elements of Counselling- Scott T Meier, Susan R Davis
10. An introduction to Counselling- John McLeod

MSW Semester III

SOW3 C 12: Participatory Project Planning and Training

Credits : 4
Hours/week : 4

Learning Objectives :-

1. **To understand the phases of development projects**
2. **To learn techniques in formulating and implementing development projects**
3. **To develop skills in writing project proposals and managing projects**
4. **To Learn the concept and importance of participatory training.**
5. **To understand the different steps in organizing participatory training programmes and develop skills in participatory training and facilitation**

Module I Development Projects **(10 Hours)**

Meaning and purpose, Programme vs. project
Principles in development project: sustainability, development direction, concern for the marginalized. Planning in Local Self-Governing Institutions and Community Based Organisations
Environmental Impact assessment [EIA], Gender Impact Assessment [GIA]

Module II Project Identification and Planning **(12 Hours)**

Need Assessment, Project Formulation -Setting Goals and objectives, feasibility and viability, cost benefit and cost effectiveness analysis, Action plan, budgeting, time schedule, Different models of preparing development projects

Planning for a Project - Development of vision & mission statement, strategic planning, Log frame approach, results frame work, theory of change, Risk analysis and management /Risk matrix, Gant chart, Network analysis, Critical Path Method
Identification of beneficiaries
Resource mobilization- sources and strategies, Preparing project proposals

Module III Project Implementation and Evaluation **(14 Hours)**

Monitoring and Evaluation
Monitoring, evaluation, supervision, review- meaning and definition, Need for M& E, challenges, key M & E activities, Baseline and Endline studies, process documentation, output tracking & outcome monitoring, key data collection tools for M & E- MSC (most significant change) Case study, interviews, stories, life history and interviews.
Measurement of outcomes/Impact assessment, Preparation of monitoring and evaluation reports, Various Models and methods of M&E like PME, Gap analyses, Social auditing.
Public relations and marketing of social projects, Social Entrepreneurship.
Practical sessions in project proposal writing and implementation.

Module IV Participatory training **(12 Hours)**

Participatory training- Significance, principles and Philosophy, Difference between conventional training and participatory training. Adult learning, Principles of adult learning.

Social work and participatory training - significance.

Steps- Pre-training phase: designing- conducting training needs assessment, formulation of objectives, identifying and sequencing content, choosing methods, developing modules, readers. Post –training phase: Monitoring and evaluation – types, methods, Follow up of training and report writing

Module V Methods in facilitation and training **(12 Hours)**

Lectures, Brainstorming, discussion exercises, focus group discussion, checklists, using visual images, simulation, case studies, learning games, role plays, demonstration, quiz, stories and songs and field visits.

Skill Training: Workshops for Street Theatre, Designing of Posters and other low cost participatory media, developing newsletters, digital stories.

References:

1. Chandra Prasanna, Projects: Planning, Analysis, Selection, Implementation, and Review, Tata McGraw Hill Pub. Co. Ltd, 1995.
2. Desai, Vasant., Project Management Preparation Appraisal, Himalaya Publications, 1997
3. Ghosh, A.S. Project Management. Anmol Publishers. New Delhi, 1990
4. Roy, M. Sam, Project Planning and Management – Focusing on Proposal Writing, CHAI, Secunderabad.
5. Lock, Dennis, Handbook of project Management, Jaico Publishing House, Delhi, 1997
6. Mohsin M, Project Planning and Control, Vikas Publishing House Pvt. Ltd, 1997
7. PuttaSOWamaiah.K, Aspects of Evaluation and Project Appraisal, Popular Parkashan, 1978.
8. Vasant Desai, Project Management: Preparations, Appraisal, Finance and Policy, Himalaya Pub. House, Delhi, 1997.
9. Reidar, Dale: Evaluating Development Programmes and Projects. Second Edition, Sage Publications,2004
10. Mathew .T.K.: Project Planning, Formulation and Evaluation CBCI Centre, New Delhi.
11. Agochiya Devendra 2002. Every Trainer's Handbook. Sage Publication New Delhi
12. Chatterjee, Bhasker 2004. ICT for Basic Education and Literacy: Country Study for India. Delhi: UNESCO
13. Chambers, Robert. 2002 Participatory Workshops: A Sourcebook of 21 Sets of Ideas and Activities Earthscan UK
14. Abreu, Desmond, D. Participatory Evaluation, PRIA, New Delhi

MSW Semester III

Elective 1 -Medical and Psychiatric Social Work

SOW3 E1 01 : Health Care Social Work

Credits : 4
Hours/week : 4

Learning Objectives

1. **To understand the scope of health care social work**
2. **To understand the role and functions of social worker in acute and chronic health conditions**
3. **To understand various social work interventions in health care**

Module I **(10Hours)**

Historical foundations of Social work in Health Care- UK, USA. India, The concept of patient as a person, social and emotional factors involved in illness, Hospitalisation and its implications on patient and family, Social work's biopsychosocial approach to health care, Limits of medical approach, Psychosocial issues related to health- disease related, treatment related.

Module II **(13 Hours)**

Social workers role on health teams, Social Work assessment in health care, Case management, Case conferences, Patient advocacy, Team work, multidisciplinary approach in health care, Use of methods of social work in health settings, Role and functions of social worker, Skills and qualities of Health Care Social worker

Module III **(15 Hours)**

Health Care Social Work- Practice settings: Acute and chronic care, Community Care, Chronic disease management, Palliative Care, End of life Care, Hospice care, Death and dying, bereavement., Psycho-social impact of cancer, Oncology Social work, : End-stage renal diseases- Psycho-social aspects, HIV/AIDS, Sexually Transmitted diseases, Organ donation and transplantation, Geriatric health care, Paediatric settings, Primary Health Care, Substance use disorders, addictions and compulsive behaviours: Cyber addiction, Adolescent health, Reproductive Health and Family Health.

Module IV **(12 Hours)**

Social Work Interventions: Assessment, Care Planning, Direct counselling, Information and education, Wellness training, Referral services, patient advocacy, Support groups for patients and carers, Motivational Enhancement therapy, relapse prevention, Change theory perspective, harm reduction approach and other brief interventions; Crisis counselling, Transitional care, Rehabilitation, Advance Care Plan.

Module V **(10 Hours)**

Health Care Social Work Practice Standards: Values, Ethical dilemmas, Role conflicts, Self determination and confidentiality. Medico-legal issues**,** Patients' rights and responsibilities, Professional supervision and importance of continuing education.

Reference

1. Judith LM McCovd and Toba Schwaber Kerson (2010) Social Work in Health Settings, Routledge, NY.
2. Surjit S Dhooper :Social work in Health Care- Its past and future , Sage Publications
3. Sarah Gehlert, Teri Browne (Ed): Handbook of Health Social Work
4. SurjitSingh(1997): Social Work in Health Care in the 21st Century, Sage Publications
5. Koenig, Michael A (2008), Reproductive Health in India: New Evidence, New Delhi :Rawat publications,
6. Tineshowri Devi, M (2010), Reproductive Health and Adolescent Girls, New Delhi :Akansha Publishing House

MSW Semester III

Elective 2 – Rural and Urban Community Development

SOW3 E2 01 : Rural Community Development and Governance

Credits : 4
Hours/week : 4

Learning Objectives

1. **To understand the features and challenges of rural and tribal communities**
2. **To understand the concept, philosophy and principles of Rural Community development**
3. **To learn the programmes and services in the governmental and voluntary sector.**
4. **To understand the structure and functions of PRIs and their role in community development**
5. **To understand the scope of social work interventions in rural communities**

Module I **(10 Hours)**

Rural Community — Basic Concepts, Gandhian concept of village, Rural/Urban differences. Agriculture, forests and non-farm sector in rural areas

Rural infrastructure - status of connectivity, power, land, water, irrigation, education and health in rural India, rural employment situation

Module II

Contemporary Challenges in Rural communities **(12 Hours)**

Poverty and indebtedness. Growing urbanisation, industrialisation, migration and consequent social issues. De-peasantisation and Proletarianisation of the marginal and small farmers, Changing land use, SEZs, Corporatization of agriculture arising out of globalizing market economy. Rural unemployment. Specific problems of fishermen, craftsmen communities.

Module III Tribal communities **(12 Hours)**

Understanding the Concept of Tribes, Adivasis, Indigenous people and Aboriginals

Overview of tribal history and tribal uprisings in India from pre to post Independence period

Situational Analysis of Indian tribes in the post Independence period with respect to land, food security, employment/livelihood, migration, displacement. Current tribal situation with respect to Human Development Indices

Scheduled areas: issues and governance, Overview from Panchsheel to Tribal Sub□plan and Special Component Plan, Special Commission for Tribes and their Roles

Problems of tribal communities in Kerala

Module IV Rural Development **(14 Hours)**

Concept of Rural Development and its objectives. Various Approaches to rural development.

Local Economic Development, Asset Based Community Development
Rural Development policies in India.
Administration of Rural Development at Central and State Levels
Rural development programmes including poverty alleviation programmes and implementation strategies, Different intervention strategies - government and NGOs.
Rural Credit: Current trends, Microfinance – Scope and challenges
Rural Cooperatives: concept, scope and limitations of the cooperative movement

Social Work and Rural Development. Scope and challenges

Module V Governance **(12 Hours)**

Major concepts: Governance, Good Governance, Accountable democracy, Panchayati Raj, Decentralisation. Historical development of Panchayati raj, national level committees in the evolution of Panchayati Raj (Balwantrai Mehta, Ashok Mehta, Singhvi committees)
Constitutional provisions, 73rd Constitutional Amendment Act 1992, Panchayati Raj Institutions- Three Tier Governance. Gender mainstreaming in rural governance. Panchayati Raj in Kerala
Structure, powers and functions of Panchayati Raj Institution. Gramsabha - role and importance Sources of funds for Panchayats.

References:

1. Singh, Katar, Rural Development- Principles, Policies and Management,3rdEdn. Sage Publications, New Delhi 2009
2. Jain, Reshmi, Communicating Rural Development Strategies and Alternatives. Rawat Publications, New Delhi, 2003.
3. Singh, Surat, (Ed) Decentralised Governance in India- Myth and Reality , Deep and Deep Publications. New Delhi, 2004
4. Rath, Govind Chandra:Tribal Development in India -The Contemporary Debate Sage Publications, New Delhi 2006

5. John Harriss (Ed.) Rural Development: Theories of peasant economy and agrarian change, Rawat Publications, New Delhi, 2017
6. G D Banerjee, Issues on Rural Finance Infrastructure and Rural Development Jain Book Depot, New Delhi, 2010

7. Anil Kumar Jana (Ed.)Decentralizing Rural Governance and Development: Perspectives, Ideas and Experiences, Rawat Publications, New Delhi, 2015

8. Sidhartha, Rural Development Administration, Jain Book Depot, New Delhi 2015

MSW Semester IV

SOW4 C 14 : Administration of Human Service Organizations

Credits : 4
Hours/week : 4

Learning Objectives

1. **Develop understanding of the evolution of administration as a method in Social Work Practice.**
2. **Develop understanding and appreciate the utility of the administrative structures, processes and procedures in an organization.**
3. **To understand the types of organizations and registration of these organizations**
4. **Develop an overview of human resource management as an important component of AHSO**

Module 1

Introduction to Administration of Human Service Organisations

Administration: Definition, Concept and Scope. Basic elements in Administration: Planning, Organizing, Staffing, Directing, Coordinating and Budgeting. Public Administration, Social Work Administration and its application as a method of social work.
Voluntary organization: Organizational structure, functions, characteristics and types of voluntary organizations. Role of voluntary organizations in social welfare development. Strengths and challenges, capacity building of NGOS and CBOs. Societies registration Act, Indian Trust Act, Companies Act and laws related to Income tax exemption, receiving donations and Foreign grants.

Module II

Social Welfare Programmes of the State and Centre governments.

Structure and functions of Ministry of Women and Child Development, Ministry of Rural Development, Ministry of Urban Development, Panchayati Raj, PRIs in Social Welfare administration and development, Central Social Welfare Board, State Social Welfare Board, State Social Justice Department, National social Security Mission, National and State level NGOs, Kudumbasree and other current programmes

Module III Human Resource Management

Introduction and Importance- Meaning and definition, nature and scope, functions, importance of HRM, Qualities and skills of HR professionals, International Human Resource Management. Role of a HRManager, Human Resource Development.

HRM Processes: Man power planning, recruitment, selection, training, induction, compensation, performance management, promotion, transfer, performance appraisal and employee separation-lay-off, retrenchment, retirement and death-, employee counseling.

Corporate Social Responsibility

Module IV Organizational Behavior

Concept of Organizational Behavior, Organizational Culture, Organization development-process, approaches and strategies
Theories of motivation and basic understanding of their application in the work context

Leadership, Theories of Leadership: Trait theory, Behavioral theories, contingency theories

Morale, job satisfaction and performance, Conflict management, occupational stress and stress management,

Total quality management, Quality circles, Organizational structure –line and staff.

Module V Employee Relations and grievance redressal

Meaning, functions and characteristics of employee relations, methods of maintaining organizational peace. Grievances - handling of grievances, Disciplinary procedures, statutory compliance- welfare measures, health and safety, social security

Problems in organizations: Absenteeism, Alcoholism, health hazards, employee turnover, downsizing, sexual harassment in work place.

References :

1. Chowdhary D.Paul.(1992). *Social Welfare Administration*. New Delhi: Atma Ram
2. Goel S.L, *Social Welfare Administration* VOL. 1: Theory and Practice, Deep & deep Publication,
3. Goel S.L., Jain R.K., (1988) .*Social Welfare Administration* VOI. 2: Theory and Practice, Deep &Deep Publication,
4. Stoner, Freeman and Gilbert (2008). Management. PHI Learning Private Ltd, New Delhi.
5. Flippo, Edwin B.: Principles of Management, Mc,Graw Hill Publishing company Ltd, New Delhi
6. Monappa, Arun and Sivadain : Personnel Management Tata Mc Graw-Hill Publishing Company Ltd, New Delhi.1996
7. Luthans, Fred : Organisational Behaviour Mc. Graw Hill Publishing Company, New Delhi 2005
8. Robbins, Stephen.P : Organisational Behavior – Concepts, Controversies, Applications. 4th Ed. Prentice Hall (2004).
9. ASOWathappa, K : Human Resource Management: Text and Cases, 5th Edition, Tata Mc,Graw Hill Publishing company Ltd, New Delhi.2010
10. Armstrong, Michael : A handbook of Human Resource Management Practice, Kogan Page Limited, London. 2014

MSW Semester IV

SOW4 C 15 : Social Work with Vulnerable groups

Credits :4
Hours/week :4

Learning objectives

1. **To understand the prevailing realities and problems of vulnerable and marginalized groups in India.**
2. **To learn the roles and functions of social workers in helping them.**
3. **To understand the contribution of Govt. and non Govt. organizations in promoting welfare of the marginalized and vulnerable groups.**
4. **To understand the policies and welfare progammes for vulnerable groups**

Module I: Understanding key terms **(14 hours)**

Social exclusion, Vulnerability-Multiple vulnerability, Deprivation, marginalization, at risk group, socio-economic disadvantage, stigmatization

Children: analytical understanding of the prevailing realities, causes and precipitating factors of vulnerability, needs and problems of these children, child rights and its deprivation..

Categories of vulnerable children, with emphasis on the girl child, destitute children, children from broken families, child labour, street children, children with disability, sexually abused children, children facing stigmatization, Children affected by natural calamities, disasters, domestic violence

National policies and programmes for children: Education, health, nutrition and protection.

National and international agencies working with children. Institutional and non institutional services for children. National interventions and initiatives in child protection and child rights.

Scope of social work interventions and the role of the social worker in helping vulnerable children.

Module II: Women (12 hours)

Major issues and concern of women, gender issues, issues of representation and participation, and reproductive health

A gender analysis of poverty, health, education and labour. Vulnerable women- adolescent girls, victims of violence and harassment, women having mental illness, Non-heterosexual women Homeless Women, Women in Commercial sex work, women with HIV/AIDS, Female offenders, older women, women with disabilities and Female substance users.

Policies and welfare programmes for Women. Role and functions of social work in working with vulnerable and marginalized women.

Module III: Elderly **(12 hours)**

Elderly: Issues and concerns of the elderly: Work, retirement, social security, housing; physical and mental health, disability, terminal illness and death of spouse; loneliness and

alienation; feminization of ageing, domestic violence and abuse; dependency and family care; destitution; Risk assessment.

Policies and programmes for elderly in India, Welfare schemes for elderly. Role of Govt. and NGOs in the development of services for elderly.

Social work practice for enabling active ageing and enhancing quality of life: education for preparation of new roles and activities; for physical safety, financial security; retirement planning; individual and family counselling for adjustment and emotional wellbeing; bereavement counselling; mediating for enabling the elderly to receive their entitlements.

Module IV: Differently abled **(12 hours)**

Disability, Persons with Disability and their Rehabilitation Contexts — Understanding different categories of disability, causes, classification, assessment, consequences/impact of disability on individual's growth and functioning

Needs and problems of person with disability issues related to activities of daily living, education, sexuality, integration, employment and interpersonal relationships.

Role of the social worker, team work with professionals working in the field of disability and rehabilitation. Policies and programmes for people with disability in India.

Module V: Schedule caste and scheduled tribes **(10 hours)**

Historical background of backwardness, oppression and oppressive practices in a caste society, problems of Dalits and Tribals, socio political and religious movements; Policies and welfare programmes for SC/ST. Social Work with SC/ST- Approaches, and strategies.

References:

1. *AFFILIA*: Journal of Women and Social Work
2. Bhuimali,A. (2009*). Rights of disabled women and children in India.* New Delhi: Serials publications.
3. Desai, M. and Siva, R. (2000). *Gerontological Social Work in India: Some Issues and Perspectives.* Delhi:B.R. Publishing.
4. Gandhi, E.A &Vijayanchali, S.S (2012). *Marginalised groups*. New Delhi: APH Publishing Corporation.
5. Gitterman, A. (2014). *Handbook of Social Work Practice with Vulnerable and Resilient Populations*. New York: Columbia University Press.
6. Karade, J. (2008). *Development of Scheduled Castes and Scheduled Tribes in India*. UK: Cambridge Scholars Publishing.
7. Naqi M (2005) Social work for weaker sections. Anmol Publications Pvt.Ltd.
8. Mukherjee, M. (2006): Problems of Disabled People.
9. Parke, J.& Penhale, B(2007).Working with Vulnerable Adults (The Social Work Skills Series)

MSW IV Semester

Elective 1 - Medical and Psychiatric Social work

SOW4 E1 04 : Social Work Practice with Families

Credits : 4
Hours/week : 4

Learning Objectives:-

1. **Understand family as a social institution and the different conceptual frameworks for understanding family**
2. **Develop knowledge and skills for assessment in family social work**
3. **Demonstrate an understanding of family Social Work**
4. **Develop an understanding of various Settings of family practice.**

Module I **(11 Hours)**

Concept of family, Definition Marriage and Family, Types of family, Functions of family, Qualities of successful families, Trends in Marriage & Family. Emerging family problems
Overview of Conceptual frameworks for Understanding Marriage and Family:
Family Systems Perspective: Family system, Key assumptions about family systems

Module II **(6 Hours)**

Family Developmental Perspective:
Family life cycle – Developmental stages of family, Variations affecting Family Life Cycles: Separation and divorce, Death of a parent, Single parenting, Step parenting, blended families, Cultural variation
Variations affecting the life cycle

Module III **(13 Hours)**

Assessment of Family

Family Assessment Tools: : Genogram, Ecomap, Mc Master Model. Assessing family functioning using Family Categories Schema, Process Model of Family Functioning, Assessment of child development, Assessment of parent –child relationship, Assessing parenting skills, ,

Module IV **(14 Hours)**

Family Social Work

Family social work – Concept & Definition, historical background - Assumptions - Principles Family Social Work, Family Counselling and Family Therapy – similarities and differences.

Practice of Family social Work: Scheduling Family meetings, building relationship with clients, Techniques of interviewing families: Attentive listening, Formulating questions, Different phases of Family Social Work - Beginning phase -Assessment phase - Goal Setting and Contacting - Intervention phase – Promoting behaviour change, Termination Phase, Evaluating outcome, Gender sensitive practice, culturally sensitive practice

Module V **(16 Hours)**

Practice of Family Social Work

Scope and practice of social work in

- Family Counselling Centers- Premarital, Marriage and Family Counseling
- Family Courts
- Adoption and Foster Care Agencies
- Family Violence

Existing policies, programmes, legislations, organizations in the field of family welfare and development. Family Life Education-Concept, philosophy, goals and significance

References:

1. Carter, Betty (2004). Expanded family life cycle: individual, family and social perspectives. New York : Pearson Education
2. Collins, D. Jordan, Cathleen, Coleman, Heather (1999). An Introduction to Family Social Work. Illinois: F. E. Peacock Publishers
3. Olson, D. H., &DeFrain, J. (2000). Marriage and the family: Diversity and strengths. Mayfield Publishing Co.
4. Barker, P., & Chang, J. (2013). Basic family therapy. John Wiley & Sons.

MSW First Semester
Ability Enhancement Course (AEC)
SOW 1 A 01 Working with Older Persons

Credits: 4

Module I Introduction to basic concepts: Old Age, elderly, older person, ageing,

Demography of the Ageing at national and international level and its related implications

Module II Needs and problems of elderly: physical, psychological, financial, social and environmental.

Module III Social security measures and Welfare programmes/schemes for older persons

Module IV Introduction to Social Work with Older Persons: Counselling and guidance services for preparation of old age, lifestyle management, Grief and bereavement counseling, sensitizing children/families/ communities, creating favourable/safe environment for the elderly, services for older persons in institutions and palliative care

Instructional Strategies:

Module	**Instructional Strategies**
Module I	Reading Assignments Seminar on Problems and challenges faced by elderly
Module II	One article/book review- Article/book discussing problems/interventions with respect to older persons
Module III	Visit to two organizations working with older persons Assignment on services and programmes for older persons
Module IV	Class room sessions (4 hours) Lectures and Interaction with a social worker from the field of Elderly Care

Mode of Assessment

Sl. No.	Assessment Format	Weightage
1.	Test with multiple choice questions (Minimum 25 Questions)	10
2.	Assignment on the profile of an Institutional Care Facility for Older persons	2
3.	One article/book review- Article/book discussing problems/interventions with respect to older persons (guidelines for review should be given)	4
4.	Group Activity (Students may be divided into three or four groups) – One Programme in the campus or in the community-Either to raise awareness of issues or for providing a service or opportunity for older persons	4
	Total	20

References:

1. Bose, A.B. (2006)*Social Security for the Old Myth and Reality*.Concept Publishing Company
2. Thara Bhai, L.,(2002) *Ageing - Indian Perspective*. Vedic Books
3. Joshi, Arvind K., (2006)*Older Persons in India*, Serials, New Delhi
4. Papalia et al. (2002)*Adult Development and Ageing* Mc Graw Hill, New Delhi
5. Desai, M. and Siva, R. (2000). *Gerontological Social Work in India: Some Issues and Perspectives.* Delhi:B.R. Publishing.

B.Sc. PHYSICS
OPEN COURSES SYLLABUS

Semester 5♠Open Course I

PHY5D01(1): NON CONVENTIONAL ENERGY SOURCES

54 Hours (Credit – 3)

	Course Outcome	CL	KC	Class Sessions allotted
CO1	Understand the importance of non conventional energy sources	U	C	4
CO2	Understand basic aspects of solar energy	U	C	12
CO3	Understand basic principles of wind energy conversion	U	C	10
CO4	Understand the basic ideas of geothermal and biomass energy and recognize their merits and demerits	U	C	16
CO4	Understand the basic ideas of oceans and chemical energy resources and recognize their merits and demerits	U	C	12

Unit 1 **4 Hrs**

Energy Resources-Non Conventional Energy Sources-Renewable and Non-Renewable energy sources.

(Section 1.3, 1.4 and 1.5 from Non- Conventional Energy Sources and Utilisation by R.K.Rajput, S.Chand Publishers, 1st Edition.)

Unit 2

Solar energy **12 Hrs**

Solar Energy Terms and Definitions- Solar Constant, Solar radiation measurements, Solar energy collector, Physical principle of the conversion of solar radiation in to heat, solar air heaters and drying, solar cookers, solar distillation, solar furnaces, solar greenhouses, solar power plants, solar photovoltaic cells(no need of mathematical equations)

(Section 2.2.1 and 2.2.2, 2.3, 3.1.2, 3.1.3-3.1.5, 3.2, 3.3.1-3.3.3, 3.4.1-3.4.10, 4.16, 4.17, 4.18, 4.19, 4.20, 4.21.4, 4.21.8, 4.21.9, 4.21.10, 4.21.4 from Non- Conventional Energy Sources and Utilisation by R.K.Rajput, S.Chand Publishers, 1st Edition.)

Unit 3 Wind energy **10 Hrs**

Introduction, Utilisation aspects of wind energy, Advantages and Disadvantages of wind energy, Environmental impact of wind energy, Sources/Origins of wind, Principle of wind energy

conversion and wind power, Basic components of wind energy conversion system(WECS), Advantages and Diadvantages of WECS, Wind-Electric Generating Power Plant, Wind Energy Economics, Problems in operating large wind power generators.

(Section 5.1-5.6, 5.8, 5.10, 5.11, 5.20, 5.25, 5.26 from Non- Conventional Energy Sources and Utilisation by R.K.Rajput, S.Chand Publishers, 1st Edition.)

Unit 4 **16 Hrs**

Geothermal energy

Introduction to Geothermal energy, Important aspects of Geothermal Energy, Structure of Earth's interior, Geothermal system-Hot Spring structure, Geothermal Resources (Hydrothermal, Geopressured, Petro-thermal system, Magma Resources), Advantages and disadvantages of geothermal energy over other energy forms, application of geothermal energy.

(Section 7.1, 7.2, 7.3, 7.5, 7.8.1, 7.8.2, 7.8.3, 7.8.4, 7.9, 7.10 from Non- Conventional Energy Sources and Utilisation by R.K.Rajput, S.Chand Publishers, 1st Edition.)

Energy from biomass:

Introduction to biomass, Biomass resource, Biomass Conversion process (Densification, Combustion and incineration, Thermo Chemical conversion, Biochemical conversion), Biogas: Biogas Applications, Biogas Plants (Raw materials used, Main Components of a Biogas Plant)

(Section 6.1, 6.2, 6.5.1, 6.5.2, 6.5.3, 6.5.4, 6.6.1, 6..6.2, 6.7.1, 6.7.2, 6.7.3 from Non- Conventional Energy Sources and Utilisation by R.K.Rajput, S.Chand Publishers, 1st Edition.)

Unit 5. Energy from Oceans and Thermal and Chemical effects **12 Hrs**

Ocean Energy, Ocean Energy Sources, Tidal energy, Components of a Tidal Power Plant, Economic aspects of tidal energy conversion, Wave energy, Advantages and disadvantages, Factors affecting Wave energy, Ocean Thermal Energy Conversion (OTEC), Working principle of OTEC, Efficiency of OTEC, Types of OTEC Plants (Closed system, Thermoelectric OTEC system), Advantages and Disadvantages and Applications of OTEC.

Thermo electric effects, Fuel Cells, Hydrogen energy, Nuclear Reactors, Advantages and Disadvantages of Nuclear power plants (Basic Principles/concepts only)

(Section 8.1, 8.2, 8.3.1, 8.3.8, 8.3.14, 8.4.1, 8.4.2, 8.4.3, 8.5.1, 8.5.3, 8.5.4, 8.5.5.1, 8.5.5.5, 8.5.6, 9.2, 9.7.1, 9.7.2, 9.7.3, 10.1, 10.2, 10.3, 11.2.1, 11.5 from Non- Conventional Energy Sources and Utilisation by R.K.Rajput, S.Chand Publishers, 1st Edition.)

Books of study:

1. Non- Conventional Energy Sources and Utilisation by R.K.Rajput, S.Chand Publishers

References

1. Non- Conventional Energy Resources by G. D. Rai, Khanna Publishers, 2008.
2. Solar Energy Fundamentals and application by H.P. Garg and J. Prakash, Tata McGraw- Hill Publishing company Ltd, 1997.
3. Solar Energy by S. P. Sukhatme, Tata McGraw- Hill Publishing company ltd,1997.
4. Solar Energy Utilization by G.D. Rai, Khanna Publishers, 1995.

Mark distribution for setting Question paper.

Unit/ chapter	Title	Marks
1	Non Conventional energy	06
2	Solar energy	18
3	Wind energy	15
4	Geothermal energy and energy from biomass	22
5	Energy from Oceans and Chemical energy resources	18
*Total Marks **		79

*****Total marks include that for choice of questions in sections A, B and C in the question paper.

SYLLABI OF COURSES ON ENVIRONMENTAL SUSTAINABILITY

File Ref.No.72046/GA - IV - J3/2019/Admn

UNIVERSITY OF CALICUT

Abstract

General and Academic - UG Programmes under CBCSS UG Regulations 2019 with effect from 2019 Admission onwards- Syllabus of Audit Course-Disaster Management- Implemented- Orders Issued

G & A - IV - J

U.O.No. 11725/2019/Admn Dated, Calicut University.P.O, 30.08.2019

Read:-1. U.O.No. 4368/2019/Admn dated 23.03.2019

2. The minutes of the meeting of the Board of Studies in Geology on 10.06.2019

3. Item No. I.27 in the minutes of the meeting of Faculty of Science held on 27.06.2019

ORDER

The Regulations for Choice Based Credit and Semester System for Under Graduate (UG) Curriculum- 2019 (CBCSS UG Regulations 2019) for all UG Programmes under CBCSS-Regular and SDE/PrivateRegistration w.e.f. 2019 admission has been implemented vide paper read first above. As per the Clause 4.10 of the CBCSS UG Regulations 2019, there shall be one Audit course each in the first four semesters.

The meeting of Board of Studies in Geology held on 10/06/2019 has approved the Syllabus of Audit course - Disaster Management for all UG programmes in tune with the new CBCSS UG Regulations with effect from 2019 Admission onwards, vide paper read second above.

The Faculty of Science at its meeting held on 27/06/2019 has approved the minutes of the meeting of the Board of Studies in Geology held on 10/06/2019, vide paper read third above.

Under these circumstances , considering the urgency, the Vice Chancellor has accorded sanction to implement the Scheme and Syllabus of Audit Course- Disaster Management in accordance with the new CBCSS UG Regulations 2019, in the University with effect from 2019 Admission onwards, subject to ratification by the Academic Council.

The Scheme and Syllabus of Audit Course- Disaster Management in accordance with CBCSS UG Regulations 2019, is therefore implemented in the University with effect from 2019 Admission onwards.

Orders are issued accordingly. (Syllabus appended)

Biju George K

Assistant Registrar

To

The Principals of all Affiliated Colleges

Copy to: PS to VC/PA to PVC/ PA to Registrar/PA to CE/JCE I/JCE II/ JCE III/ JCE IV/DoA/EX and EG Sections/GA I F/CHMK Library/Information Centres/SF/DF/FC

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Section Officer

UNIVERSITY OF CALICUT

SCHEME & SYLLABUS of

AUDIT COURSE-DISASTER MANAGEMENT

(CBCSS-UG – REGULATION-2019)

2019 Admission Onwards

AUD2E02 DISASTER MANAGEMENT

Module 1:

Introduction – Hazard and Disaster. Concepts of Hazard, Vulnerability, Risks. Different Types of Disaster : A) Natural Disaster: such as Flood, Cyclone, Earthquakes, Landslides etc B) Man-made Disaster: such as Fire, Industrial Pollution, Nuclear Disaster, Biological Disasters, Accidents (Air, Sea, Rail & Road), Structural failures(Building and Bridge), War & Terrorism etc. Slow Disasters (famine, draught, epidemics) and Rapid Onset Disasters(Air Crash, tidal waves, Tsunami) Causes, effects and practical examples for all disasters.

Water and Climate Disaster: flood, hail storms, cloudburst, cyclones, heat and snow avalanches, cold waves, droughts, sea erosion, thunder and lightning. Geological Disaster: landslides, earthquakes, Tsunami, mine fires, dam failures and general fires. Biological Disaster: epidemics, pest attacks, cattle epidemic and food poisoning. Nuclear and Industrial Disaster: chemical and industrial disasters , nuclear accidents. Accidental Disaster: urban and forest fires, oil spill, mine flooding incidents, collapse of huge building structures.

Module 2:

Natural disasters- Earthquakes, Tsunami, Floods, Drought, Landslides, Cyclones and Volcanic eruptions. Their case studies. Coastal disasters. Coastal regulation Zone.

Risk and Vulnerability Analysis 1. Risk : Its concept and analysis 2. Risk Reduction 3. Vulnerability : Its concept and analysis 4. Strategic Development for Vulnerability Reduction

. Disaster Prevention and Mitigation. Refugee operations during disasters, Human Resettlement and Rehabilitation issues during and after disasters, Inter-sectoral coordination during disasters, Models in Disasters.

Module 3:

Disaster Preparedness and Response Concept and Nature Disaster Preparedness Plan Prediction, Early Warnings and Safety Measures of Disaster. Role of Information, Education, Communication, and Training,

Disaster Management : Role of Government, International and NGO Bodies. Role of IT in Disaster Preparedness Role of Engineers on Disaster Management. Response Disaster Response : Introduction Disaster Response Plan Communication, Participation, and Activation of Emergency Preparedness Plan Search, Rescue, Evacuation and Logistic Management Role of Government, International and NGO Bodies Psychological Response and Management (Trauma, Stress, Rumor and Panic) Relief and Recovery Medical Health Response to Different Disasters.

Module 4:

Rehabilitation, Reconstruction and Recovery Reconstruction and Rehabilitation as a Means of Development. Damage Assessment Post Disaster effects and Remedial Measures. Creation of Long-term Job Opportunities and Livelihood Options, Disaster Resistant House Construction Sanitation and Hygiene Education and Awareness, Dealing with Victims' Psychology, Long-term Counter Disaster Planning Role of Educational Institute.

Module 5:

The vulnerability atlas of India. Disaster Prevention and Mitigation. Agencies involved in Disaster Management. Warning and Prediction

Essential Reading:

1. Pandey, M., 2014. Disaster Management, Wiley India Pvt. Ltd., 240p.

2. Tushar Bhattacharya, Disaster Science and Management, McGraw Hill Education (India) Pvt. Ltd

3. Jagbir Singh, Disaster, Management: Future Challenges and Opportunities, K W Publishers Pvt. Ltd.

4. J.P. Singhal, Disaster Management, Laxmi Publications

5. C. K. Rajan, Navale Pandharinath, Earth and Atmospheric Disaster Management : Nature and Manmade, B S Publication

6. Shailesh Shukla, Shamna Hussain, Biodiversity, Environment and Disaster Management, Unique Publications

File Ref.No.72046/GA - IV - J3/2019/Admn

UNIVERSITY OF CALICUT

Abstract

General and Academic - UG Programmes under CBCSS UG Regulations 2019 with effect from 2019 Admission onwards- Syllabus of Audit Course - Environmental Studies - Implemented- Orders Issued

G & A - IV - J

U.O.No. 11724/2019/Admn Dated, Calicut University.P.O, 30.08.2019

Read:-1. U.O.No. 4368/2019/Admn dated 23.03.2019

2. The minutes of the meeting of the Board of Studies in Geology on 10.06.2019

3. Item No. I.27 in the minutes of the meeting of Faculty of Science held on 27.06.2019

ORDER

The Regulations for Choice Based Credit and Semester System for Under Graduate (UG) Curriculum- 2019 (CBCSS UG Regulations 2019) for all UG Programmes under CBCSS-Regular and SDE/PrivateRegistration w.e.f. 2019 admission has been implemented vide paper read first above. As per the Clause 4.10 of the CBCSS UG Regulations 2019, there shall be one Audit course each in the first four semesters.

The meeting of Board of Studies in Geology held on 10/06/2019 has approved the Syllabus of Audit course - Environmental Studies for all UG programmes in tune with the new CBCSS UG Regulations with effect from 2019 Admission onwards, vide paper read second above.

The Faculty of Science at its meeting held on 27/06/2019 has approved the minutes of the meeting of the Board of Studies in Geology held on 10/06/2019, vide paper read third above.

Under these circumstances, considering the urgency, the Vice Chancellor has accorded sanction to implement the Scheme and Syllabus of Audit Course- Environmental Studies in accordance with the new CBCSS UG Regulations 2019, in the University with effect from 2019 Admission onwards, subject to ratification by the Academic Council.

The Scheme and Syllabus of Audit Course- Environmental Studies in accordance with CBCSS UG Regulations 2019, is therefore implemented in the University with effect from 2019 Admission onwards.

Orders are issued accordingly. (Syllabus appended)

Biju George K

Assistant Registrar

To

The Principals of all Affiliated Colleges

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Section Officer

UNIVERSITY OF CALICUT

SCHEME & SYLLABUS of

AUDIT COURSE-ENVIRONMENTAL STUDIES

(CBCSS-UG – REGULATION-2019)

2019 Admission Onwards

AUD1E01 ENVIRONMENTAL STUDIES

Module 1:

Introduction – Environment in the Indian context: Concept of an ecosystem, Multidisciplinary nature of environmental studies. Components of environment- Atmosphere, hydrosphere, lithosphere and biosphere. Definition, scope and importance. Concept of sustainability and sustainable development.

Module 2: Natural Resources : Renewable and non-renewable resources : Natural resources and associated problems. a) Forest resources : Use and over-exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forest and tribal people. b) Water resources : Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems. c) Mineral resources : Use and exploitation, environmental effects of extracting and using mineral resources, case studies. d) Food resources : World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies. e) Energy resources : Growing energy needs, renewable and non renewable energy sources, use of alternate energy sources. Case studies. f) Land resources : Land as a resource, land degradation, man induced landslides, soil erosion and desertification. • Role of an individual in conservation of natural resources. •Carbon footprint Water conservation, rain water harvesting, watershed management

Module 3: Structure and function of an ecosystem. • Producers, consumers and decomposers. • Energy flow in the ecosystem. • Ecological succession. • Food chains, food webs and ecological pyramids. • Introduction, types, characteristic features, structure and function of the following ecosystem :- a. Forest ecosystem b. Grassland ecosystem c. Desert ecosystem d. Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries)

Module 4: Biodiversity and its conservation • Introduction – Definition : genetic, species and ecosystem diversity. • Biogeographical classification of India • Value of biodiversity : consumptive use, productive use, social, ethical, aesthetic and option values • Biodiversity at global, National and local levels. • Hot-spots of biodiversity. • Threats to biodiversity : habitat loss, poaching of wildlife, man-wildlife conflicts. • Endangered and endemic species of India • Conservation of biodiversity :

Module 5: Environmental Pollution Definition • Cause, effects and control measures of :- a. Air pollution b. Water pollution c. Soil pollution d. Marine pollution e. Noise pollution f. Thermal pollution g. Nuclear hazards • Solid waste Management : Causes, effects and control measures of urban and industrial wastes. • Role of an individual in prevention of pollution.

Module 6: Environmental Policies and practices: Climate change, Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents.

Essential Reading

1. Bharucha Erach, The Biodiversity of India, Mapin Publishing Pvt. Ltd., Ahmedabad – 380 013, India, Email:mapin@icenet.net (R) c)

2. Brunner R.C., 1989, Hazardous Waste Incineration, McGraw Hill Inc. 480p

3. Carson, R. 2002. Silent Spring. Houghton Mifflin Harcourt.

4. Gadgil, M., & Guha, R.1993. This Fissured Land: An Ecological History of India. Univ. of California Press.

3. Gleeson, B. and Low, N. (eds.) 1999. Global Ethics and Environment, London, Routledge.

4. McNeill, John R. 2000. Something New Under the Sun: An Environmental History of the Twentieth Century.

5. Singh, J. S., Singh, S. P. and Gupta, S. R. 2014. Ecology, Environmental Science and Conservation. S. Chand Publishing, New Delhi.

6. Sodhi, N. S., Gibson, L. & Raven, P. H. (eds). 2013. Conservation Biology: Voices from the Tropics. John Wiley & Sons.

7. Warren, C. E. 1971. Biology and Water Pollution Control. WB Saunders.

SEMESTER V

Course Code: CHE5B06

Core Course VI: INORGANIC CHEMISTRY – III

Total Hours: 48; Credits: 3; Hours/Week: 3; Total Marks 75 (Internal 15 & External 60)

CHE5B06	**INORGANIC CHEMISTRY – III**	L	T	P	C
		3	0	0	3
Objective (s)	To gain detailed knowledge of the chemistry of different analytical principles and to develop concerns for environment. To give a basic understanding of different metallurgical processes, interhalogen compounds and inorganic polymers.				
Course outcome (s)					
CO1	To understand the principles behind quanlitative and quantitative analysis				
CO2	To understand basic processes of metallurgy and to analyse the merit of different alloys				
CO3	To understand the applications of different inorganic polymers				
CO4	To analyse different polluting agents				
CO5	To apply the principles of solid waste management				

Module I: Analytical Principles II (6 hrs)

Qualitative Analysis: Applications of solubility product and common ion effect in the precipitation of cations – Interfering acid radicals and their elimination (oxalate, fluoride, borate, phosphate, chromate, arsenite and arsenate) – Introduction of micro scale experiments in inorganic and organic qualitative analysis & their advantages. Preparation of Na_2CO_3 extract for inorganic qualitative analysis and it's advantages.

Gravimetric analysis –Mechanism of precipitate formation. Factors affecting stability of precipitates. Co-precipitation and post precipitation. Effects of digestion, washing, drying and ignition of precipitates.

References

1. Jeffrey A. Lee, *The Scientific Endeavor: A Primer on Scientific Principles and Practice,* Pearson Education, 1999.

2. J. Mendham, R.C. Denney, J. D. Barnes, M. Thomas, *Vogel's Text Book of Quantitative Chemical Analysis*, 6th Edn., Pearson Education, Noida, 2013.

Further reading

1. D.A. Skoog, D.M. West, F.J. Holler, S.R. Crouch, *Fundamentals of Analytical Chemistry*, 8th Edn., Brooks/Cole, Thomson Learning, Inc., USA, 2004.
2. A.I. Vogel, *A Textbook of Quantitative Inorganic Analysis*, 3rd Edn., Longmans, Green, London, 1962.

Module II: Metallurgy (10 hrs)

[Prerequisites: Occurrence of metals based on standard electrode potential – Concentration of ores – Calcination and roasting – Reduction to free metal].

Electrometallurgy – Hydrometallurgy. Refining of metals: Electrolytic refining, ion exchange method, zone refining, vapour phase refining and oxidative refining – Ellingham diagrams for metal oxides – Extractive metallurgy of Al, Fe, Ni, Cu Ti and U. Alloys: Definition – Composition and uses of German silver, brass, bronze, gunmetal and alnico. Steel: Open hearth process – Classification of steel – Composition and uses of alloy steels – Intramedullary rods (a brief study).

References

1. B. R. Puri, L. R. Sharma, K. C. Kalia, *Principles of Inorganic Chemistry*, 31st Edn., Milestone Publishers, New Delhi 2010.
2. S. Prakash, G. D. Tuli, S. K. Basu, R. D. Madan, *Advanced Inorganic Chemistry*, 5th Edn., Volume I, S Chand, 2012.

Further reading

1. A. Cottrel, *An introduction to metallurgy*, 2nd Edn., University press. 1990.

Module III: Interhalogen compounds (5 hrs)

[Prerequisites: Halogens, properties, electronic configuration, electronegativity, electron affinity].

Electropositive character of iodine – General preparation and properties of interhalogen compounds (study of individual members not required) – Structure and hybridization and reactivity of ClF_3, Icl_3 IF_5 and IF_7- Comparison of properties of halogens and pseudohalogens (29yanogens as example) – Structure of polyhalide ions.

References

1. B. R. Puri, L. R. Sharma, K. C. Kalia, *Principles of Inorganic Chemistry*, Shoban Lal Nagin Chand and Co., Delhi, 1996.
2. D. F. Shriver, P.W. Atkins, *Inorganic Chemistry*, 3rd Edn., Oxford University Press, 2006.

Further reading

1. J. E. Huheey, E. A. Keiter, R. L. Keiter, O K Medhi, *Inorganic Chemistry*, 4th Edn., Pearson. 2006.
2. F. A. Cotton, G. Wilkinson, C. Murillo, M. Bochman, *Advanced Inorganic Chemistry*, 6th Edn., John Wiley, New York, 1999.
3. F. A. Cotton, G. Wilkinson, P.L. Gaus, *Basic Inorganic Chemistry*, 3rd Edn., John Wiley, New York, 2008.

Module IV: Noble Gases (3 hrs)

[Prerequisites: Why the name noble gas, electronic configuration].

Discovery – Occurrence – Separation by charcoal adsorption method – Structure of oxides, fluorides and oxy fluorides of xenon – Reaction of xenon fluorides with water – Uses of noble gases.

References

1. B. R. Puri, L. R. Sharma, K. C. Kalia, *Principles of Inorganic Chemistry*, Shoban Lal Nagin Chand and Co., Delhi, 1996.
2. D. F. Shriver, P.W. Atkins, *Inorganic Chemistry*, 3rd Edn., Oxford University Press, 2006.
3. M. N. Greenwood, A. Earnshaw, *Chemistry of the elements*, 2nd Edn, Butterworth, 1997.

Further reading

1. J. E. Huheey, E. A. Keiter, R. L. Keiter, O K Medhi, *Inorganic Chemistry*, 4th Edn., Pearson. 2006.
2. F. A. Cotton, G. Wilkinson, C. Murillo, M. Bochman, *Advanced Inorganic Chemistry*, 6th Edn., John Wiley, New York, 1999.
3. F. A. Cotton, G. Wilkinson, P.L. Gaus, *Basic Inorganic Chemistry*, 3rd Edn., John Wiley, New York, 2008.

Module IV: Inorganic Polymers & Non-aqueous Solvents (8 hrs)

[Prerequisites: Catenation, Self ionization of water].

Inorganic Polymers: Heterocatenation. Structure and applications of silicones and silicates. Phosphazenes: Preparation, properties and structure of di and tri phosphonitrilic chlorides. SN compounds: Preparation, properties and structure of S_2N_2, S_4N_4 and (SN)x.

Non-aqueous Solvents: Classification – General properties – Self ionization and leveling effect – Reactions in liquid ammonia, liquid N_2O_4, liquid SO_2 and liquid HF.

References

1. B. R. Puri, L. R. Sharma, K. C. Kalia, *Principles of Inorganic Chemistry*, 31st Edn. Milestone Publishers, New Delhi, 2010.
2. S. Prakash, G. D. Tuli, S. K. Basu, R. D. Madan, Advanced Inorganic Chemistry,Volume I, S Chand.
3. J. E. Huheey, E. A. Keiter, R. L. Keiter, O K Medhi, *Inorganic Chemistry*, 4th Edn., Pearson. 2006.

Further reading

1. M. Clyde Day, J. Selbin, *Theoretical Inorganic Chemistry*, 2nd Edn. Reinhold Book Corp.
2. Sisler, Harry Hall, *Chemistry in non-aqueous solvents*, Reinhold, New York, 1961.

Module V: Environmental Pollution (12 hrs)

[Prerequisites: What is Pollution, quality of drinking water].

Air pollution: Major air pollutants – Oxides of carbon, nitrogen and sulphur – Particulates – London smog and photochemical smog. Effects of air pollution: Acid rain, greenhouse effect and depletion of ozone. Control of air pollution – Alternate refrigerants. Bhopal Tragedy (a brief study).

Water pollution: Water pollution due to sewage and domestic wastes – Industrial effluents – Agricultural discharge – Eutrophication. Quality of drinking water – Indian standard and WHO standard. Water quality parameters: DO, BOD and COD – Determination of BOD and COD. Toxic metals in water (Pb, Cd and Hg) – Minamata disaster (a brief study). Control of water pollution – Need for the protection of water bodies.

Thermal pollution, noise pollution and radioactive pollution (Sources, effects and consequences).

Hiroshima, Nagasaki and Chernobyl accidents (a brief study). Local environmental movements: Silent Valley, Plachimada, Narmada.

References

1. S.S. Dara, *A Textbook of Environmental Chemistry and Pollution Control*, 8th Edn., S. Chand and Sons, New Delhi, 2008.
2. A.K. De., *Environmental Chemistry*, 6th Edn., New Age International (P) Ltd., New Delhi, 2006.
3. A.K. Ahluwalia, *Environmental Chemistry*, Ane Books India, New Delhi, 2008.

Further reading

1. M.L. Davis, D.A. Cornwell, *Introduction to Environmental Engineering*, 3rd Edn., McGraw Hill, New Delhi, 1998.
2. S. E. Manahan, *Environmental Chemistry*, 8th Edn., CRC Press, Florida, 2004.
3. G. M. Masters, *Introduction to Environmental Engineering and Science*, 3rd Edn., Prentice-Hall Inc., New Delhi, 2007.
4. B. K. Sharma, H. Kaur, *Environmental Chemistry*, Goel Publishing House, Meerut, 1996.
5. M. N. Rao, A. K. Datta, A.K., *Waste Water treaement*, Ofxord & IBH Publ, Co. Pvt.Ltd. 1987.

Module VI: Solid Waste Management (4 hrs)

[Prerequisites: aerobic and anaerobic degradation].

House hold, municipal and industrial solid waste – Non-degradable, degradable and biodegradable waste – Hazardous waste – Pollution due to plastics. Solid waste management: Recycling, digestion, dumping, incineration, land treatment and composting. Impacts of medical waste and E-waste & their disposal. Energy production from waste.

SEMESTER VI

Course Code: CHE6B12

Core Course XII: Advanced and Applied Chemistry

Total Hours: 48; Credits: 3; Hours/Week: 3; Total Marks 75 (Internal 15 & External 60)

CHE6B12	Advanced and Applied Chemistry	L	T	P	C
		3	0	0	3
Objective (s)	Student will be able to 54olymer the role and opportunities of chemistry as a discipline in modern civilization.				
Course outcome (s)					
CO1	To understand the importance of nanomaterials				
CO2	To appreciate the importance of green approach in chemistry				
CO3	To understand the uses and importance of computational calculations in molecular design				
CO4	To realize the extent of chemistry in happiness index and life expectancy				

Module I: Colloids and Nanomaterials (6 hrs)

[Prerequisites: Colloids: Definition – classification- Synthesis – nanometer, micrometer.]

Colloids: Stability – electrical double layer – zeta potential- Aggregation – flocculation – purification of colloids- Properties and applications of colloids.

Nanomaterials: Classification of nanomaterials (0D, 1D, 2D and 3D) – Top down and bottom up approaches in the synthesis – Size dependence of material properties (optical, electrical and catalytic). Variation in electronic and optical properties – Surface area to volume ratio (aspect ratio) and its significance – Metal and semiconductor nanoparticles and carbon nanotubes.

Characterization of nanomaterials.

Applications of nanomaterials (general idea only).

References

1. M.A. Shah, Tokeer Ahmad, *Principles of Nanoscience and Nanotechnology*, Narosa Publishing House, New Delhi, 2010.

2. T. Pradeep, *A Textbook of Nanoscience and Nanotechnology*, McGrawhill, New Delhi, 2012.

3. Paras N. Prasad, *Nanophotonics*, John Wiley & Sons, 2004.

4. P. W. Atkins, J. de Paula, *Atkin's Physical Chemistry*, 8th Edn., Oxford University Press, 2006.

Further reading

1. V.S. Muralidharan, A. Subramania, *Nano Science and Technology*, CRC Press, London.

2. V.R. Raghavan, *Materials Science and Engineering*, Prentice Hall (India) Ltd, 2001.

3. Jonathan W. Steed, David R. Turner, Karl J. Wallace, *Core Concepts in Supramolecular Chemistry and Nanochemistry*, John Wiley & Sons Ltd. 2007.

Module II: New vistas in chemistry (8 hrs)

Green Chemistry: Introduction – need of green chemistry approach – Twelve principles of green chemistry with explanations- Atom economy and microwave assisted reactions – Green solvents –Green synthesis of ibuprofen. Microwave and ultrasound assisted green synthesis: Diels- Alder reaction and Cannizaro reaction.

Supramolecular chemistry: Introduction—types of non- covalent interactions – Molecular recognition – Host-guest interactions.

Combinatorial Chemistry: Introduction – combinatorial synthesis (elementary idea only). Applications of combinatorial synthesis (brief study).

References

1. V. K. Ahluwaliya, *Green Chemistry*, Narosa Publishing House, New Delhi, 2011.

2. P. S. Kalsi, J. P. Kalsi, *Bioorganic, Bioinorganic and Supramolecular Chemistry*, 1st Edn., New Age International Publishers (P) Ltd., New Delhi, 2007.

3. W. Bannwarth, B. Hinzen, *Combinatorial Chemistry – From Theory to Application*, 2nd Edn., Wiley-VCH, 2006.

4. Jonathan W. Steed, David R. Turner, Karl J. Wallace, *Core Concepts in Supramolecular Chemistry and Nanochemistry*, John Wiley & Sons Ltd. 2007.

Further reading

1. Paul T. Anastas, T. C. Williamson, *Green Chemistry – Designing Chemistry for the Environment*, 2nd Edn., 1998.

2. Andrew P. Dicks, *Green Organic Chemistry in Lecture and Laboratory*, CRC Press, Universityof Toronto, Ontario, Canada, 2011.

3. Helena Dodziuk, *Introduction to Supramolecular Chemistry*, Springer, New York, 2002.

Module III: Introduction to Computational Chemistry (6 hours)

Classification of Computational Chemistry methods – Molecular mechanics methods (basic idea of force field) and Electronic Structure methods (basic idea of ab initio and semi empirical methods), potential energy surface – local minima, global minima, saddle point and transition states, Elementary idea of basis functions – Slater type and Gaussian type orbitals.

Reference

1. I. N. Levine, Quantum Chemistry, 6th Edn., Pearson Education Inc., 2009.

2. Frank Jensen, *Introduction to Computational Chemistry*, John Wiley & Sons LTD 1999.

3. C. J. Cramer, *Essentials of Computational Chemistry: Theories and models*, John Wiley & Sons 2002.
4. P. W. Atkins, *Molecular Quantum Mechanics*, Oxford University Press, New York, 2005.
5. R. K. Prasad, *Quantum Chemistry*, Oscar Publications, New Delhi, 2000.

Further reading

1. E. G. Lewars, *Computational Chemistry: Introduction to the theory and applications of molecular quantum mechanics*, 2nd Edn., Springer 2011.
2. Andrew R. Leach, *Molecular Modelling: Principles and Applications*, 2nd Edn., Prentice Hall, 2001.
3. S. Wilson, *Chemistry by Computer: An Overview of the Applications of Computers in Chemistry*, Plenum Publishing, New York, 1986.

Module IV: Synthetic polymers (4 hrs)

Classification – Tacticity –Synthesis and applications of addition polymers (polythene, polystyrene, 56olyme and PMMA) and condensation polymers (nylon 6, nylon 66, and terylene) – thermosets – 56olymeri. Zeigler Natta 56olymerization—advantages. Plastic identification codes. Biodegradable polymers: PLA, PGA and PHBV.

References

1. V. R. Gowarikar, *Polymer Chemistry*, New Age International (P) Ltd., New Delhi, 2010.
2. Fred. W. Billmeyer, *Textbook of Polymer Science*, 3rd Edn., Wiley India, Delhi, 2008.
3. Jeol R. Fried, *Polymer Science and Technology*, Prentice Hall of India Private Limited, New Delhi, 1999.

Further reading

1. Premamoy Ghosh, *Polymer Science and Technology: Plastics, Rubbers, Blends and Composites*, 3rd Edn., McGraw Hill Education (India) Private Limited, 2011.

Module V: Applied inorganic chemistry (8 hrs)

Cement: Manufacture, composition and setting.

Glass: Manufacture, annealing, types of glasses and uses.

Refractory materials: borides and carbides.

Inorganic fertilizers: Essential nutrients for plants – nitrogeneous, phosphatic and potash fertilizers – examples with formula.

Rocket propellants: Classification with examples

Tooth paste and Talcum powder: Composition and health effects.

Chemical industries in kerala: Location, raw materials, chemistry involved in the preparation and uses of the following. Caustic soda and chlorine – Travacore Cochin Chemicals Ltd., TiO_2 pigment from ilmenite – Travancore Titanium Products Ltd.

References

1. E. Stocchi: *Industrial Chemistry*, Vol-I, Ellis Horwood Ltd. UK.

2. R. M. Felder, R. W. Rousseau: *Elementary Principles of Chemical Processes*, Wiley Publishers, New Delhi.

Further reading

1. W. D. Kingery, H. K. Bowen, D. R. Uhlmann: *Introduction to Ceramics*, Wiley Publishers, New Delhi.

2. J. A. Kent, *Riegel's Handbook of Industrial Chemistry*, CBS Publishers, New Delhi.

3. P. C. Jain, M. Jain, *Engineering Chemistry*, Dhanpat Rai & Sons, Delhi.

4. R. Gopalan, D. Venkatappayya, S. Nagarajan, *Engineering Chemistry*, Vikas Publications, New Delhi.

5. B. K. Sharma, *Engineering Chemistry*, Goel Publishing House, Meerut.

6. S. L. Tisdale; W. L.Nelson, J. D. Beaton, *Soil Fertility and Fertilizers*, Macmillan Publishing Company, New York, 1990.

Module VI: Applied organic chemistry – I (8 hrs)

Petroleum: Carbon range and uses of various fractions of petroleum distillation – Petrol – Knocking – Octane number – Anti-knocking compounds – Diesel oil – Cetane number – Flash point – Composition and uses of LPG and CNG.

Pharmaceuticals: Medicinal chemistry – Drugs (chemical, generic and trade names with examples).

Terminology: Prodrug, pharmacy, pharmacology, pharmacodynamics and pharmacokinetics (elementary idea only). Antipyretics, analgesics, antacids, antihistamines, antibiotics, antiseptics, disinfectants, (definition and examples, structures not expected) – Preparation of paracetamol and aspirin.

Cleansing Agents: Soaps and detergents: Preparation soap by saponification of oils and fats, classification, advantages and disadvantages of soaps and detergents – TFM of soap – Cleaning action. Shampoos: Ingredients and functions.

Pesticides: Insecticides, rodenticides and fungicides (definition and examples) – Organo chlorine pesticides – Structure of Endosulfan, DDT and BHC. Organo phosphorus pesticides – malathion, parathion. Harmful effects of pesticides. Herbicides – glyphosate – side effects.

References

1. M. K. Jain, S. C. Sharma, *Modern Organic Chemistry*, 3rd Edn., Vishal Publishing Company Co.

2. K. S. Tewari, N. K. Vishnoi, *Organic Chemistry*, 3rd Edn., Vikas Publishing House.

3. Jayashree Ghosh, *A Textbook of Pharmaceutical Chemistry*, 3rd Edn., S. Chand andCompany Ltd., New Delhi, 1999.

4. A. W. A. Brown, *Insect Control by Chemicals*, New York: Wiley; London: Chapman & Hall, 1951.

Further reading

1. K. H. Buchel, *Chemistry of Pesticides*, John Wiley & Sons, New York, 1983.

2. G. Thomas, *Fundamentals of Medicinal Chemistry*, John Wiley & Sons Ltd., 2006.

Module VII: Applied organic chemistry – II (8 hrs)

Dyes: Definition – Requirements of a dye – Theories of colour and chemical constitution – Classification based on structure and mode of application to the fabric – Preparation and uses of Rosaniline and Indigo. Composition of hair dyes.

Food adulterants: Common food adulterants in various food materials and their identification: Milk, vegetable oils, tea, coffee powder and chilli powder.

Food additives: Food preservatives, artificial sweeteners and antioxidants (definition and examples, structures not required) – Structure of BHT, BHA and Ajinomoto – Common permitted and non-permitted food colours (structures not required) – Artificial ripening of fruits.

Modern food: Definition of fast foods, instant foods, dehydrated foods, junk foods and condiments – Composition of chocolate, milk powder and soft drinks.

References

1. K. S. Tewari, N. K. Vishnoi, S. N. Mehrotra, *A Textbook of Organic Chemistry*, 2nd Edn., Vikas Publishing House (Pvt.) Ltd., New Delhi, 2004.

2. B. Srilakshmi, *Food Science*, 5nd Edn., New Age Publishers, New Delhi, 2010.

Further reading

OPEN COURSE STRUCTURE

(FOR STUDENTS OTHER THAN B.Sc. CHEMISTRY) Total Credits: 3 (Internal 20%; External 80%)

Semester	*Code No*	*Course Title*	*Hrs/ Week*	*Total Hrs*	*Marks*
V	CHE5D01	Open Course 1: Environmental Chemistry	3	48	75
	CHE5D02	Open Course 2: Chemistry in Daily Life			
	CHE5D03	Open Course 3: Food Science and Medicinal Chemistry			

SEMESTER V

Course Code: CHE5D01

Open Course 1: ENVIRONMENTAL CHEMISTRY

Total Hours: 48; Credits: 3; Hours/Week: 3; Total Marks 75 (Internal 15 & External 60)

Course outcomes

At the end of the course, students will be able to:

CO 1: Recall the terms involved in pollution.

CO 2: Understand the sources and effects of air pollution.

CO 3: Understand the sources, types and effects of water pollution.

CO 4: Describe water quality parameters

CO 5: Know Soil, Noise, Thermal and Radioactive Pollutions and their effects.

CO 6: Study various pollution control measures.

CO 7: Understand the basics of green chemistry.

Module I: Introduction to Environment and Environmental pollution (4 hrs)

Environmental chemistry-introduction, Environmental segments – Lithosphere: components of soils, Hydrosphere: water resources, Biosphere, Atmosphere.- regions of Atmosphere – Troposphere, stratosphere, Mesosphere, Thermosphere.

Environmental pollution – Concepts and definition – Pollutant, contaminant, receptor and sink – Classification of pollutants – Global, regional, local, persistent and non-persistent pollutants.

References

1. A. K. De., *Environmental Chemistry*, 6th Edn., New Age International.
2. A. K. Ahluwalia, *Environmental Chemistry*, The Energy and Resources Institute, 2017.

3. Balram Pani, *Textbook of Environmental Chemistry*, I. K. International Pvt Ltd, 2010.

Module II: Air Pollution (8 hrs)

Tropospheric pollution –Gaseous air pollutants – Hydrocarbons, Oxides of sulphur, nitrogen and carbon – Global warming, green house effect, acid rain – Particulates – Smog: London smog and photochemical smog – effects and control of photochemical smog – stratospheric pollution depletion of ozone layer, Chlorofluorocarbons -. Automobile pollution. Control of air pollution – Alternate refrigerants – Bhopal Tragedy (a brief study). Causes, symptoms and drugs used for the treatment of air-borne diseases: Chickenpox, influenza, measles and tuberculosis.

References

1. S. K. Banergy, *Environmental Chemistry*, 2nd Edn., Prentice-Hall of India Pvt. Ltd., New Delhi, 2005.
2. V.N. Bashkin, *Environmental Chemistry: Asian Lessons*, Springer Science & Business Media, 2003.
3. S. E. Manahan, *Environmental Chemistry*, 8th Edn., CRC Press, Florida, 2004.
4. A. K. Ahluwalia, *Environmental Chemistry*, The Energy and Resources Institute, 2017.
5. Balram Pani, *Textbook of Environmental Chemistry*, I. K. International Pvt Ltd, 2010.

Module III: Water Pollution (10 hrs)

Impurities in water – Cause of pollution – natural and anthropologenic – Marine water pollution – Underground water pollution.

Source of water pollution – Industrial waste, Municipal waste, Agricultural waste, Radioactive waste, Petroleum, Pharmaceutical, heavy metal, pesticides, soaps and detergents.

Types of water pollutants: Biological agents, physical agents and chemical agents – Eutrophication-biomagnifications and bioaccumulations.

Water quality parameters: DO, BOD, COD, alkalianity, hardness, chloride, fluoride and nitrate. Toxic metals in water and their effects: Cadmium, lead and mercury – Minamata disaster (a brief study). International Standards for Drinking Water.

Water born diseases: Cholera, dysentery and typhoid – Symptoms and medicines.

References

1. S. K. Banergy, *Environmental Chemistry*, 2nd Edn., Prentice-Hall of India Pvt. Ltd., New Delhi, 2005.
2. Janine M. H. Selendy, *Water and Sanitation-Related Diseases and the Changing Environment*, John Wiley & Sons, Inc.
3. P. K. Goel, *Water Pollution: Causes, Effects and Control*, New Age International, 2006.
4. V. N. Bashkin, *Environmental Chemistry: Asian Lessons*, Springer Science & Business Media, 2003.
5. S. E. Manahan, *Environmental Chemistry*, 8th Edn., CRC Press, Florida, 2004.
6. A. K. Ahluwalia, *Environmental Chemistry*, The Energy and Resources Institute, 2017.
7. Balram Pani, *Textbook of Environmental Chemistry*, I. K. International Pvt Ltd, 2010. 98

Module IV: Soil, Noise, Thermal and Radioactive Pollutions (8 hrs)

Soil pollution: Sources by industrial and urban wastes Pollution due to plastics, pesticides, biomedical waste and E-waste (source, effects and control measures) – Control of soil pollution.- Solid waste Management – Open dumping, Landfilling, Incineration, Re – use, reclamation, recycle, Composting.

Non-degradable, degradable and biodegradable wastes. Hazardous waste.

Noise Pollution – physiological response to noise, Noise categories- effect of noise – biological effects.

Thermal pollution – definition,sources, harmful effects and prevention.

Radioactive pollution (source, effects and control measures) – Hiroshima, Nagasaki and Chernobyl accidents (brief study). Endosulfan disaster in Kerala (brief study).

References

1. S. E. Manahan, *Environmental Chemistry*, 8th Edn., CRC Press, Florida, 2004.
2. A. K. Ahluwalia, *Environmental Chemistry*, The Energy and Resources Institute, 2017.
3. A. K. De., *Environmental Chemistry*, 6th Edn., New Age International.
4. Balram Pani, *Textbook of Environmental Chemistry*, I. K. International Pvt Ltd, 2010.
5. *Environmental Studies*, Pearson Education India, 2009
6. Pallavi Saxena, Vaishali Naik, *Air Pollution: Sources, Impacts and Controls*, CAB International, 2018.

Module V: Pollution Control Measures (12 hrs)

Air pollution control measures – Gravitational settling chamber, fabric filter, wet scrubber, catalytic converters, stacks and chimneys, cyclone collectors, Cottrell electrostatic precipitator, extraction ventilator, zoning and green belt.

References

1. N. P Cheremisinoff , *Handbook of Air Pollution Prevention and Control*, 2002.
2. M. Senapati, *Advanced Engineering Chemistry*, 2006.
3. K. C. Schifftner, *Air Pollution Control Equipment Selection Guide*, CRC Press, 2013.
4. K. B. Schnelle, C. A. Brown, *Air Pollution Control Technology Handbook*, CRC Press, 2016.

Module VI: Green Chemistry (6 hrs)

Introduction- Definition of green Chemistry, need of green chemistry, basic principles of green chemistry. Applications of green chemistry in daily life.

References

1. V.K. Ahluwalia, M. Kidwai, *New Trends in Green Chemistry*, Springer Science & Business Media, 2012.
2. M. Lancaster, *Green Chemistry*: *An Introductory Text*, Royal Society of Chemistry, 2010.
3. S. C. Ameta, R. Ameta, *Green Chemistry*: *Fundamentals and Applications*, CRC Press, 2013.

Scheme of Examinations:

The external question paper with 60 marks and internal examination is of 15 marks. Duration of each external examination is 2 Hrs. The pattern of External Examination is as given below:

Section A	
Short answer type carries 2 marks each – 12 questions	Ceiling – 20
Section B	
Paragraph/ Problem type carries 5 marks each – 7 questions	Ceiling – 30
Section C	
Essay type carries 10 marks (1 out of 2)	1x10=10

The students can answer all the questions in Sections A & B. But there shall be Ceiling in each section.

Mark Distribution

Module I	4 Marks
Module II	10 Marks
Module III	14 Marks
Module IV	10 Marks
Module V	14 Marks
Module VI	8 Marks

SEMESTER V

Course Code: CHE5D02

Open Course 2: CHEMISTRY IN DAILY LIFE

Total Hours: 48; Credits: 3; Hours/Week: 3; Total Marks 75 (Internal 15 & External 60)

Course outcomes

At the end of the course, students will be able to:

CO 1: Understand the basics of polymer chemistry.

CO 2: Explain the functions of biomolecules, vitamins, enzymes, hormones and nucleic acid.

CO 3: Describe food additives and the food habits.

CO 4: Explain the uses of pesticides and fertilizers and their impacts to the environment.

CO 5: Understand advantages and disadvantages of cleansing agents and cosmetics.

CO 6: Recognize the common classes of drugs in pharmaceutical industry and their application.

CO 7: Understand the basic concepts and processes in petroleum industry.

Module I: Polymers (8 hrs)

Classification of polymer: Origin, structure, synthesis, Molecular forces. Commercially important polymers: Application of polyethylene, polystyrene, polyhaloolefines, Nylon-6, Nylon-66, Melamine, Terylene, Bakelite, Natural and synthetic rubber, vulcanization,

Semester V

Course Category: Core Course 8
Course Title and Code: India's Economic Development: National and Regional, ECO5 B08
No. of Credits: 4
No. of Contact Hours: 108

India's Economic Development: National and Regional

Objectives

To expose the learners to some of the key issues facing the Indian economy both at national and regional levels. In this process, as young adults, students are expected to be sensitised about these issues, appreciate and learn to critically assess the role of the government in various economic spheres. The learners are also exposed to numerical information relating to various aspects of Indian economy and India's economic policies. They are expected to develop analytical skills, interpret the economic events and visualise the economic future of India. For all these to happen, teachers are requested to take special care to instruct the students to read the
suggested reference books, collect clippings and articles from news papers and magazines and also develop the habit of following economic survey, economic review and RBI Bulletin. Besides, as against the conventional assignments, each module has **'Suggested Additional Activities'** at the end. Teachers need to encourage the learners to explore beyond the texts while attempting these activities.

Report Based on Study Tour: *A study tour is recommended because it may add direct experience to learners about different economic culture of the country. All the final year students need to prepare a report of the tour that includes the places they visited, its importance etc and submit it to the Head of the Department soon after the completion of the tour.*

Module I - Development Policies and Experience (1947-1990).

Low Level of Economic Development under the Colonial Rule- Development and Structural Change of Indian Economy Since Independence: Economic policies Perused between 1950's and 1980's: Mixed Economic framework; Market intervention policy and import substitution; Objectives and strategy of planning: Failures and achievements of plans – Performance of 11^{th} plan – Current plan.

Suggested Additional Activities

1. Find out and prepare a list of items that India used to import and export during 1950-51 and 1990-91
a. Observe the difference

b. Do you see the impact of self reliance? Discuss. Details can be collected from latest Economic Survey.
2. Find out the Deputy Chairman and members of the first Planning Commission of India
3. Find out the commodities which India Government permitted to import till 1980.
4. Explain how import substitution can protect domestic industry?

Module II - Economic Reforms since 1991
Background for the introduction of New Economic Reforms of 1991; Liberalisation, Privatisation and Globalisation: An Appraisal- Indian Economy during Reforms with Special focus on trends in FDI, FII and Disinvestment- Centre-State Financial Relations: Finance Commission, its structure and Functioning (with emphasis on Latest Finance Commission).

Suggested Additional Activities
1. Prepare arguments for and against subsidies. Explain your view.
2. Do you think only loss making companies should be privatised? Why?
3. Construct a pie chart for the sectoral contribution of GDP for the period1950-51 and 2012- 13. What would you observe? Is there a structural change? Explain in your own words
4. Prepare a list showing the latest data on the number of banks- nationalised, private, private foreign and New Generation Banks.
5. Discuss the different formulae used for Finance Commission awards.
6. Find out who all are there in the First Finance Commission of India?

Module III - Gross Domestic Product and Sectors.
a. Indian Agriculture: The place of Agriculture in the National Economy; Recent Trends in Investment, Credit and Agricultural Subsidy Policy, Agricultural Marketing and Price- New Agricultural Strategy of 1960s (Green Revolution)- Food Security, PDS and TPDS in India; The Need, Scope and Appraisal of Land Reforms in a Developing Country like India.
b. Indian Industries: Review of Industrial Growth under Planning- Industrial Structure: Traditional, SSI, Village, Cottage and Modern Industries- Industrial Sickness-Industrial Policy Resolutions: 1956, 1977, 1980, 1991; an Analysis of Current Industrial Policy- Infrastructure Development in India.

Suggested Additional Activities.
1. Why, despite the implementation of green revolution, 65% of our population continued to be engaged in the agricultural sector till 1990?
2. Why was public sector given a leading role in industrial development during the plan period?
3. „Losses incurred by public sector undertakings are to be met out of the public budget"- Do you agree with this statement? Discuss.
4. Find out the method of estimating inflation in India. Compare it with other countries.

Module IV Current Challenges Facing the Indian Economy.
a. Poverty: Who are Poor?, Causes and Measurement of Poverty, Number of Poor in India; Policies and Programmes Towards Poverty Alleviation with Special Emphasis on Recent Policies like- Food as a Right: The Food Security Act of 2013 & MGNREGS.

b. Unemployment: Nature, Trends and Estimates of Unemployment in India, Informalisation of Indian Work Force; Employment Prospective of the latest Five Year Plan; Recent Schemes to Reduce Unemployment and Underemployment.

Suggested Additional Activities.

1. Find out from your parents and teachers types of tax payments they are making. Classify the taxes and observe the differences.
2. On the basis of the definition of poverty line, analyse whether categorisation of people into BPL/APL is done in the correct way. Explain in your own words.
3. Analyse whether the dream programme of MGNREGP is carrying out in the right way. If „No", suggest ways to make the programme more effective.
4. In some communities, you might have noticed that even if the males do not earn high income, they do not send women to work. Why?
5. Prepare a list of recent schemes and objectives to strengthen the rural areas from the government website *http://www.rural.nic.in*

Module V Kerala's Economic Development

Growth and Structure- Primary, Secondary and Tertiary Sectors-Economic Development Vs Social Development-Poverty Profile of Kerala- Indicators of Human Development: PQLI and HDI- Demographic Transition of Kerala- Trends in Employment and Unemployment in Kerala- Sustainability of "Kerala Model of Development" with a Special Mention on Recent Sen- Bhagawati Debate- Decentralised Planning and Development of Kerala- Land Reforms in Kerala- Migration: Concepts in Migration- Emigration to the Gulf- Remittance and its Impact on the Economy of Kerala- Return Migration: Causes, Problems and Policies.

Suggested Additional Activities.

1. Find out the history of emigration from Kerala.
2. „Foreign remittance is the backbone of Kerala"s socio-economic development". Discuss.
3. What is Nitaqat and Saudization? In what ways it is harmful to the economy of Kerala.
4. Find out the reasons for the existing controversy in poverty estimation.
5. Observe the functioning of „ayalkoottams" (SHGs) in your locality and write how far it is successful in empowering women.

Basic Readings

1. ECONOMIC DEVELOPMENT IN INDIA-Problems and Prospects, N.P. Abdul Azeez (Ed), Regal Publications, New Delhi.
2. Indian Economy, Gopalji Gupta, PEARSON, New Delhi.
3. Ahulwalia, I.J. and I.M.D. Little (Eds) (1999), *India's Economic Reforms and Development*, (Essays in honour of Manmohan Singh), Oxford University Press, New Delhi.
4. Bardhan, P .K. (1999), The Political Economy of Development in India, Oxford University Press, New Delhi
5. Chakravarty S, (1987), Development Planning: The Indian Experience, Oxford University Press, and New Delhi
6. Acharya Shanker, Mohan Rakesh (Eds) (2011), India"s Economy: Performance and Challanges, Oxford University Press, New Delhi

Semester VI

Course Category: Core Course 11
Course Title and Code: Macroeconomics – II, ECO6 B11
No. of Credits: 5
No. of Contact Hours: 90

Macroeconomics- II

Introduction:
Policy makers all over the world use macroeconomic theories and related empirical results to frame policies. Similarly, business firms, use these theories and results to formulate their strategies. A sound understanding of macroeconomic principles and their applications is essential for students of Economics.

Objectives:
The objective is to familiarise the students in the application of principles of macroeconomic analysis to the day-to-day decision-making in the aggregate economy.

Learning Outcome :
This course is expected to develop skill in economic reasoning, This vital skill is expected to help them in understanding and solving aggregate economic problems.

Syllabus

Module I: Theories of Money
Nature and Functions of Money - Types of Money: Near money, inside money and outside money.
1. Theories of Demand for money - Defining demand for money - Classical theory of demand for money - Friedman's re-statement of Quantity Theory of Money - Liquidity Preference theory and Keynesian Liquidity Trap.
2. Theories of Supply of money - Defining supply of money - Measuring supply of money - High powered money & money multiplier

Module II: Theories of Inflation and Unemployment
Inflation – Definition - Types of Inflation - Measurement of inflation in India - Effects of inflation- Sacrifice ratio-Inflationary gap-Theories of inflation- Demand pull versus cost push inflation-Mixed inflation-Structural inflation- Measures to control inflation-Meaning and types of unemployment - Cost of unemployment and Okun's law - Phillips curve - Modified Phillips curve - Long run Phillips curve - Stagflation - reasons.

Module III: Macro economic Instability and Policy:
Business Cycle- meaning- types and phases- Theories of trade cycles- Hawtrey's theory- Hayek's theory- Keynesian theory-Monetarist interpretation of trade cycles-Contracyclical policy measures-Monetary, fiscal, and income policy - Meaning and Instruments.

Module IV: Open Economy Macro Economics:
Definition and derivation of IS curve - Shift in the IS curve - Definition and derivation of LM curve - Shift in the LM curve - General equilibrium in the IS-LM model - Relative effectiveness of monetary and fiscal policy - Derivation of IS and LM curves for an open economy - Definition and derivation of the BP curve - Shift in the BP curve - General equilibrium of an open economy using IS-LM-BP curves.

References:
1. Edward Shapiro – 'Macro economics' Oxford University press.
2. Gregory Mankiw – 'Macro economics' – 6th Edn. Tata McGraw Hill.
3. Richard T. Froyen – 'Macro economics', Pearson education.
5. Eugene Duilio – Macro economic Theory, Shaum's Outline series. Tata McGraw Hill
6. Errol D'Souza – 'Macro Economics' – Pearson Education 2008.
7. Abhijit Kundu (2009) : Methodology and Perspectives of Social Science – Pearson Education
8. Dornbusch, Fischer and Startz-MacroEconomics-Tata McGraw –Hill

Additional Readings
9. Dominick Salvatore :'Macroeconomic Theory' Schaum's Outline series : Tata Magrahill.
10. Lipsey R. and A Chrytal – Economics (11th Edition) Oxford University Press Newdelhi.
11. Glenn Hubbard and Anthony Patrick O'Brien: **Macroeconomics**-Pearson Education

Note: Case study analysis may be included while teaching various topics, wherever relevant. This may be used for assignments and internal examinations only.

MSW Semester III

SOW3 C 12: Participatory Project Planning and Training

Credits : 4
Hours/week : 4

Learning Objectives :-

1. **To understand the phases of development projects**
2. **To learn techniques in formulating and implementing development projects**
3. **To develop skills in writing project proposals and managing projects**
4. **To Learn the concept and importance of participatory training.**
5. **To understand the different steps in organizing participatory training programmes and develop skills in participatory training and facilitation**

Module I Development Projects (10 Hours)

Meaning and purpose, Programme vs. project
Principles in development project: sustainability, development direction, concern for the marginalized. Planning in Local Self-Governing Institutions and Community Based Organisations
Environmental Impact assessment [EIA], Gender Impact Assessment [GIA]

Module II Project Identification and Planning (12 Hours)

Need Assessment, Project Formulation -Setting Goals and objectives, feasibility and viability, cost benefit and cost effectiveness analysis, Action plan, budgeting, time schedule, Different models of preparing development projects

Planning for a Project - Development of vision & mission statement, strategic planning, Log frame approach, results frame work, theory of change, Risk analysis and management /Risk matrix, Gant chart, Network analysis, Critical Path Method
Identification of beneficiaries
Resource mobilization- sources and strategies, Preparing project proposals

Module III Project Implementation and Evaluation (14 Hours)

Monitoring and Evaluation
Monitoring, evaluation, supervision, review- meaning and definition, Need for M& E, challenges, key M & E activities, Baseline and Endline studies, process documentation, output tracking & outcome monitoring, key data collection tools for M & E- MSC (most significant change) Case study, interviews, stories, life history and interviews.
Measurement of outcomes/Impact assessment, Preparation of monitoring and evaluation reports, Various Models and methods of M&E like PME, Gap analyses, Social auditing.
Public relations and marketing of social projects, Social Entrepreneurship.
Practical sessions in project proposal writing and implementation.

Module IV Participatory training **(12 Hours)**

Participatory training- Significance, principles and Philosophy, Difference between conventional training and participatory training. Adult learning, Principles of adult learning.

Social work and participatory training - significance.

Steps- Pre-training phase: designing- conducting training needs assessment, formulation of objectives, identifying and sequencing content, choosing methods, developing modules, readers. Post –training phase: Monitoring and evaluation – types, methods, Follow up of training and report writing

Module V Methods in facilitation and training **(12 Hours)**

Lectures, Brainstorming, discussion exercises, focus group discussion, checklists, using visual images, simulation, case studies, learning games, role plays, demonstration, quiz, stories and songs and field visits.

Skill Training: Workshops for Street Theatre, Designing of Posters and other low cost participatory media, developing newsletters, digital stories.

References:

1. Chandra Prasanna, Projects: Planning, Analysis, Selection, Implementation, and Review, Tata McGraw Hill Pub. Co. Ltd, 1995.
2. Desai, Vasant., Project Management Preparation Appraisal, Himalaya Publications, 1997
3. Ghosh, A.S. Project Management. Anmol Publishers. New Delhi, 1990
4. Roy, M. Sam, Project Planning and Management – Focusing on Proposal Writing, CHAI, Secunderabad.
5. Lock, Dennis, Handbook of project Management, Jaico Publishing House, Delhi, 1997
6. Mohsin M, Project Planning and Control, Vikas Publishing House Pvt. Ltd, 1997
7. PuttaSOWamaiah.K, Aspects of Evaluation and Project Appraisal, Popular Parkashan, 1978.
8. Vasant Desai, Project Management: Preparations, Appraisal, Finance and Policy, Himalaya Pub. House, Delhi, 1997.
9. Reidar, Dale: Evaluating Development Programmes and Projects. Second Edition, Sage Publications,2004
10. Mathew .T.K.: Project Planning, Formulation and Evaluation CBCI Centre, New Delhi.
11. Agochiya Devendra 2002. Every Trainer's Handbook. Sage Publication New Delhi
12. Chatterjee, Bhasker 2004. ICT for Basic Education and Literacy: Country Study for India. Delhi: UNESCO
13. Chambers, Robert. 2002 Participatory Workshops: A Sourcebook of 21 Sets of Ideas and Activities Earthscan UK
14. Abreu, Desmond, D. Participatory Evaluation, PRIA, New Delhi

MSW Semester III

Elective 2 – Rural and Urban Community Development

SOW3 E2 02: Urban Community Development and Governance

Credits:4
Hours/week : 4

Learning Objectives:

1. **To understand about the urban communities and the processes like urbanization and its impact**
2. **To learn about the challenges faced by urban communities in general and vulnerable populations in particular**
3. **To understand the structures and institutions for urban governance**
4. **To understand the scope of social work interventions in urban communities**

Module I **(10 Hours)**

Concepts - urban, urbanism, urbanization, urban development. Theories of urban development, Trends in urbanization and its implications.

Changing Urban communities: Infrastructural development, Growing heterogeneity, Merging of fringe villages, the 'global city' and socio-cultural and economic implications

Module II **Urban social problems** **(12 Hours)**

Overcrowding and pressure on infrastructure and amenities, urban disorganization and maladjustments, urban migration, Problems related to pollution, waste disposal and sanitation, crime and juvenile delinquency. Urban housing and slums. Displacement - Development Projects (Highways, Special Economic Zones, Large scale industries, Commercial Complexes etc.)

Problems in Kerala's cities.

Module III. Poverty, Livelihood and Informal Sector **(14 Hours)**

Urban poverty: Magnitude, causes and implications, manifestations of poverty

Livelihood issues: employment, growth of informal sector – causes, informalisation and casualisation of work.

Informal sector: Composition - Gender, Caste, Age, Issues and recent developments: sub contracting, etc., Implications on Livelihood, Women and Children Social Impacts – vulnerability, problems in access to Services - Health, Education, Food Security, Social Welfare.

Welfare programmes, and Legislations for informal sector. Institutional Mechanisms (Centre and State)

Module IV Urban Community Development **(12 Hours)**

Concept, principles and approaches, Policies and programmes

Urban Planning

Urban Social safety nets – Critical overview of safety nets and urban development programmes- national and state. Social Work Interventions in urban communities, Challenges in working with urban communities

Module V **(12 Hours)**

Urban Governance

History of Urban Local Self Government in India

Types of Urban Local Self Government in India- Municipal Corporation, Municipal Council/Nagar Palika, Sources of Revenue, Structure, powers and functions at each level.

Committees and their functions, Ward Committees and citizen participation

74th Constitutional Amendment- Review of content and implementation, Role of Urban LSG bodies in Urban Development, Women's participation; participation of marginalized groups

Challenges in developing partnerships between elected bodies, bureaucracy and civil society.

References

1. Batnagar, K.K., Gadeock , K.K. (Ed.): Urban Development and Administration, Aalekh Publishers, Jaipur, 2007

2. Mohan, Sudha, Urban Development New Localism, Rawat Publications, New Delhi, 2005.

3.Sivaramakrishnan, K. C. Kundu, Amitabh, Singh B. N. : Handbook of Urbanization in India: An Analysis of Trends and Processes Oxford University Press, 2005

4. Thudipara, Z. Jacob , Urban Community Development (2nd Ed), Rawat Publications, New Delhi, 2007

5. Das, Kumar Amiya ,Urban Planning in India, Rawat Publications, New Delhi, 2007

6. Ali, Sabir (Ed) , Dimensions of Urban Poverty, Rawat Publications, New Delhi, 2006

7. Batnagar, K.K., Gadeock , K.K. (Ed.): Urban Development and Administration, Aalekh Publishers, Jaipur, 2007

8. Mohan, Sudha, Urban Development New Localism, Rawat Publications, New Delhi, 2005.

MSW Semester IV

Elective 2 - Rural and Urban Community Development

SOW4 E2 03: Environmental Studies and Disaster Management.

Credits : 4
Hours/week : 4

Learning Objectives :-

1. **Understand the basic concepts in environment studies.**
2. **Understand the environment problems and impact of development initiatives.**
3. **Examine the utilization and management of natural resources.**
4. **Study the role of social work practice in dealing with environmental problems and in disaster management.**

Module I Basic Concepts **(12 Hours)**

Environment and Ecology. Basic concepts: Ecosystems, Biotic and abiotic factors, climatic factors, food chain, food web. Bio Geo Chemical cycles. The interrelatedness of living organisms and natural resources.

Environmental Ethics: Gaia Theory, Ecosophy, and Deep Ecology**,** Environmentalism

Biodiversity, Natural Resources and Livelihoods, Sustainable Development

Module II Conservation and Management of Resources **(12 Hours)**

Natural Resource Management - Policy and approaches (eg. Community-based natural resource management, integrated natural resource management), Role of rural institutions and other mechanisms in the protection of Natural Resources (eg: Pani Panchayats, Vana Samrakshana Samiti, Diversification of livelihoods)

Issues related to Natural Resources- Rights, Indigenous knowledge systems and Indigenous Communities, Food Security, Forestry and Land Use

Concept of appropriate technology. Appropriate technology models in housing, watershed, energy, cottage industries, agriculture.

Gender and Environment: The relationship between Men, Women and Environment, Eco-feminism.

Module III Environment problems **(12 Hours)**

Climate change and global warming, depletion of the ozone layer, desertification, land degradation, extinction of wildlife and loss of natural habitat, deforestation, biodiversity depletion, Nuclear wastes and radiation issues, waste management, pollution, energy crisis, disasters.

Impact of development initiatives, war and terrorism.

Environment issues specific to Kerala- Threats to wetlands and Western Ghats, sand mining, quarrying, solid waste management. Mitigation Strategies

Module IV Responses to environment Issues **(12 Hours)**

Environmental Movements: History of International Environmental Movements, Grassroots Environmental Movements in India

International Conferences and Environmental Agreements.

Environmental Policy and Politics: An Overview of policies such as liberalization and globalisation

Environment and International Organisations : United Nations, the World Bank and the World Trade Organization. Impact of environment policies on developing nations.

Social Work and environment – Green social work, Interventions – crisis intervention, advocacy, monitoring and enforcement of policy and legal instruments, education, consultation on sustainable development initiatives and appropriate technology.

Module V **(12 Hours)**

Disaster Management

Disaster: Definition, Natural and Human made disasters; multiple causes and effects; Development and Disaster

Disaster Management: Goals, Disaster management cycle –Prevention, Mitigation, preparedness, Rehabilitation, Reconstruction. Role of social workers in different stages. Disaster Management Policy, Disaster Management Act 2005, Role of government and voluntary organizations.

References:

1. Saxena, H.M.: Environmental Studies, Rawat Publications. New Delhi,2006.
2. Pawar, S.N, Patil, R.B and Salunkhe, S.A (Eds) : Environmental Movements in India . Strategies and Practice. Rawat Publications. New Delhi , 2005
3. Carson, Rachel: Silent Spring , Penguin books, 1962
4. BiSOWal, Tapan : Human rights, Gender and Environment
5. Ariyabandu, M. M: Bringing together Disaster and Development – Concepts and Practice, Some Experiences from South Asia." (2003)
6. Pradeep Sahni and Madhavi Malalgoda Ariyabandu (Eds.) ; Disaster Risk Reduction in South Asia. New Delhi: Prentice-Hall of India
7. Dominelli, Lena: Green Social Work: From Environmental Crises to Environmental Justice, Polity Publishers 2012

MSW Semester IV

Elective 3 - Family and Child Welfare (FCW)

SOW4 E3 03: Women's Development

Credits : 4

Hours/week : 4

Learning Objectives

1. To develop understanding of women's issues and status of women in India

2. To learn the constitutional and legal provisions and services and programmes available for women

Module I **(12 Hours)**

Status of Women : Demographic profile of Indian women in relation to education and employment in rural, urban and tribal communities. Changing roles and status of women in India. Socio- legal status of women among different religious groups. Democratisation and women leadership.

Module II **(12 Hours)**

Women and Health

Indicators of health and nutritional status of women in India. Factors contributing to low health and nutrition among women. Policies and programmes for improving health and nutrition status of women- Maternity and child health services.

Module III **(12 Hours)**

Problems of Women : Problems of destitutes, widows, un-wed mothers, single women, girl child etc. Atrocities against women: dowry deaths, wife battering, female infanticide, Female feoticide, sati. Sexual exploitation of women and young girls: rape, prostitution, devadasi system, Problems of working women in organised and unorganised sectors. Gender discrimination in India Society.

Module IV **(12 Hours)**

Development of women : Strategies for women's development in Five Year Plans. Employment and Training programmes. Functional literacy, condensed course of education for women etc. Hostels for working women and short stay homes for women and girls, Women's Development Corporation in Kerala, Policies and programmes. Socio- economic

SYLLABI OF COURSES ON GENDER PARITY

File Ref.No.7668/GA - IV - B1/2012/CU

UNIVERSITY OF CALICUT

Abstract

General and Academic - Faculty of Humanities -Syllabus and Question Bank of the Audit Course, Gender Studies (4 credits) for fourth semester CBCSS UG Programmes -Implemented wef 2019 Admn onwards - Subject to ratification by the Academic Council - Orders issued

G & A - IV - B

U.O.No. 7236/2021/Admn Dated, Calicut University.P.O, 23.07.2021

Read:-1. U.O.No. 4368/2019/Admn dated 23.03.2019
2. U.O No. 10662/2020/Admn dated 13.11.2020.
3. Item No.1 of the minutes of the meeting of Board of studies in Women's Studies ,held on 04.02.2021
4. Remarks of the Dean, Faculty of Humanities dated 20.06.2021.
5. Orders of the Vice Chancellor dated 21.06.2021.

ORDER

1. The Regulations for Choice Based Credit and Semester System for Under Graduate (UG) Curriculum- 2019 (CBCSS UG Regulations 2019) for all UG Programmes under CBCSS-Regular and SDE/PrivateRegistration w.e.f. 2019 admission have been implemented vide paper read (1) and the same was modified vide paper read (2) above. As per the Clause 4.10 of the CBCSS UG Regulations 2019, there shall be one Audit Course each in the first four semesters and at the end of each semester there shall be examination conducted by the college from a pool of questions (QuestionBank) set by the University.
2. The Board of Studies in Women's Studies SB, vide paper read as (3) above , has resolved to approve the syllabus and question bank of the Audit Course, Gender Studies (4 credits) for fourth semester CBCSS UG Programmes.
3. The Dean, Faculty of Humanities vide paper read as (4) above has approved the Item no. 1 of the minutes of the meeting of the Board of Studies in Women's Studies, held on 04.02.2021 .
4. Considering the urgency, the Vice Chancellor has approved Item no. 1 of the minutes of the meeting of the Board of Studies in Women's Studies, held on 04.02.2021 and has accorded sanction to implement the Syllabus and Question Bank of Audit Course- Gender Studies, subject to the ratification by the Academic Council.
5. The Syllabus and Question Bank of the Audit Course, Gender Studies (4 credits) for fourth semester CBCSS UG Programmes is therefore implemented wef 2019 Admission onwards.
6. Orders are issued accordingly. (Syllabus and Question Bank appended)

Ajitha P.P

Joint Registrar

To

The Principals of all Affliated Colleges.
Copy to: PS to VC/ PA to Registrar/PA to CE/JCE I/JCE II/JCE III/JCE IV/JCE VIII/ Digital Wing/SF/DF

Forwarded / By Order

Section Officer

AUD4E06-Gender Studies

Audit Course for UG Programme in CBCSS

Semester IV

Credits -4

Aim

Aim of this course is to introduce the significance and relevance of gender studies

Objectives

- To provide the relevance and significance of the ideas of gender equality and gender justice in our society
- To develop an understanding about the basic concepts of gender studies
- To provide a historical background of women's movements and its relevance
- To understand the major debates around gendered ways of violence and to introduce gender perspectives on popular culture

Course - Outcomes

1. It helps the student to acquire knowledge about the importance of gender equality and women's rights
2. It helps the student to develop gender sensitivity through an analysis of contemporary social issues at the global, national and local levels
3. It helps the student to familiarise with analysing the popular culture and media with a gender perspective
4. It equips the student to acquire knowledge about the various organs, conventions, constitutional provisions and redressal systems to combat gender discrimination

Module I

Introducing the concepts of sex and gender, gender division of labour, patriarchy, sexualities and sexual orientations, gender stereotypes, masculinities, intersectionalities of race, class, caste and gender in family and society

Suggested Readings

1. *50 Key concepts in Gender Studies*, Jane Pilcher and Imelda Whelehan, Sage Publications, 2005
2. *Understanding Gender*: Kamala Bhasin, Women Unlimited, New Delhi, 2003.
3. *What is Patriarchy*? Kamala Bhasin, Women Unlimited, New Delhi, 2003.
4. ജൂതന്മയ ലിംഗവൽകരണകമമജൾ, ഉമ ചകക്രവർത്തി, മുതദമ ബകകസക , മകഴുതമകജൾ
5. *Exploring Masculinity, Kamala Bhasin, Women Unlimited, New Delhi, 2003.*

Module II

Women's Experiences in family & work, community, public sphere kinship structures, various forms of violence against women – female foeticide, infanticide, dowry, domestic violence, sexual assaults, rape, sexual harassment at workplace, honour killings – Government mechanisms to combat Violence against women in India

1. *An overview of the status of women in India:* Neera Desai and Maithreyi Krishnaraj, P 296-319, *Class, Caste, Gender*- Readings in Indian Government and Politics-5, Ed. Manoranjan Mohanty, Sage Publications, New Delhi, 2004
2. '*Towards Equality',* Report of the Committee on the Status of Women in India, 1975
3. തറവജൽ പന്നവള്ള ചനയപണല ഉണജയയതങെയന ?;, കലസ്തയല ചനയപണല ഉണജയയതങെയന ?, യജ. മദവതക , യസനർ മഫജർ ഡവലപയമന്ത സഡന്സക , തത്തവനനപരല

Module III

Historical Roots of Women's Movements in India and global – Right to vote –Women's Question and social reform in 19th early 20th Century in India and Kerala –Women in National Movement – Left Movement- The Contemporary Women's Movements in India – Queer movements – International human rights instruments & UN conventions on gender rights, Indian Constitutional guarantees of equality and citizenship rights – gender in higher education

1. History of Doing, Radha Kumar, Kali for Women, New Delhi
2. *Mapping of Women's Movement*, Threfall. M. (Ed.). Verso, London
3. *Women, Ecology and Culture:* Gabriele Dietrich, P. 72- 95, Gender and Politics in India, Kali for Women
4. തന്ത്രചറയപമടണ വത്സവചനല , മഡജ. ഗനജകമജർ, മകരള ശജസസജഹതക്ക പർഷത
5. Saksham Report on Measures for Ensuring the Safety of Women and Programmes for Gender Sensitisation on Campuses, 2013, https://www.ugc.ac.in/pdfnews/5873997_saksham-book.pdf

Module IV

Gender perspectives on popular culture, discourse and practices of cinema, television, popular music, magazines and advertisements, representations of women and gender/sexual minorities in media, gendered dimensions of social media – analysis of gender in news – print, television, web and women's media initiatives

Suggested Readings

1. Whose News: The Media and Women's Issues, Ammu Joseph & Kalpana Sharma (Ed), Sage Publishing, 2006
2. *Films and Feminism - Essays in Indian Cinema* - Jasbir Jain and Sudha Rai (Ed.), Rawat Publications.

Suggested Activities

1. Analysis of popular films – films for analysis: (1) The Great Indian Kitchen (Malayalam), Thappad (Hindi)

2. Analysis of (1) commercial television advertisements (2) Matrimonial Classifieds in Malayalam News papers

References

3. Understanding Gender: Kamala Bhasin, Women Unlimited, New Delhi
4. What is Patriarchy? Kamala Bhasin, Women Unlimited, New Delhi
5. Exploring Masculinity, Kamala Bhasin, Women Unlimited, New Delhi
6. History of Doing, Radha Kumar, Kali for Women, New Delhi
7. Gendering caste through a feminist lens, Uma Chakravarti, Sage Publications
8. Feminism in India, Maitreyi Chaudhuri (Ed.), Women Unlimited, New Delhi 2005
9. 50 Key concepts in Gender Studies, Jane Pilcher and Imelda Whelehan, Sage Publications
10. Feminism, Jane Freedman, Buckingham Open University Press, Buckingham, 2001, pp. 1-44.
11. Mapping of Women's Movement, Threfall. M. (Ed.). Verso, London
12. Anila Agarwal, Human Rights for surivial of civilization, Kalinga Publication, Delhi (2004).
13. V.N. Shukla's Constitution of India, Eastern Book Company, 13thedn.
14. Who's News? Ammu Joseph and Kalpana Sharma, Sage Publications, New Delhi, 1994.
15. Women in Malayalam Cinema: Naturalising Gender Hierarchies, (Ed.) Meena T Pillai, Orient BlackSwan, New Delhi, 2010.

Semester V

Course Category: Core Course 8
Course Title and Code: India's Economic Development: National and Regional, ECO5 B08
No. of Credits: 4
No. of Contact Hours: 108

India's Economic Development: National and Regional

Objectives

To expose the learners to some of the key issues facing the Indian economy both at national and regional levels. In this process, as young adults, students are expected to be sensitised about these issues, appreciate and learn to critically assess the role of the government in various economic spheres. The learners are also exposed to numerical information relating to various aspects of Indian economy and India's economic policies. They are expected to develop analytical skills, interpret the economic events and visualise the economic future of India. For all these to happen, teachers are requested to take special care to instruct the students to read the
suggested reference books, collect clippings and articles from news papers and magazines and also develop the habit of following economic survey, economic review and RBI Bulletin. Besides, as against the conventional assignments, each module has **'Suggested Additional Activities'** at the end. Teachers need to encourage the learners to explore beyond the texts while attempting these activities.

Report Based on Study Tour: *A study tour is recommended because it may add direct experience to learners about different economic culture of the country. All the final year students need to prepare a report of the tour that includes the places they visited, its importance etc and submit it to the Head of the Department soon after the completion of the tour.*

Module I - Development Policies and Experience (1947-1990).

Low Level of Economic Development under the Colonial Rule- Development and Structural Change of Indian Economy Since Independence: Economic policies Perused between 1950's and 1980's: Mixed Economic framework; Market intervention policy and import substitution; Objectives and strategy of planning: Failures and achievements of plans – Performance of 11^{th} plan – Current plan.

Suggested Additional Activities

1. Find out and prepare a list of items that India used to import and export during 1950-51 and 1990-91
a. Observe the difference

b. Do you see the impact of self reliance? Discuss. Details can be collected from latest Economic Survey.
2. Find out the Deputy Chairman and members of the first Planning Commission of India
3. Find out the commodities which India Government permitted to import till 1980.
4. Explain how import substitution can protect domestic industry?

Module II - Economic Reforms since 1991
Background for the introduction of New Economic Reforms of 1991; Liberalisation, Privatisation and Globalisation: An Appraisal- Indian Economy during Reforms with Special focus on trends in FDI, FII and Disinvestment- Centre-State Financial Relations: Finance Commission, its structure and Functioning (with emphasis on Latest Finance Commission).

Suggested Additional Activities
1. Prepare arguments for and against subsidies. Explain your view.
2. Do you think only loss making companies should be privatised? Why?
3. Construct a pie chart for the sectoral contribution of GDP for the period1950-51 and 2012- 13. What would you observe? Is there a structural change? Explain in your own words
4. Prepare a list showing the latest data on the number of banks- nationalised, private, private foreign and New Generation Banks.
5. Discuss the different formulae used for Finance Commission awards.
6. Find out who all are there in the First Finance Commission of India?

Module III - Gross Domestic Product and Sectors.
a. Indian Agriculture: The place of Agriculture in the National Economy; Recent Trends in Investment, Credit and Agricultural Subsidy Policy, Agricultural Marketing and Price- New Agricultural Strategy of 1960s (Green Revolution)- Food Security, PDS and TPDS in India; The Need, Scope and Appraisal of Land Reforms in a Developing Country like India.
b. Indian Industries: Review of Industrial Growth under Planning- Industrial Structure: Traditional, SSI, Village, Cottage and Modern Industries- Industrial Sickness-Industrial Policy Resolutions: 1956, 1977, 1980, 1991; an Analysis of Current Industrial Policy- Infrastructure Development in India.

Suggested Additional Activities.
1. Why, despite the implementation of green revolution, 65% of our population continued to be engaged in the agricultural sector till 1990?
2. Why was public sector given a leading role in industrial development during the plan period?
3. „Losses incurred by public sector undertakings are to be met out of the public budget"- Do you agree with this statement? Discuss.
4. Find out the method of estimating inflation in India. Compare it with other countries.

Module IV Current Challenges Facing the Indian Economy.
a. Poverty: Who are Poor?, Causes and Measurement of Poverty, Number of Poor in India; Policies and Programmes Towards Poverty Alleviation with Special Emphasis on Recent Policies like- Food as a Right: The Food Security Act of 2013 & MGNREGS.

b. Unemployment: Nature, Trends and Estimates of Unemployment in India, Informalisation of Indian Work Force; Employment Prospective of the latest Five Year Plan; Recent Schemes to Reduce Unemployment and Underemployment.

Suggested Additional Activities.

1. Find out from your parents and teachers types of tax payments they are making. Classify the taxes and observe the differences.
2. On the basis of the definition of poverty line, analyse whether categorisation of people into BPL/APL is done in the correct way. Explain in your own words.
3. Analyse whether the dream programme of MGNREGP is carrying out in the right way. If „No", suggest ways to make the programme more effective.
4. In some communities, you might have noticed that even if the males do not earn high income, they do not send women to work. Why?
5. Prepare a list of recent schemes and objectives to strengthen the rural areas from the government website *http://www.rural.nic.in*

Module V Kerala's Economic Development

Growth and Structure- Primary, Secondary and Tertiary Sectors-Economic Development Vs Social Development-Poverty Profile of Kerala- Indicators of Human Development: PQLI and HDI- Demographic Transition of Kerala- Trends in Employment and Unemployment in Kerala- Sustainability of "Kerala Model of Development" with a Special Mention on Recent Sen- Bhagawati Debate- Decentralised Planning and Development of Kerala- Land Reforms in Kerala- Migration: Concepts in Migration- Emigration to the Gulf- Remittance and its Impact on the Economy of Kerala- Return Migration: Causes, Problems and Policies.

Suggested Additional Activities.

1. Find out the history of emigration from Kerala.
2. „Foreign remittance is the backbone of Kerala"s socio-economic development". Discuss.
3. What is Nitaqat and Saudization? In what ways it is harmful to the economy of Kerala.
4. Find out the reasons for the existing controversy in poverty estimation.
5. Observe the functioning of „ayalkoottams" (SHGs) in your locality and write how far it is successful in empowering women.

Basic Readings

1. ECONOMIC DEVELOPMENT IN INDIA-Problems and Prospects, N.P. Abdul Azeez (Ed), Regal Publications, New Delhi.
2. Indian Economy, Gopalji Gupta, PEARSON, New Delhi.
3. Ahulwalia, I.J. and I.M.D. Little (Eds) (1999), *India's Economic Reforms and Development*, (Essays in honour of Manmohan Singh), Oxford University Press, New Delhi.
4. Bardhan, P .K. (1999), The Political Economy of Development in India, Oxford University Press, New Delhi
5. Chakravarty S, (1987), Development Planning: The Indian Experience, Oxford University Press, and New Delhi
6. Acharya Shanker, Mohan Rakesh (Eds) (2011), India"s Economy: Performance and Challanges, Oxford University Press, New Delhi

7. Uma, Kapila (2013), Indian Economy: Performance & Policies, Academic Foundation, New Delhi.
8. Amit Badhuri, Development with Dignity (2005), NBT New Delhi.
9. Brahmananda, P.R. and V.R. Panchmukhi (Eds) (1987), *The Development Process of Indian Economy*, Himalaya Publishing House, Bombay.
10. M.P Todaro, Economic Growth (2nd Edition), PEARSON, New Delhi
11. Jalan, B. (1992), The *Indian Economy – Problems and Prospects*, Viking, New Delhi.
12. Joshi, V. and I.M.D. Little (1999), *India: Macro Economics and Political Economy*, 1964-1991, Oxford University Press, New Delhi.
13. Kaushik Basu (Ed) (2004), *India's Emerging Economy*, Oxford University Press, New Delhi.
14. Centre for Development Studies, 1977, Poverty, Unemployment and Development Policy: A case study of selected issued with reference to Kerala, Orient Longman, Bombay.
15. B.A. Pakash (Ed) 2004, Kerala‟s Economic Development: Performance and Problems in the post liberalization period, Sage Publications, New Delhi.
16. B.N Ghosh &Patmaja D. Namboodiri, 2009 (Eds),The Economy of Kerala Yesterday, Today and Tomorrow, Serial Publications, New Delhi.
17. K.C. Zachariah, K.P. Kannan, S. Irudaya Rajan, 2002 (Ed). Kerala‟s Gulf Connections, C.D.S, Trivandrum.
18. Rajasenan, D. and Gerard De Groot (Ed) 2005, Kerala Economy: Trajectories, Challenges and Implications, CUST, Kochi.

Semester VI

Course Category: Core Course 11
Course Title and Code: Macroeconomics – II, ECO6 B11
No. of Credits: 5
No. of Contact Hours: 90

Macroeconomics- II

Introduction:
Policy makers all over the world use macroeconomic theories and related empirical results to frame policies. Similarly, business firms, use these theories and results to formulate their strategies. A sound understanding of macroeconomic principles and their applications is essential for students of Economics.

Objectives:
The objective is to familiarise the students in the application of principles of macroeconomic analysis to the day-to-day decision-making in the aggregate economy.

Learning Outcome :
This course is expected to develop skill in economic reasoning, This vital skill is expected to help them in understanding and solving aggregate economic problems.

Syllabus

Module I: Theories of Money
Nature and Functions of Money - Types of Money: Near money, inside money and outside money.
1. Theories of Demand for money - Defining demand for money - Classical theory of demand for money - Friedman's re-statement of Quantity Theory of Money - Liquidity Preference theory and Keynesian Liquidity Trap.
2. Theories of Supply of money - Defining supply of money - Measuring supply of money - High powered money & money multiplier

Module II: Theories of Inflation and Unemployment
Inflation – Definition - Types of Inflation - Measurement of inflation in India - Effects of inflation- Sacrifice ratio-Inflationary gap-Theories of inflation- Demand pull versus cost push inflation-Mixed inflation-Structural inflation- Measures to control inflation-Meaning and types of unemployment - Cost of unemployment and Okun's law - Phillips curve - Modified Phillips curve - Long run Phillips curve - Stagflation - reasons.

Module III: Macro economic Instability and Policy:
Business Cycle- meaning- types and phases- Theories of trade cycles- Hawtrey's theory- Hayek's theory- Keynesian theory-Monetarist interpretation of trade cycles-Contracyclical policy measures-Monetary, fiscal, and income policy - Meaning and Instruments.

Module IV: Open Economy Macro Economics:
Definition and derivation of IS curve - Shift in the IS curve - Definition and derivation of LM curve - Shift in the LM curve - General equilibrium in the IS-LM model - Relative effectiveness of monetary and fiscal policy - Derivation of IS and LM curves for an open economy - Definition and derivation of the BP curve - Shift in the BP curve - General equilibrium of an open economy using IS-LM-BP curves.

References:
1. Edward Shapiro – 'Macro economics' Oxford University press.
2. Gregory Mankiw – 'Macro economics' – 6th Edn. Tata McGraw Hill.
3. Richard T. Froyen – 'Macro economics', Pearson education.
5. Eugene Duilio – Macro economic Theory, Shaum's Outline series. Tata McGraw Hill
6. Errol D'Souza – 'Macro Economics' – Pearson Education 2008.
7. Abhijit Kundu (2009) : Methodology and Perspectives of Social Science – Pearson Education
8. Dornbusch, Fischer and Startz-MacroEconomics-Tata McGraw –Hill

Additional Readings
9. Dominick Salvatore :'Macroeconomic Theory' Schaum's Outline series : Tata Magrahill.
10. Lipsey R. and A Chrytal – Economics (11th Edition) Oxford University Press Newdelhi.
11. Glenn Hubbard and Anthony Patrick O'Brien: **Macroeconomics**-Pearson Education

Note: Case study analysis may be included while teaching various topics, wherever relevant. This may be used for assignments and internal examinations only.

MSW Semester II

SOW2 C 09: Psychology for Social Work

Credits : 4
Hours/week : 4

Learning Objectives

1. **To develop an understanding regarding individual and collective behaviour and determinants of social behaviour**
2. **To acquire knowledge regarding the concept of mental health and mental health issues in the contemporary society.**
3. **To gain basic knowledge regarding various mental disorders and dysfunctions.**

Module I: Introduction to Social Psychology (8Hours)

Social Psychology: Definition, Nature and Scope and relevance to social work
Social Perception: Nonverbal communication-Attribution-Theories of attribution.
Attitude: Definition , Formation and change of attitudes.

Module II: Individual Behavior in social Context (10 Hours)

Social Cognition: Meaning &definition, Schemas and Heuristics
Prejudice: Definition and characteristics of prejudices
Sex and Gender, Gender identity and gender stereotypes.
Social influence- Types of social influence, Compliance techniques

Module III: Group Behavior in social Context (12 Hours)

Pro-social behaviour.- factors and determinants.
Aggression- factors and determinants.
Propaganda: definition, Psychological basis and techniques. Counteracting misleading propaganda
Collective behavior: Characteristics of Audience & crowd. Classification of crowd and audience.

Module IV: Introduction to Mental Health (14 Hours)

Definition, characteristics and determinants of mental health. Mental Health issues in the contemporary society- Alcoholism and drug addiction, Suicide.
Adjustment disorder-post traumatic stress disorder; Anxiety disorder: specific phobia, social phobias, generalized anxiety disorders, obsessive-compulsive disorder.

Module V: Introduction to major Mental Disorders (16 Hours)

Clinical features of schizophrenia, mood disorders
Somatic Symptom Disorders, Hypochondriasis, Somatization Disorder, Pain Disorder, Conversion Disorder;
Dissociative Disorders - Depersonalization/ Derealization Disorder, Dissociative Amnesia and Dissociative Fugue, Dissociative Identity Disorder (DID).
Major Childhood disorders- Autism spectrum disorders, Conduct disorders, ADHD, LD, Intellectual Disability

References:

Baron, R.A.,& Branscombe, N.R.(2012). *Social Psychology*(13 th ed). New Delhi: Pearson Education.

Baron, R.A., Branscombe, N.R., Byrne, D., & Bhardwaj, G. (2009). *Social Psychology, 12 th ed.* New Delhi: Pearson Education**.**

Baron, R.A., & Byrne, D. (2002). *Social Psychology, 10th ed.* New Delhi: Pearson Education

Butcher, J. N., Hooley, J. M., &Mineka, S. (2014). Abnormal Psychology (16th ed.). U.S.A : Pearson Education, Inc.

Carson, R. C., Butcher, J. N., &Mineka, S. (1996). Abnormal Psychology and Modern life (10th ed.). Newyork : Harper Collins College Publishers.

Myers,D.G.(2006).Social Psychology. New Delhi: Tata MCGraw Hill Inc.

Sadock, B. J., Sadock, V. A., & Ruiz, P. (2015). Kaplan &Sadock's Synopsis of Psychiatry Behavioral Sciences/ Clinical Psychiatry (11th ed.). U.S.A :Wolters Kluwer.

Seligman, M. E. P., Walker, E. P. ,&Rosenhan , D. L. (2001). Abnormal Psychology (4th ed.). Newyork : W. W. Norton & Company, Inc.

Taylor,S.E.,Peplau,L.A., & Sears, D.O.(2006). New Delhi: Pearson Education.

MSW Semester III

SOW3 C 12: Participatory Project Planning and Training

Credits : 4
Hours/week : 4

Learning Objectives :-

1. **To understand the phases of development projects**
2. **To learn techniques in formulating and implementing development projects**
3. **To develop skills in writing project proposals and managing projects**
4. **To Learn the concept and importance of participatory training.**
5. **To understand the different steps in organizing participatory training programmes and develop skills in participatory training and facilitation**

Module I Development Projects **(10 Hours)**

Meaning and purpose, Programme vs. project
Principles in development project: sustainability, development direction, concern for the marginalized. Planning in Local Self-Governing Institutions and Community Based Organisations
Environmental Impact assessment [EIA], Gender Impact Assessment [GIA]

Module II Project Identification and Planning **(12 Hours)**

Need Assessment, Project Formulation -Setting Goals and objectives, feasibility and viability, cost benefit and cost effectiveness analysis, Action plan, budgeting, time schedule, Different models of preparing development projects

Planning for a Project - Development of vision & mission statement, strategic planning, Log frame approach, results frame work, theory of change, Risk analysis and management /Risk matrix, Gant chart, Network analysis, Critical Path Method
Identification of beneficiaries
Resource mobilization- sources and strategies, Preparing project proposals

Module III Project Implementation and Evaluation **(14 Hours)**

Monitoring and Evaluation
Monitoring, evaluation, supervision, review- meaning and definition, Need for M& E, challenges, key M & E activities, Baseline and Endline studies, process documentation, output tracking & outcome monitoring, key data collection tools for M & E- MSC (most significant change) Case study, interviews, stories, life history and interviews.
Measurement of outcomes/Impact assessment, Preparation of monitoring and evaluation reports, Various Models and methods of M&E like PME, Gap analyses, Social auditing.
Public relations and marketing of social projects, Social Entrepreneurship.
Practical sessions in project proposal writing and implementation.

Module IV Participatory training **(12 Hours)**

Participatory training- Significance, principles and Philosophy, Difference between conventional training and participatory training. Adult learning, Principles of adult learning.

Social work and participatory training - significance.

Steps- Pre-training phase: designing- conducting training needs assessment, formulation of objectives, identifying and sequencing content, choosing methods, developing modules, readers. Post –training phase: Monitoring and evaluation – types, methods, Follow up of training and report writing

Module V Methods in facilitation and training **(12 Hours)**

Lectures, Brainstorming, discussion exercises, focus group discussion, checklists, using visual images, simulation, case studies, learning games, role plays, demonstration, quiz, stories and songs and field visits.

Skill Training: Workshops for Street Theatre, Designing of Posters and other low cost participatory media, developing newsletters, digital stories.

References:

1. Chandra Prasanna, Projects: Planning, Analysis, Selection, Implementation, and Review, Tata McGraw Hill Pub. Co. Ltd, 1995.
2. Desai, Vasant., Project Management Preparation Appraisal, Himalaya Publications, 1997
3. Ghosh, A.S. Project Management. Anmol Publishers. New Delhi, 1990
4. Roy, M. Sam, Project Planning and Management – Focusing on Proposal Writing, CHAI, Secunderabad.
5. Lock, Dennis, Handbook of project Management, Jaico Publishing House, Delhi, 1997
6. Mohsin M, Project Planning and Control, Vikas Publishing House Pvt. Ltd, 1997
7. PuttaSOWamaiah.K, Aspects of Evaluation and Project Appraisal, Popular Parkashan, 1978.
8. Vasant Desai, Project Management: Preparations, Appraisal, Finance and Policy, Himalaya Pub. House, Delhi, 1997.
9. Reidar, Dale: Evaluating Development Programmes and Projects. Second Edition, Sage Publications,2004
10. Mathew .T.K.: Project Planning, Formulation and Evaluation CBCI Centre, New Delhi.
11. Agochiya Devendra 2002. Every Trainer's Handbook. Sage Publication New Delhi
12. Chatterjee, Bhasker 2004. ICT for Basic Education and Literacy: Country Study for India. Delhi: UNESCO
13. Chambers, Robert. 2002 Participatory Workshops: A Sourcebook of 21 Sets of Ideas and Activities Earthscan UK
14. Abreu, Desmond, D. Participatory Evaluation, PRIA, New Delhi

MSW Semester III

Elective 2 – Rural and Urban Community Development

SOW3 E2 02: Urban Community Development and Governance

Credits:4
Hours/week : 4

Learning Objectives:

1. **To understand about the urban communities and the processes like urbanization and its impact**
2. **To learn about the challenges faced by urban communities in general and vulnerable populations in particular**
3. **To understand the structures and institutions for urban governance**
4. **To understand the scope of social work interventions in urban communities**

Module I **(10 Hours)**

Concepts - urban, urbanism, urbanization, urban development. Theories of urban development, Trends in urbanization and its implications.

Changing Urban communities: Infrastructural development, Growing heterogeneity, Merging of fringe villages, the 'global city' and socio-cultural and economic implications

Module II Urban social problems **(12 Hours)**

Overcrowding and pressure on infrastructure and amenities, urban disorganization and maladjustments, urban migration, Problems related to pollution, waste disposal and sanitation, crime and juvenile delinquency. Urban housing and slums. Displacement - Development Projects (Highways, Special Economic Zones, Large scale industries, Commercial Complexes etc.)

Problems in Kerala's cities.

Module III. Poverty, Livelihood and Informal Sector **(14 Hours)**

Urban poverty: Magnitude, causes and implications, manifestations of poverty

Livelihood issues: employment, growth of informal sector – causes, informalisation and casualisation of work.

Informal sector: Composition - Gender, Caste, Age, Issues and recent developments: sub contracting, etc., Implications on Livelihood, Women and Children Social Impacts – vulnerability, problems in access to Services - Health, Education, Food Security, Social Welfare.

Welfare programmes, and Legislations for informal sector. Institutional Mechanisms (Centre and State)

Module IV Urban Community Development **(12 Hours)**

Concept, principles and approaches, Policies and programmes

Urban Planning

Urban Social safety nets – Critical overview of safety nets and urban development programmes- national and state. Social Work Interventions in urban communities, Challenges in working with urban communities

Module V **(12 Hours)**

Urban Governance

History of Urban Local Self Government in India

Types of Urban Local Self Government in India- Municipal Corporation, Municipal Council/Nagar Palika, Sources of Revenue, Structure, powers and functions at each level.

Committees and their functions, Ward Committees and citizen participation

74th Constitutional Amendment- Review of content and implementation, Role of Urban LSG bodies in Urban Development, Women's participation; participation of marginalized groups

Challenges in developing partnerships between elected bodies, bureaucracy and civil society.

References

1. Batnagar, K.K., Gadeock , K.K. (Ed.): Urban Development and Administration, Aalekh Publishers, Jaipur, 2007

2. Mohan, Sudha, Urban Development New Localism, Rawat Publications, New Delhi, 2005.

3.Sivaramakrishnan, K. C. Kundu, Amitabh, Singh B. N. : Handbook of Urbanization in India: An Analysis of Trends and Processes Oxford University Press, 2005

4. Thudipara, Z. Jacob , Urban Community Development (2nd Ed), Rawat Publications, New Delhi, 2007

5. Das, Kumar Amiya ,Urban Planning in India, Rawat Publications, New Delhi, 2007

6. Ali, Sabir (Ed) , Dimensions of Urban Poverty, Rawat Publications, New Delhi, 2006

7. Batnagar, K.K., Gadeock , K.K. (Ed.): Urban Development and Administration, Aalekh Publishers, Jaipur, 2007

8. Mohan, Sudha, Urban Development New Localism, Rawat Publications, New Delhi, 2005.

MSW Semester IV

SOW4 C 15 : Social Work with Vulnerable groups

Credits :4
Hours/week :4

Learning objectives

1. **To understand the prevailing realities and problems of vulnerable and marginalized groups in India.**
2. **To learn the roles and functions of social workers in helping them.**
3. **To understand the contribution of Govt. and non Govt. organizations in promoting welfare of the marginalized and vulnerable groups.**
4. **To understand the policies and welfare progammes for vulnerable groups**

Module I: Understanding key terms (14 hours)

Social exclusion, Vulnerability-Multiple vulnerability, Deprivation, marginalization, at risk group, socio-economic disadvantage, stigmatization

Children: analytical understanding of the prevailing realities, causes and precipitating factors of vulnerability, needs and problems of these children, child rights and its deprivation..

Categories of vulnerable children, with emphasis on the girl child, destitute children, children from broken families, child labour, street children, children with disability, sexually abused children, children facing stigmatization, Children affected by natural calamities, disasters, domestic violence

National policies and programmes for children: Education, health, nutrition and protection.

National and international agencies working with children. Institutional and non institutional services for children. National interventions and initiatives in child protection and child rights.

Scope of social work interventions and the role of the social worker in helping vulnerable children.

Module II: Women (12 hours)

Major issues and concern of women, gender issues, issues of representation and participation, and reproductive health

A gender analysis of poverty, health, education and labour. Vulnerable women- adolescent girls, victims of violence and harassment, women having mental illness, Non-heterosexual women Homeless Women, Women in Commercial sex work, women with HIV/AIDS, Female offenders, older women, women with disabilities and Female substance users.

Policies and welfare programmes for Women. Role and functions of social work in working with vulnerable and marginalized women.

Module III: Elderly (12 hours)

Elderly: Issues and concerns of the elderly: Work, retirement, social security, housing; physical and mental health, disability, terminal illness and death of spouse; loneliness and

alienation; feminization of ageing, domestic violence and abuse; dependency and family care; destitution; Risk assessment.

Policies and programmes for elderly in India, Welfare schemes for elderly. Role of Govt. and NGOs in the development of services for elderly.

Social work practice for enabling active ageing and enhancing quality of life: education for preparation of new roles and activities; for physical safety, financial security; retirement planning; individual and family counselling for adjustment and emotional wellbeing; bereavement counselling; mediating for enabling the elderly to receive their entitlements.

Module IV: Differently abled (12 hours)

Disability, Persons with Disability and their Rehabilitation Contexts — Understanding different categories of disability, causes, classification, assessment, consequences/impact of disability on individual's growth and functioning

Needs and problems of person with disability issues related to activities of daily living, education, sexuality, integration, employment and interpersonal relationships.

Role of the social worker, team work with professionals working in the field of disability and rehabilitation. Policies and programmes for people with disability in India.

Module V: Schedule caste and scheduled tribes (10 hours)

Historical background of backwardness, oppression and oppressive practices in a caste society, problems of Dalits and Tribals, socio political and religious movements; Policies and welfare programmes for SC/ST. Social Work with SC/ST- Approaches, and strategies.

References:

1. *AFFILIA*: Journal of Women and Social Work
2. Bhuimali,A. (2009*). Rights of disabled women and children in India.* New Delhi: Serials publications.
3. Desai, M. and Siva, R. (2000). *Gerontological Social Work in India: Some Issues and Perspectives.* Delhi:B.R. Publishing.
4. Gandhi, E.A &Vijayanchali, S.S (2012). *Marginalised groups*. New Delhi: APH Publishing Corporation.
5. Gitterman, A. (2014). *Handbook of Social Work Practice with Vulnerable and Resilient Populations*. New York: Columbia University Press.
6. Karade, J. (2008). *Development of Scheduled Castes and Scheduled Tribes in India*. UK: Cambridge Scholars Publishing.
7. Naqi M (2005) Social work for weaker sections. Anmol Publications Pvt.Ltd.
8. Mukherjee, M. (2006): Problems of Disabled People.
9. Parke, J.& Penhale, B(2007).Working with Vulnerable Adults (The Social Work Skills Series)

MSW Semester IV

Elective 2 - Rural and Urban Community Development

SOW4 E2 03: Environmental Studies and Disaster Management.

Credits : 4
Hours/week : 4

Learning Objectives :-

1. **Understand the basic concepts in environment studies.**
2. **Understand the environment problems and impact of development initiatives.**
3. **Examine the utilization and management of natural resources.**
4. **Study the role of social work practice in dealing with environmental problems and in disaster management.**

Module I Basic Concepts **(12 Hours)**

Environment and Ecology. Basic concepts: Ecosystems, Biotic and abiotic factors, climatic factors, food chain, food web. Bio Geo Chemical cycles. The interrelatedness of living organisms and natural resources.

Environmental Ethics: Gaia Theory, Ecosophy, and Deep Ecology**,** Environmentalism

Biodiversity, Natural Resources and Livelihoods, Sustainable Development

Module II Conservation and Management of Resources **(12 Hours)**

Natural Resource Management - Policy and approaches (eg. Community-based natural resource management, integrated natural resource management), Role of rural institutions and other mechanisms in the protection of Natural Resources (eg: Pani Panchayats, Vana Samrakshana Samiti, Diversification of livelihoods)

Issues related to Natural Resources- Rights, Indigenous knowledge systems and Indigenous Communities, Food Security, Forestry and Land Use

Concept of appropriate technology. Appropriate technology models in housing, watershed, energy, cottage industries, agriculture.

Gender and Environment: The relationship between Men, Women and Environment, Eco-feminism.

Module III Environment problems **(12 Hours)**

Climate change and global warming, depletion of the ozone layer, desertification, land degradation, extinction of wildlife and loss of natural habitat, deforestation, biodiversity depletion, Nuclear wastes and radiation issues, waste management, pollution, energy crisis, disasters.

Impact of development initiatives, war and terrorism.

Environment issues specific to Kerala- Threats to wetlands and Western Ghats, sand mining, quarrying, solid waste management. Mitigation Strategies

Module IV Responses to environment Issues (12 Hours)

Environmental Movements: History of International Environmental Movements, Grassroots Environmental Movements in India

International Conferences and Environmental Agreements.

Environmental Policy and Politics: An Overview of policies such as liberalization and globalisation

Environment and International Organisations : United Nations, the World Bank and the World Trade Organization. Impact of environment policies on developing nations.

Social Work and environment – Green social work, Interventions – crisis intervention, advocacy, monitoring and enforcement of policy and legal instruments, education, consultation on sustainable development initiatives and appropriate technology.

Module V (12 Hours)

Disaster Management

Disaster: Definition, Natural and Human made disasters; multiple causes and effects; Development and Disaster

Disaster Management: Goals, Disaster management cycle –Prevention, Mitigation, preparedness, Rehabilitation, Reconstruction. Role of social workers in different stages. Disaster Management Policy, Disaster Management Act 2005, Role of government and voluntary organizations.

References:

1. Saxena, H.M.: Environmental Studies, Rawat Publications. New Delhi,2006.
2. Pawar, S.N, Patil, R.B and Salunkhe, S.A (Eds) : Environmental Movements in India . Strategies and Practice. Rawat Publications. New Delhi , 2005
3. Carson, Rachel: Silent Spring , Penguin books, 1962
4. BiSOWal, Tapan : Human rights, Gender and Environment
5. Ariyabandu, M. M: Bringing together Disaster and Development – Concepts and Practice, Some Experiences from South Asia." (2003)
6. Pradeep Sahni and Madhavi Malalgoda Ariyabandu (Eds.) ; Disaster Risk Reduction in South Asia. New Delhi: Prentice-Hall of India
7. Dominelli, Lena: Green Social Work: From Environmental Crises to Environmental Justice, Polity Publishers 2012

MSW Semester IV

Elective 2 – Rural and Urban Community Development

SOW4 E2 04 : Social Work Practice and Gender

Credits: 4
Hours /week: 4

Learning Objectives:

1. **Understand concepts related to gender and its significance in social work**
2. **Develop perspectives concerning what constitutes a gender issue and learn to create a multi-perspective analysis of a given gender issue**
3. **Understand the status of women and appreciate the gaps therein**
4. **Develop skills and attitudes to work with gender issues**
5. **Practice social work with a gender perspective.**

Module I Basic concepts **(10 Hours)**

Concepts- gender, gender studies, gender identity, gender role stereotyping, gender division of labour, gender discrimination, patriarchy, gender equality and equity.

Overview of feminist theories – Liberal feminism, Radical Feminism, Black feminism, postmodern feminism, Eco feminism. Women's Movements

Module II Status of women **(12 Hours)**

Health- life expectancy, maternal mortality, nutritional status, incidence of diseases, mental health issues

Education – literacy rate, representation in higher education,

Work and Income– work participation, wages, ownership of property and assets

Political participation: Women in governance: an assessment of the Panchayati Raj experience, Representation in media, Gender and the Indian Legal System: Gender and personal law.

Factors affecting the Status of Women in India

Discrepancies and gaps in the status with respect to health, education, employment and participation

Module III Gender Based violence **(12 Hours)**

Violence against Women–Theoretical perspectives, Causes – cultural, economic, legal and political factors.

Continuum of Violence. Types - Rape, Pornography, Child Sexual Abuse, Domestic Violence and Violence at Workplace. Trafficking, forced prostitution, Military rape and sexual abuse, traditional practices like genital mutilation.Violation of Reproductive Rights, Gender issues in Population Control and Contraception, Sex-selective abortions, female infanticide, surrogacy.

Legal remedies and Social Welfare Services available to Women Facing Violence.

Module IV Gender and Development **(12 Hours)**

Human Development Index, Gender Development Index, Gender Empowerment Measure, Approaches to development-- Women in Development (WID), Women and Development (WAD), Gender and Development(GAD)

Gender Analysis Frameworks and gender mainstreaming; Gender blind, neutral and redistributive policies; Welfare, Efficiency and Empowerment approaches to Gender; Strategic and practical gender needs/interests;

International initiatives -world conferences, women's decade, CEDAW. Indian initiatives – the ' Towards Equality' Report, National Perspective Plan for women, National Policy for the Empowerment of Women-2001, National and State women's Commissions, Nirbhaya, Women Development Corporation

Module V Social Work with women **(14 Hours)**

Feminist social work theory and practice; Applications of liberal, radical, socialist, cultural, post modern and global feminism to social work practice;

Feminist theory and practice: Implications for working with men and other disadvantaged groups.

Interventions for women from feminist frame works. Interventions with Gender Based Violence, Women and Mental Health, sexual minorities, Homeless Women, widows, elderly women, women in commercial sex work and women with HIV/AIDS, female offenders, women in unorganized labour sector and women with disabilities

Gender Aware therapy, Feminist counseling, building collectives, education, advocacy, challenging sex role stereotypes, challenging patriarchal norms, assertiveness training, strategies to encourage a sense of empowerment.

Challenges in working with women

References:

1. Dominelli, Lena (2007), Women and Community Action Rawat Publications Jaipur
2. John, Mary E., (2008), Women's Studies in India a Reader Penguin Books, New Delhi
3. Kamala Bhasin, (2003) ,Understanding Gender, Women Unlimited, New Delhi
4. Lee, Janet and Susan M. Shaw. 2011. Women Worldwide: Transnational feminist perspectives on women. New York: McGraw Hill.
5. Nalini Visvanathan (Ed.), (2006)The Women, Gender and Development Reader, Zubaan, New Delhi,
6. Sharma,Kumud & Sujaya C. P., (2011) Towards Equality: Report of the Committee on the Status of Women in India. Pearson
7. White, Vicky (2006) The State of Feminist Social work, Routledge London
8. Peterson, K. Jean and Lieberman, A. Alice (Eds) (2001) Building on Women's Strengths- A social Work Agenda for the Twenty First Century. Routledge New York
9. Towards Equality Report, Government. of India, 1975

BA Journalism and Mass Communication

Semester V Course Code: 20 JOU5B10

Advertising

Contact Hours: 4 Credits: 4

Objective:

To enable students to critically analyze advertisements and also to give them an introduction to the world of advertising.

Course Outcome

1. To gain an overview of the world of advertising both in theory and practice.
2. To prepare advertising copies that can effectively and convincingly convey selling ideas, brands and images.
3. To effectively assess the effects of advertising on a larger perspective on a given society.

Module I

Definition, features, evolution and functions of advertising – kinds of advertising – product, consumer, co- operative, prestige, corporate, public service, national, regional, global – advertising agencies in India and World – trends in global advertising

Module II

Media planning, market analysis – product research, media reach and frequency, media schedule, segmentation, positioning, niche, media mix – ad campaign and its elements. Ad personalities: David Ogilvy, Alyque Padamsee and Piyush Pandey – top agencies in world, India, and Kerala

Module III

Brand awareness and attitudes- brand identity- brand equity- Brand image- brand loyalty- top national and international brands- Rossiter and Percy model

Module IV

Print ads- principles and components- classified and display ads, television advertising principles, components and production. Radio ads- principles, components and production. Internet ads- principles and components

Module V

Visualization – copy writing for print, radio, television and online advertisements

Module VI

[Type text]

Effects of advertising – advertising and cultural values- cultural jamming –economic, social and ethical issues of advertising- professional organizations and code of ethics – ABC, ASCI, AAAI

Books for reference

1. S.A. Chunnawalla, Advertising: An Introductory Text. Mumbai, Himalaya Publishing House.
2. Subrata Banerjee, Advertising as a Career, New Delhi: National Book Trust.
3. J.V. Vilnilam and A.K. Varghese, Advertising Basics: A Resource Guide for Beginners, NewDelhi: Sage Publications.
4. Frank Jefkins Advertising Prentice Hall
5. Gerald J Tellis Effective advertising: understanding when, how and why advertising wakes 2004. Response Books New Delhi.
6. Lary Percy and Richard Elliot, Strategic Advertising management (2009) Oxford.

Books for further reading

7. George Belch, Advertising and Promotion, Tata McGraw-Hill.
8. S.H.H.Kazmi and Satish Batra, Advertising and Sales Promotion, Excel Books.
9. Wells Burnett Moriarty, Advertising: Principles and Practice, Pearson Education.
10. S.N.Murthy and U Bhojana, Advertising: An IMC Perspective.

I. **Continuous Assessment: 20 Marks**

As per the CBCSSUG Regulation 2019, Components with percentage of marks of Internal Evaluation of Theory Courses are- Test paper 40%, Assignment 20%, Seminar 20% and Class room participation based on attendance 20%.

1. Class Tests: 8
2. Assignment: 4
3. Seminar Presentation: 4
4. Class room participation based on attendance: 4

II. Semester end examination: 80 Marks

III. **Suggested activity:**
1. Advertising review.
2. **Preparation of print ads – classified and display**
3. **Ad agency visit.**

Model question paper

Fifth Semester B. A. Degree Examination

JOU5B 10 Advertising

Time: 2.5 hrs **Max. Marks: 80**

PART A

Answer any number of questions each not exceeding 50 words. Each question carries 2 marks. Ceiling of marks for Part A is 25.

1. AIDA
2. David Ogilvy
3. Amul girl
4. Flight
5. ASCI
6. Classified Ad
7. Alyque Padamsee
8. Brand ambassador
9. Jingle
10. Rossiter and Percy model
11. PSA
12. Piyush Pandey
13. Consumer culture
14. Surrogate ads
15. Advertising appeals

PART B

Answer any number of questions each not exceeding 100 words. Each question carries 5 marks. Ceiling of marks for Part B is 35.

16. Analyze the reach of advertisements of FMCG and FMEG in middle class families in India?
17. “Advertising creates unnecessary needs”; Comment.
18. What do you mean by product life cycle?
19. “In the case of advertising selling is more important than reality”; Comment.
20. What are the key characteristics of print advertisement? Also write important elements of a print advertisement.
21. Write a short note on the challenges of TV advertising.
22. What do you mean by cultural jamming? Explain.
23. Write a short note on the key characteristics of online advertisement.

PART C

Answer any two questions not exceeding 400 words. Each question carries 10 marks.

24. What are the different types of advertising? Explain with examples.
25. Write on the positive and negative effects of advertising?

26. What do you mean by brand advertising? Explain. Also write on terms like brand identity, brand image and brand loyalty with examples.
27. What do you mean media planning? Explain the concepts: segmentation, niche, targeting and positioning.

(2x10=20)

BA Journalism and Mass Communication
Semester VI Course 22 Code JOU6B12

Media Laws and Ethics

Contact Hours: 5 Credit : 4

Objective:
To give the students an exposure to the fundamentals of Media Laws.

Course Outcome

1. To gain basic understanding of the legal system and important media laws.
2. To assess the implications of freedom of speech and expression and perils of the restrictions on this freedom.
3. To obtain the capacity to examine the actual working of the media from an ethical perspective.

Module I
Basic Legal concepts - Judicial system in India - Indian Penal Code, role of Macaulay. Fundamental rights - directive principles. Basic legal terms such as writ, FIR, habeas corpus, suo moto, judicial review, PIL, bail, amicus curie etc

Module II
Freedom of the press - evolution of the concept of freedom of the press, Types of censorships. Freedom of speech and expression in Indian Constitution - article 19 (1) (a) and reasonable restrictions. India's ranking in the press freedom index.

Module III
Defamation – libel, slander and defenses of media professional - Privacy and Cyber laws - Right to Information Act - Whistle Blower's Protection Act.

Module IV
Press Laws: Official Secrets Act - PRB Act - Copyright Act - Contempt of Court Act - Young Person's Harmful Publication Act - Indecent Representation of Women's Act - Drug & Magic Remedies Act - Working Journalists Act - Wage Boards, Film Certification Rules - Intellectual Property Rights- Information Technology Act; Child rights and POCSO.

Module V
Media Ethics and Issues - code of ethics for media personnel - Press Council of India- Paid News and Cheque-book Journalism. Impact of Indian emergency (1975-77) on mass media. Internet censorship, data mining by internet service providers, privacy versus public good, privacy in the digital age, embedded journalism, ethics of sting journalism. Corporatisation of media.

[Type text]

Books for Reference

1. Naresh Rao &SuparnaNaresh, '**Media Laws, an appraisal',** Premier Publishing Company, Bangalore.
2. Kundra.S, **'Media Laws & Indian Constitution'**, Anmol Publications Ltd, New Delhi.
3. Vakul Sharma, '**Handbook of Cyber Laws',** Macmillan, 2002.
4. NirmalaLakshman,'**Writing a Nation, an Anthology of Indian Journalism'.**
5. NaliniRajan, '**Practising Journalism',** Sage Publications.
6. Hamid Moulana, '**International Information Flow'.**
7. Karen Sandars, '**Ethics & Journalism',** Sage Publications.

[Type text]

Books for Further Reading

1. AravindSinghal& Everett M.Rogers, '**India's Communication Revolution',** Sage Publications.
2. Edward S. Herman & Noam Chomsky, '**Manufacturing Consent',** Vintage Publications.
3. Dr. Jan R. Hakemuldar et.al, 'Principles **& Ethics of Journalism',** Anmol Publications.
4. Patrick Lee Plaisance, '**Media Ethics',** Sage Publications.

I. **Continuous Assessment: 20 Marks**

As per the CBCSSUG Regulation 2019, Components with percentage of marks of Internal Evaluation of Theory Courses are- Test paper 40%, Assignment 20%, Seminar 20% and Class room participation based on attendance 20%.

1. Class Tests: 8
2. Assignment: 4
3. Seminar Presentation: 4
4. Class room participation based on attendance: 4

II. Semester end examination: 80 Marks

BA Journalism and Mass Communication

Semester VI Course 23 Code JOU6B13

Online Journalism

Contact Hours 5 Credits 4

Course Outcomes:

1. Understanding the effectiveness of Digital Medium.
2. To achieve the capacity to evaluate the role of Internet in the contemporary society.
3. To involve and participate in the functional world of Internet in personal capacity.

(The program intends to create a basic conceptual understanding about the function and use of Internet and does not engage in an act of transacting technical competence)

Module 1

Internet as a medium of communication - history and evolution of internet- Various popular formats of Online Media- Earlier forms of Communication that led to the invention of Internet.

Module 2

Features of online journalism –Interactive, Participative, Virtual- Continuity, Anonymity and Convergent Characteristics, Hypertext, Multimedia - Online Aesthetics – content, design, colours, font, templates, navigation bars, and hyperlinks

Module 3

Annotative reporting and strengths and limitations - Citizen Journalism, Absence of Gatekeeping/Gate viewing, Timely Feedback- Portals; Styles of Involvement like Blogging– Podcasting – Vodcasting.

Module 4

Internet culture, Subjectivity and Objectivity of Facts– Media both as Social and Personal, Cybercrime and Regulations, Article 66 A of IT Act

Module 5

World Wide Web - web pages - e-groups - e-governance – e learning- Online advertisements.

Module 6

Technical writing -Definition and Types - Objectives in Technical Writing - Guidelines for effective writing - prewriting, writing and re-writing. Structure and Content of Trolls and Memes.

Books for Reference

1. Online Journalism: A Basic Text, Tapas Ray, Cambridge University Press.

2. The New Media Handbook – Andrew Dewdney and Peter Ride.

3. The Cyberspace Handbook – Jason Whittaker.

4. Breaking News, Sunil Saxena, Tata McGraw-Hill.

Books for Further Reading

1. Media and Power – James Curran.

2. Media, Technology and Society – Brian Winston.

3. Journalism Online – Mike Ward.

4. Managing Media Convergence – Kenneth C. Killebrew

I. **Continuous Assessment: 20 Marks**

As per the CBCSSUG Regulation 2019, Components with percentage of marks of Internal Evaluation of Theory Courses are- Test paper 40%, Assignment 20%, Seminar 20% and Class room participation based on attendance 20%.

1. Class Tests: 8
2. Assignment: 4
3. Seminar Presentation: 4
4. Class room participation based on attendance: 4

II. Semester end examination: 80 Marks