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3.	ECOLOGY AND SUSTAINABLE DEVELOPMENT`	G 103.4E	POLITICAL SCIENCE	4	
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## **FACULTY OF HUMANITIES – CBCS**

## G 101.4E HISTORY AND TOURISM IN INDIA

## Unit I :

Tourism-Concept and meaning – Nature-Scope-types of tourism-Tourism as an industry-Socio- Economic impact of Tourism-History of tourism development in India **Unit II:** 

History and culture as tourism products-Monuments, religious and secular-Historical Sites-Historical and cultural events-Impact of tourism development on Protection and conservation of historical monuments and sites- National Parks and Wild Life Sanctuaries of India.- Festivals of India.

## Unit III

Tourism and Karnataka : Historical Sites -World Heritage Sites -Hampi -Pattadakal-Adventure Tourism - Beaches Resorts- Wild Life Sanctuaries in Karnataka Prospects of Tourism in Karnataka

KSTDC –Establishment –Aims & Objective-Activities Facilities –Jungle Lodge and Resorts, Home stays

## Suggested Readings

- A.K. Bhatia, International Tourism Management, Sterling Publishers, New Delhi, 2011
- D.S Bharadwaj and Others (Ed), Domestic Tourism in India, Indus Publishing company, New Delhi, 1998
- K VijayaBabu (Ed), Tourism in India, Zenon Academic Publishing, Hyderabad, 2014.
- Kevin Hannam, Anya Diekmann, Tourism and India: A Critical Introduction, Routlege, 2011
- PranNath Seth, SushmaShethBhat, An Introduction to Travel and Tourism Sterling Publishers, New Delhi, 1998
- Rabindra Seth, Tourism in India- An Overview, Kalpaz Publications, New Delhi, 2005

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#### G102.4E

#### **QUANTITATIVE ECONOMICS**

#### **LEARNING OBJECTIVES:**

- To acquaint the students with elementary knowledge of mathematical techniques in Economics.
- To train them to use mathematical techniques in economics.

#### **LEARNING OUTCOMES:**

- The Student will be able:
- To Apply some mathematical methods to economic theories
- Using calculus and differential equations in the economic models
- Use economic integration in applications

# MODULE I: LINEAR FUNCTIONS AND THEIR APPLICATION IN ECONOMIC ANALYSIS

Linear Function - Demand Function - Supply Function - Market Equilibrium - Taxation - Subsidy - Elasticity of Demand- National Income Determination.

# MODULE II: NON- LINEAR FUNCTIONS AND THEIR APPLICATION IN ECONOMIC ANALYSIS.

Quadratic Function – Simple and General market Market Equilibrium – Production Possibility Curves – Power Function – Pareto's Distribution of Income – Logarithm and Anti- Logarithms- Exponential Function – Interest Compounding, Discounting

# MODULE III: DIFFERENTIAL AND INTEGRAL CALCULUSAND THEIR APPLICATION IN ECONOMIC ANALYSIS.

Application of Derivatives in Economics – Cost – Average and Marginal Cost Relationship – Revenue – Average and Marginal Relationship – Equilibrium of the Firm under perfect competition, monopoly, price discrimination. Integral Calculus Definite Integration – Application to Economics – Consumers Surplus – Producers Surplus – – Indefinite Integration – Cost and Revenue Analysis, National Income Analysis

#### **BOOKS FOR REFERENCES:**

- 1. Allen, R.G.D., 2007. : *Mathematical Analysis for Economists*, Macmillan, Mumbai
- Bhardwaj, R.S., 2007: Mathematics for Economics and Business, 2<sup>nd</sup> Ed. Excell Books, New Delhi.
- Chiang, A.C. ,1985: Fundamental Methods of Mathematical Economics, 3<sup>rd</sup> Ed. McGraw Hill Mumbai.
- 4. Dinwiddy, C., 1967, *Elementary Methods of Mathematical Economics*, Oxford University Press
- Dowling, E.T, 2005: Introduction to Mathematical Economics, 2<sup>nd</sup> Ed. Schaum's Outline Series, MacGraw Hill, Mumbai.
- 6. Halden, K. and A.W. Pearson, (2002): *Introductory Mathematics for Economics and Business*, Macmillan Press Ltd, Delhi.
- 7. Mehta & Madnani : 1992: . Mathematics for Economists, S. Chand, New Delhi.
- 8. Simon, Carl P. and Lawrence Blume, 2007 : *Mathematics for Economics*, Viva Books Pvt Ltd, New Delhi.
- 9. Veerachamy, R., 2008 : *Quantitative Methods for Economists*, New Age International Publications, New Delhi.
- 10. Weber, Jean E. ,1982: Mathematical Analysis , Harper International.
- 11. Yamane, T., 2011: *Mathematics for Economists*, 2<sup>nd</sup> Ed. PHI Learning, New Delhi. \*\*\*\*\*\*\*

## G103.4E ECOLOGY AND SUSTAINABLE DEVELOPMENT

## Learners Outcome:

- 1. To understand the meaning and significance of ecological sustainability.
- 2. To be aware of the Interrelationship between resource use, politics and environment
- 3. To evaluate the way development impacts on people women, tribal population
- 4. To develop skills required for analyzing and developing strategy to address ecological and environmental issues by taking into consideration the political and social perspectives.

## UNIT- I PERSPECTIVES ON ECOLOGY AND SUSTAINABILITY.

- An Introduction to Ecology and Sustainable Development –meaning and scope
- Global Initiatives and Perspectives -Rio Declaration and Sustainable Development, Think Globally Act Locally.
- Millennium Development Goals of the UN: Sustainable Developmental Goals (SDG) Agenda 2030
- Laudato Si- Papal Encyclical- a Document on Ecological Justice

## UNIT-II ENVIRONMENTAL CHALLENGES IN INDIA

- Levels of environmental impacts of human activities- Shrinking diversity and threat of extinction to various biological communities in the regions of Western Ghats and Himalayas
- Need for Human capital: Improved ecological health and Knowledge; Sustainable opportunities for people

## Unit III ECOLOGICAL MOVEMENTS IN INDIA AND PUBLIC POLICY

- Various Ecological Movements: Tehri Dam, Appiko, Chipko, Narmada Bachao Andolan
- Recent Ecological Policies and Reports: Gadgil Committe Report; Kasturi Rangan Report
- **Skill Development Assessment**: (Field Study) Environmental Impact assessment; Environment Campaign / Programmes Designing, Implementation and Evaluation; Environment Friendly Technologies.

## **Case Studies:**

- 1. Tehri Dam Project, <u>https://www.youtube.com/watch?v=-cj0cDXCljU</u>
- 2. Kudankulam Protest
- 3. People's Initiatives for Environment and Forest Management in India

## **BIBLIOGRAPHY:**

- Baviskar, A. (1997). Ecology and Development In India: A Field And Its Future. *Sociological Bulletin*, 46(2), 193-207. Retrieved from http://iproxy.inflibnet.ac.in:2060/stable/23619589
- Chokar, K.B., Pandaya, M. and Raghunathan, M. (2004). *Understanding Environment*. New Delhi: Sage Publications & CEE.
- Gadgil, M. and Guha, R. (1995) *Ecology and Equity*. New Delhi, Penguin Books
- Haas, P. (1996). Is "Sustainable Development" Politically Sustainable? *The Brown Journal of World Affairs*, *3*(2), 239-247. Retrieved from <a href="http://iproxy.inflibnet.ac.in:2060/stable/24590153">http://iproxy.inflibnet.ac.in:2060/stable/24590153</a>
- Haque, M. (2000). Environmental Discourse and Sustainable Development: Linkages and Limitations. *Ethics and the Environment*, *5*(1), 3-21. Retrieved from <a href="http://iproxy.inflibnet.ac.in:2060/stable/27766052">http://iproxy.inflibnet.ac.in:2060/stable/27766052</a>
- Holdgate, M. (1995). How Can Development Be Sustainable? RSA Journal, 143(5464), 15-29. Retrieved from <u>http://iproxy.inflibnet.ac.in:2060/stable/41376905</u>
- Jaswal P.S., (2006). Environmental Law. Faridabad: Allahabad Law Agency
- Karnad, D., Krishnadas, M., & NAIR, T. (2013). Budgeting for Nature: Economic Growth and Ecosystem Conservation in India. *Economic and Political Weekly*, 48(25), 22-26. Retrieved from <u>http://iproxy.inflibnet.ac.in:2060/stable/23527967</u>
- Kothari, Ashish. (1997). Understanding Biodiversity: Life, Sustainability and Equity. Hyderabad: Orient Longman.
- Madhusudan, M., & Shankar Raman, T. (2003). Conservation as if Biological Diversity Matters: Preservation versus Sustainable Use in India. *Conservation and Society*, 1(1), 49-Retrieved from http://iproxy.inflibnet.ac.in:2060/stable/26396450
- Moellendorf, D. (2011). A Right to Sustainable Development. *The Monist*, 94(3), 433-452. Retrieved from <a href="http://iproxy.inflibnet.ac.in:2060/stable/23039153">http://iproxy.inflibnet.ac.in:2060/stable/23039153</a>
- Narayanan P., &Hanjagi, A. (2009). Land Transformation: A Threat On Bangalore's Ecology - A Challenge to Sustainable Development: Theoretical and Empirical Researches in Urban Management,4(1S), 38-47. Retrieved from <u>http://iproxy.inflibnet.ac.in:2060/stable/24872407</u>
- On Development and Ecology. (2000). *Economic and Political Weekly*, 35(14), 1153-1154. Retrieved from <u>http://iproxy.inflibnet.ac.in:2060/stable/4409105</u> Patel, S. (1997). Ecology and Development. *Economic and Political Weekly*, 32(38), 2388-2391. Retrieved from <u>http://iproxy.inflibnet.ac.in:2060/stable/4405866</u>
- Sharma, P.D. (1995). Ecology and Environment. Delhi: Rasthogi Publishes Shiva, Vandana. (1998) Earth Democracy, Justice Sustainability and Peace. London.

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# SOCIOLOGY OF HEALTH

## G. 104.4E

## **Objectives**:

- 1. To introduce students to the Sociology of health
- 2. To expose the students to various theoretical approaches in health
- 3. To explore the inter-relation between society and health
- 4. To understand the health care systems in India.

## **Unit1: Introduction**

- a. Origin and development of Sociology of health
- b. Four dimensions of health- Physical, Mental, Spiritual and Social
- c. Social components of Health- Housing, Potable, Nutrition and Waste Management

## **Unit 2: Theoretical Approaches in Health**

- a. Social Approaches
- b. Cultural Approaches
- c. Feminist Approaches

## **Unit 3: Society and Health**

- a. Attitudes, beliefs and values associated with disease
- b. Interpersonal relationship in hospital system, changing doctor-patient relationship
- c. Inequalities and Health- gender, class

## Unit 4: Health Care System in India

- a. Functions of hospitals co-ordination and supervision in hospitals
- b. Health system in India -Ayurvedic, Homeopathic and Allopathic
- c. Programmes and Policies social legislations for health care in India

## References

- 1. Annandale, E. (1988) *The Sociology of Health and Medicine*. Cambridge: Polity Press.
- Boorse, C. (1999) On the distinction between disease and illness. In J.L. Nelson and H.L.Nelson(eds.), *Meaning and Medicine: A Reader in the Philosophy of Healthcare*. New York: Routledge, pp. 16–27.
- 3. Fruend, P.E.S., McGuire, M.B. and Podthurst, L.S. (2003) *Health, Illness and the Social Body*. New Jersey: Prentice Hall, pp. 195–223.
- 4. Good, B. (1994) *Medicine, Rationality and Experience: An Anthropological Perspective.* Cambridge: Cambridge University Press, pp. 135–165.
- 5. Kleinman, A. (1988) *The Illness Narratives: Suffering, Healing and the Human Condition*. New York: Basic Books,pp. 3–30.
- Morgan, L.M. (1987) Dependency theory and the political economy of health: An anthropological critique. *Medical Anthropology Quarterly*, New Series, 1(2), 131-154.
- 7. Parsons. T. (1951) *The Social System*. London: Routledge, pp. 428–479.
- 8. Turner, B.S. (1995) *Medical Power and Social Knowledge*. London: Sage, pp. 1–54. \*\*\*\*\*\*\*

#### G 105.4E Media and Gender issues

#### Objectives

- To introduce the students to gender studies
- To sensitize the students on gender stereotyping in media and developing critical thinking
- To enable the students to develop media evaluation in terms of representation of gender

#### Unit 1

#### Introduction to Gender:

Gender and Sex, Femininity and Masculinity, LGBTQ. Framing and stereotyping gender. Cultural determinism and gender roles. Socio-cultural perspectives of body and sexuality; Gender sensitivity.

#### Unit 2

#### Portrayal of Gender in media:

Print- newspaper, magazine; Electronic media- soaps, reality shows, talk shows, game shows, comedy; Film; New media; Case studies. Gender bias; Heteronormativity.

#### Unit 3

#### Gender roles and exposure to media:

Media as a work place for different genders, Women and transgender and their roles in News and Entertainment industry- news room, music, dance, film – Hollywood and Bollywood; gender issues by male, female and transgender film directors; gender in theatre, art and literature.

#### Unit 4:

#### Analysing portrayal of gender in advertisements

Advertisements – gender stereotypes; Objectification and commodification; beauty and fairness ads; home appliances ads; office ads; family ads; automobile ads; Gender appeals in ads – emotional appeal, sex appeal, scarcity appeal, rational appeal.

#### **Recommended Books**

- Mohanthi, M (2004) Caste, Class and Gender. New Delhi: Sage.
- Berger, Arthur Asa (2003) Media and Society: a Critical Perspective. USA: Rowman & Little Field Publishers.
- John, Mary (ed) (2008) Women's studies in India: a Reader. New Delhi: Penguin. (Introduction).
- Rege, Sharmila (ed). (2003) Sociology of Gender: The Challenge of Feminist Sociological Knowledge. New Delhi: Sage.
- Kasturi, Leela & Mazumdar, Vina (1994) Women and Indian nationalism. New Delhi: Vikas Pub. House.
- Dutt, Bishnupriya (2010) Engendering Performance: Indian Women Performers in Search of an Identity. New Delhi: Sage.
- Krishnan, Prabha & Dighe, Anita (1990). Affirmation and Denial: Construction of Femininity on Television. New Delhi: Sage.
- Prasad, Kiran (ed.) (2005). Women and Media: Challenging Feminist Discourse. New Delhi: The Women Press.

#### **Course outcome**

- Greater awareness about gender related issues in media
- Sensitivity towards gender issues in general and media in particular.

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#### G 106.4E PSYCHOSOCIAL COMPETENCIES FOR BETTER LIVING

Objective: To enhance the well being by coping effectively with the demands and challenges of everyday life.

#### Unit I- Self awareness

Self concept, self esteem, self confidence, coping with emotions, fears and concerns

#### **Unit II- Communication**

Five components to effective communication, barriers, anger management, Interpersonal bonding, working in teams.

#### **Unit III- Entrepreneurial competencies**

Problem solving, Decision making, risk taking, management of time.

#### **References:**

Manual will be developed and followed for the course \*\*\*\*\*\*\*\*\*

## G 110.4E

## **Video Editing**

## UNIT I:

Over view of the editing process, Advantages, elements of editing, Principles of editing, Non-linear versus linear editing, video capture, formats and resolution, Analog versus Digital - the difference, Titles and credits, safe titles, Transitions-Fades, Cuts, Dissolves, Wipes, Keying & Layering, formats- Avi, MPG-2, Mov, Wmv, VCDs and DVDs, Internet formats, VHS, 3D compositing, DI process in films.

## <u>UNIT II:</u>

Video and audio editing softwares, Capturing and gathering media Build and organizing, importing, Rough cut, Trim the story, Motion Effects Text, Multiclip Filtering and Keying, Organizing Clips In The Browser, THE Creation of Sequences and BINS, The Icon View and Columns View, Marking Controls.

## **References:**

- 1. The Art and Science of Digital Compositing, Morgan Kaufmann by Ron Brinkmann, 1999
- 2. Digital Compositing for film and Video, Focal Press, 2006
- 3. PC Audio Editing, Focal Press, by Roger Derry, 2003
- 4. Editing Digital Video (Digital Video and Audio Series),
- 5. Adobe Premiere Pro CC Classroom in a Book, By Maxim Jago. By Adobe

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## G 111.4E

## DISASTER MANAGEMENT: PREPAREDNESS AND RESPONSE

## **OBJECTIVES:**

- To provide basic conceptual understanding of disasters and its relationships with development.
- To gain understand approaches of Disaster Risk Reduction (DRR) and the relationship between vulnerability, disasters, disaster prevention and risk reduction.
- To provide broad understanding about the basic concepts of Disaster Management

## UNIT I:

## **Concepts and Types of Disaster**

Understanding the Concepts and Definitions of Disaster, Hazard, Vulnerability, Risk, Capacity – Disaster and Development, and Disaster Management <u>Types of disasters</u> Geological Disasters (earthquakes, landslides, tsunami, mining); Hydro-Meteorological Disasters (floods, cyclones, lightning, thunder-storms, hail storms, avalanches, droughts, cold and heat waves) Biological Disasters (epidemics, pest attacks, forest fire); Technological Disasters (chemical, industrial, radiological, nuclear) Manmade Disasters (building collapse, rural and urban fire, road and rail accidents, nuclear, radiological, chemicals and biological disasters)

## UNIT II:

Disaster preparedness: Earthquake, Cyclone, Floods, fire Accidents, landslides Risks of future Disasters: a) Possible future pandemics, b) over population, c) food, d) Land, e) Fresh water, f) energy g) clean air Emergency planning: Disaster plan Disaster supply kit: water, food, first aid supplies, tools emergency supplies

## UNIT III

Disaster response: Search, Rescue, Evacuation and Logistics management Psychological Response and Management (post-traumatic stress and disorder) Relief and Recovery Rehabilitation of victims of the Disaster Case study: Indian Ocean Earthquake (2004)

Cyclone Disaster Management

## References

- Murthy, D.B.N. (2008). Disaster Management: Text and Case Studies. Deep Deep Publications Pvt. Ltd, New Delhi
- Reza, B.K. (2010). Disaster Management. Global Publications Delhi
- Karunanidhi, K.(2015). Disaster Management: Relief, Rehabilitation and Mitigation. Alfa Publications. New Delhi.
- Sphere Project (2011). Humanitarian Charter and Minimum Standards in Disaster Response.
- Geneva: Sphere Project. http://www.sphereproject.org/ handbook/
- Satapathy S. (2009) Psychosocial care in Disaster management, A training of trainers manual (ToT), NIDM publication.
- Prewitt Diaz, J.O (2004). The cycle of disasters: from Disaster Mental Health to Psychosocial Care. Disaster Mental Health in India, Eds: Prewitt Diaz, Murthy, Lakshmi Narayanan, Indian Red Cross Society Publication.
- Sekar, K (2006). Psychosocial Support in Tsunami Disaster: NIMHANS responses. Disaster and Development, 1.1, pgs 141-154.
- Inter-Agency Standing Committee (IASC) (Feb. 2007). IASC Guidelines on Mental Health and Psychosocial Support in Emergency Settings. Geneva: IASC.
- Alexander David, 2000 Introduction in 'Confronting Catastrophe', Oxford University Press. 12. Andharia J. 2008 Vulnerability in Disaster Discourse, JTCDM, Tata Institute of Social Sciences Working Paper no. 8,

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## G 135.4E Introduction to Cultural Studies

## Unit I: Theory of Culture

"Culture and Anarchy": Matthew Arnold "Culture is Ordinary" – Raymond Williams Recommended Text: Cultural studies: A Critical Introduction - Simon During

## **Unit II Visual Cultural text**

Film: Lagaan

Critical Essay on the Film Lagaan

Stable URL: http://www.jstor.org/stable/65075

Politics of Leisure in Colonial India: 'Lagaan': Invocation of a Lost History? Author(s): BoriaMajumdar. Source: Economic and Political Weekly, Vol. 36, No. 35 (Sep. -7, 200), pp. 3399-3404 Published by: Economic and Political Weekly

## Stable URL:<u>http://www.jstor.org/stable/4406</u>

Additional Reading: Cricket and Politics in Colonial India. Author(s): RamachandraGuha Source: Past & Present, No. 6 (Nov., 998), pp. 55-90 Published by: Oxford University Press on behalf of The Past and Present Society

## **Unit III Literary Text**

Text: The Reluctant Fundamentalist by Mohsin Hamid,

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## G 136.4E Translation Course

Translation Hindi to English/Kannada/Tulu/Konkani vice-versa

## Preamble

The modern age is the era of communication revolution and information technology. The relevance and utility of translation in this context is unambiguous today. In the field of knowledge and technology, a continuous advancement and progress is being achieved, the entire world knows its importance. The concept of 'globalization' and concept of 'Vishwa Gram' is being considered as communication and 'translation'. 'Translation' proves useful to present the expression of 'worldbrotherhood' and mutual sensibilities.

## St. Aloysius College (Autonomous) Mangaluru, Hindi,Dept. Translation Course - 2019

First Unit -	Translation: Definition and Meaning -	
	1. As translator.	
	2. Glossary of Terms.	
Second Unit-	Theory of Translation.	
	Translator's properties and liabilities.	
	Translator Problems and Connection.	
Third unit -	types and samples of translation	
	Literary translation.	
	Practical translation	
	Official translation	
Fourth unit-	translationprocessand experimentation	
	Source language reading and interpretation	
	Translation in the target language	
	Comparison and editing of both languages.	
Experimental Study -	(time 6 hours)	
Visit to	various institutions related to translation.	

Reference Books -

1. Hindi, prayojanmulak Hindi aur anuvad - Dr. Purnachand Tandon, Book House, Ansari Road, Dariaganj, New Delhi, 2012

2. Anuvad vignan- Bholanath Tiwari, Bookhouse Publications, New Delhi

3. **Prayojanmulak Hindi**- Dr. Madhav Sontakke, Lok Bharti, 15-A, Mahatma Gandhi Marg, Allahabad.

4. Anuvad ki samsyaye- No. Gopinathan and S. Kandaswamy, Lok Bharati Publications, first floor,davrbari building, Mahatamgandhi marg, Allahabad - 1

5. Karyalayi Hindi evamkaryalyi anuvad takanik- No. Dr. Suresh Maheshwari, Vikas Publications Kanpur

6. Anuvad vijnan ki bhumika- Krishna Kumar Goswami, Rajkamal Publications, Pvt. Lee 1-B,Netaji Subhash Marg, New Delhi-110 002

7. Anuvad siddanta aur samagrapatrachar- Dr. Shambhunath Dwivedi, Pooja Publications, Kanpur-208 021

8. Mulyankan shabdavali prabodhika Hindi –General Editor PonSubbiah, CIIL, Manasagangotri, Mysore – 570006.

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	ಸಂತ ಅಲೋಶಿಯಸ್ ಕಾಲೇಜು(ಸ್ರಾಯತ), ವ	ಬಂಗಳೂರು 575003			
ಪದವಿ ಪಠ್ಯಕ್ರಮ – ಕನ್ನಡ – (ಆಯ್ಕೆ ಆಧಾರಿತ ಮೌಲ್ಯಾಂಕ ಪದ್ಧತಿ) 2019–20					
ಆಯೆ, ವಿಷಯ (ಇಲೆಕಿ ವ್ ಕೋರ್ಸ್)- ಎರಡನೆಯ ಚರ್ತುಮಾಸ					
		ಒಟು ಅಂ≠ಗಳು · 50			
ಪಠ್ಯ : ತೆನೆ 4 ಮಾಧ್ಯಮ ಕನ್ನಡ					
		ಅಂತಿಮ ಪರೀಕ್ಷೆ : 40			
		ಆಂತರಿಕ ಮೌಲ್ಯಮಾಪನ : 10			
ಕ್ರ.ಸಂ	ಪಾಠ	·			
<b>ಘಟಕ:1</b> : ಮಾಧ್ಯಮ ಮತ್ತು ಕನ್ನಡ					
1.	ಮಾಧ್ಯಮಗಳ ಸ್ವರೂಪ, ಉದ್ದೇಶ, ವೈವಿಧ್ಯ, ಇತಿಹಾಸ ಮತ್ತು ಜವಾಬ್ದಾರಿ.				
2.	ಮಾಧ್ಯಮ ಪ್ರಕಾರಗಳು: ಪತ್ರಿಕೆ, ಬಾನುಲಿ, ದೂರದರ್ಶನ, ಬ್ಲಾಗ್, ಇ –ಪತ್ರಿಕೆ.				
<b>ಘಟಕ:2 –</b> ಕನ್ನಡ ಮತ್ತು ಕಂಪ್ಯೂಟರ್					
1.	ಮಾಹಿತಿ ತಂತ್ರಜ್ಞಾನ ಮತ್ತು ಕನ್ನಡ				
2.	ಗಣಕಗಳಲ್ಲಿ ಕನ್ನಡ ತಂತ್ರಾಂಶದ ಅಳವಡಿಕೆ ಮತ್ತು ಬಳಕೆ				
3.	ಯುನಿಕೋಡ್ ಮತ್ತು ಕನ್ನಡ : ನುಡಿಯಿಂದ ಯೂನಿಕೋಡ್–ಯೂನಿಕೋಡ್ನಿಂದ ನುಡಿಗೆ				
	ಪರಿವರ್ತನೆ				
4.	ಕನ್ನಡದಲ್ಲಿ ಎಂ ಎಸ್ ಆಫೀಸ್ ಮತ್ತು ಪವರ್ ಪಾಯಿಂಟ್ ಬಳಕೆ				
5.	ಕನ್ನಡ ಭಾಷೆ ಮತ್ತು ಅಂತರ್ ಜಾಲ ಹಾಗೂ ವಿದ್ಯುನ್ಮಾನ ಅಂಚೆಯ ಬಳಕೆ				
6.	ಕನ್ನಡ ಮತ್ತು ವಿಕಿಪೀಡಿಯಾ ಲೇಖನ ಬರವಣಿಗೆ				
7.	ಕಂಪ್ಯೂಟರ್ನಲ್ಲಿ ಅಂತರ್ಜಾಲ ತಾಣಗಳು ಹುಡುಕಾಟ				
8.	ಕಂಪ್ಯೂಟರ್ನಲ್ಲಿ ಕನ್ನಡ ಬ್ಲಾಗ್ ಬರಹ ತಯಾರಿ				
9.	ಕಂಪ್ಯೂಟರ್ನಲ್ಲಿ ಕನ್ನಡದ ಪದಕೋಶಗಳು ಮತ್ತು ಅವುಗಳ ಉಪಯೋಗ				

#### G 137.4E

#### ಪರಾಮರ್ಶನ ಗ್ರಂಥಗಳು

- 1. ಕನ್ನಡ ಸಾಹಿತ್ಯ ಚರಿತ್ರೆ ರಂ. ಶ್ರೀ ಮುಗಳಿ, ಉಷಾ ಸಾಹಿತ್ಯ ಮಾಲೆ, ಮೈಸೂರು.
- 2. ರಂ. ಶ್ರೀ.ಮುಗಳಿ, 'ಪ್ರಾಚೀನ ಕನ್ನಡ ಸಾಹಿತ್ಯರೂಪಗಳು',
- 3. ರಂ. ಶ್ರೀ.ಮುಗಳಿ, 'ಕನ್ನಡ ಸಾಹಿತ್ಯದ ಇತಿಹಾಸ',
- 4. ಕನ್ನಡ ಭಾಷೆಯ ಚರಿತ್ರೆ, ಪ್ರಾ. ಗು. ಕುಲಕರ್ಣಿ
- 5. ಶ್ರೀ ಸಾಮಾನ್ಯನಿಗೆ ಸಾಹಿತ್ಯ ಚರಿತ್ರೆ (ಸಂಪುಟ 10) ಪ್ರಸಾರಾಂಗ ಬೆಂಗಳೂರು ವಿಶ್ವವಿದ್ಯಾನಿಲಯ.
- 6. ಹೊಸಗನ್ನಡ ಸಾಹಿತ್ಯ ಎಲ್. ಎಸ್. ಶೇಷಗಿರಿ ರಾವ್.
- 7. ಕನ್ನಡ ಭಾಷೆಯ ಚರಿತ್ರೆ, ಸಾ. ಶಿ. ಮರುಳಯ್ಯ, ಕನ್ನಡ ಸಾಹಿತ್ಯ ಪರಿಷತ್ತು, ಬೆಂಗಳೂರು.
- 8. ಕನ್ನಡ ಭಾಷಾವ್ಯಾಸಂಗ ಡಾ. ಸಂಗಮಮೇಶ ಸವದತ್ತಿಮಠ, ರೂಪರಶ್ಮೀ ಪ್ರಕಾಶನ, ಕಲಬುರ್ಗಿ
- 9. 'ಆಡಳಿತ ಕನ್ನಡ', ಅಬ್ದುಲ್ ರೆಹಮಾನ್ ಪಾಷಾ, ಕನ್ನಡ ಮತ್ತು ಸಂಸ್ಕೃತಿ ನಿರ್ದೇಶನಾಲಯ, ಬೆಂಗಳೂರು.

10. ಆಡಳಿತ ಕನ್ನಡ, ಎ ಮುರಿಗೆಪ್ಪ (ಪ್ರ. ಸಂ), ಕನ್ನಡ ವಿಶ್ವವಿದ್ಯಾನಿಲಯ, ಹಂಪಿ

- 11. ಕ್ರಿಯಾತ್ಮಕ ಕನ್ನಡ, ವಸಂತ ಕುಮಾರ್, ತೆಂಡುಲ್ಕರ್ ಪ್ರಕಾಶನ, ಉಡುಪಿ
- 12. ಕನ್ನಡದಲ್ಲಿ ಕಂಪ್ಯೂಟರ್ ಶಿಕ್ಷಣ: ಸುರೇಶ ಎಂ

- 13. ಕಂಪ್ಯೂಟರ್ ಕೈಪಿಡಿ: ಡಾ. ಶ್ರೀಧರ್, ಬೆಂಗಳೂರು ವಿ.ವಿ. ಬೆಂಗಳೂರು
- 14. ಇಂಟರ್ನೆಟ್ ತಿಳುವಳಿಕೆ : ಬಿ.ನಾರಾಯಣಪ್ಪ, ಬೆಂಗಳೂರು ವಿ.ವಿ.
- 15. ಶ್ರೀನಿವಾಸ ಹಾವನೂರು, ಹೊಸಗನ್ನಡ ಅರುಣೋದಯ, ಕನ್ನಡ ಅಧ್ಯಯನ ಸಂಸ್ಥೆ, ಮೈಸೂರು ವಿಶ್ವವಿದ್ಯಾನಿಲಯ, ಮೈಸೂರು.
- 16. ಬಿ.ವಿ. ನಾಗರಾಜು, ನುಡಿಚಿತ್ರ, ಕರ್ನಾಟಕ ಮಾಧ್ಯಮ ಅಕಾಡೆಮಿ, ಬೆಂಗಳೂರು-1
- 17. ಚಂದ್ರಶೇಖರ್ಎಸ್. ಆರ್., ಸಮೂಹ ಮಾಧ್ಯಮಗಳು, ಕನ್ನಡ ಅಧ್ಯಯನ ಸಂಸ್ಥೆ, ಮೈಸೂರು ವಿ.ವಿ. ಮೈಸೂರು, 1976
- 18. ಸಮೂಹ ಮಾಧ್ಯಮಗಳು: ಎಸ್. ದಿವಾಕರ

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## FACULTY OF COMMERCE – CBCS

## **B. Com - Semester IV**

## Stock Market Operations G 309.4E

**Course outcomes**: On successful completion of the course the learner will be able to: CO-1: Develop a good understanding of the primary and secondary market

CO-2: Acquire the practical knowledge relating to trading in stock market.

CO-3: Describe the legal procedures involved in the functioning of stock market

Pedagogy: Classroom lectures, group discussions and case studies

## **Unit 1: STOCK MARKETS IN INDIA**

Introduction - Primary Market – Secondary Market- Stock Market -Functions of Secondary Markets- Present Recognized Stock Exchanges- Bombay: Stock Exchange -National Stock Exchange

## **Unit2: TRADING IN THE STOCK MARKET**

Auction Markets Vs. Broker-Dealer Markets- Advantages of Broker-dealer Markets -Hybrid Market: Bombay Stock Exchange-- Demat Form of Trading - Electronic Form of Trading -Screen Based Electronic Trading- Internet Trading (e trading)- Margin Trading - Electronic Fund Collection - Foreign Listing.

## **Unit3: REGULATIONS RELATING TO STOCK MARKET**

Procedure for Recognition of Stock Exchange-SEBI- Regulation by SEBI of Stock Brokers - Powers of SEBI- Registration of Stock Broker - General Obligations and Responsibilities

#### REFERENCES

- 1. Avadhani, V. (2014). Investment Management. New Delhi: Himalaya Publishing House.
- 2. Machiraju, H. (2011). Working of Stock Exchanges in India. New Delhi: New Age International.
- 3. Natarajan, E. G. (2016). Financial Markets and Services. New Delhi: Himalaya Publishing House.
- 4. Rajib, R. a. (2017). Stock Exchanges Investment And Derivatives. New Delhi: Tata McGraw-Hill.

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## B. Com – Semester IV

#### EVENT MANAGEMENT

#### G 307.4E

#### **OBJECTIVE:**

- To provide students with a conceptual framework of Event Management
- Learn about Event Services
- Conducting Event and Managing Public Relations

## **Unit: 1- INTRODUCTION TO EVENT MANAGEMENT**

Event – meaning; event management- need - analysis of event, scope of event, decision makers- event manager, technical staff- establishing of policies & procedure- developing record keeping systems.

## **Unit: 2-EVENT MANAGEMENT PROCEDURE**

Principles for holding an event, general details, permissions- policies, government and local authorities, - phonographic performance license, utilities- ambulance, catering, electricity, water, taxes applicable; precautions to be taken on managing an event.

## **Unit: 3-CONDUCT OF AN EVENT**

Preparing a planning schedule, assigning responsibility, communication and budget of event- checklist, computer aided event management– roles & responsibilities of event managers for different events. Corporate events; planning of corporate event, job responsibility of corporate events organizer, arrangements, budgeting, safety of guests and participants, creating blue print, need for entertainment in corporate events and reporting.

#### **Skill Development**

- Preparation of Event Plan for Wedding, Annual general body Meeting of an MNC.
- Preparing Budget for conduct of National level intercollegiate sports events.
- Preparation of Event Plan for College day Celebrations
- Preparation of Budget for Conducting inter collegiate Commerce Fest.

#### **Book References:**

- 1. Event Entertainment and Production Author: Mark Sonderm CSEP Publisher: Wiley & Sons, Inc.
- 2. GhouseBasha Advertising & Media Mgt, Vikas Book House.
- 3. Anne Stephen Event Management, Himalaya Publishing House.
- 4. K. Venkataramana, Event Management, SHBP.
- 5. Special Event Production Doug Matthews ISBN 978-0-7506-8523-8
- 6. The Complete Guide to successful Event Planning Shannon Kilkenny
- 7. Human Resource Management for Events Lynn Van der Wagen (Author)
- 8. Successful Team Manageemnt (Paperback) Nick Hayed (Author)
- 9. Event Management & Public Relations by Savita Mohan Enkay Publishing House
- 10. Event Management & Public Relations By Swarup K. Goyal Adhyayan Publisher – 2009

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## **B. Com – Semester IV**

## Personal Tax Planning G 308.4E

## **Objective:**

- Enable learners to assess income tax on individual income
- Offer knowledge on tax saving avenues under Income Tax Law

## **Unit 1: Assessment of Income of Individuals**

Income from Salary, Rental income, Business / Professional income, capital gains, other sources. Illustrations.

## **Unit 2: Assessment of Tax of Individuals**

Investments, savings, payments and incomes deductible while computing taxable income;

Income Tax rates applicable to individuals including Senior Citizens and Super Senior Citizens. Illustrations on computation of Taxable income and income tax payable

## **Unit 3: Filing of IT Returns**

IT returns by individuals, Due dates of return, PAN, Assessment Procedure.

## **Books for Reference:**

- 1 Vinod K Singhania and Monica Singhania, Students' Guide to Income Tax, University Edition, Taxmann Publications Pvt. Ltd., New Delhi.
- 2 GirishAhuja and Ravi Gupta, Systematic Approach to Income Tax, Bharat Law House, Delhi.
- 3 DinkarPagare, Law and Practice of Income Tax, Sultan Chand and Sons, New Delhi.
- 4 B.B Lal, Income Tax Law and Practice, Konark Publications, New Delhi.

## FACULTY OF MANAGEMENT – CBCS

#### PESRSONAL INVESTMENT AND TAX PLANNING G 406.4E

**OBJECTIVE OF THE PAPER:** To acquaint students with the basic knowledge of Investment and Tax planning.

#### **MODULE 1- UNDERSTANDING PERSONAL INVESTMENT PLAN - I**

Time value of money applications, Personal financial statements, Cash flow and debt management. Risk management and insurance decision in personal financial Planning, Various Insurance Policies and Strategies for General Insurance, Life Insurance, Motor Insurance, Medical Insurance. Various retirement schemes such as Employees Provident Fund (EPF), Public Provident Fund (PPF), Superannuation Fund, Gratuity, Other Pension Plan and Post- retirement counselling Investment Planning: Risk Return Analysis, Mutual Fund, Derivatives, Asset Allocation, Investment strategies and Portfolio construction and Management.

Learning Outcomes:

1) Learn the importance, and have a basic understanding of Tax planning techniques.

2) Develop and identify analytical skills, by lecture and class discussion to facilitate effective financial decision-making, including informed decisions regarding investment, insurance, retirement, and estate planning.

#### **MODULE 2- UNDERSTANDING PERSONAL INVESTMENT PLAN – II**

Gratuity, Other Pension Plan and Post- retirement counselling Investment Planning: Risk Return Analysis, Mutual Fund, Derivatives, Asset Allocation, Investment strategies and Portfolio construction and Management.

Learning Outcomes:

Upon course completion, the student should have the ability to have a working knowledge of the materials covered in the course, thereby providing the student with the ability to make – and, if necessary access, sources – for making appropriate financial decisions, both personal and business.

## **MODULE 3- TAX PLANNING**

Income-tax computation for Individuals- Direct Taxes

Income from salary, House property, Business and Profession, Capital Gains and Other Sources

Computation of Gross Total Income, Deductions available from 80C to 80U. Computation of Total Income. Tax Rebate, Tax Liability. Filing of Returns of an Individual Income. E-filing.

Learning outcomes:

The main objective of the course is to give an understanding of income tax laws in India and be able to do tax planning. Students of the course will able to state the use of deductions of expenses to reduce the taxable income.

#### SKILL DEVELOPMENT

- 1. Study the Form 16 of the employee.
- 2. Study the schemes which are exempted from tax as per Income Tax Act.

#### **BOOKS FOR STUDY AND REFERENCE**

1. Ranganathan and Madhumathi (2012) *Investment Analysis and Portfolio Management*, Pearson Publication, New Delhi.

2. George Rejda (2013) Principles of Risk Management and Insurance, Pearson publication, New Delhi.

3.Bhalla V K, (2011) *Investment Management – Security Analysis & Portfolio Management*, S. Chand and Company Limited.

4. Mehrotra C (2018) Income Tax Law & Accounts, Sahithya Bhavan Publications, New Delhi.

5. Singhania V K and Singhania Monica (2018) *Taxman's Income tax*, Taxman Publications Private limit, New Delhi.

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#### **FUNDAMENTALS OF ACCOUNTING**

#### G 407.4E

**OBJECTIVE OF THE PAPER:** To provide knowledge and understanding of the basic framework of financial statements and their preparation and reporting requirements.

**MODULE 1 - INTRODUCTION AND CONCEPTUAL BASIS OF ACCOUNTING** Meaning of Accounting; Objectives of Financial Accounting and Reporting – Users of Financial Accounting Information - Limitations of Accounting – Qualitative characteristics of financial statements: Understandability, Relevance, Reliability and Comparability - Basic Financial Statements (Balance sheet, Profit or loss statement, cash flow statement) Understanding the Concepts of Equity, Assets, Liabilities, Income, Expense and Revenue vs. Capital – Accounting Concepts & Conventions, GAAP.

Learning Outcome: To explain the underlying assumptions, policies and accounting estimates.

#### **MODULE 2 - FRAMEWORK OF ACCOUNTING**

Accounting Cycle – Classification of Accounts (based on Accounting Equation Method) -Process of Journalising – Posting to Ledgers - Preparation of Trial Balance - Preparation of Subsidiary Books: Purchases, Sales, Purchases Returns, Sales Returns, and Journal Proper.

Learning Outcome: To apply the principles of double – entry book keeping.

#### **MODULE 3 - FINAL ACCOUNTS OF SOLE TRADING CONCERN**

Preparation of Final Accounts of a Sole Trade - Meaning of Final Accounts -Trading Account- Meaning, Purpose and Preparation- Profit and Loss Account- Meaning, Purpose and Preparation. Balance Sheet- Marshalling of Balance sheet - Problems on preparation of Trading & Profit & Loss Account and Balance Sheet.

#### SKILL DEVELOPMENT

1. Study of published financial statements of firms (developing skills to interpret the financial statements & assess performance).

2. Collect information with regard to the practical reasons for charging depreciation and the methods adopted for calculating the same.

3. Generate different types of financial and cost related reports using excel and tally.

4. Find out the accounting system adopted by a sole proprietor.

#### **BOOKS FOR STUDY AND REFERENCE**

1. Anil Kumar V S, Mariappa and V Rajesh Kumar (2016) *Fundamentals of Advanced Accounting*, Kolkata: Himalaya Publishing House.

2. Goyal V K and Goyal Ruchi (2012) *Financial Accounting*, New Delhi: PHI learning Private Limited.

3. Gupta R.L and Gupta V K (2013) *Book keeping and Accounts*, New Delhi: Sulthan Chand and Sons.

4. Jain S P and Narang (2017) Basic Financial Accounting, Ludhiana: Kalyani Publishers.

5.. Maheshwari V.S.N and Maheshwari S.K (2015) *Financial Accounting*, Bangalore: Vikas Publishing House.

6. Maheshwari S. N and Maheshwari S. K (2014) *Introduction to Accountancy*, New Delhi: Vikas Publishing House Private Limited.

7. SofatRajani and Hiro Preethi (2012) *Basic Accounting*, New Delhi: PHI learning Private Limited.

8. Shukla M.C and Grewal T S (2015) *Introduction to Accounting & Advanced Accounting*, New Delhi: S Chand & Company Limited.

9. Tulsian P.C (2013) Financial Accounting, New Delhi: Pearson Education Private Limited.

10. Tulsian P.C, and CA Bharath Tulsian (2012) *Fundamentals of Accounting* (Kindle Edition), New Delhi: MC Graw Hill Education Private Limited.

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#### **TRAVEL AND TOURISM MANAGEMENTG 408.4E**

**OBJECTIVE OF THE PAPER:** To provide the student with an introduction to the world of business and particularly to business as it applies to the Travel and tourism of hospitality industry.

#### MODULE 1- INTRODUCTION TO TRAVEL AND TOURISM

Definition-concepts and classification and historical development of travel and tourism, types of tourist-visitor-excursionist, types and forms of tourism; tourism system, components of tourism and its characteristics. Tourism planning process; assessment of tourist demand;

Learning outcomes: To learn about demand for tourism industry and to understand the basic concepts of tourism.

#### **MODULE 2- ITINERARY PREPARATION**

Definition, Concept, Typology, Duration, Do's and don'ts of itinerary preparation -Limitations and Constraints, Custom made itinerary and Readymade itinerary, Factors to be considered while preparing an itinerary - Seasonal itinerary -Product based itinerary-Allinclusive itinerary.

Learning outcomes: To learn how to prepare the itinerary.

#### **MODULE 3- TOUR PACKAGING AND PRODUCTS**

Definition-Types-Forms and Components of Package Tour. Advantages and Disadvantages of Package Tour. Negotiation of Package Tour. Product Oriented Package tour: Health tourism, Yoga, Meditation and Nature Cure –Beach holidays- Pilgrim Tours. Adventure Package: Soft and Hard adventure -Concepts and guidelines: Desert safaris, Mountaineering, Skiing, White Water Rafting, and Scuba Diving, Golf tours, Theme tours and Cruise. Special Interest Tours: MICE Tours- Eco and Wildlife tours- Ethnic tours and Architectural tours - Farm tours -Fairs and Festivals- Rural/Village tour.

Learning outcomes: To learn how to design the tour packages.

#### SKILL DEVELOPMENT

• Visit travel agencies and prepare a report on working of the same.

- Work as tour guide in tour agencies
- Prepare an itinerary for the various tour packages

#### **BOOKS OF STUDY AND REFERENCE**

- 1. Chris Cooper, 2016, "*Essentials of Tourism*" Harlow, United Kingdom, Pearson Education Limited.
- 2. Pran math Seth, "*An introduction to your and tourism*" New Delhi, Sterling publishers.
- 3. Bhatia K.A "Internal tourism management", New Delhi, sterling publishers.
- 4. Jacob Ronatt, "Tourism operations and management" New Delhi, Oxford publishers.
- 5. Weaver, D. (2006) "Sustainable tourism: Theory and Practice". Sydney, Butterworth Heinemann.
- 6. A.K Bhatia, *"Tourism development- principles and practices"* New Delhi, sterling publishers.
- 7. Jagmohan "*Travel agency operations*" New Delhi, Kanishka Publishers & Distributors.
- 8. Ernie Health & Geoffrey Wall, "Marketing Tourism Destinations", John Wiley & Sons. Inc.
- 9. M.N. Chand, (2009), "Travel Agency Management", Anmol Publications Private Limited.
- 10. Acharya ram, "Tourism and cultural heritage of India", Jaipur, Rosa publication.
- Weaver David, Lawton Laura (2014) "Tourism Management" New York, United States, John Wiley & Sons Inc.

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#### NEW VENTURE CREATION AND ENTREPRENEURSHIP G 409.4E

**OBJECTIVE OF THE PAPER:** To inculcate an understanding of the concept of entrepreneurship and to give a direction for the budding entrepreneurs to start up their own venture.

#### MODULE 1- INTRODUCTION TO ENTREPRENEURSHIP DEVELOPMENT

Entrepreneurship: Concept and Definitions; features, functions, need of Entrepreneurship development; Entrepreneurial decision process, Types of Entrepreneurs, Qualities of an Entrepreneurs.

Concepts of Entrepreneurship Development - EDP Programmes, Manager vs. Entrepreneur, Family run business, Women Entrepreneurship, Rural Entrepreneurship, Social Entrepreneurship.

Learning Outcome: To understand the basics of entrepreneurship, different types of entrepreneurs and to understand the outcomes of social, rural and women entrepreneurs

#### **MODULE 2 - FINANCING OF AN ENTERPRISE**

Financing the New Venture: Importance of new venture financing, venture capital, determining ideal debt-equity mix, Angel Investors.

Enterprise Development- Start Up Analysis -The Challenges of New-Venture Start -ups, Start -ups in India, Pitfalls in selecting new venture, Critical factors for New ventures, Reasons for new Ventures failure

Learning outcome: To prepare a budget for start-ups and know the proper sources of funding to the enterprises.

#### **MODULE 3- FORMULATION OF BUSINESS PLAN**

Meaning of business plan, purpose, Opportunity identification and selection; formulation of business plan, Plan preparation for new ventures, Format of a business plan, Writing a business plan, contents, components and elements of a business plan. Learning Outcome: To learn to write a business plan and draft a business idea and to brain storm business ideas.

#### SKILL DEVELOPMENT

- 1. Make a business plan.
- 2. Read a book about one entrepreneur.

#### **BOOKS OF STUDY AND REFERENCE**

1. Bruce R Barringe and Ireland R. Duane (2012) Entrepreneurship, South Asia. Pearson.

2. Chandra Prasana (2011) Projects – Planning, Analysis, Selection, Implementation and Reviews, Tata McGraw-Hill.

3. Dayanandan R. and. Nilascoarputharaj A. (2012) Entrepreneurship development and small business management.

4. Desai Vasantha (2007) *Small Scale Industries and Entrepreneurship*, New Delhi: Himalaya Publishing House.

5. Desai Vasantha (2007) *Dynamics of Entrepreneurial Development and management*, 4th Edition New Delhi: Himalaya Publishing House.

6. Gupta K Nirmal. (1992) *Small Industry – Challenges and Perspectives*, New Delhi: Anmol Publications.

7. Jain C P (2012) Handbook for New Entrepreneurs, EDII, New Delhi: Oxford University Press.

8. Manimala Mathew (2010) *Entrepreneurship Theory at the Crossroads*, Paradigms & Praxis, New Delhi: 2/e Biztrantra.

9. Rao Kuratko, (2012) Entrepreneurship, New Delhi: Cengage Leaning.

10. Reddy Narayana P. (2010), *Entrepreneurship*, New Delhi: Cengage Learning India Private Limited.

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## FACULTY OF SCIENCE – CBCS

#### G 501.4E RENEWABLE ENERGY AND ENERGY HARVESTING

#### **Course objectives:**

- 1. To draw attention towards and develop an understanding about available renewable energy resources.
- 2. Impart basic theoretical knowledge.
- 3. Provide hands-on learning on renewable energy harvesting.

#### **Course outcomes:**

On successful completion of the course the student must be in a position to :

- 1. Define basic properties of renewable energy sources.
- 2. Decide on the viability of a given energy harvesting technology in any given environment.
- 3. Acquire knowledge of energy storing systems.
- 4. Realise the environmental impact of renewable energy harvesting technologies.

**Fossil fuels and Alternate Sources of energy:** Fossil fuels and Nuclear Energy, their limitation, need of renewable energy, non-conventional energy sources. An overview of developments in Offshore Wind Energy, Tidal Energy, Wave energy systems, Ocean Thermal Energy Conversion, solar energy, biomass, biochemical conversion, biogas generation, geothermal energy tidal energy, Hydroelectricity.

**Solar energy:** Solar energy, its importance, storage of solar energy, solar pond, non convective solar pond, applications of solar pond and solar energy, solar water heater, flat plate collector, solar distillation, solar cooker, solar green houses, solar cell, absorption air conditioning. Need and characteristics of photovoltaic (PV) systems, PV models and equivalent circuits, and sun tracking systems.

**Wind Energy harvesting:** Fundamentals of Wind energy, Wind Turbines and different electrical machines in wind turbines, Power electronic interfaces, and grid interconnection topologies.

**Ocean Energy:** Ocean Energy Potential against Wind and Solar, Wave Characteristics and Statistics, Wave Energy Devices.

Tide characteristics and Statistics, Tide Energy Technologies, Ocean Thermal Energy, Osmotic Power, Ocean Bio-mass.

**Geothermal Energy:** Geothermal Resources, Geothermal Technologies. **Hydro Energy:** Hydropower technologies, environmental impact of hydro power sources. **Piezoelectric Energy harvesting:** Introduction, Physics and characteristics of piezoelectric effect, materials, modelling piezoelectric generators, piezoelectric energy harvesting applications

Electromagnetic Energy Harvesting: Linear generators, recent applications

Carbon captured technologies, cell, batteries, power consumption

Environmental issues and Renewable energy sources, sustainability.

#### **Demonstrations and Experiments**

- 1. Field Visit/ Industrial Visit
- 2. Demonstration of Training modules on Solar energy, wind energy, etc.
- 3. Conversion of vibration to voltage using piezoelectric materials
- 4. Conversion of thermal energy into voltage using thermoelectric modules.

#### **Reference Books:**

Non-conventional energy sources - G.D Rai - Khanna Publishers, New Delhi

- Solar energy M P Agarwal S Chand and Co. Ltd.
- Solar energy Suhas P Sukhative Tata McGraw Hill Publishing Company Ltd.
- Godfrey Boyle, "Renewable Energy, Power for a sustainable future", 2004,
- Oxford University Press, in association with The Open University. Dr. P Jayakumar, Solar Energy: Resource Assesment Handbook, 2009
- J.Balfour, M.Shaw and S. Jarosek, Photovoltaics, Lawrence J Goodrich (USA).
- <a href="http://en.wikipedia.org/wiki/Renewable\_energy">http://en.wikipedia.org/wiki/Renewable\_energy</a>

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#### G502.4E: Chemistry in Everyday Life UNIT I

#### **Cosmetics and Toiletries Industry**

Raw materials: Surfactants – structure, types (anionic, cationic, nonionic and zwitterionic) hydrophilic lipophilic balance (HLB); Thickeners, foam stabilizers, natural oils, emulsifiers, humectants (definition, types and examples), plasticizers.

Hair-care products – Structure of hair keratin, major components of shampoo, hair dyes (mechanism and composition), Health & Environmental concerns.

Skin care products – skin structure, sunscreens, fairness creams, moisturizers, Health & environmental concerns.

Nail polish – formulation, manufacture and safety concerns.

Perfumes – Perfumes and odours in nature, synthetic perfumes, ingredients, chemoreception.

#### **Polymers in Everyday Life**

Natural and synthetic polymers – Properties, classification and structures, polymers and the environment, recycling of polymers.

Natural polymers – cellulose, starch, polysaccharides, proteins, polyisoprene.

Synthetic polymers – Rubber, Adhesive, paints, silicones and plastics.

#### **UNIT II**

#### **Drugs and Medicines**

General principles of drug action; classification on the basis of origin and therapeutic use; different routes of drug administration; mechanism of drug action.

Drug-receptor interactions – Covalent, ionic, hydrogen bonded, Vander Waals and hydrophobic/hydrophilic interactions.

Chemistry of Prodrugs – Concept; applications; some important prodrug concepts (to improve chemical stability, increased water solubility, decrease toxicity).

General anaesthetics – Introduction and classification, Examples (nitrous oxide, chloroform).

Local Anaesthetics – Definition, properties of ideal local anaesthetics; Examples (Benzocaine, lidocaine).

Sedatives and hypnotics – Classification (Barbiturates and non-barbiturates); Chemistry of Barbiturates – Examples, structure-activity relationship, mechanism of action and uses of Barbiturates.

Non-steroidal Anti-inflammatory Drugs (NSAIDs) – Definition, general structure and Classification – Salicylates (Aspirin, Salol) and Propionic acid (Ibuprofen).

#### Reference Books:

- **1.** *Chemistry and technology of the cosmetics and toiletries industry,* D. F. Williams, W. H. Schmitt (1992), Kluwer Academic Publishers.
- **2.** *The chemistry of fragrances: From Perfumer to Consumer*, Charles Sell, 2<sup>nd</sup> Ed. (2015), Royal Society of Chemistry.
- 3. *Medicinal Chemistry*, Ashutosh Kar, 7<sup>th</sup> Ed. (2018), New Age Publishers.
- 4. *Principles of organic medicinal chemistry*, R. R. Nadendla (2005), New Age Intl Publishers.
- **5.** *Essentials of pharmaceutical chemistry*, Donald Cairns, 4<sup>th</sup> Revised Ed. (2012), Pharmaceutical Press.

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## G 503.4E Applications of Basic Arithmetic

## **COURSE OUTCOMES**

CO -1	Have strong basic arithmetic and computational skills.
CO -2	Be able to efficiently calculate and solve numerical problems faster.
CO -3	Be prepared for aptitude based competitive exams.
CO -4	Use tricks and shortcuts to solve problems on Calendar and clocks.

#### Unit I

Number System, Decimal Fractions, Simplifications, Average, Problems on numbers.

#### Unit II

Time and distance, Time and Work, Boats and Streams, Problems on trains, Calendar, Clocks.

#### References

- 1. H. S. Hall and F. H. Stevens, An Elementary Course of Mathematics, Macmillan and Co, Ltd.
- 2. Aggarwal (R. S); *Quantitative Aptitude*, 2008;S.Chand &Co.Ltd.
- 3. A.Balaraju, Mentalability, SMVPublishers, Kolar
- 4. Sijwali (B. S); and Sijwali (Indu); Verbal and Analytical Reasoning, Arihant Publishers

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#### G 504.4E: PRINCIPLES OF MEDICAL ELECTRONICS AND

#### **BIOMEDICAL INSTRUMENTATION**

#### **Course Objective:**

The student should be made:

- To gain knowledge about the various physiological parameters both electrical and nonelectrical and the methods of recording and also the method of transmitting these parameters.
- To study about the various assist devices used in the hospitals.
- To gain knowledge about equipment used for physical medicine and the various recently developed diagnostic and therapeutic techniques.

#### **Course Outcome:**

On successful completion of this course, the student should be able to:

- Know the human body electro- physiological parameters and recording of biopotentials.
- Comprehend the non-electrical physiological parameters and their measurement body temperature, blood pressure, pulse, blood flow meter etc.
- Interpret the various assist devices used in the hospitals viz. pacemakers, defibrillators, dialyzers and ventilators.
- Comprehend physical medicine methods eg. ultrasonic, shortwave, microwave surgical diathermies , and bio-telemetry principles and methods.
- Know about recent trends in medical instrumentation.

#### SYLLABUS

#### UNIT I

**Biomedical transducers:** Classification and Selection, Resistive, capacitive & Inductive transducers, Piezo-electric, Temperature and Digital transducers; Principles of working and their characteristics.

**Physiological Signals:** Cell and its structure – Resting and Action Potential, propagation of action potentials, Types of Physiological Signals, Development of biomedical instrumentation, characteristics for designing medical equipment, man instrument system components block diagram.

**Electrodes & Amplifiers**: Principles of working and their characteristics, Electrode-Electrolyte model. Microelectrodes, Amplifiers for biomedical instrumentation.

**Instrumentation for Measurements:** Basics of ECG, EMG, EEG, and Instrumentation for measuring these signals, Measurement of blood pressure & blood flow.

Cardiac Pacemakers: block diagram & its working principle, Types of pacemakers.

**Defibrillators**: block diagram, Mechanism, AC defibrillators and Capacitive Discharge DC defibrillators.

#### UNIT II

**Biomedical Equipments:** Basic Medical Instrumentation System, Respiratory measurements and aids: Principles and Techniques of Impedance Pneumograph.

Electrosurgical units (ESU): modes of operation of the ESU & the safety features.

Ventilator: Block diagram and working and its types.

**Audiometer:** Block diagram and working and its types. Hearing aids: Different types, Comparison of microphones,

**Ultrasonics**: Basic principle, block diagram of an echocardiograph. Study of Endoscopes, Neonatal instrumentation.

**Heart-Lung Machine**: Governing principles, block diagram, Qualitative requirements and types of blood oxygenators.

**Haemodialysis:** block diagram, Qualitative requirements, General scheme of operations, Types of exchangers, Block diagram of the dialysis machine, Electronic control and monitoringsystems.

#### **References:**

- 1. John G Webster, "Medical Instrumentation", John Willey, Edition 3, 2001.
- 2. R S Khandpur, "Hand book of Biomedical Instrumentation", TATA McGraw Hill, Edition 2, 2003.
- 3. Richard Aston, "Principles of Biomedical Instrumentation and Measurements", Maxwell macmilan International editions.
- 4. LA Geddes & LE Baker, "Principles of Applied Medical Instrumentation", John Wiley Edition 3, 1989.
- 5. Leslie Cromwell, "Biomedical Instrumentation and Measurements", Prentice Hall, Edition 2, 2000.

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## G 505.4E Office Automation

Introduction to open office/MS office/Libre office Word Processing: Formatting Text, Pages, Lists, Tables Spreadsheets: Worksheets, Formatting data, creating charts and graphs, using formulas and functions, macros, Pivot Table Presentation Tools: Adding and formatting text, pictures, graphic objects, including charts, objects, formatting slides, notes, hand-outs, slide shows, using transitions,

animations

#### **Books Recommended:**

- 1. SushilaMadan , Introduction to Essential tools, JBA, 2009.
- 2. Anita Goel, Computer Fundamentals, Pearson, 2012

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#### G 506.4E STATISTICAL DATA ANALYSIS USING SPSS

#### **Objectives:**

- 1. To train students in SPSS Software.
- 2. To expose the students to the analysis of statistical data.

#### UNIT I

**Descriptive Statistics:** Measures of averages, Measures of variation, Kurtosis. Correlation: Karl Pearson's and Spearman's Rank Correlation, Regression analysis: Simple Regression Analysis.

#### UNIT II

**Introduction to SPSS:** Description of SPSS menu, import from other data source, data entry, labelling for dummy numbers, recoding of the variables, transpose of data, insert variables and cases merge variables and cases.

#### **UNIT III**

**Data handling:** Split, select cases, transform, compute total scores and table looks, changing column, font style and sizes. Diagrammatic representation: Simple bar diagram, Multiple bar diagram, Sub-divided bar diagram, Percentage bar diagram, Pie diagram, Frequency table, Histogram, Scatter diagram, Box plot.

#### **References:**

- Darren George & Paul Mallery (2019), IBM SPSS Statistics 25 Step by Step, 15<sup>th</sup> Ed., ISBN: 978-1-138-49104, Taylor & Francis.
- Ronald D. Yockey (2018), SPSS Demystified-A Simple Guide and Reference, 3<sup>rd</sup> Ed., Taylor & Francis.
- 3. Ajay S. Gaur & Sanjana S. Gaour (2009), Statistical Methods for Practice and Research: A Guide to Data Analysis using SPSS, ISBN: 9788132101000.

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## G 507.4E NURSERY MANAGEMENT AND GARDENING

Choice based credit system – **Interdisciplinary-** An elective course which enables an exposure to some other discipline/domain

#### Course outcomes:

#### On completion of this course student will be able to

- understand the concept and importance of gardening
- maintain a nursery
- commercialize the knowledge

#### UNIT1

**1.1 Nursery:** Definition, objectives, scope and building up of infrastructure

**Planning and seasonal activities** - Planting - direct seeding and transplants. Nursery Management and Routine Garden Operations. Different types of gardening- Landscape and home gardening - parks and its components, plant materials and design

1.2 Gardening operations: soil laying, manuring, watering.

Principles of organic farming, Management of pests.

Green house - mist chamber, shade house and glass house for propagation.

#### UNIT2

**2.1 Propagation methods**: Sowing/raising of seeds and seedlings, transplanting of seedlings. Air-layering, cutting, selection of cutting , propagule collecting season, treatment of cutting , rooting medium and planting of cuttings, Hardening of plants.

**2.2 Ornamental Plants with examples:** Flowering annuals; herbaceous, perennials, Divine vines, Shade and ornamental trees, Ornamental bulbous and foliage plants, Cacti and succulents, Ornamental palms, Medicinal, Aromatic plants and Hydrophytes Cultivation of plants in pots, Indoor gardening, Bonsai.

Cultivation of Important flowers (Anthuriums, Orchids, Marigold, Jasmine) 33

#### **References:**

1. Ratha Krishnan, P., Kalia R.K., Tewari J.C. and Roy M.M., 2014. Plant Nursery Management: Principles and Practices. Central Arid Zone Research Institute, Jodhpur.

2. Smith E.C. 2009. Vegetable garden bible. Storey Publishing LLC, USA.

3. Uberoi M. 2002. The Penguin Book of Gardening in India. Penguin random house publishers, New Delhi

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4. Batth A.S. 2016. Home Gardeners' Guide Indian Garden Flowers, New Delhi.

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## G 508.4E NATURE AND WILDLIFE PHOTOGRAPHY

## Basic concepts of photography

- 1. Introduction to photography: History and evolution of photography.
- 2. Types of photography
- 3. Basics of photography: Focusing, aperture, ISO, shutter speed.
- 4. Lighting
- 5. Depth of field
- 6. Types of camera- Point and shoot camera, bridge camera, SLR and DSLR.
- 7. Choice of camera and lenses for nature and wildlife photography

## Advanced skills and techniques:

- 8. Autofocus and manual focus
- 9. Exposure: Metering modes and their use
- 10. Use of flash in photography
- 11. Other tools used in photography
- 12. Rules of composition
- 13. Post processing techniques in Light room and Photoshop
- 14. Macro and landscape photography
- 15. Bird and mammal photography
- 16. Rules and codes of ethical nature/wildlife photography

## References

- 1. Tharp, B. (2010) Creative nature and outdoor photography. Revised Edition, Amphoto Books. Canada.
- 2. Peterson, B. (2016) Understanding exposure, IV Edn, Amphoto books, Ontario, Canada.
- 3. Weston, C. (2008) Nature photography: Insider secrets from the world's top digital photography professionals, Routledge publishers, London, UK.
- 4. Owen, D. (2019) Park Ranger's guide to nature and wildlife photography, Amherst Media, New York.

- 5. Farrell, I. (2014) Complete guide to digital photography, Quercus publishers. London, UK.
- 6. Ballard, J. (2017) Wildlife photography: Proven techniques for capturing stunning digital images, Falcon guides. UK.
- 7. Gerlach, J. and GerlachB. (2013) Digital wildlife photography, Routeldge publishers, London, UK.
- 8. Freeman, J. (2015) Complete practical guide to digital and classic photography, Southwater publishers. Leicester, UK.
- Alderfer, J. (2007) National Geographic birding essentials: All the tools, techniques, and tips you need to begin and become a better birder, National Geographic. Washington DC.
- 10. Bernabe, R. (2018) Wildlife Photography, Ilex press, Lewes, UK.
- 11. Caputo, R. (2007) National Geographic: The ultimate field guide to landscape photography (National Geographic photography field guides), National Geographic, Washington DC.
- 12. Arbari, S. (2011) The complete guide to nature photography: Professional techniques for capturing digital images of nature and wildlife, Amphoto books. Ontario, Canada.
- Boyer, T. (2018) Learn the art of bird photography: The complete field guide for beginning and intermediate photographers and birders, Createspace Independent Publishing Platform. California, US.

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#### G509.4E SOLID WASTE MANAGEMENT

#### **Course Learning Outcomes**

Outcome 1. Understand the concepts categories of solid waste

**Outcome 2**. Have developed a very good understanding of types of e-waste.

**Outcome 3**. Gained knowledge of a variety of methods of safe disposal of solid and e-waste.

#### 4. ELECTIVE - OPEN ELECTIVE - IV SEMESTER -SOLID WASTE MANAGEMENT-G509.4E CREDIT: 1

**UNIT-1.Definition** of a Solid Waste, Categories of Wastes , Municipal Solid Waste, Hazardous Waste ,Industrial, Waste. Medical Waste, Universal Waste, Electronics Waste Construction and Demolition Debris .Radioactive Waste Mining Waste, Agricultural Waste Generation of MSW, Solid Waste Management Source Reduction Recycling. Incineration Land Disposal. **Common Components in Municipal Solid Waste** 

Electronics Waste: Introduction : Major Types of Electronic Equipment Computers, Cathode Ray Tube Computer Monitors Computer Desktop Telecommunications Equipment (Telephones, Fax Machines Mainframe Computers and High-End Telecommunications Equipment, Televisions with CRTs, Flat Screen Televisions, Telephones, Hazards of e-Waste: Cathode Ray Tubes, Computers Wastes Hazardous Waste, EPA CRT Rule, Boards, Electronics Recycling Residential Collection Programs, Reuse and Resale, Deconstruction, Processing and Recycling e-Waste Components CRT Glass Metals Circuit Boards. Central Processing Units, Computer Peripherals

#### UNIT-2

Composting MSW, Introduction ,Composting, Overview of the Composting Process, Role of Microorganisms in Composting , Factors Affecting the Composting Process: Preprocessing of the Feedstock ,Environmental Factors, C:N Ratio ,Aeration, Moisture Content, Temperature, PH, Composting Stage Turned Piles Turned Windrow, Aerated Static Piles, In-Vessel Systems Stage Environmental Concerns during Composting Air Quality, Odor Noise, Toxins within the Pile, Leachate, Runoff Litter.

#### **REFERENCES:**

WASTE MANAGEMENT PRACTICES Municipal, Hazardous, and Industrial, Industrial, Second Edition John Pichtel, CRC Press Taylor & Francis Group6000 Broken Sound Parkway NW.

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#### G 510.4E MOLECULES OF LIFE

#### Unit-I

**Carbohydrate**: Introduction, Biological importance, classification. Monosacharides, Disaccharides and polysaccharides (Definition, sources and examples).Blood sugar and diabetes mellitus, obesity (causes, symptoms and treatment).**Amino acids**: Definition and nutritional classification. Amino acid metabolic disorders: Phenylketonuria and albinism. **Protein**: Definition, biological importance and nutritional classification. Peptide bond, biologically important peptides. Malnutrition: Kwashiorkor and Marasmus.

Unit-II

**Lipids**: Classification and properties. Fatty acids: Classification and properties of fatty acids (rancidity and Saponification). Lipoproteins: types and function. Serum lipid profile, Hypercholesterolemia and atherosclerosis. **Nucleic acids**: Introduction, nitrogenous bases - purines and pyrimidines, nucleosides, nucleotides, phosphodiester bonds. Types and functions of DNA and RNA. Biological importance of DNA and RNA. Gout (Causes, symptoms and treatment).

#### **References:**

- 1. Fundamentals of Biochemistry (2005) by J.L Jain, 6th Ed, S. Chand & Co Ltd.ISBN:81-219-2453-7.
- Lehninger: Principles of Biochemistry (2013) 6<sup>th</sup> ed., Nelson, D.L. and Cox, M.M., W.H. Freeman and Company (New York), ISBN: 13: 978-1-4641-0962-1 / ISBN: 10:1-4292-3414-8.
- Physical Biochemistry (2009) 2nd ed., Sheehan, D., Wiley-Blackwell (West Sussex), ISBN: 9780470856024 / ISBN: 9780470856031.
- 4. The Tools of Biochemistry (1977; Reprint 2011) Cooper, T.G., Wiley India Pvt. Ltd. (New Delhi), ISBN: 978-81-265-3016-8.
- Biochemistry (2011) 4<sup>th</sup> ed., Donald, V. and Judith G.V., John Wiley & Sons Asia Pvt. Ltd. (New Jersey), ISBN: 978-1180-25024.
- 6. Biochemistry (2010) 4<sup>th</sup> ed., Garret, R. H. and Grisham, C.M., Cengage Learning (Boston),ISBN-13:978-0-495-11464-2
- 7. Biochemistry (2013) by U. Satyanarayana and U. Chakrapani, 4th edition, Elsevier.

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 Textbook of Biochemistry with Clinical Correlations (2011) 7th ed., Devlin, T.M., John Wiley & Sons, Inc. (New Jersey), ISBN: 978-0-470-28173-4. 3.

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## G 511.4E- IMMUNE SYSTEM AND DISEASE MANAGEMENT

## **CREDITS: 2**

## Unit 1

## Introduction

Brief history to immunology, innate and adaptive immunity – skin, physiological, phagocytic and inflammation, lymphocytes, Cells and Organs of Immune system, Antigen and antibody structure & functions

## UNIT II

## Microbial Diseases

The following diseases in detail with Symptoms, mode of transmission, prophylaxis and control

**Bacterial diseases:** Respiratory Diseases: Haemophilusinfluenzae, Mycobacterium tuberculosis

Gastrointestinal Diseases: Salmonella typhi, Vibriocholerae

**Viral diseases:** Polio, Hepatitis, Rabies, Dengue, Influenza with brief description of swine flu, Ebola, Nipah virus

Protozoan diseases: Malaria, Kala-azar

**Fungal diseases:** Cutaneous mycoses: Tineapedis (Athlete's foot); Systemic mycoses: Histoplasmosis; Opportunistic mycoses: Candidiasis

**Sexually transmitted diseases (STD):** Types, route of infection, clinical symptoms and prevention.

#### Unit III

#### Vaccines & Cancers

Active and passive immunization, types of vaccines. Cancer-types of cancer, causes of cancer.

#### REFERENCES

- 1. Ananthanarayan R. and Paniker C.K.J. (2009) Textbook of Microbiology. 8th edition, University Press Publication
- 2. Brooks G.F., Carroll K.C., Butel J.S., Morse S.A. and Mietzner, T.A. (2013) Jawetz, Melnick and Adelberg's Medical Microbiology. 26th edition. McGraw Hill Publication.
- 3. Madigan MT, Martinko JM, Dunlap PV and Clark DP. (2014). Brock Biology of Microorganisms.14<sup>th</sup> edition. Pearson International Edition
- 4. Goldsby R. A., Thomas J. K, Osborne B A., 2007. Kuby Immunology, W. H. Freeman and Company, New York.

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## G 512.4E Video Editing

#### UNIT I:

Over view of the editing process, Advantages, elements of editing, Principles of editing, Non-linear versus linear editing, video capture, formats and resolution, Analog versus Digital - the difference, Titles and credits, safe titles, Transitions-Fades, Cuts, Dissolves, Wipes, Keying & Layering, formats- Avi, MPG-2, Mov, Wmv, VCDs and DVDs, Internet formats, VHS, 3D compositing, DI process in films

#### <u>UNIT II:</u>

Video and audio editing softwares, Capturing and gathering media Build and organizing, importing, Rough cut, Trim the story, Motion Effects Text, Multiclip Filtering and Keying, Organizing Clips In The Browser, THE Creation of Sequences and BINS, The Icon View and Columns View, Marking Controls

#### **References:**

- 6. The Art and Science of Digital Compositing, Morgan Kaufmann by Ron Brinkmann, 1999
- 7. Digital Compositing for film and Video, Focal Press, 2006
- 8. PC Audio Editing, Focal Press, by Roger Derry, 2003
- 9. Editing Digital Video (Digital Video and Audio Series),
- 10. Adobe Premiere Pro CC Classroom in a Book, By Maxim Jago. By Adobe

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#### G 513.4E QUANTITATIVE ECONOMICS

#### **LEARNING OBJECTIVES:**

- To acquaint the students with elementary knowledge of mathematical techniques in Economics.
- To train them to use mathematical techniques in economics.

#### **LEARNING OUTCOMES:**

- The Student will be able:
- To Apply some mathematical methods to economic theories
- Using calculus and differential equations in the economic models
- Use economic integration in applications

# MODULE I: LINEAR FUNCTIONS AND THEIR APPLICATION IN ECONOMIC ANALYSIS

Linear Function - Demand Function - Supply Function - Market Equilibrium - Taxation - Subsidy - Elasticity of Demand- National Income Determination.

# MODULE II: NON- LINEAR FUNCTIONS AND THEIR APPLICATION IN ECONOMIC ANALYSIS.

Quadratic Function – Simple and General market Market Equilibrium – Production Possibility Curves – Power Function – Pareto's Distribution of Income – Logarithm and Anti- Logarithms- Exponential Function – Interest Compounding, Discounting

# MODULE III: DIFFERENTIAL AND INTEGRAL CALCULUSAND THEIR APPLICATION IN ECONOMIC ANALYSIS.

Application of Derivatives in Economics – Cost – Average and Marginal Cost Relationship – Revenue – Average and Marginal Relationship – Equilibrium of the Firm under perfect competition, monopoly, price discrimination. Integral Calculus Definite Integration – Application to Economics – Consumers Surplus – Producers Surplus – – Indefinite Integration – Cost and Revenue Analysis, National Income Analysis

#### **BOOKS FOR REFERENCES:**

- 12. Allen, R.G.D., 2007. : *Mathematical Analysis for Economists*, Macmillan, Mumbai
- Bhardwaj, R.S., 2007: Mathematics for Economics and Business, 2<sup>nd</sup> Ed. Excell Books, NewDelhi.
- 14. Chiang, A.C. ,1985: Fundamental Methods of Mathematical Economics, 3<sup>rd</sup> Ed.
  McGraw Hill Mumbai.
- 15. Dinwiddy, C., 1967, *Elementary Methods of Mathematical Economics*, Oxford University Press
- Dowling, E.T, 2005: Introduction to Mathematical Economics, 2<sup>nd</sup> Ed. Schaum's Outline Series, MacGraw Hill, Mumbai.
- 17. Halden, K. and A.W. Pearson, (2002): *Introductory Mathematics for Economics and Business*, Macmillan Press Ltd, Delhi.
- 18. Mehta & Madnani : 1992: . Mathematics for Economists, S. Chand, New Delhi.
- 19. Simon, Carl P. and Lawrence Blume, 2007 : *Mathematics for Economics*, Viva Books Pvt Ltd, NewDelhi.
- 20. Veerachamy, R., 2008 : *Quantitative Methods for Economists*, New Age International Publications, New Delhi.
- 21. Weber, Jean E. ,1982: *Mathematical Analysis* , Harper International.
- 22. Yamane, T., 2011: *Mathematics for Economists*,2<sup>nd</sup> Ed. PHI Learning, NewDelhi. \*\*\*\*\*\*\*

## FACULTY OF COMPUTER APPLICATIONS – CBCS

#### G604.4E HARDWARE AND PC MAINTENANCE

#### Learning Objectives:

- To build and maintain computer systems, desktops, and peripherals.
- To learn installing, diagnosing, repairing, maintaining, and upgrading Softwares

#### Learning Outcomes:

At the end of the course students will fully aware of

- Assembling Computer Systems
- Installing Various Operating Systems and other softwares
- Trouble suiting Computer Systems

## UNIT I

**The Complete PC**: External Connections, Devices and Their Connectors. Introduction to networking hardware: Crimping, Cabling and NIC Card Fixing, Setting up of a Local Area Network(User account creation, IP Address configuration, MAC Address, ARP Tables),Essential Networking Commands. Microprocessor: Selecting, Installing, and Troubleshooting. RAM: Type, Installing, Troubleshooting. BIOS :Modify CMOS: The Setup Program, A Quick Tour Through a Typical CMOS Setup Program, Power-On Self Test (POST). Motherboards: Installing Expansion Cards, Upgrading and Installing Motherboards, Installing and Maintaining Power Supplies .Hard Drive Technologies: Installing Drives, BIOS Support: Configuring CMOS and Installing Drivers, Hard Drive Formatting, The Partitioning and Formatting Process, Installing Removable Media.

#### UNIT II

Installing and Upgrading Windows: Preparing for Installation or Upgrade, Troubleshooting Installation Problems, Post-Installation Tasks. Windows7: The Windows Interface, Operating System Folders, Tech Utilities. Task Manager, Managing Users in Windows 7, Maintaining Windows, Optimizing Windows, Preparing Windows for Problems, Failure to Boot: Windows 7 Installing and Configuring a Wired Network, Connecting to the Internet, Installing a Printer in Windows, Network Security.

#### **Text Book:**

1. Mike Meyers' CompTIA A+ $\mbox{B}$  Guide to Managing and Troubleshooting PCs Fourth Edition, 2016 Publication - McGraw-Hill

#### **References Books:**

1. Balvir Singh, PC Hardware, Published by : Firewal Media, 2008.

2. Craig Zacker and Jhon Rourke, The Complete Reference PC Hardware, Tata McGraw-Hill Publishing Company Limited, 2001

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#### G605.4E Fundamentals of ICT

#### Learning Objectives:

• To make the students understand and learn the basics of computer for its effective use in day to day life.

#### Learning Outcomes:

- Be able to apply knowledge of computing analyze a problem, and identify and define the computing requirements appropriate to its solution
- Be able to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs

#### UNIT I

**Computer Basics**: Introduction, Characteristics computers, Evolution computers, Generation of computers, Classification of computers, the computer system, Application of computers. **Computer Architecture:** Introduction, Central processing unit- ALU, Registers, Control unit, system bus, main memory unit, cache memory, communication between various units of a computer system. **Number system:** Conversion between binary, decimal, octal and hexadecimal integers. **Computer software:** Introduction, software definition, relationship between software and hardware, software categories, Installing and uninstalling software, software piracy, software terminologies.

#### UNIT II

**Computer programming languages**: Introduction, developing a program, Program development cycle, Types of programming languages, generation of programming languages, Features of a good programming language. Word processing software, **Presentation software**: Introduction, , PowerPoint environment, creating a new presentation, working with different views, using masters, adding animation, adding transition, running slides. **Access:** Access environment, Database objects.

**Spreadsheet** software: Excel environment, copying cells using Fill handle, dragging cells, Formulas and functions, Inserting Charts, sorting. **The Internet:** Introduction, Evolution, basic internet terms, Internet applications, Data over the internet. **Internet tools:** Web browser, Web browser features, Internet Explorer environment, Electronic mail, Email address structure, checking email, sending email, email attachment, How email works, advantages and disadvantages of email, searching

**Text Book:** TL Education Solution Limited, **Introduction to Information Technology**, Pearson- Second Edition, 2008.

#### **Reference Books:**

1. Peter Norton, **Introduction to Computers**, 7th edition, Tata McGraw Hill Publication, 2011

2. Anita Goel, **Computer Fundamentals**, Pearson Education, 2011.

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