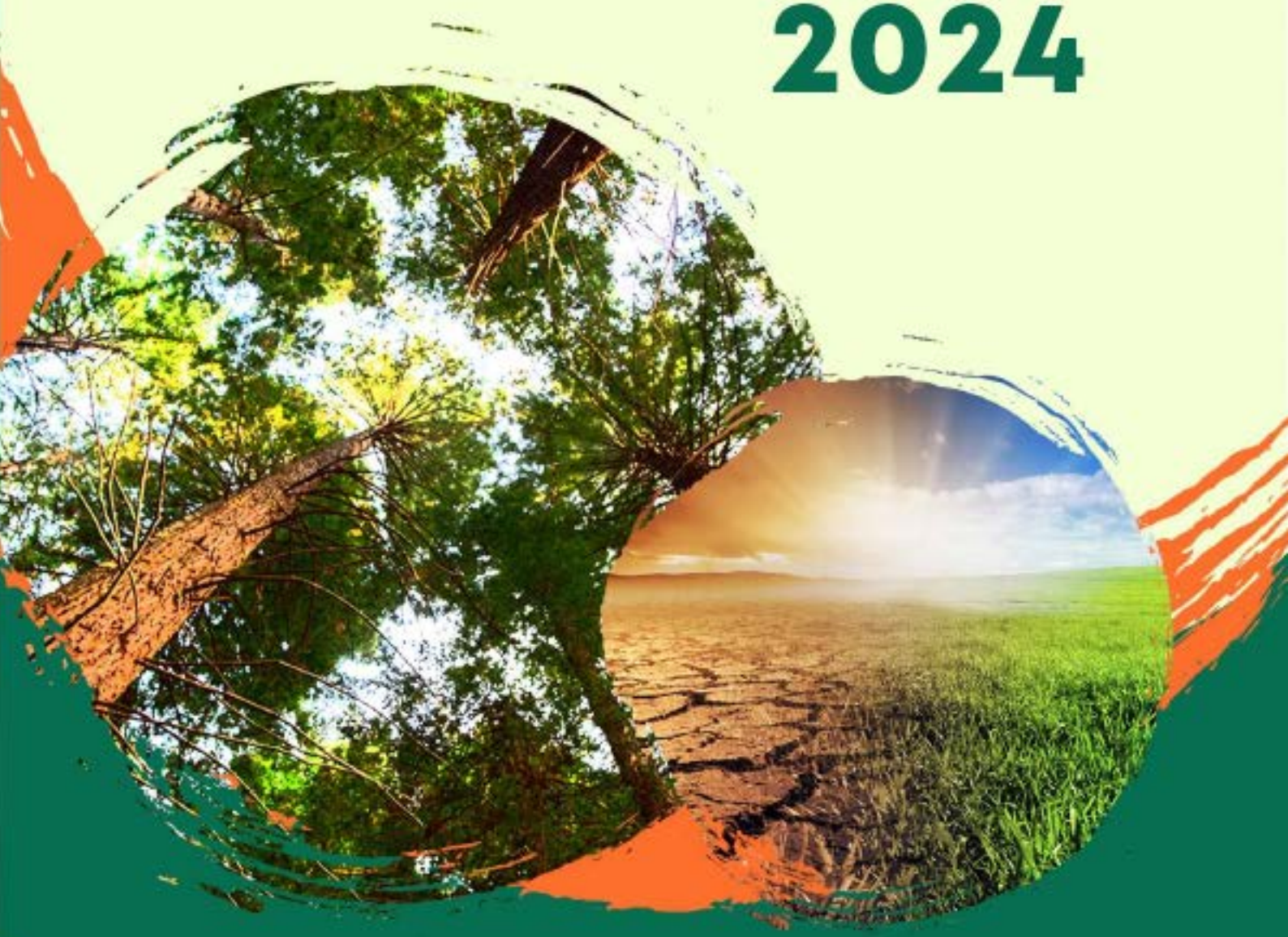
Bachelor of Social Sciences in Environmental and Development Studies (General) External Degree

Detailed Course Outline

2024



Department of Geography
Faculty of Humanities and Social Sciences
University of Sri Jayewardenepura

Detailed Course Outline

2024

Bachelor of Social Sciences (General) External Degree in Environmental and Development Studies

Department of Geography

Faculty of Humanities and Social Sciences

University of Sri Jayewardenepura

Content

Topic

Curriculum of the degree Programme

Degree Year I

GEDS 1001 Physical Environment

GEDS 1002 Human landscape

GEDS 1003 Spatial Organization of Economics Activities

GEDS 1004 Fundamentals of Ecology

GEDS 1005 Principles of Development

GEDS1006 Regional Development

ENGE 1005 English

SOSE 1006 Information Technology

Degree Year II

GEDS 2001 Cartography for Development Planning

GEDS 2002 Disaster Management

GEDS 2003 Rural Development and Planning

GEDS 2004 Natural Resource Management

GEDS 2005 Statistics for Development Studies

GEDS 2006 Contemporary Development Issues

GEDS 2007 Global Environment and Climate Change

SOFT 2001 English in use II

SOFT 2002 Leadership and Personality Development

Degree Year III

GEDS 3001 Human Resource Planning

GEDS 3002 Environmental Policies & Legislations

GEDS 3003 Project Management & Evaluation

GEDS 3004 Urban Planning & Development

GEDS 3005 Geographic Information Systems for Planning

GEDS 3006 Water Resource Management

GWBT 3001 Work Based Training

GENG 3003 English for General Purpose

UNIVERSITY OF SRI JAYEWARDENEPURA

Department of Geography

Bachelor of Social Sciences (General) External Degree in Environmental and Development Studies

Course Structure

Course Code	Course Title	Credit Value
FIRST YEAR		
GEDS 1001	Physical Environment	04
GEDS 1002	Human landscape	04
GEDS 1003	Spatial Organization of Economic Activities	04
GEDS 1004	Fundamentals of Ecology	04
GEDS 1005	Principles of Development	04
GEDS1006	Regional Development	04
ENGE 1005	English	03
SOSE 1006	Information Technology	03
SECOND YEAR		
GEDS 2001	Cartography for Development Planning	04
GEDS 2002	Disaster Management	04
GEDS 2003	Rural Development and Planning	04
GEDS 2004	Natural Resource Management	04
GEDS 2005	Statistics for Development Studies	04
GEDS 2006	Contemporary Development Issues	04
GEDS 2007	Global Environment and Climate Change	04
SOFT2001	English in use II	03
SOFT 2002	Leadership and Personality Development	03
THIRD YEAR		
GEDS 3001	Human Resource Planning	04
GEDS 3002	Environmental Policies & Legislations	04
GEDS 3003	Project management & Evaluation	04
GEDS 3004	Urban Planning & Development	04
GEDS 3005	Geographic Information Systems for Planning	04
GEDS 3006	Water Resource Management	04
GWBT 3001	Work Based Training	03
GENG 3003	English for General Purpose	03
Total Credits		**90**

First Year

1. Physical Environment

1	**Course Code**	GEDS 1001	
2	**Course Title**	Physical Environment	
3	**Number of Credits**	04	
4	**Year**	First Year	
5	**Rationale (Introductory Notes)** This course is an introduction to the world's physical environment including weather, climate, landforms, natural vegetation, mineral and water resources. Physical geography is the study of relationships between the various Earth systems of the natural landscape. The inter-disciplinary science of geography examines the world from the perspective of location; that is, why the Earth's features are located where they are and how does this locational aspects influence the Earth. The course unit aims to give a basic knowledge on major physical systems and processes, and to study the interactions of physical processes both at global and regional levels. As there are many models and theories available in each of these topics, only very prominent key models and theories will be chosen for study. Other than the above criteria adopted to confine the contents of lectures, high priorities have been given the examples from tropical environment to elaborate the theories because such environment is familiar to us and there are memories left over in our own life history connected to this environment.		
6	**Pre-requisites**	None	
7	**Course Objectives (Instructional)** The principle objective of this course unit is to furnish student's both theoretical knowledge on basic physical geography and secondly to encourage students, through this theoretical knowledge, to comprehend the environment that they live in. Specific Objectives are • To acquaint students with the geographer's approach to studying physical landscapes, especially principles governing their locations • To make students aware of global environmental regions and the inter-relationships between weather, climate, soil, natural vegetation and landforms • To better understand the relationships between humans and their natural environments		
8	**Expected Main Teaching Outcomes (By Students)** • Students will be able to gain a theoretical knowledge about physical geography and will be able to interpret and identify specific features pertaining to the physical geography • It is expected to provide instructional opportunities designed to help students read, view, reasons and synthesize information from varied sources; to develop methods of inquiry through problem-solving as distinguished from the storing of facts • Students will be able to solve problems and challenges through real world examples. • Students will be able to use this knowledge to their daily life through inquiry, reading, media and travel • Students will be able to generate data out of analytical interpretation of scientific literature of physical geography		
9	**Content**		

Main theme	Sub-theme	No. of hours
1. Introduction to Physical Environment and Physical geography	i. What is physical Environment? ii. What is physical geography? iii. its content and scope iv .Approaches	03
2. Earth interior	i. Different layers ii. Events and consequences. Earth quakes. Plate tectonics • movements and results • vertical and horizontal movements and related landforms	06
3. Earth surface. Landforms	i. Different landforms and their forming factors ii.Weathering and deposition process iii.Landscape of Sri Lanka	06
4. Rock and minerals	i.Different rock types and their formation ii.Composition of minerals iii.Structure and properties iv.Rock and mineral in Sri Lanka	04
5. Biological environment	i.Soil ii.Physical properties iii.Different types iv.Vegetation. plant succession v.Biomes their distribution. Ecosystems	03 05
6. Climate and water	i. Weather and Climate ii. Climatic elements iii Climatic factors iv.Climatic phenomena v. Climatic types vi.Climatic variations in the Sri Lankan context vii.Water. Surface water, soil water and ground water in Sri Lanka	04 03 03
7. Plate tectonics and continental drift.	i. Plate tectonics continental drift evidence	03
8. Combined field study.	I. Landscape and land use study in selected area in Sri Lanka	20

10	**Mode of delivery**	Lectures, Discussions
11	**Evaluation and Assessment** **In Course Evaluation (Team Work, Presentation, Conference Type Presentation, Projects)**	
	Mode of Evaluation	Assignment – 20%
	End of Course Evaluation (Year-end evaluation – 80 Marks)	
	Mode of Evaluation	Written Examination – 80%
12	**Recommended Reading** Bradshaw, M. & Weaver, R. (1993). Physical Geography: An Introduction to Earth Environments, Mossby, London. Christopherson, R. W. (2000). Geosystems: An Introduction to Physical Geography, Prentice Hall, New York. McKnight, T.L. (1996). Physical Geography: A Landscape Appreciation. Prentice Hall, New York. Strahler, A.H. &Strahler, A.N. (2000). Introducing Physical Geography, John Wiley & Son, New York. Cooray, P.G. (1984). An Introduction to Geology of Sri Lanka. National Museums of Sri Lanka Publication. Mahapatra, G.B. (1994). Text Book of Physical Geology, CBS Publishers & Distributors Pvt.Ltd. Plummer, McGeary (1982). Physical Geology, Study Guide. W.M.C. Brown Company ublishers. Ronald Louis Bonewitz (2005). Rock and Minerals – The Definitive visual Guide. Thomas, J.A.G. (1966). An Introduction to Geological Maps: Thomas Murby& Company, London. Spencer E.W, (1983). Physical Geology, Addison- Wesley Publishing Company. Zumberge, J.H.R. Nelson, A.C. (1972). Elements of Physical Geology. John Wiley & Sons, Inc.	

2. Human Landscape

1	**Course Code**	GEDS 1002	
2	**Course Title**	Human Landscape	
3	**Number of Credits**	04	
4	**Year**	First Year	
5	**Rationale (Introductory Notes)** The major purpose of this course is to introduce students to the nature of human landscape as an academic discipline and as a body of useful knowledge through a survey of some of the field's central problems, concepts, methods and applications. Human landscape provides a critical interpretation of the human inhabitation of the earth and the differences between, and the similarities amongst, people and the places and landscapes they create. By examining the cultural, economic, historical and social processes that create the spatial patterns and spatial relationships that modify the natural and built environments, both a foundation for subsequent human geography courses will be laid, and an ability to inspect more critically the student's own place in the world.		
6	**Pre-requisites**	NO	
7	**Course Objectives (Instructional)** ***The precise goal*** of this course unit is to; • Internalize in students both the theoretical and practical knowledge on various human and cultural processes and systems with holistic discipline • Encourage students to understand human landscape that they live in.		
8	**Expected Main Teaching Outcomes (By Students)** • On successful completion of this course unit, students will be able to; • Appraise the importance of theoretical perspectives in human landscape • Identify several human, cultural, social and economic issues due to its holistic perspective. • Apply gained knowledge for development processes namely policy making in aforementioned areas, administrative work and also for general awareness of students themselves. • Employ skills in researching, analysing and presenting on various aspects of society.		

9	**Content**		
	Main Themes	**Sub Themes**	**No. of Hours**
1.	**Introduction to human landscape**	i. Definitions	02
2.	**World population**	i. Temporal and Spatial distribution of world population ii. Population density and Factors influencing iii. Population structure/Pyramids	04
		i. Major determinants of aging population	04

3. **Aging population**	ii. Spatial patterns of aging population iii. Problems of aging population	
4. **Landscape of primary activities - Agriculture**	i. Classifications ii. Impacts of Agricultural Technologies • Green Revolution • Gene Technology • Post-harvest technology	03
5. **Settlements**	i. What is a settlement ii. Classification of settlements iii. Differences among various patterns of settlement and their dynamics	02
6. **Urbanization**	i. Urbanization and urbanism ii. Criteria used to identify urbanization iii. Emerging socio- economic and environmental problems of urbanization iv. Models in urban area analysis	03
7. **Landscape of secondary activities- Industries**	i. Major industrial zones in the world ii. Modern industrialization • Types of industry • Locational factors • High technology used in industries	02
8. **Globalization**	i. Definitions ii. Characteristics & driving forces of globalization iii. Impacts of globalization	04
9. **Eco-tourism**	i. Definitions ii. Types of tourism iii. Dimensions and Impacts of eco- tourism iv. Eco-tourism and regional development	04
10. **Eco-strategies**	i. What are eco strategies? ii. Active and passive adaptation iii. Knowledge and methods used in agriculture, irrigation, food Security and resource management	04
	i. Framework of Livelihood Assets i. Five capital assets and strategies	04

11. **Livelihood Assets and Life Path Changes**		ii. Concept of life path changes iii. Factors influencing for life path changes		
12. **Social networks**		i. Definitions ii. Types of social networks iii. Importance of social networks in various development activities iv. Social networks and post disasters		04
13. **Assignment**		Assignment Discussion/Data collection for field based assignment/Data analysis/preparation of assignment report		20
10	**Mode of delivery**	Lectures	Group Discussions	Group work
11	**Evaluation and Assessment** **In Course Evaluation(Team Work, Poster Presentation, Field based Report writing**			
	Mode of Evaluation	Assignment (20% - 40%)		
	End of Course Evaluation (Year-end evaluation)			
	Mode of Evaluation	Written Examination (80% - 60%)		
12	**Recommended Reading** Getis, A., Getis, J. and Fellman, J.D. (2008). Introduction to Geography. Eleventh edition. Mcgrow-hill higher education. Hammond, C.W. (1979). Elements of human geography. George Allen &Anwin Ltd. Huntington, E. (1956). Principles of human geography. Sixth edition. John Wiley Sons Inc. USA. Jhonston, R.J., Gregory, D. and Davis, M.S. (1986). The dictionary of human geography. Oxford Blackwell. Keinth, C. (1979). An introduction to human geography: People, pattern and process. Halsted. Smith, D.M. (1977). Human geography: A welfare approach. Edward Arnold. White, C.L. and Renner, G.T. (1948). Human geography: An ecological study of society. Appleton, New York. තෙන්නකෝන්, සුනේත්‍රා (2019), මානව භූ දර්ශනය සංහිඳ ප්‍රකාශකයෝ, ගංගොඩවිල.			

3. Spatial Organization of Economic Activities

1	**Course Code**	GEDS 1003	
2	**Course Title**	Spatial Organization of Economic Activities	
3	**Number of Credits**	04	
4	**Year**	First Year	
5	**Rationale (Introductory Notes)** Spatial organization of economic activities is the study of spatial behavior of the activities related to production, distribution and consumption of goods and services. This subject, also known as Economic Geography, mainly analyses spatial organization of different economic activities by questioning how and why different economic activities organize in various spaces in different manner. Particularly, since 1960s this subject has significantly developed with the quantitative revolution by developing theories and models. Contemporary this course examines the nature and causes of development and underdevelopment and it considers the link between economic systems and geography. It particularly attempts to interpret the spatial impact of capitalism and its role in the development of world economy. In addition, it analyses the nature of predominant economic views by emphasizing the dimensions of class and inequalities, race, gender and welfare in different economic systems. It also studies the impact of technological change and the construction of new economic spaces.		
6	**Pre-requisites**	None	
7	**Course Objectives (Instructional)** • To provide knowledge to the students to understand spatial arrangement of economic activities in a geographic perspective. • To provide some background knowledge about theories and models in economic geography. • To train them to see and understand spatial difference of economic activities and to emphasize such spatial difference is a product of different geographic factors combined with time, space and processes. • To train the students to think about the importance of geographic aspects in spatial economic planning.		
8	**Expected Main Teaching Outcomes (By Students)** • Students will understand what economic geography is and be able to explain the spatial division of economic activities. • They will understand how its subject matters have been constructed theoretically and practically. • They will be able to analyze spatial arrangement of economic activities in an economic geographic perspective. • They will also understand the importance and the role of economic geographer in spatial economic planning. • Expect that they will apply such knowledge in their future research and studies.		
9	**Content**		
	Main Themes	**Sub Themes**	**No. of Hours**

	1. What is Spatial Organization of Economic Activities (SOEA)?	i. Introduction to SOEA ii. Its scope iii. Content	02
	2. Understanding SOEA through economic geography	i. What is economic geography? ii. Definitions of economic geography iii. SOEA and economic geography	03
	3. Economic decision making and SOEA	i. What is economic decision making? ii. Allocation, Production and Distribution decisions iii. The importance of decision making for SOEA	03
	4. Price, demand and supply in a spatial perspective	i. Introduction to price, demand and supply i. Analysis of price, demand and supply ii. Understanding the concepts of market range and threshold iii. Introduction to economies of scale	03
	5. Economies of scale	i. Introduction to internal economies of scale ii. Analysis of external economies of scale iii. The importance of economies of scale for SOEA	03
	6. Economic Systems	i. What is an economic system? ii. Identification of economic systems iii. Economic systems and spatial economic organization	03
	7. Manufacturing Regions	i. Major manufacturing regions ii. Causes for their spatial organization iii. Future trends of their spatial organization	02
	8. Labour market	i. Introduction to labour market ii. Spatial division of labour	

		iii.	The importance of labour for SOEA	02
	9. Spatial behaviour of world food and agriculture	i. ii. iii.	Distribution of world food and agriculture Causes for such distribution Future trends in world food and agriculture	03
	10. Multinational Companies	i. ii. iii.	Introduction to multinational companies Spatial behaviuor of multinational companies Their advantages and disadvantages for SOEA	02
	11. Global Trade	i. ii. iii.	Global trade patterns Dynamics of world trade Problems and issues in world trade	03
	12. World Monetary Structure	i. ii. iii.	World monetary structure Trends in world financial market World and regional financial crisis	03
	13. E-commerce and its issues	i. ii. iii.	Introduction to E-commerce Advantages and disadvantages of e-commerce Problems and issues faced by developing countries in e-commerce	03
	14. Technology and its global impact	i. ii. iii.	History of world technology Technological change Its impact on food, agriculture and industry	02
	15. Economic policies at global level	i. ii. iii.	Introduction to economic policy Different economic policies at global level Their impact on SOEA	03
10	**Mode of delivery**			
11	**Evaluation and Assessment**			

	In Course Evaluation(Project through Team Work, and Presentation)	
	Mode of Evaluation	
	End of Course Evaluation (End Semester evaluation 80 Marks)	
	Mode of Evaluation: **End semester exam** – 80 Marks	**Team work project –** 20 Marks
12	**Recommended Readings:** Aoyama, Y., Murphy, J., and Hanson, S. (2010) *Key Concepts in Economic Geography.* London: Sage Barnes, T., Peck, J., Sheppard, E. and Tickell, A. (Eds) (2003) *Reading Economic Geography.* London: Wiley-Blackwell Berry B.J.L., Conkling E.C. and Ray D.M. (1993) *The Global Economy: Resource Use, Locational Choice and International Trade.* New Jersey: A Simon & Schuster Company Christopherson, S. and Clark, J. (2009) *Remarking the Regional Economies: Power, Labour and Firm Strategies in the Knowledge Economy*. Clark, G., Gertler, M. and Feldman, M.(eds) (2003) *The Oxford Handbook of Economic Geography.* Oxford: Oxford University Press Coe, N. and Jones, A., (eds) (2010) *The Economic Geography of the UK.* London: Sage Coe, N., Kelly, P., and Yeung, H. (2007) *Economic Geography: A Contemporary Introduction.* London: John Wiley & Sons Hodder B.W. & Lee R. (1974) *Economic Geography.* London: Methuen & Co. Ltd Hudson, R., (2005) *Economic Geographies: Circuits, Flows and Spaces.* London: Sage Mackinnon, D. and Cumbers, A. (2008) *An Introduction to Economic Geography: Globalization, Uneven Development and Place.* London: John Wiley & Sons Leyshon, A., Lee, R., McDowell, L and Sunley, P. (eds) (2011) *The Sage Handbook of Economic Geography.* London: Sage Polenske, K. (ed) (2007) *The Economic Geography of Innovation.* Cambridge University Press: Cambridge	

4. Fundamentals of Ecology

1	**Course Code**	GEDS 1004
2	**Course Title**	Fundamentals of Ecology
3	**Number of Credits**	04
4	**Year**	First Year
5	**Rationale (Introductory Notes)** Ecology is the scientific study of the interactions of living organisms with their environment. Ecologists seek to explain the life processes, interactions, interrelationships, behaviours and adaptations of organisms for their living environment,the successional development of ecosystems and the abundance and distribution of organisms and biodiversity in the context of the environment. Ecosystems sustain life-supporting functions and produce natural capital, such as biomass production, the regulation of climate, global biogeochemical cycles, water filtration, soil formation, erosion control, flood protection, and many other natural features of scientific, historical, economic, or intrinsic value. There are many practical applications of ecology for various purposes such as conservation, planning and management of natural resources, urban planning, community health, global changes, and human-social interactions. This course unit has been designed to provide the principal concepts and fundamental theories and concepts of ecology through the scientific ecological inquiry on how organisms interact with each other and their dynamic physical environment and to provide practical application of knowledge acquired through this study to resolve the real-world problems and issues encountered in the biosphere.	
6	**Pre-requisites**	None
7	**Course objectives** **Course objectives are:** ▪ To enable students to understand the key concepts in ecology, how organisms interact with their environment, the dynamics and regulation of populations, the various types and character of the interactions among organisms, the nature, geography, and biodiversity of communities and the structure and function of ecosystems. ▪ To provide knowledge to understand the linkages between ecology and the other subfields of the biological sciences and earth systems science ▪ To explain methods used in ecological research. ▪ To appreciate the positive and negative impacts of humans on ecological systems which hamper the capacity of providing ecosystem services. ▪ To explore the strategies to minimize negative impacts in ecosystems for the sustainability of ecosystem services. •	

8	**Expected learning Outcomes (By Students)** On completion of this course, the student will be able to: 1. Demonstrate a broad knowledge of the significance of ecology, its definitions, concepts and basic theories. 2. Explain the factors controlling the abundance and distribution of living organisms in the world. 3. Understand the evolutionary process of organisms in the world and the concept of natural selection and specification. 4. Analyze the population dynamics and explain the regulating factors of population. 5. Explain the role of key species in a community. 6. Understand and explain the temporal dynamics of communities. 7. Identify the role of specific species in a community. 8. Classify the terrestrial ecosystems and identify their unique characteristics. 9. Identify the unique characteristics of world biomes. 10. Define biodiversity, explain its significance, evaluate the threats and propose conservation strategies. •

10	**Mode of delivery**	Lectures, Online lectures, Seminars
11	**Evaluation and Assessment:**	
	In Course evaluation	
	Written examination Assignment Total	80 Marks 20 100
	End of Course Evaluation	
	Mode of evaluation	Written examination (80 marks)

5. Principles of Development

1	**Course Code**	GEDS 1005
2	**Course Title**	Principles of Development
3	**Number of Credits**	05
4	**Year**	First Year

9. CONTENT		
Main Themes	**Sub Themes**	**No. of Hours**
1. Introduction	▪ What is ecology? Definition ▪ The scope of the ecology?	04
7. Temporal dynamics in a community	▪ What is succession ▪ Primary and secondary succession i. Climax community	04
8. Classification of terrestrial ecosystems.	▪ Criteria used for the classification. ▪ Types of important terrestrial and aquatic ecosystems. ▪ Ecosystem services provided by ecosystems i.	04
9. Structure and functions of world biomes	▪ Structure, species composition and functions of selected biomes of the world i. Field investigation/field-based assignment on a terrestrial biome in Sri Lanka.	04

12	**Recommended reading**
4. Evo the wo	Begon, M., Townsend, C. R. & Harper, J. L. (2006). Ecology (4th edn). Blackwell Science, Oxford. (The recommended text for this course) Townsend, C.R., Begon, M. and Harper, J.L. (2014). Essentials of Ecology (2nd Edition). Wiley. (Highly recommended). Grime, J. P., & Pierce, S. (2012). The evolutionary strategies that shape ecosystems. John Wiley & Sons. Prach, K., & Walker, L. R. (2020). Comparative Plant Succession Among Terrestrial Biomes of the World. Cambridge University Press. Ingrouille M. (1995). Historical Ecology of the British Flora. Chapman and Hall. Kaiser MJ et al. (2011) Marine Ecology. Oxford University Press. (Highly recommended for overview of marine ecology & ecosystems) Krebs, C. J. (1994 & 2001). Ecology. (4th & 5th edns). Harper Collins, New York. (Good on animal populations) Levinton (2010) Marine Biology. Oxford University Press (Good for more in-depth review of biological topics) Molles, M. (2015). Ecology: concepts and applications. McGraw-Hill Education. Ricklefs, R. E. & Miller, G. L. (1999). Ecology. (4th edn). Freeman, New York.

5	**Rationale (Introductory Notes)** This course builds knowledge on development theories, concepts, policies, indicators, indexes, norms and planning approaches as a guide to achieve economically feasible, socially acceptable and

10. Biodiversity	▪ What is biodiversity? ▪ Role of biodiversity ▪ Threats to the biodiversity i. Conservation strategies	04

	environmentally caring sustainable development. Through readings, lectures, seminar discussions, and assignments, students will further develop an understanding on development strategies, approaches and programmes implemented by various countries including Sri Lanka, and the lessons that can be learnt of their past experiences from the regional and national development perspectives.	
6	**Pre-requisites**	None
7	**Course Objectives (Instructional)** • To offer a wider theoretical and conceptual construct on Regional and National Development with adequate exposure to relevant definitions, indexes and models of Development. • To expose the students to study and understand development strategies and approaches adopted by different countries in the past. • To examine some of the pressing development challenges faced by the international and national (Sri Lankan) communities in the context of Globalization and Market Economy in this century. • To widen the horizons of critical understanding on issues of Development disparities in Global, International and National contexts.	
8	**Expected Main Teaching Outcomes (By Students)** • Analyzes and interprets primary and secondary source materials to increase understanding of the Development Theories, Concepts, Policies, Strategies and Planning and Implementation Approaches. • Enable to measure and analyze developments levels and disparities using development indicators, indexes and norms in Global, International and National contexts. • Distinguishes between relevant and irrelevant information. • Evaluates information for accuracy, separating facts from opinions. • Selects and defends positions in writing, discussion, and debate. • Participates in interviews, debates and interact with agencies and community personnel including field exposures. • Accesses and uses electronic databases and communication network of all types. • Plans, designs, and develops projects relative to the ongoing discourse of the Development Concepts. • Student understanding of Development as an economic and social process with an environmentally friendly approach shall be increased and the degree to which the factors discussed in class will be interrelated while learning use variety of measurement tools and methods.	

9. CONTENT		
Main Themes	**Sub Themes**	**No. of Hours**
1. Introduction and Overview of Development Theories	ii. Development Definitions iii. Economic Development Theories iv. Social Development Theories	03
2. Introduction and Overview of Development Concepts	ii. Economic Development Concepts iii. Social Development Concepts	03
3. Regional Development Concepts	ii. Introduction to Regional Development iii. Concepts and Approaches	03
4. Development Approaches	ii. National Development Approaches iii. Regional Development Approaches	02
5. Development Strategies	ii. National Development iii. Rural Development iv. Integrated Rural Development	02
6. Global Development Strategies	ii. Introduction to Globalization iii. Impact of Globalization on the Developing Countries iv. Implications of Globalization Policies on Food Security and poverty.	03
7. Global Development Strategies	ii. Introduction to Market Economy iii. Impacts of Globalization on Free Trade and Agriculture	03
8. Global Development Strategies	ii. Sustainable Development Strategy ii. Millennium Development Agenda	03
9. Development Measuring Tools and Indicators	ii. Introduction ii. Economic Development Indicators	03
10. Development Measuring Tools and Indicators	ii. Social Development Indicators ii. Poverty Measurement Indexes iv. Environmental Indicators	02
11. Development Imbalances	i. Global Imbalances ii. Regional Imbalances iii. National Imbalances (Sri Lanka)	02
12. 21 Century Development Challenges of Sri Lanka	i. Poverty ii. Rural Development	03
13. Sri Lanka's Post Conflict Development Strategy	i. Rebuilding Programme: Challenges and Constraints	03
14. Sri Lanka's Post war Development Strategy	i. Regional Development Strategies: Gama Neguma, Divinaguma, MagaNeguma etc.	03

<table>
<tr><td>10</td><td colspan="2">Mode of delivery</td><td>Lectures, Online lectures, Seminars</td></tr>
<tr><td>11</td><td colspan="3">Evaluation and Assessment:</td></tr>
<tr><td rowspan="4"></td><td colspan="3">In Course evaluation</td></tr>
<tr><td colspan="2">Mode of evaluation</td><td>Assignment or presentation (20 marks)</td></tr>
<tr><td colspan="3">End of Course Evaluation</td></tr>
<tr><td colspan="2">Mode of evaluation</td><td>Written examination (80 marks)</td></tr>
<tr><td>12</td><td colspan="3">Recommended Reading

Ake, Claude. 1995. "The New World Order: A view from Africa". In Holm-Henrik and Aorensem, Georg Eds., Whose World Order: Uneven Globalization and the End of the Cald War, Boulder: Westview.
ESCAP (2007), Statistical Yearbook for Asia and the Pacific, UN Publication, Thailand.
Hunger in a Global Economy (1998), Bread for the World Institute, USA.
Muricken A. (1997), Globalization and SAP: Trends & Impact – An Overview, VikasAdhyayan Kendra, Mumbai.
IFAD-International Fund for Agricultural Development (1992), The state of World rural poverty: An Inquary into its Causes and Consequences, IFAD, London.
Ray Hammond (2007),The World in 2030, Printed by Itxaropena SA, 20800 Zarautz (Spain). itxaropena@itxaropena.net.
World Development Report,</td></tr>
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6. Regional Development

1	**Course Code**	GEDS 1006
2	**Course Title**	Regional Development
3	**Number of Credits**	04
4	**Year**	First Year
5	**Rationale (Introductory Notes)** The study of regional development emerged in the 1950s with a strong economics basis and a focus on what firms did in regions and how their performance influenced a range of economic indicators such as employment, profit, GDP and growth. Towards the end of the 20th century, regional development became far more multi-disciplinary in its approach. Political science, public policy and sociology became critical disciplines, alongside economics, focusing more on the notion of what a region might be and how a range of factors shaped the idea of a region. In the 21st Century, economic geography has joined the discipline, and the focus of regional development is more on the spatial dynamics of regions. New theories of regional development focus on human and social capital, innovation and spatial dynamics as key components in understanding how often small peripheral economies are challenged to respond to the pressures from a global economy. In the light of this background this course unit focuses the theoretical and applied knowledge of the field of regional development.	
6	**Pre-requisites**	None
7	**Course Objectives (Instructional)** • To enhance the knowledge on Regions and their development process through different aspects • To build a wide array of theoretical and applied knowledge on Regional growth and development at Global, National and Local levels • To Train students to identify regional development issues and challenges and to design regional development policies and planning	
8	**Expected Main Teaching Outcomes (By Students)** By the completion of this course unit students will be able to • Understanding of the role of regional development in economic and community development. • Understanding of regions and how regions are defined. • Students will deepen their understanding for regional development theories, policies, and practice through in-depth study and analysis of several regional development case studies	
9	**Content**	

	Main Themes	Sub Themes	No. of Hours
	1. Introduction to Regional Development	i. Definitions ii. Focal points in Regional Development a. Definitions b. Regional and Economic Development c. Sustainable Development iii. Significance of Regional Development	04
	2. Basic characteristics of a region	i. The concept of region a. Definitions of Region b. Characteristics of a region c. Hierarchy of regions d. Regional identity and diversity ii. Principles of Regional Division iii. Types of Regions	04
	3. Theoretical Framework for Regional Development	i. Regional Location a. Theories and Models ii. Regional Growth a. What is regional growth b. Theories and models c. Limitations iii. Regional Development a. Theories and practices iv. Revisiting models	04
	4. Disparities of Regional Development	i. Introduction ii. Measuring disparities iii. Global and Local perspectives	04
	5. Regional Development Policies	i. What is a regional development policy? ii. Regional development policy design iii. Urban and Rural development policies	04
	6. Regional Planning	i. Fundamentals of Regional Planning ii. Decentralization, periphery development, poverty alleviation iii. Regional Planning in different fields; irrigation, natural resources etc iv. Land use planning for Urban and rural development	04
	7. Regional Development Strategies	i. Local regional development strategies ii. Regional attraction strategies iii. Rural-urban linkages iv. International cooperation	04
	8. Regional Development Issues in South Asia	i. Introduction ii. Uneven Development iii. Economic and social marginalization iv. Impact of Globalization on regional development	04

		v. Centralization of Technology and Education Demographic challenges	
	9. Regional Development in Sri Lanka	i. History of Regional Development ii. Contemporary regional disparities iii. Government policies and Programmes	04
	10. Issues and Challenges of Regional Development in Sri Lanka	i. Uneven distribution ii. Socio cultural challenges iii. External forces iv. Future prospectus	04
	In Course Evaluation	**Discussion, report writing and Presentation**	20
	Total student contact hours		**60**
10	**Mode of delivery**	Lectures, Online Communication, Seminars	
11	**Evaluation and Assessment** **In Course Evaluation (Team Work, Presentation, Conference Type Presentation, Projects)**		
	Mode of Evaluation	Assignment – 20 Marks	
	End of Course Evaluation (End Semester evaluation 80 Marks)		
	Mode of Evaluation	Written Examination – 80 marks	
12	**Recommended Reading** Andrew Herod, (2009), Geographies of Globalization, Wiley-Blackwell. Andrew Wood and Susan Roberts, (2011), Economic Geography: Places, Networks and Flows, Routledge Brakman, Steven, Harry Garretsen, and Charles van Marrewijk. (2009), *The New Introduction to Geographical Economics* (Cambridge, UK, Cambridge University Press). Chapter 2: Geography and economic theory,32- 78 Friedmann, John. (2001), Regional development and planning: The story of collaboration. *InternationalRegional Science Review* 24: 386- 95. Fujita, M. and J.- F. Thisse. (2002). *Economics of Agglomeration: Cities, Industrial Location, and Regional Growth*. Cambridge, UK: Cambridge University Press. Hansen, Niles M. (1965), Unbalanced growth and regional development. *Western Economic Journal* 4: 3- 14. Malizia, Emil E, and Edward J Feser. (1999), *Understanding Local Economic Development* (New Brunswick,NJ, CUPR Press). Chapter 6: Regional growth theory, 123- 149. Morgan, Kevin. (1997), The learning region: Institutions, innovation and regional renewal. *Regional Studies* 31: 491- 503.		

North, Douglass C. (1955), Location theory and regional economic growth. *Journal of Political Economy* 63: 243- 258.

Parr, John B. (1999), Regional economic development: An export stages framework. *Land Economics* 75: 94- 114.

Parr, John B. (1999). Growth- pole strategies in regional economic planning, a retrospective view, Part 2.

Rey, S. J., and M. V. Janikas. (2005), Regional convergence, inequality, and space. *Journal of EconomicGeography* 5 (2): 155- 176.

Solow, Robert M. (1994), Perspectives on growth theory. *Journal of Economic Perspectives* 8: 45- 54.

Second Year

1. Cartography for Development Planning

1	**Course Code**	GEDS 2001
2	**Course Title**	Cartography for Development Planning
3	**Number of Credits**	05
4	**Year**	Second Year
5	**Rationale (Introductory Notes)** This course is initially a "cartography oriented" and demonstrating the relevance and applicability of cartographic theories and techniques in environmental and development studies. The course examines the processing, compilation and symbolization of spatial data and the application of related statistical techniques. The course content covers basic principles of cartography, interpretation and application of creating and interpreting both manual and digital maps as well as application of cartographic techniques into the real world. Emphasis is placed on the technology of mapping, particularly the digital mapping, geographic information systems, remote sensing and Global positioning system. The course prepares students for further course work in geographic information science and technology.	
6	**Pre-requisites**	None
7	**Course Objectives (Instructional)** • To offer a wider theoretical and practical knowledge and skill in mapping • To help students become knowledgeable and critical users of maps, able to examine the advantages and considerable limitations of geospatial data and map products • To improve the cartographic thinking and cartographic communication in addressing environmental and development issues holistically.	
8	**Expected Main Teaching Outcomes (By Students)** • Students will attain actionable knowledge of cartography and geo-visualization • Students will develop an understanding of how maps are created and how geospatial information is represented and conveyed through the use of maps. • Students will also develop a basic understanding of modern geospatial technologies and an ability to critically evaluate data, maps and spatial forms of representation. • Students are expected to identify, analyze and predict the development pattern and processes through their ability to create, store, manipulate and visualize geo-reference data.	

9	**Content**		
	Main Themes	**Sub Themes**	**No. of Hours**
	1. Introduction to Mapping	i. Introduction to Cartography ii. The map as a graphical representation of the earth surface iii. Evolution of Cartography **iv.** Modern Cartography and its application	04
	2. Fundamentals of Cartography	i. Elements of a map ii. Scaling iii. Symbolizing iv. Spatial reference systems v. Map Projections	04
	3. Layout Designing	i. Organizing map elements ii. Cartographic traditions for layout designing	02
	4. Reading and Interpreting Topographic Maps	i. Types of Maps ii. Sri Lanka Topographic Maps iii. Contour interpretation, Slopes and profiles	06
	5. Measuring , Ranking and Zonation	i. Measuring an area, line and polygon ii. Demarcation of features: Catchment area iii. Ordering and ranking features: Streams and service centres	04
	6. Practicing Cartographic Techniques	i. Creating profiles ii. Slope gradient iii. Zonation	04
	7. Reading and Interpreting Charts	i. Types of Chart ii. Interpreting information depicted on charts	02
	8. Analyzing Map data	i. Analyzing landuse changes through maps	04

	9. Aerial Photo Interpretation	i. Introduction ii. Process of Aerial Photographing iii. Practicing stereoscopic view of Aerial Photograph iv. Preparing landuse maps based on Air Photos	06
	10. Weather Maps and Synoptic Charts	i. Introduction to weather mapping ii. Identifying symbols for weather maps iii. Preparing synoptic charts	04
	Continuous Assessment	Practical exercises	20
	Total student contact hours		**60**

10	**Mode of delivery**	The course is made of two components: lectures and practical in cartography and computer labs. In the lectures, the conceptual elements of the above topics will be explained. The labs are designed in such a way that students will gain first-hand experience in data input, data management, data analyses, and visualization.
11	**Evaluation and Assessment** **In Course Evaluation (Team Work, Presentation, Conference Type Presentation, Projects)**	
	Mode of Evaluation	Continuous Assessment – 20 Marks
	End of Course Evaluation (End Semester evaluation 80 Marks)	
	Mode of Evaluation	Written Examination – 80 marks
12	**Recommended Reading** චන්ද්‍රසේකරඑම්. ජී. (1963), සිතියම් ප්‍රක්ෂේපණය, ලංකාවේ සීමාසහිත එක්සත් ප්‍රවෘත්ති පත්‍ර සමාගම, ලේක්හවුස්, කොළඹ. විතාරණ, කේ.එම්. (2007), සිතියම් විද්‍යාව, සරසවි ප්‍රකාශකයෝ, නුගේගොඩ. උපාලි වීරක්කොඩි (1996), ප්‍රායෝගික භූගෝල විද්‍යාව, කර්තෘප්‍රකාශන. උපාලිවීරක්කොඩි (2004), දූරස්ථ සංවේදය, කර්තෘප්‍රකාශන. මොන්ක්වුස් එෆ්. ජේ සහ විල්කින්සන් එච්. ආර්. (1967), සිතියම් සහ රේඛාසටහන්, අධ්‍යාපන ප්‍රකාශන දෙපාර්තමේන්තුව, ශ්‍රී ලංකාව Alvi, Z. (1999), A Text Book of Practical Geography, Vikas Publishing House Pvt. Ltd.	

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Chang, K.T., 2008. Introduction to Geographic Information Systems. McGraw Hill, New York.

Dent BD, TorgusonJS, and Hodler TW (2009) Cartography: Thematic Map Design, 6th Edition, McGraw-Hill.

Lillesand, T.M. and Kiefer, R.W. (1994), Remote sensing and Image Interpretation, John Wiley & Sons, Inc,

Lo,C.P. and Yeung, A.K.W. (2005), Concepts and Techniques of Geog¾phic Information Systems Prentice-Hall< New Delhi.

Longley P.A., M.F. Goodchild, D.J. Maguire, D.W. Rhind, 2011. Geographic Information Systems and Science. John Wiley and Sons, New Jersey.

Monmonier M (1998) How to Lie with Maps, 2nd edition. University of Chicago Press.

Peterson, G.N.(2009), GIS Cartography: A guide to Effective Map Design, Taylor and Francis Group, New York. Publications, Ottawa.

Robinson, A. (1960), Elements of Cartography, John Willey & Sons, New York.

Slocum TA, McMaster RB, Kessler FC & Howard HH (2009) Thematic Cartography and

2. Disaster Management

1	**Course Code**	GEDS 2002	
2	**Course Title**	Disaster Management	
3	**Number of Credits**	05	
4	**Year**	Third Year	
5	**Rationale** Disaster Management course unit is designed to provide students with graduate level knowledge and associated ability to understand disasters from development perspective and critical thinking for decision making involved in planning, management, relief and recovery management in disasters. As a core of the study, students will be exposed to concepts, theory and planning, management, response, relief, recovery, economies and specific cases associated with public emergencies in disasters. The course content also concerns to provide an accurate and rational description about the mechanism, issues and challenges of disaster management in Sri Lanka.		
6	**Pre-requisites**	None	
7	**Course Objectives (Instructional)** • Promote the understanding of applicability of disaster management through the knowledge of interrelationship between the environment and development. • Create a critical understanding on the all types of disasters. • Create awareness on all aspects on Disaster Management planning and implementation. • Enhance the capability of applying disaster management skills for the development purpose		
8	**Expected Main Teaching Outcomes (By Students)** By the completion of this course unit students will be able to • Understand the importance of disaster management while imbibing the sense of hazards and their impacts • Train to assess the impact of hazards for managing disasters and emergency situation and to prepare research projects and proposals. • Actively participate to the regional events of disaster management while familiarizing the functions and activities on preparedness, mitigation, response and recovery phases.		
9	**Content**		
	Main Themes	**Sub Themes**	**No. of Hours**
	1. Introduction to Disaster Management	i. Definitions of Hazards and Disasters ii. Principles of Disaster Management	04
	2. Natural disasters	i. Defining natural hazards ii. Types and characteristics iii. Short and Long-term impact	04
	3. Anthropogenic disasters:	i. Definition ii. Types and characteristics iii. Short and Long-term impact	04
	4. Disaster management cycle	i. Introduction ii. Significance iii. Main phases	04

	5. Pre disaster management strategies	i. Introduction ii. Structural Methods for Disaster Mitigation iii. Non-Structural Methods for Disaster Mitigation iv. Preparedness for a disaster v. Issues and challenges	04
	6. Disaster Response	i. Introduction ii. Pre-disaster response iii. Emergency response	04
	7. Post-Disaster Management Strategies	i. Introduction ii. Principles of recovery iii. Strategies for recovery	04
	8. Disaster Risk Assessment and Risk Mapping	i. Introduction ii. Contribution of modern technology on disaster management iii. Risk assessment iv. Risk mapping	04
	9. Disaster Management mechanism of Sri Lanka	i. Major disasters in Sri Lanka ii. Institutional framework of Disaster Management in Sri Lanka iii. Issues and challenges	08
	In Course Evaluation	i. Teamwork ii. Institutional visit iii. Report writing iv. Presentation	20
	Total student contact hours		**60**
10	**Mode of delivery**	Lectures (80%) In Course Evaluation (20%)	
11	**Evaluation and Assessment** **In Course Evaluation**		
	Mode of Evaluation	Report writing and presentation– 20%	
	End of Course Evaluation (End Semester evaluation – 80 Marks)		
	Mode of Evaluation	Written Examination - 80%	
12	**Recommended Reading** සංඝසුමන හිමි, පී. (2015), ආපදා කළමනාකරණය පාඨමාලා අත්පොත, බාහිර විභාග සහ විස්තාරිත පාඨමාලා ඒකකය, ශ්‍රී ජයවර්ධනපුර විශ්වවිද්‍යාලය. ධනපාල, ඒ.එච්. (2012), ආපදා කළමණාකරණය, සරසවි ප්‍රකාශකයෝ, නුගේගොඩ.		

වික්ටර් පෙරේරා, (2014), ආපදා සහ ආපදා කළමනාකරණය, සීමාසහිත ඇස් ගොඩගේ සහ සහෝදරයෝ, කොළඹ.
විජේරත්න, එස්. (2009), සුනාමි ව්‍යසනය, කර්තෘ ප්‍රකාශන.
සරත් කුමාර, එල්.(2010), ශ්‍රී ලංකාවේ ආපදා කළමනාකරණය, කර්තෘ ප්‍රකාශන.
ශකූර්, අයි.එම්. (2005), ගෝලීය පාරිසරික වෙනස්වීම් සහ මානව ලෙඩ රෝග උගැරිය ප්‍රකාශකයෝ, වරකාපොල (1991).
Disaster Mitigation in Asia and Pacific, Asian Development Bank, Manila.(1994).
Disaster Management in Metropolitan Areas for the 21st Century, UNCRD, New York, United nations Secretariat.(2012), Hazard Profiles of Sri Lanka, Disaster management Centre, Colombo.
Alexander, D. (1999), Natural Disasters, Kluwer Acedemic Publishers, London.
Himayatullah KHAN (2014), Disaster maígement Cycle: A theoretical Approach
http://www.mnmk.ro/documents/2008/2008-6.pdf
Pramanic, M.A.H. (1993), Impact of Disasters on environment and Development INCEDE report No. 3, 1993. Tokyo.
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3. Rural Development and Planning

1	**Course Code**	GEDS 2003	
2	**Course Title**	Rural Development and Planning	
3	**Number of Credits**	05	
4	**Year**	Second Year	
5	**Rationale (Introductory Notes)** The course is focused on three major components of land use planning, rural development planning and agricultural planning which are vital in development and planning process. It provides the theoretical, field based practical knowledge and discusses the planning and management issues with relevant to above areas.		
6	**Pre-requisites**	None	
7	**Course Objectives (Instructional)** a) To give an understanding on planning in land use management with special emphasis on environmental aspects and human and land use interaction which will affect the development process b) Internalize in students both the theoretical and practical knowledge on development rural development c) Encourage students to understand spatial patterns of rural development issues with reference to global and Sri Lankan contexts and evaluate the effectiveness of rural policies, planning and development initiatives. d) To build up ability to apply theoretical and practical aspects of planning process for agriculture development		
8	**Expected Main Teaching Outcomes (By Students)** a) Students will be able to understand the significance of land use analysis, land use planning and apply their practical skills acquired for the development activities in contemporary environment. b) Evaluate the impacts of changes on different groups of people in rural space. c) Employ skills in researching, analyzing and presenting on aspects of development and planning. **d)** Familiarized with formulation of plans for implementation of agriculture development strategies		
9	**Content**		
	Main Themes	**Sub Themes**	**No. of Hours**
	1. Rural development within the context of development	i. Definitions & Objectives of Rural Development ii. Why rural development? iii. Important sections in Rural Development iv. Reasons for less achievements of RD	04
	2. Rural development approaches and	i. Rural development approaches ii. Rural development strategies	03

	strategies in Sri Lanka		
	3. Rural Development planning	Preparation of Village Development plans (Institutional training at RDTRI)	04
	4. Micro Finance & Rural Development	i. Types of micro finance ii. Impacts of micro finance on women empowerment & poverty alleviation iii. Issues of micro finance at village levels (some examples)	04
	5. Introduction to Land Use Planning and Analysis	i. What is land use dynamics? ii. What is land use planning? iii. What is land use analysis?	02
	6. Institutional and Legal Environment of land Use Planning	i. Institutional mechanism in relation to land use planning ii. Land use policies in Sri Lanka	02
	7. Application of Land Use Analysis and Planning	i. Environmental management ii. Natural disasters iii. Infrastructure development iv. Regional development and urban development	04
	8. Exposure on Real World Best Practices in Land Use Planning	i. Practical field study on land use planning	05
	9. Introduction to Agriculture Planning and development	i. What is planning and development? ii. Types of agriculture plans and their relative importance	02
	10. An overview agricultural planning and development	i. Importance and benefits of agriculture planning ii. Agricultural planning in developing countries	02
	11. Agriculture Planning Process	i. Information gathering ii. Goal setting and prioritization	03

		iii. Identification of strategies iv. Plan implementation v. Challenges in plan implementation	
	12. Strategies and policies for agriculture planning and development	i. General Strategies of agriculture planning ii. Policies in agriculture planning iii. Agriculture planning in Sri Lanka	03
	13. Planning for sustainable agriculture	i. What is sustainable agriculture ii. Fundamental principles of sustainable agriculture iii. Benefits of sustainable agriculture iv. Methods and tools for sustainable agriculture planning	02
	14. Assignment	Assignment Discussion/Data collection for field based assignment/Data analysis/preparation of assignment report	20
11	**Mode of delivery**	Lectures, discussions, Tutorials, Field visit	
12	**Evaluation and Assessment** **In Course Evaluation**		
	Mode of Evaluation	Assignment /Village Development Plan/Land Use Plan– 20% -40%	
	End of Course Evaluation (End Semester evaluation)		
	Mode of Evaluation	Written Examination – **80% -60% Mark**	
13	**Recommended Reading** a. Albrecht, D. and Eller, E., 1996, 'Experiences of Land Use Planning in Asian Projects', The Asian Working Group on Land Use Planning for the Asian - Pacific Region - Selected Insights, Deutsche GesellschaftfürTechnischeZusammenarbeit (GTZ) GmbH. b. Gautam, A.P., and et al., (2002). "Land Use Dynamics and Landscape Change Pattern in a Mountain Watershed in Nepal". GISdevelopment.net, Environment. c. Simonsson, L., (2003). "Landscape as an Arena for Applied Environmental Studies". Norwegian Journal of Geography. 57: 40 – 48.		

d. Simonsson, L., (2004). "Environmental Assessments of Landscape Changes". Interdisciplinary Studies in Rural Tanzania. 11 – 52 p
e. Dixon, C. J. (1990). Rural Development in South Asia. Routledge, London.
f. Karunanayake, M.M. (2001) People, Space and Resources: Perspectives on Development Issues in Rural Sri Lanka. Sida/SAREC Research Co-operation Project. Department of Geography, University of Sri Jayewardenepura.
g. Molinga, P.P. (2000). Water for Food and Rural Development: Approaches and initiatives in South Asia. Sage Publications, New Delhi.
h. Ellis, Frank. (1992) *Agricultural Policies in Developing Countries.* Cambridge: Cambridge University Press.
i. FAO (1984) *Planning Agriculture.* Policy Analysis Division. Rome.
j. FAO (1985) *Toward Improved Multilevel Planning for Agricultural and Rural Development in Asia and the Pacific.* Economic and Social Development Paper #52. Rome.
k. FAO (1986) *Guide for Training in the Formulation of Agricultural and Rural Investment Projects.* 5 volumes. Development Policy Studies and Training Service, Policy Analysis Division. Rome.

4. Natural Resources Management

1	**Course Code**	GEDS 2004	
2	**Course Title**	Natural Resources Management	
3	**Number of Credits**	05	
4	**Year**	Second Year	
5	**Rationale (Introductory Notes)** Natural resources are the entities made naturally or the things freely available in the world. When these things are used by man or if there is a potential to use, they called Resources. Some natural things will be depleted due to continues utilization but some are constantly available. The use of resources depends on the requirement or demand of the human society and their culture and the technical ability. However in the present world, due to growing population and the development of technical knowledge, the uses of natural resources are being rapidly increased. Thus most resources are being subject to depletion, decrease, and quality changes and some natural resources are adversely affecting the man causing hazards. Thus the proper management of resources is being focused urgent attention of the present world. Sri Lanka already uses and still has a great potential of using a wide range of natural resources but there is a lack of basic understanding of what is a proper management and how can it do?. This course will be a useful attempt to fill that gap giving basic understanding and knowledge to the graduate level		
6	**Pre-requisites**	None	
7	**Course Objectives (Instructional)** • To scientifically understand the physical resources of the world from a geographical perspective • To give better understanding of the relationship between man and natural resources • To give knowledge on various management systems of natural resources in the world • To give awareness on natural resource utilization problems of Sri Lanka concerned with weakness and constrains based on field work		
8	**Expected Main Teaching Outcomes (By Students)** • Students will be able to get an clear understanding of natural resources distribution of the world • It will be possible to gain a good knowledge on man–resources relationship • Student will have awareness on concept of management and its different applications in the world.		

	• They can gain a broad knowledge on what are the natural resources that are actually used in Sri Lanka with and without a proper management • Students are finally have knowledge of how natural resources in Sri Lanka are used with a proper management for the future development of our country		
9	**Content**		
	Main Themes	**Sub Themes**	**No. of Hours**
	1. Physical resources of the world	i. Geographical distribution of natural resources in the world. ii. Their origin	08
	2. Relationship of man and resources	i. Differences in the past and present ii. Primitive relationship from a historical perspective. ii. Modern relationship	06
	3. What is natural resources management?	i. Concepts ii. Applications	05
	4. Natural resources in Sri Lanka	i. Land, soil, water, rocks & mineral, flora & fauna, climate, coastal region, coral reef, Wetland, landscape etc.	08
	5. Resource management of Sri Lanka	i. Contemporary conceptual situation ii. Weakness, constrains, problems of natural resource management.	10
	6. Proper management of Natural Resources	i. Concepts, planning and implementation	05
	7. Field study	i. Observation of two sites where resources are traditionally used and where modern methods are used	20
			60
10	**Mode of delivery**	Lectures and field study	
11	**Evaluation and Assessment** **In Course Evaluation (20%-40%)**		
	Written examination and **two** assignments		
	Mode of Evaluation.	field based assignment and/or literature based assignment	
	End of Course Evaluation (End Semester evaluation)		
	Mode of Evaluation	Written paper = **60% – 80% Marks**	

12	**Recommended Reading** AluthwatthaR.G.S.T. (2009). Non nectar feeding behavior of Sri Lankan butterflies: An essential study for habitat conservation and restoration, First National Symposium on Natural Resources Management GaminiRanasinghe, Wu ChunmingProceedings of International Conference on Business Management http://journals.sjp.ac.lk/index.php/icbm/article/view/307 Wijedasa. K H.J.(1994). Towards sustainable Growth .The Sri Lankan experiences. Central Environmental Authority Colombo Michael, L., M.Mckinney, Robert M Schoch, (2003). Natural Resources and Environmental Science. Jones and Bartlett Publishers. London http://www.tradingeconomics.com/sri-lanka/total-natural-resources-rents-percent-of-gdp-wb-data.html http://www.srilankalaw.lk/revised-statutes/volume-vi/840-naval-and-victualling-stores-ordinance.html Journal of Tropical Forestry and Environment Department of Forestry and Environmental Science, University of Sri Jayewardenepura, Nugegoda, Sri Lanka

5. Statistics for Development Studies

1	**Course Code**	GEDS 2005	
2	**Course Title**	Statistics for Development Studies	
3	**Number of Credits**	05	
4	**Year**	Second Year	
5	**Rationale (Introductory Notes)** It is evident that various types of quantitative techniques have developed in the field of development studies with the quantitative revolution and model building movement which particularly initiated in early 1960s. These quantitative techniques assist to measure and analyze various types of data and information of development in more scientific and logical manner. These techniques are particular to development studies and essential for the analysis of development indicators and to understand different relationships among development related variables. A course unit based on these quantitative techniques is essential as the statistical techniques can play a vital in measuring, analyzing and understanding the nature of development of any country or region.		
6	**Pre-requisites**	None	
7	**Course Objectives (Instructional)** • To provide sufficient knowledge to the students about the quantitative techniques applied in development studies. • To guide them to apply these techniques in their independent assignment and research. • To train them to think analytical and logical manner by following the positivist's approach.		
8	**Expected Main Teaching Outcomes (By Students)** • Expect that the student will get the knowledge about different statistical techniques and will understand the nature of development by measuring and analyzing quantitatively. • Expect that they will apply statistical techniques in their assignment and research. • They will get knowledge on how to construct a quantitative research model.		

	• They will see the objective reality of the world by measuring different relationships among variables relating to development.		
9	**Content**		
	Main Theme	**Sub Themes**	**No. of Hours**
	1. Introduction to Statistics and Development Studies	i. What is statistics? ii. Functions of statistics iii. The need of statistics for development studies	02
	2. Analysis of ungrouped and grouped data	i. Introduction to ungrouped and group data ii. Frequency Distribution iii. Basic analysis of frequency distribution iv. Different forms of frequency distribution	03
	3. Measures of Central Tendency	i. Introduction to measures of central tendency ii. Measuring central tendency for grouped and ungrouped data iii. Application of central tendency for development studies	03
	4. Measures of Dispersion	i. Introduction to dispersion ii. Different measures of dispersion iii. Application of dispersion in development studies	03
	5. Measures of Skewness and Kurtosis	i. Introduction to skewness and kurtosis ii. Measures of skewness and kurtosis iii. Their applications in development studies	02

	6. Levels of Measurement	i. Introduction to levels of measurement ii. Different levels of measurement iii. The importance of levels of measurement in statistics and development studies	02
	7. Inductive Statistics and Probability	i. Introduction to inductive statistics and probability ii. The importance of probability iii. Probability applications in development studies	
	8. Probability Distributions	i. Introduction to probability distributions ii. Different types of probability distributions iii. The use of probability distributions in development studies	02
	9. Normal Distribution	i. Introduction to normal distribution ii. The importance and the analysis of normal distribution iii. Its applications in development studies	02
	10. Testing of Hypothesis	i. Introduction to hypothesis ii. Testing of hypothesis relating to development studies	03
	11. Regression and Correlation	i. Introduction to regression and correlation ii. Regression and correlation analysis of development related variables	03
	12. Quantification of Qualitative Information	i. The way of quantifying qualitative data	03

	13. Analysis of Variance	ii. Techniques to analyze qualitative variables of development i. Introduction to Analysis of Variance ii. Its applications in development studies	03
	14. Time Series Analysis	i. Introduction to time series analysis ii. Trend and seasonal analysis of development related variables	03
	15. Time Management in Development Research Projects	i. Introduction to network analysis ii. Budgeting and managing time with network analysis	03 03
	Combined Field Study and Assignment		20
10	**Mode of delivery**		
11	**Evaluation and Assessment** **In Course Evaluation(Individual Project)**		
	Mode of Evaluation		
	End of Course Evaluation (End Semester evaluation 80 Marks)		
	Mode of Evaluation: **End semester exam** – 80 Marks	**Individual project –** 20 Marks	
12	**Recommended Readings:** Berry, G.C. (2007) *Business Statistics.* New Delhi: Tata McGraw-Hill Publishing Comapany Cliff, A.D. and Ord, J.K. (1973) *Spatial Autocorrelation.* London Cole, J.P. and King, C.A.M. (1968) *Quantitative Geography.* London Ebdon, E. (1987) *Statistics in Geography.* UK: Basil Blackwell Ltd. Hubert M., Blalock, Jr. (1972) *Social Statistics.* New York: McGraw Hill Book Company		

	Hammond, R. and McCullagh, P.S. (1978) *Quantitative Techniques in Geography: An Introduction.* Oxford University Press Karunaratna, K. R. M. T. (2009) *Quantitative Methods for Management.* Maharagama: Tharanjee Prints King, L.J. (1969) *Statistical Analysis in Geography.* Englewood Cliffs Neft, D.S. (1966) 'Statistical Analysis for Spatial Distributions'. *Philadelphia Regional Science Research Institute Monograph Series,* No.2 Panneerselvam, R. (2009) *Research Methodology.* New Delhi: PHI Learning Private Limited Taylor, P.J. (1971) 'Distances within Shapes: An Introduction to a Family of Finite Frequency Distributions'.*GeographiskaAnnaler,* B, 53, pp. 40 – 53

6. Contemporary Development Issues

1	**Course Code**	GEDS 2006
2	**Course Title**	Contemporary Development Issues
3	**Number of Credits**	05
4	**Year**	Second Year
5	**Rationale (Introductory Notes)** This course is essentially to provide the student with an initial overview of contemporary development issues. This will enable students to update with the latest issues of environment and development that have already completed in other course units, while not imposing opinions on them. It will look at opposing points of view on the same issues and assess their relative merits. Accordingly this course will provide the analytical tools needed to study the issues in more depth on their own by the students. This course will focus to study of issues relating to environmental, economic, political, social, legal and development matters at the local, national, and international levels. Students study current problems and use method of investigation, research, and discussion which is an integral part of modern teaching and learning of environment and development studies.	
6	**Pre-requisites**	None
7	**Course Objectives (Instructional)** • To offer a wider theoretical and conceptual construct in with adequate exposure to the students in addressing contemporary development Issues. • To examine some of the pressing development problems faced by the global and Sri Lankan communities as they are preparing for the next several decades including challenges and prospects in good governance, peace and reconciliation, sustainable development, international trade and political relations etc. in an increasing globalizing world where	

governments, international organizations, and individuals to address those problems through cooperation, competition, or conflict.

- To widen the horizons of critical understanding on issues of international and regional interests.

8 Expected Main Teaching Outcomes (By Students)

- Analyzes and interprets primary and secondary source materials to increase understanding of the structure of society, its groups, institutional and culture.
- Distinguishes between relevant and irrelevant information.
- Evaluates information for accuracy, separating facts from opinions.
- Selects and defends positions in writing, discussion, and debate.
- Plans, designs, and develop
- ps projects relative to the study of ongoing contemporary development Issues.
- Participates in interviews, debates and interact with agencies and community personnel including field exposures.
- Student understanding of Contemporary Development Issues shall be increased and the degree to which the factors discussed in class will be interrelated while learning use variety of measurement tools and methods.

9 Content

Main Themes	Sub Themes	No. of Hours
1. Introduction to contemporary development Issues.	i. Introduction and Overview ii. Key Global Issues in the 21 Century	03
2. Global Climatic Change.	i. What is Climate Change ii. Impacts of Climate Change (Global) iii. Regional and Local Impacts of Climate Change.	04
3. Global Political Issues	i. Introduction to political issues ii. Conflicts and development iii. Impact of global terrorism	02
4. Global economic issues	i. Introduction to global economic issues. ii. In-depth analysis of selected economic issues at local and global level	04
5. Global Poverty Issues	i. Defining poverty ii. Dimensions of poverty iii. An overview of global poverty iv. Strategies for poverty alleviation	04
6. Natural Disasters	i. Definitions and Introduction ii. Types and causes of natural hazards iii. Disaster management for development	03

	7. Food insecurity and Hunger	i. Conceptual framework on food security ii. Dimensions of food insecurity and hunger iii. Causes for food insecurity iv. Impact of food insecurity on socioeconomic development at global and local level v. Strategies for enhancing food security at various levels	06
	8. Forced migration issues	i. Defining forced migration ii. Global refugee crisis iii. Issues of internal displacement iv. Impact of forced migration on development	06
	9. Urban – Rural Settlement Issues	i. Introduction to Settlement Development Perspectives ii. Issues of Urban and Rural Settlements iii. Settlement development Policies and constraints	04
	10. Development policy issues	i. Introduction to development policies ii. Contemporary development policy issues	04
	In Course Evaluation	**Discussion, Report writing and Presentation**	20
	Total student contact hours		**60**
10	**Mode of delivery**	Lectures, Online Communication, Seminars	
11	**Evaluation and Assessment** **In Course Evaluation (Team Work, Presentation, Conference Type Presentation, Projects)**		
	Mode of Evaluation	Assignment – 20 Marks	
	End of Course Evaluation (End Semester evaluation 80 Marks)		
	Mode of Evaluation	Written Examination – 80 marks	
12	**Recommended Reading** (2012), Hazard Profiles of Sri Lanka, Disaster management Centre, Colombo. (2011 November), Report of the Commission of Inquiry on Lessons Learnt and Reconciliation, Government of Sri Lanka. Alexander, D. (1999), Natural Disasters, Kluwer Academic Publishers, London. Displacement and resettlement, www.zedbooks.co.uk. Food and Agricultural Organization (2010). Annual Report. Marie Hoadley (2003), development-induced displacement and Resettlement– impoverishment or sustainable Development? ACMER.		

	Michel T, Sinarr and D. Neil Snarr (2002), Introducing Global Issues, Lynne Rienner Publishers, Inc., Colarado, USA. Millennium Development Goals - MDG (2010) Ray Hammond (2007),The World in 2030**,** Printed by Itxaropena SA, 20800 Zarautz (Spain) itxaropena@itxaropena.net Robert Muggah (2008), Relocation failures in Sri Lanka: a short history of internal State of Food Insecurity –SOFI (2010) Rev. Sangasumana, P. (2010), Conflict and Displacement: A leading Social Problem of Sri Lanka, In: Huhua Cao (ed), Ethnic Minorities and Regional Development in Asia, Amsterdam University Press, Netherlands. Rev. Sangasumana, P. (2014), The Children Left Behind by International Migrants from Sri Lanka: Victims or Beneficiaries of Globalization?, In; Veale, A. and Dona, G. (eds), Child and Youth Migration, Palagrave Macmillan, 162-185 pp. Robbert, B., Tony Binns, Jennifer, A., David Smith (2004), Geographies of Development, Person Education Limited, England.

7 Global Environment and Climate Change

1.	**Course Code**	GEDS 2007
2.	**Course Title**	Global Environment and Climate Change
3.	**Course Coordinator**	B.A, Sumanajith Kumara
4.	**Number of Credits**	05
5.	**Year**	Year 2
6.	**Rationale (Introductory Notes)** Global environment is the overall environment of the earth consists of air (atmosphere), water hydrosphere), Land (lithosphere), plant and Animals (biosphere). It is apparent that these environments are being adversely affected by ongoing Climate change that has been drawn wide attention of the world. It has been a serious challenge to mitigate the devastating impacts to natural and human systems. Thus climate change and its impact on global environment will be the focal point of concern in the context of environmental protection strategies	

	In this regard the understanding of how climate change is happened, how it effect on man and environment and how to mitigate them are essential issues that our attention should be focused. Dissemination of knowledge and awareness on these matters especially among the intellectuals is very important in this context. Taking these aspects into account, this course unit aims to give the students the basic climatological knowledge, as a foundation and then gives knowledge on how climate change is happened and subsequently its impact on the environment at local, regional and global level. In this regard global environment including air, water, land and biological entities are given special attention.	
6.	**Pre-requisites**	Should have a pass for GEDS 1001 Physical Environment
7.	**Course objectives** 1. To give knowledge on weather and climate together with climatic elements which are related to climate change. 2. to give awareness on climatic variations, climate change and weather extremities 3. to give scientific knowledge on how climate change affect the environment 4. improve the perception on protection of environment from climatic variations and weather extremities	
8.	**Expected Main Teaching Outcomes (By Students)** Students will understand weather extremities, climatic variations and climate change at local, regional and global level Student will be able to understand contemporary global environmental problems caused by climate change They will understand the importance of regarding climatic issues when environmental managements are undertaken	

	Students will be provided with practical knowledge on how climatic variations and climate change are studied	
9.	**Content**	

Main theme	**Sub theme**	**No of hours**
1. What is global environment?	Major environmental systems from spatial view point and their characteristics • Atmosphere • Hydrosphere • Lithosphere • Biosphere	04
2. Weather and climate (general introduction)	What is weather What is climate	02
3. Climatic elements.(In detail)	Definitions. Impacts. spatial distribution • Temperature • Precipitation • Humidity • Pressure and winds	08
4. Tropical atmosphere (special reference)	Atmosphere of the tropical region and its behavior • Air turbulences • Thermal waves and inversions • Depressions and cyclones • Monsoons	04
5. Global climate, regional climate and local climate	Definitions. Interrelationship between each	02
6. Climatic variations and climate change.	Definitions. differences	04
7. Factors affecting climate change (in detail)	Universal, global. regional and local basis *Solar system and solar radiation. *Terrestrial impacts (earth surface and interior) *Human induced impacts.	04

8. Consequences of climate change (special reference to environmental issues)	1 water resources 2 biological entities 3 air quality 4 weather extremities	08
9. Climate change study (data analysis, models and modern technology)	Required Data collection Data analysis	04
10. Impact of climatic variations on environment. Local issues	Couse work based on field study	
10. Total lecture hours		40
11. Evaluation and Assessment	Written examination Assignment Total	75 Marks 25 100

Recommended reading

Alina Bachmann (2017), The Science of Climate Change. A Hand –On Course.

Alexa Ingram (2024) Climate Anxiety No More: https://www.amazon.com/Climate-Anxiety-More-

Alexa Ingram (2023) Climate Change Simplified: A Comprehensive Guide to Global Warming and
Sustainable Living. https://www.amazon.com/dp/1962795004/ref=sspa_dk_detail_2?psc

Assessing the Global Climate. National Centers for Environmental Information https://www.ncei.noaa.gov/news/global-climate-202308

Bandaranayake G.M. (2021) foaY.=Kh c,h yd mrsirh' f.dvf.a m%ldYlfhda fld<U 10

Christopherson, Robert W. (1996). Geo-ecosystems: An Introduction to Physical Geography. Prentice Hall. ISBN 0-13-505314-5.

Gerald Foley (1991), Global Warming : Who is taking the heat. Panos publications London.

Global Environmental Change. https://www.sciencedirect.com/journal/global-environmental-change

Third Year

1. Human Resource Planning

1	**Course Code**	GEDS 3001	
2	**Course Title**	Human Resource Planning	
3	**Number of Credits**	04	
4	**Year**	First Year	
5	**Rationale (Introductory Notes)** Human resource planning (HRP) is the process of reviewing human resource requirements to ensure that any country has the necessary human resources to meet both its operational and strategic goals. HRP is forward looking discipline and it involves planning of future human resource requirements and developing strategies to meet necessary requirements according to country needs. Thus, in this course you will mainly learn about the HRP process. In addition, you will also analyze alternative human resource strategies and critically assess their relationship to operational and strategic plans of the country.		
6	**Pre-requisites**	None	
7	**Course Objectives (Instructional)** • To provide an understanding of the essential elements of Human Resource Planning. • To emphasize the central position that man holds in the quest for development. • To emphasize the importance of HRP in the process of development. • To guide them how to plan human resources for the development in Sri Lanka.		
8	**Expected Main Teaching Outcomes (By Students)** • Students will understand essential elements that should be taken into consideration in HRP. • They will understand the importance of HRP for development. • They will acquire the knowledge for the analysis, assessment and planning of human resource requirements for the development in Sri Lanka.		

9	Content		
	Main Theme	**Sub Themes**	**No. of Hours**
	1. Introduction to HRP	i. Defining HRP ii. History of HRP iii. HRP beyond HRM iv. The need of HRP v. Relationship between HRP & Development	03
	2. Spiritual aspects of HRP	i. Basic nature of human being ii. Meaning and the importance of spiritualism iii. Nature of human being in leading and management	03
	3. Models in HRP	i. Introduction to HRP model ii. Importance of HRP model iii. Outline and the application of HRP model	03
	4. Bargaining power of labour	i. What is bargaining power? ii. The need of bargaining power iii. How to achieve bargaining power	03
	5. Leadership development	i. Introduction to leadership ii. The concept of leadership development iii. Theories of leadership and leadership development	03
	6. HRP and Gender	i. Introduction to gender ii. Changing role of gender iii. Consequences of changing roles iv. The need of HR planning for gender	04
	7. Empowering people	i. What is empowerment? ii. Why need empowerment? iii. How to empower for HR planning	04

	8. Green HRM	i. What is green HRM? ii. Importance of green HRM iii. Practice of green Concept in HRM and HRP	03
	9. Human Development Index (HDI)	i. Defining development and human development ii. Defining HDI iii. Theories behind human poverty and development	03
	10. Human Resource Information System (HRIS)	i. Introduction to HRIS ii. The need of HRIS iii. Models of HRIS	03
	11. HR planning at national level	i. The role of government in HR planning ii. The importance of education and skill development iii. Country HR planning as a development strategy	04
	12. Globalization and Human Development Issues	i. What is globalization ii. Human development issues in globalization iii. Challenges faced by Sri Lanka in HR planning	04
	Combined field study and assignment		20

10	**Mode of delivery**		
11	**Evaluation and Assessment** **In Course Evaluation(Project on HR Planning through Team Work, and Presentation)**		
	Mode of Evaluation		
	End of Course Evaluation (End Semester evaluation 60 – 80 Marks)		
	Mode of Evaluation: **End semester exam** – 80 Marks	**Team work project –** 20 Marks	
12	**Recommended Readings:** Belcourt, M. and McBey, K. (2013) *Strategic Human Resource Planning.*Toronto: ThompsonNelson Boudreau, J. W. (2007) *Beyond HR: The New Science of Human Capital.* Harvard Business School Press Cascio, W. F. (1995) *Managing Human Resources.* New York: McGraw Hill Dychtwald, K., Erickson, T. J. and Morison, R. (2006) *Workforce Crisis: How to Beat the Coming Shortage of Skills and Talents.* USA: Harvard Business School Press Nadler, L. and Nadler, Z. (1990) *The Handbook of Human resource Development.* NY: John Wiley and Sons Nankervis, A. R. and Compton, R.I. (1997) *Readings in Strategic Human Resources.* Melbourne: Nelson Sparrow, P., Brewster, C. and Harris, H. (2004) *Globalizing Human Resource Management.* London: Rutledge Stone, J. R. (1998) *Human Resource Management.* Australia: John Wiley and Sons Storey, J. (1992) *Developments in the Management of Human Resources.* Oxford: Blackwell Thong, G. (1990) *Human Resource Issues in Singapore.* Singapore: Addison Wesley Ulrich, D. (2008) *HR Competencies: Mastery at the Intersection of People and Business.* Society for Human Resource Management		

2. Environment Policies & Legislation

1	**Course Code**	GEDS 3002	
2	**Course Title**	Environment Policies & Legislations	
3	**Number of Credits**	05	
4	**Year**	Third Year	
5	**Rationale (Introductory Notes)** To promote economic growth in a sound environmental context requires objective efforts to integrate environmental concerns in development decision making. Environmental policy and legislation course unit is designed to provide students with undergraduate level to understand the current major environmental issues prevailed in the country and to make them aware the evolution of environmental policy, legislation and regulatory mechanism in the country implemented and the implementation procedure in different administrative level to overcome environmental problems and to achieve sustainable development. This course also explores the other national and international commitments regarding safeguard the environmental and their strengths and issues in implementation.		
6	**Pre-requisites**	None	
7	**Course Objectives (Instructional)** • Create awareness on the rationale behind environment policy development and formation of legislation. • Create a critical understanding of the relevance of major pieces of legislations adapted to safe guard the natural resources in the country and to achieve sustainable development goals. • Create awareness on acts, ordinance of state relevance to environmental protection as well as conventions and treaties adopted internationally.		
8	**Expected Main Teaching Outcomes (By Students)** At the end of this course, students are be able to : • Present an overview of the rationale behind the development of environmental policy in the country and relevance of the legislation. • Explain fundamental concepts in environmental law and policy • Describe the existing environmental policy and the legislations of the country at the state and local levels in order to safeguard land, air, water, biodiversity etc. • Examine and analyze legal approaches to pollution control, environmental planning and natural resource management. • Critically examine implementation issues associated with environmental regulation and adapting international environmental laws, agreements, conventions and treaties.		
9	**Content**		

	Main Themes	Sub Themes	No. of Hours
	1. Introduction to Environmental Policy and Legislation	i. What is Environmental Policy ii. What is Environment Legislation iii. Importance of Environment Policy and Legislation for a country iv. Concept of sustainable development and environmental protection	03
	2. Overview of the development process of environmental policy in Sri Lanka.	i. Rationale of the development of environmental policy ii. National environmental Act iii. Concepts related to the development of environmental policy	03
	3. Development of Environmental regulations in Sri Lanka	iv. The administrative structure v. The political setting vi. Legislative process vii. Background of Environment concerns in legislative process	03
	4. An overview of Environmental legislations in Sri Lanka	i. Ordinances ii. Acts iii. Laws iv. Examples for Ordinances • Crown Land Ordinance • Land Development Ordinance • Forest Ordinance • Fauna and flora protection ordinance	03
	5. An overview of various Acts and Laws related to environmental protection	i. Mines and Minerals Law ii. Soil conservation Act iii. Coast Conservation Act iv. National Environment Act v. Marine pollution prevention Act	03
	6. Current environment Regulations in Sri Lanka	i. Regulations for Environmental Protection ii. Regulations for Air Quality Maintenance iii. Regulations for Noise Control iv. Regulations for Waste Management	03
	7. Environmental Impact Assessments Regulations	i. what is EIA? ii. EIA in NEA iii. EIA in Coast Conservation Act iv. EIA in Fauna and Flora Protection Ordinance v. Existing Legal framework for EIA	03

	8. EIA process in Sri Lanka	i. Determining whether IEE or EIA ii. Approving procedure for Projects/ prescribed projects iii. Role of Project Approving Agencies iv. Environmental Scoping v. Preparation of EIA Report vi. Incorporation of Social Impact assessment	03
	9. EIA process in Sri Lanka and the significance of social impact Assessment (SEA)	i. Extended Cost Benefit Analysis ii. Analysis of Alternatives iii. Public Participation and Appeal procedure iv. Benefits of SEA v. Constraints in EIA process	02
	10. International regulations for environmental protection	i. International Conventions, Protocols and treaties ii. Framework Convention on Climate Change iii. Ramzar Agreement iv. Biodiversity Convention v. BASEL convention vi. Viana Convention	02
	11. Combined Field Study	Based on a Case study on a Specific Environmental issue	20

10	**Mode of delivery**	Lectures, discussions, Tutorials, Field visit
11	**Evaluation and Assessment** **In Course Evaluation(Team Work, Presentation, Conference Type Presentation, Projects)**	
	Mode of Evaluation	Assignment (20%-40%)
	End of Course Evaluation (End Semester evaluation)	
	Mode of Evaluation	Written Examination (80% - 60-%)
12	**Recommended Readings** හේරත්, එච්. එම්. බී. එස්.(2015), පාරිසරික ප්‍රතිපත්ති හා නීති පාඨමාලා අත්පොත, බාහිර විභාග සහ විස්තාරිත පාඨමාලාඒකකය, ශ්‍රී ජයවර්ධනපුර විශ්වවිද්‍යාලය Central Environmental Authority, Review of Environmental Legislation in Sri Lanka S Hennayake et al (eds), Environmental Impact Assessment: The Sri Lanka experience McCormick, John (2001). *Environmental Policy in the European Union. The European Series*. South Asia Co – operative Environment Programme, Compendium of Summaries of Judicial Decisions in Environment Related Cases	

South Asia Co – operative Environment Programme, Report of the Regional Symposium on the Role of the Judiciary in Promoting the Rule of Law in the Area of Sustainable Development
The South Asian Environmental Low Reports, Vol. 2(1), March1995

National Environmental Act (NEA) No. 47 of 1980

National Environmental (Amendment) Act, No. 56 of 1988

National Environmental Act. Order made by Minister of Environment under Section 23 Z specifying "prescribed" projects.

National Environmental (Procedure for the Approval of Projects) Regulations No.1 of 1993.

Central Environmental Authority : Guidance for Implementing the Environmental Impact Assessment (EIA) Process, 1995

Solow R. (1992) *An Almost Practical Step Toward Sustainability*, Resources for the Future, Washington D.C.

Fiorino, D. J. 1995, Making Environmental Policy, Berkeley, Los Angelies, London, University of California Press.

Dasman, R.F. (1984) "An Introduction to World Conservation" In *Sustaining Tomorrow*, F.R. Thibodena and H.H. Field (eds.) pp 16-24.

World Commission on Environment and Development (1987). *Our Common Future*. Oxford: Oxford University Press.
Eccleston C. and March F., Global Environmental Policy: Principles, Concepts And Practice, CRC Press Inc.
http://www.earthsystemgovernance.net/conceptual-foundatins

3 Project management & Evaluation

1	**Course Code**	GEDS 3003	
2	**Course Title**	Project Management	
3	**Number of Credits**	04	
4	**Year**	Third Year	
5	**Rationale (Introductory Notes)** Project management is a critical skill in today's fast-paced and dynamic environment. With organizations increasingly relying on structured approaches to manage projects, the ability to effectively plan, execute, monitor, and close projects is highly sought after across industries. This course is designed to provide participants with a solid foundation in project management principles, methodologies, and tools. As projects become more complex and globalized, the need for skilled project managers is more critical than ever. This course is relevant for professionals in development and environmental sectors. This course equips students with the necessary competencies to succeed in a competitive job market.		
6	**Pre-requisites**	None	
7	**Course Objectives (Instructional)** To Internalize in students on core principles, processes and methodologies of project management To encourage students to develop effective and detail project plans including timelines, budgets, resource allocation To develop skills and attitudes required for active involvement in the project management in the fields of environment and development.		
8	**Expected Main Teaching Outcomes (By Students)** By the end of this course, participants will be able to 1. Identify and describe on essential components and processes of environmental and development project management. 2. Analyze contemporary environmental and development project performances in Sri Lanka and other countries. 3. Design environmental and development projects for local and national applications.		

9	Course contents		
Main Themes		**Topic**	**Hours**
Introduction to Project Management Frameworks and Methodologies		Introduction to Project Management Frameworks Methodologies Benefits and challenges of each methodology	4
Project Life Cycle: Initiation, Planning, Execution, Monitoring & Control, and Closing		Project initiation Project planning Execution phase Monitoring and control Key performance indicators (KPIs) for project tracking. Project closing Post-project evaluation and stakeholder feedback**.**	8
Risk Management and Contingency Planning		Risk identification Risk assessment Risk prioritization Developing risk response strategies Creating a risk register and contingency plans. Implementing monitoring techniques to track risks throughout the project lifecycle.	8

	Real-world case studies of risk management failures and successes.	
4. Budgeting, Cost Estimation, and Financial Control	Budgeting basics Types of cost estimates Cost management Monitoring actual vs. planned costs Cost forecasting and re-estimation techniques. Financial risk management and cost control. Reporting on financial status and budget performance.	6
5. Resource Management, Team Dynamics, and Stakeholder Engagement	Resource allocation Role assignment and team structure Managing team dynamics Techniques for effective stakeholder analysis and engagement. Balancing competing demands from multiple stakeholders. Communication strategies for managing expectations and ensuring alignment. Managing external vendors and third-party resources	6
6. Quality Management and Process Improvement	Defining quality standards and metrics for project success. Quality planning Quality assurance vs. quality control Continuous process improvement Implementing quality reviews, audits, and inspections. Techniques for detecting and addressing quality issues during the project lifecycle. Case studies of quality failures and improvements in projects.	4
7. Project Documentation, Reporting, and Communication	Key project documents Creating effective project reports Best practices for project communication Change management documentation Project close-out documentation: Lessons learned and final reports.	4

		Techniques for clear, concise, and transparent communication across teams.	
1. In Course Evaluation		Data collection for field based assignment/Data analysis/preparation of assignment report or Self-review of social welfare and community development programs	20
10	**Mode of delivery**	A. Lectures B. Reading of prescribed books and other documents C. Review of Real world case studies	
11	**Evaluation and Assessment** **In Course Evaluation (Real world case studies, Team Work, Project designs, Project reports)**		
	Mode of Evaluation	In course evaluation – 40%	
	End of Course Evaluation (Year-end evaluation – 80 Marks)		
	Mode of Evaluation	Written Examination – 60%	
12	**References** Ebenezer A.Sholarin, J. L. (2015). Environmental Project Management, Principles, methodology and process. Switzerland: Springer International publishing. Munier, N. (2014). Project Management for Environmental, Construction and Manufacturing Engineers: A Manual for Putting Theory into Practice. Springer Silvius, G., & Tharp, J. (2013). Sustainable Project Management. Gower Publishing. Morris, P., & Therivel, R. (Eds.). (2009). Methods of Environmental Impact Assessment (3rd ed.). Routledge. Serrat, O. (2017). The Logical Framework Approach: A Project Management Tool for Development Planning. Asian Development Bank. Savino, M. (Ed.). (2011). Risk Management in Environment, Production, and Economy. InTech. Vanclay, F., & Esteves, A. M. (Eds.). (2015). Social Impact Assessment: An Introduction. Edward Elgar Publishing.		

4. Urban Planning and Development

1	**Course Code**	GEGE 3004	
2	**Course Title**	Urban Planning and Development	
3	**Number of Credits**	05	
4	**Year**	Third Year	
5	**Rationale (Introductory Notes)** This course is designed as a survey of ideas and issues in urban geography. Because urban geographers focus on a placerather than on a particular topics relevant to development of the country, region and the world.		
6	**Pre-requisites**	No	
7	**Course Objectives (Instructional)** • Understand and be able to explain major concepts and theories from urban geography • Understand and to able to explain major approaches to and perspective on urban geography • Be able to recognize and critically analyze the geographical dimensions of urban issues they encounter in their future studies • Describe the effects of urbanization on the environment - pollution (air, water, visual and noise), the results of urban sprawl on surrounding areas, the growth of out-of-town urban activities - shopping areas, sports facilities, etc. • To understand the development planning of the country.		
8	**Expected Main Teaching Outcomes (By Students)** • Students will examine the major concepts and Theoretical frameworks in Urbanization and Development • Student will discuss basic historical, social, political and economical processes that shape of urban landscape. • Student will explain and compare the differences on the spatial dimensions of urban phenomena and how they impact people.		
9	**Content**		**No. of hours**
	Main Themes	**Sub Themes**	**(60)**
	1. Introduction to urbanization and the development	Define urban centers Urbanization	01 01
	2. Origin of Economic Development, Settlements and Cities.	Economic Development Settlements and Cities	02 04
	3. Identification of Service Centres and their Periphery	Service Centers and their Periphery Development Trends	02

	4. Globalization of the urban system and Development	Global Urbanization Urbanization impact of the Development	02 02
	5. Urban Land Use	Urban Land use Changing pattern of the Land use	02 02
	6. Urban Issues	Urban Issues	04
	7. The Role of Solve the urban Issues	The Plan to Reduce Urban Issues	04
	8. Urbanization in third world	Urbanization in Third world Urban Trends in Third World Urbanization	02 02
	9. Urbanization and new trends in Sri Lanka	Urbanization in Sri Lanka Urban trends in Sri Lanka	04 04
	10. Urban Issues and Planning in SL	The Impact of Urban Issues in SL Methods of Reduce the Urban Issues in SL	02 02
	11. Urban Impact of the Environment	Urban Impact of the Environment	04
	12. Urban Function and Service Area	Urban Morphology Urban Morphology for Third world Countries	04 02
	13. The Relationship between Urbanization and the Development	Development Inequalities Identification of Reasons for development Inequalities The Role of Towns for development	02 02 02
10	**Mode of delivery**	Lectures and Group Activities	Group Discussions
11	**Evaluation and Assessment –** Continues assessment and Written Exam		
	In Course Evaluation - Group Assignment and Individual Presentation		
	Mode of Evaluation	**Group assignment and Presentation (20-40 marks)**	
	End of Course Evaluation - Written Exam		
	Mode of Evaluation	**Written Examination (80- 60 Marks)**	
12	**Recommended Reading**		

Tim Hall 91998) Urban Geography, Routledge, London.. ISBN 0 415 14084 6

Pacione.M, (1998), Urban Geography; A global perspective (2nd Edition), Routladge, London, ISBN 0 415 34306 2

Ratnayake.R.M.K., (2007), **Rural – Urban Linkages in Regional Devlopment; the experiences of North Central Sri Lanka,** (Auther Publication) Piyasiri Printers, Malabe, Colombo. ISBN 978 955 50519 0 3

ආර්.,එම්.,කේ. රත්නායක, 2008.,***නාගරික දිළින්දන් හා පාරිසරික සෞඛ්‍යය*** ., එස් ගොඩගේ සහ සහෝදරයෝ ., කොළඹ 10.

ආර්.එම්., කේ., රත්නායක, 2009,ජනාවාස අධ්‍යයනය ., කර්තෘ ප්‍රකාශන ., කොළඹ.

5. Geographic Information Systems for Planning

1	**Course Code**	GEDS3005	
2	**Course Title**	GIS for Planning	
3	**Number of Credits**	05	
4	**Year**	Third Year	
5	**Rationale (Introductory Notes)** The analysis functions use the spatial and non-spatial attributes in the database to answer questions about the real world. Geographic analysis facilitates the study of real-world processes by developing and applying models. Such models illuminate the underlying trends in geographic data and thus make new information available. Results of geographic analysis can be communicated with the help of maps, or both for planning.		
6	**Pre-requisites**	GEDS 2001	
7	**Course Objectives (Instructional)** • To provide a background to the fundamental principles of computer cartography, map design and production. • To expose students to a variety of thematic mapping techniques. • To gain a practical understanding use of GIS for Planning in different purposes		
8	**Expected Main Teaching Outcomes (By Students)** While following the concept and techniques and the practical secessions, student are familiarize the computer cartography and the GIS software. In addition to understand basic GIS analysis concepts and application of GIS for Planning purposes		

9	**Content (Main Themes)**	**No. of Hours**	**Sub Heading**	**No. of Hours**
	1. Introduction to fundamental concept and digital mapping	10	i. What is GIS ii. Component of the GIS iii. GIS Users iv. History of GIS	02 02 03 03
	2. Introduction to GIS software	06	Practical Session	06
	3. Working on in class projects (Lab Exercises)	10	Familiarize the basic tools	10
	4. Practice different types of Thematic Maps	10	i. Density Map ii. Dot Maps iii. Chart	03 03 06
	5. Types of Analysis	14	i. Mapping ii. Spatial Measurement iii. Tabular Analysis iv. Proximity Analysis	02 02 02

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<tr><td></td><td></td><td></td><td>v. Overlay</td><td>04
04</td></tr>
<tr><td></td><td>6. An Analysis of application of GIS for Planning</td><td>10</td><td>i. Land use Analysis
ii. Application of Agriculture
iii. Urban Planning</td><td>04
02
04</td></tr>
<tr><td>10</td><td colspan="2">Mode of delivery</td><td colspan="2">Lectures</td><td>Group discussions</td></tr>
<tr><td rowspan="4">11</td><td colspan="5">Evaluation and Assessment
In Course Evaluation(Mid Semester Evaluation)</td></tr>
<tr><td colspan="2">Project 01 (20 Marks)</td><td colspan="3">Mid Term Text or Project 02 (20 - 40 Marks)</td></tr>
<tr><td colspan="5">End of Course Evaluation (End Semester evaluation)</td></tr>
<tr><td colspan="2">Mode of Evaluation</td><td colspan="3">Written examination (80- 60 marks)</td></tr>
<tr><td>12</td><td colspan="5">Recommended Reading
1. ESRI, 2004, Introduction to ArcGIS Desktop ii, United State of America.
2. ESRI, 1996, Arc View GIS, United State of America.
3. Burrough.P.A. and McDonnell.R.A, 1998, Principles of Geographical Information Systems, Oxford University Press, Oxford, Ney York.
4. Lo.C.P and Yeung.A.K.W., 2002, Concepts and Techniques of Geographic Information Systems, New Jersey, USA.
5. http://www.esri.com/About.com, Inc. http://gis.about.com/science/gis
6. http://www.colorado.edu/geography/gcraft/notes/datacon/datacon
7. http://www.king.ac,uk/geog/gis/intro.htm
8. http://oddens.geog.uu.nl/index.html
9. http://www.usgs.gov/education/learnweb/wwmaps.html</td></tr>
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6 Water Resource Management

1	**Course Code**	GEDS 3006
2	**Course Title**	Water Resource Management
3	**Number of Credits**	4
4	**Year**	3
5	**Course Coordinator**	B.A, Sumanajith Kumara
6	**Rationale** Water is a multiple use of resource. Its quantitatively scarcity or surplus as well as qualitatively pollution or contamination have become severe problem in every part of the world. It is also apparent that water resources are the most distinctive entities undergone to thread due global climate change and human interference. In addition increasing demand on water, high completion for use, inappropriate management have intensified the problem. In this dimension, a better knowledge on water itself, water sources, water resources and better planning strategies are needed. This course unit aims at giving the student a better knowledge and understanding to realize what a good water management is and how to do a better planning of such a management. In this connection, scientific knowledge on water itself, its behavior in the physical environment are essentially needed prior to plan or assesses a water management system. Apart from that, technical and human aspects are essential components that should be taken into consideration. This course unit gives the student such a theoretical and practical knowledge using hydrological and geographical concepts enabling to practice them in the field.	
6	**Pre-requisites**	None
7	**Course objectives** 1. To give the students a good understanding on water behavior in the physical environment and different types of water resources in the world and especially in Sri Lanka. 2. To give awareness to the students on the importance of re-considering the existing water resource management systems in Sri Lanka from a sustainable perspective 3. To provide the students with a sound knowledge enable to assess the existing water resource management systems or to monitor an ongoing water utilization project. 4 provides theoretical and practical knowledge to the students on how to plan out a good management for a water resource (as a model)	

8	**Expected Main Teaching Outcomes (By Students)** • Student's perception on water will be changed or enhanced enabling to see from scientific and sustainable sense. • Different kinds of water sources in the world and potential resources available in Sri Lanka could be understood. • Students will have a sound knowledge on how to evaluate or monitor an existing water project • They will be able to make a good water resource plan using the practical knowledge • Students will be able to undertake research on potential water resources, using geographical and hydrological knowledge gained from this course unit

9	**Content**	
Main theme	Sub theme	No of hours
1. Introduction to water and water distribution in the earth	Water distribution global situation	02
2.Water and hydrological studies	Rain water. Surface water. Ground water. Storage water. Spring water. River and streams. irrigation water (basic introduction) parameters (introduction) Rainfall amount and intensity. Runoff rate and volume, soil infiltration. Evaporation and transpiration. Stream water flow. Soil water behavior. Ground water behavior	04
3.Water resource management	Introduction. Definitions. Common management framework	04
4. River water utilization	Damming , storing .diverting, direct use	04
5. Storage management	Tanks and reservoir maintaining, operating, Water storing and discharging	02
7.Flood management	River flood and urban floods	04
8. Rainwater harvesting	Different methods now use in Sri Lanka	04
9.Ground water	Ground water exploring Water level measuring (well investigation). Tunnelling	04
10.River basin management	Upper catchment managing	06
11. Water quality study	PH value. Turbidity. TDSS, Hardness (review of previous researches undertaken by scientists)	02
12. Irrigation water management	Paddy field water utilization in Sri Lanka	04
13 **Total student contact hours**		40

14.**Evaluation and assessment**	Written examination Assignment based on field work	75 marks 25 100 total

Recommended readings

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Bandaranayake G.M.(2017) Water Resources Study. Theory Practice and Application. Godage International Publishers. Colomo10

Dissanayake .P. Smakhtin. V (2007),Environmental and Social Values of River Water: Example from the Menik ganga Sri Lanka, Working paper 121. Colombo(IWMI)

Elper Elci (2023) Sustainable Water Resources Management. link.springer.com/journal/40899

What is hydrology and what do hydrologists do?". United States Geological Survey. Archived from the original on April 27, 2012. Retrieved July 27, 2021.

GEORGE Tsakiris (2023) Water Resources Management: An international journal. EWRA Journal of Water Resources Planning and management. ascelibrary.com/journal /jwrmd5Dis

Korgaard L (2006) Environmental Flows in integrated water resources management. Institute of environment and resources. Technical university of Denmark

Natural Resources and Development .Focus: water the lifeline of our Future. Volume 49/50 Institute for scientific Co-operation Tubingen. German

Water Resources Management: Innovation and challenges in a changing world. mdpi.com/2073-4441/9/4/281

Sharma .R.K. (1979). A text Book of Hydrology & Water Resources. Dhanpat Rai &Sons. Delhi

1.	**Course Code**	GWBT 3001
2.	**Title of the Course Unit**	GWBT 3001 Work Based Training (WBT)
3.	**Number of Credits**	03
4.	**Course Description**	This is a 3-credit, compulsory course unit to be completed in the second academic year of the student. This will be a Non-GPA course, but the accomplishment of this will be indicated in the student's transcript.
5.	**Coordinators of the Course Unit**	(To be decided)
6.	**Course Duration**	300 hours spread over 10 months starting from the commencement of the second academic year of the student.
7.	**requisites**	To be a second year student of the BA external (General) degree program
8.	**Main objective of the course unit** To enhance the student's learning through planned career experiences in an actual work setting in order to develop his/her employability potential.	
9.	**Intended Learning Outcomes (ILOs) of the course unit** On completion of this course unit, students…., 1. will have gained industry relevant training and social inclusion. 2. will be able to find opportunities for potential career placement in their occupational choice. 3. display an awareness of basic company policies and procedures, work ethics, and expected professional behavior at a work place.	

10.	**Mode of Delivery:** WBT will take place in either of the following three ways. **Mode 1: Formal** At medium-sized and large work places, public or private, including government institutes, schools and other educational centers, with a fixed time duration, with or without remuneration, at the end of which the student will receive a letter/certificate of completion. **Mode 2: Informal Apprenticeships** With micro and small enterprises, with or without a fixed time duration or remuneration, at the end of which the student will receive a letter/certificate of completion. **Mode 3: Entrepreneurs:** (nature of entrepreneurship should be acceptable to the coordinators of the BA degree program) **Note:** The student has the discretion to find the particular work place for his/her WBT, and upon finding, he/she should furnish the EDECU with relevant details about the employer. If the coordinators of the program endorse the particular work place, a letter will be issued to the selected employer, signed by a coordinator, with student details and expectations of the EDECU with respect to WBT. The respective coordinators will monitor the progress of the learner in consultation with the respective employer.

11	**Integrated 21st Century Skills to be achieved by the learner** (Learning and Innovative Skills, Life and Career Skills and Socio-Emotional Skills) • Collaboration, Analytical/Logical Thinking Skills Oral communication skills • Interpersonal skills, Optimism and Self-confidence • Collaboration • Transferring knowledge • Emotional resilience, Negotiating and Mediation skills
12	**Mode of Assessment:** **Mode of assessment will be as follows.** **Mode 1 and II: Those who are employed in formal and informal sectors as outlined above:** 1. Progress reports at the end of every 100 hours from respective employer. **10 marks per progress report**. (all **30 marks)** (can be submitted in Sinhala/Tamil or English) 2. Portfolio: This should be prepared by the learner during WBT to showcase his/her knowledge and skills gathered at the workplace, praises, achievements, participation in different events, and a self-reflection and self-assessment of his/her experiences at the workplace. This will be evaluated by a panel of lecturers from the Faculty of Humanities and Social Sciences: **60 marks**. (Portfolio can be submitted in Sinhala/Tamil or English) 3. A questionnaire (Sinhala and/or English) to be filled by the respective employer. The questionnaire will be prepared by a team of lecturers from the Faculty of Humanities and Social Sciences, USJ, focusing on the above 21st century skills, and will be marked by them, upon completion by the employer. **10 marks** **Mode III: Entrepreneurs** 1. Two progress reports by Grama Niladari, (one at the end of 150 hours, the other at the end of 300 hours) certified by Secretary, Divisional Secretariat: **10 marks per progress report**. (all **20 marks)** (can be submitted in Sinhala/Tamil or English) 2. Portfolio: This should be prepared by the entrepreneur / learner during WBT to showcase his/her knowledge and skills gathered during entrepreneurship, praises, achievements, participation in different events, and a self-reflection and self-assessment of his/her experiences as an entrepreneur. This will be evaluated by a panel of lecturers from the Faculty of Humanities and Social Sciences: **80 marks**. (can be submitted in Sinhala/Tamil or English)