தமிழ்நாடு மத்தியப் பல்கலைக்கழகம்

CENTRAL UNIVERSITY OF TAMIL NADU

तमिलनाडु केन्द्रीय विश्वविद्यालय

ESTABLISHED BY AN ACT OF PARLIAMENT IN 2009

GENERIC ELECTIVES

(Academic Year 2019-20 Onwards)

Department of Geography

School of Earth Sciences

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List of Offered Courses

Courses		Credits				Assessment	
Code	**Title**	**L**	**T**	**P**	**Total**	**CIA**	**ESE**
ODD SEMESTER							
GEOGE01	Geography of Tourism	2	1	0	3	40	60
GEOGE02	Basics of Geoinformatics	2	1	0	3	40	60
EVEN SEMESTER							
GEOGE03	Fundamentals of Geography	2	1	0	3	40	60
GEOGE04	Health Programmes and Policies in India	2	1	0	3	40	60
GEOGE05	Urban Planning	2	1	0	3	40	60
GEOGE06	Applications of Geoinformatics	2	1	0	3	40	60

Credits: 3 Course Code: GEOGE01

GEOGRAPHY OF TOURISM

Learning Outcomes

1. *It will give exposure to the factors responsible for tourism to flourish, the positive and negative impacts of tourism, the different kinds of tourism and will also reflect on the tourism policy of India.*
2. *It will help generating the geographical, environmental and socio-cultural aspects of tourism as against the managerial and economic aspects, so that tourism can be made sustainable smokeless industry.*
3. *Students will be able to apply the principles of Geotourism to develop a tourism policy and a plan based on Geotourism parameters.*

Unit I

Nature, Scope, Concept and definitions of tourism and tourist, Approaches; Tourism, Recreation and Leisure Inter-Relations; Geographical Parameters of Tourism by Robinson; Types of Tourism.

Unit II

Recent Trends of Tourism: International and Regional; Domestic (India); Concept of Eco-Tourism and Sustainable Tourism, MICE tourism, Impact of Tourism: Economy; Environment; Society

Unit III

Tourism in India: Tourism Infrastructure; Case Studies of Himalaya, Desert and Coastal Areas; Geoparks and Geoheritage, National Tourism Policy, Development of tourism in Tamil Nadu.

References

1. Dhar, P.N. (2006) International Tourism: Emerging Challenges and Future Prospects. Kanishka, New Delhi.
2. Hall, M. and Stephen, P. (2006) Geography of Tourism and Recreation – Environment, Place and Space, Routledge, London.
3. International Journal ofGeoheritage:http://www.darswin.com/dw/index.php/en/journals/ijg
4. Kamra, K. K. and Chand, M. (2007) Basics of Tourism: Theory, Operation and Practise, Kanishka Publishers, Pune.
5. Page, S. J. (2011) Tourism Management: An Introduction, Butterworth-Heinemann-USA. Chapter 2.

6. Raj, R. and Nigel, D. (2007) Morpeth Religious Tourism and Pilgrimage Festivals Management: An International perspective by, CABI, Cambridge, USA, www.cabi.org.
7. Tourism Recreation and Research Journal, Center for Tourism Research and Development, Lucknow.
8. Robinson H. (1976): A Geography of Tourism. Mac Donald and Evans Ltd; London.
9. Bhatia A.K. (1978): Tourism in India. Sterling pub. New Delhi.
10. Burkarl, A.J. (1974): Tourism, past, present and future Heineman London.

Credits: 3 Course Code: GEOGE02

BASICS OF GEOINFORMATICS

Learning Outcomes

Students will be able to

1. *Gain knowledge of basics of Geoinformatics and appreciate the amalgamation of science*
2. *Understand the fundamental concepts of remote sensing, geographic information systems and Global navigational satellite system*
3. *Understand spatial processes and explore the spatial relationships between each component*
4. *Identify the potential of RS, GIS, and GPS in solving various spatial problems*

Unit 1

Introduction to Geoinformatics- Concepts, Components: Remote Sensing: Electro Magnetic Radiation & Spectrum, Types of Remote Sensing: Based on Energy source and Electro Magnetic Spectrum. Platforms, Sensors, Orbits: Types of platform: Ground-Based, Airborne and Space borne Types of sensors: Active and Passive, Satellite orbits, Resolution and its types: Spatial, Spectral, Radiometric and Temporal, False colour composite, Elements of Image Interpretation.

Unit II

GIS: Definition; Components and Elements of GIS; Development of GIS technology; theoretical models and framework for GIS, representation of geographic data; Nature of geographic data: Spatial and Attribute Data, Concept of vector and raster based models; geodatabases- spatial analysis, Presentation of GIS output.

Unit II

GPS: Fundamentals of GPS and its applications, Components of the global positioning system, Factors affecting GPS accuracy, GPS surveying methods, and accuracy, GPS survey instruments - Applications of Geoinformatics

References

1. Jensen, J.R., 2004: Remote Sensing of the Environment: An Earth Resource Perspective, Pearson Education.
2. Joseph, G. (2004): Fundamentals of Remote Sensing, Universities Press, Hyderabad, India
3. Lillesand, T. M., Kiefer, R. W. and Chipman, J. W. (2008): Remote Sensing and Image Interpretation, John Wiley & Sons, New Delhi
4. Burrough, P.A., and McDonnell, R.A., 1998: Principles of Geographic Information Systems, Oxford University Press, Oxford.
5. Longley, P.A., Goodchild, M.F., Maguire, D.J. and Rhind, D.W., 2001, Geographic Information Systems and Science, Wiley, Chichester.
6. Environmental Systems Research Institute (ESRI) –GIS concepts
7. Web resources, Published reports

Credits: 3 Course Code: GEOGE03

FUNDAMENTALS OF GEOGRAPHY

Learning Outcomes

By end of this course, students will able to

1. *understand the basic concepts in geography and provide essential background for competitive exams and further geographical studies*
2. *explain what is happening to Earth systems in real time and analyse how variations in topography and climate affect human population and settlements*
3. *understand the characteristics of major geographical regions and comprehends the geography of India*

Unit-I

Physical Geography: Themes of geography - Geographer's tools - Geological time scale - Interior of the earth - Bodies of water and landforms - Dynamic earth: internal forces - external forces - Seasons and weather - Climate - World climate regions - Soils and vegetation

Unit-II

Human Geography: Elements of Culture - Population Geography - Political Geography - Urban Geography - Economic Geography - Depletion of Resources

Unit-III

Regional Geography: Major Natural Regions: characteristics, economic base and human adaptation - Geography of India: physical setting, drainage, climate, soils, natural vegetation, minerals and energy resources, agriculture, industries, and population distribution.

References

1. Arreola, D.D., Deal, M.C., Petersen, J.F. and Sanders, R., (2007) World Geography, McDougal Littell.
2. Waugh D. (2005) Geography: An Integrated Approach, Nelson Thornes, Cheltenham.
3. Douglas, L .J., Haarmann, V., Johnson, M.L. and Clawson, D.L. (2010) World Regional Geography, 10th edition, Pearson Education Inc, New Jersey.
4. Christopherson, R. W. and Birkeland, G. H., (2012) Geosystems: An Introduction to Physical Geography (8^{th} edition), Pearson Education, New Jersey.
5. Knox, P. & Marston, S. (2013) Human Geography: Places and Regions in Global Context, 6th Edition, Pearson Education, New Delhi
6. Goh Cheng Leong & Morgan, G.C. (1982) Human and Economic Geography, 2nd Edition, Oxford University Press, New Delhi.
7. Khullar, D.R. (2014) India: A Comprehensive Geography, Kalyani Publishers, New Delhi.

Credits: 3 Course Code: GEOGE04

HEALTH PROGRAMMES AND POLICIES IN INDIA

Learning Outcomes

1. *The student will develop a theoretical understanding of the initiatives taken by the Government of India in the health sector.*
2. *The student will be able to develop strong base for multidisciplinary and interdisciplinary research on health related issues.*
3. *Students will learn the importance of health statistics, Millennium Development Goals and SDGs*

Unit 1

Health Status: Demographic characteristics of India: Age composition, sex ratio, child ex ratio, life expectancy, literacy rate, degree of urbanization; health care trends in India, five year plans and health, incidence of major diseases – malaria, asthma, TB, heart attack, HIV/AIDS.

Unit 2

Health Programmes: Health care to children and old, maternal health; major public health programmes: Universal immunization, Pulse polio, National Vector Borne Disease Control Programme, Revised National TB Programme, National AIDS control programme, National Cancer Control Programme, National Mental Health programme, National programme for Prevention and Control of Diabetes, cardiovascular disease and stroke; AYUSH, National Rural health mission, National Urban Health Mission.

Unit 3

Health policies and related challenges: National health policy, Family planning, health and Millennium Development Goals, Major challenges in Health sector in India.

References

1. Lal, S and Vahisht, BM (2002) Reforms in health system in India, Indian journal of community medicine.
2. Mukhopadhyay, A (1992) health system and services in Mukhopadhyay, A (ed) ‘State of Indian health’, Voluntary health association of India.
3. Purohit, BC (2010) Health care system in India: Towards measuring efficiency in delivering of services, Gayatri publications, India
4. WHO (2000) World Health Report
5. HO (2006) World Health Report, Working together for health

Websites:

Ministry of health and family welfare
Ministry of rural development
Ministry of urban development
Ministry of women and child development
Planning commission of India

Credits: 3 Course Code: GEOGE05

URBAN PLANNING

Learning Outcomes

Upon completing this course, students will be able to:

1. *Understand about urban systems and processes.*
2. *Identify issues associated with the urban systems with special reference to Indian urban scenario.*
3. *Understand various steps involved in planning of an urban area.*

Unit – I

Urban Settlements - Processes, Patterns & Levels of Urbanization, Urbanization in Developed and Developing Countries - Urban Settlement Systems of Different Scales, Growth of Megacities, Metropolitan Regions and Urban Agglomerations; Trends, Characteristics and Urban Land use.

Unit – II

The emergence of Urban Planning: The pioneer thinkers - Howard, Geddes, Unwin, Mata, Le Corbusier; Urban Planning Classical Theories (Concentric Zone, Sector, Multiple Nuclei) - Traditional versus contemporary; A case of Indian metropolitan cities – Sub-urbanization and growth of City Fringe, Urban Sprawl - Concept of Smart City; role of Geospatial technologies in Urban planning.

Unit – III

Urban Environment Problems and solutions; Housing, Slums, Transportation, Solid waste and pollution - Trends, Characteristics, and Impact on Government Systems and Public Services; Master plans for urban development with special reference to India - Urban policies in India – better urban future and UN Habitat.

References

1. Hall Tim, Urban Geography, Routledge, London, 1998.
2. G.K. Hiraskar, Fundamentals of Town Planning, Dhanpat Rai Publications, 2012.
3. Cherry Gordan E., Urban Planning Problems, Leonard Hills Books, London, 1974.
4. Alam S. M. & Alikhan F. Eds, Poverty in Metropolitan Cities, Concept, New Delhi, 1974.
5. Alikhan F., Urbanization in the Third World: An African Experience Book Links, Hyderabad, 1987.

6. Sengupta Chandan, Urban Poverty & Vulnerability in India, Oxfam, India Trust, 2000.
7. Alam S. M. & Khan W., Metropolitan Hyderabad and its Region, Allied, Bombay, 1972.
8. Carter H., the Study of Urban Geography, Edward Arnold, London, 1972.
9. Singh K. and Steinberg F. (Eds) - Urban India in Crises, New Age Interims, New Delhi, 1998.
10. Johnson, J.H., Urban Geography- an Introductory Analysis, Pergamon press, Oxford, 1977.
11. Johnston, R.J., Urban Geography, Penguin, London, 1984.
12. Lewis Mumford, The City in History: It's Origins, Its Transformations, and Its Prospects, Harcourt, Brace & World, 1961.
13. Jane Jacobs, The Death and Life of Great American Cities, Random House, New York, 1961
14. Website: https://unhabitat.org/

Credits: 3 Course Code: GEOGE06

APPLICATION OF GEOINFORMATICS

Learning Outcomes

1. *Students will be able to gain knowledge of state of art technologies remote sensing, GIS and GPS*
2. *Students will be able to understand how Geoinformatics helps in planning, problem solving, and decision making.*
3. *Students will be able to apply these technologies in managing and monitoring the natural and material resources.*

Unit 1

Geoinformatics: RS, GIS and GPS, Emergence of Geoinformatics technology in application areas, understanding potentials of Geoinformatics, Geoinformatics advantage over conventional techniques, Recent trends in Geoinformatics applications.

Unit 2

Application in Land Resource: Remote sensing in mapping soil degradation, impact of surface mining on land resources, application in agriculture, forest resources, GIS in energy resources management, Application in Water Resources: Remote sensing in hydro-geomorphological interpretation for groundwater exploration, water quality monitoring, reservoir sedimentation, snow cover mapping and modelling approaches, pollution, issues in water resources management

Unit 3

Application in Disaster Management: Mapping and modelling Landslide hazards, floods, Cyclones Forest fire and drought, Application in Urban Planning: Mapping urban land use, transportation network, Utility-Facility mapping, urban sprawl, site selection for urban development, Urban Information System, Application in Environmental Management: Selection of disposal sites for industrial and municipal wastes, solid waste management, Air quality monitoring, Environmental Impact Assessment (EIA).

References

1. T.M. Lillesand, Kiefer, Ralph W., Remote Sensing and Image Interpretation, John Wiley & Sons, New York.
2. Jensen, JR., Remote Sensing of the Environment – An Earth Resources Perspective, Prentice Hall Inc.
3. Magwire, D. J., Goodchild, M.F. and Rhind, D. M. Ed. 1991, ‘Geographical Information Systems: Principles and Applications', Longman Group, U.K.
4. P.S. Roy (2000). Natural Disaster and their mitigation. Indian Institute of Remote Sensing
5. Spatial Technologies for Natural Hazard Management. Proceedings of ISRS National Symposium, Nov. 21-22, 2000, IIT, Kharagpur.
6. ISRO and DOS Report