Course Synopsis- ZYU4301- Ecology

<table>
<tr><td>Level</td><td colspan="6">4</td></tr>
<tr><td>Course Synopsis Course Code</td><td colspan="6">ZYU4301</td></tr>
<tr><td>Course Title</td><td colspan="6">Ecology</td></tr>
<tr><td>Credit value</td><td colspan="6">3 credits</td></tr>
<tr><td>Core/Optional</td><td colspan="6">Core</td></tr>
<tr><td>Prerequisites</td><td colspan="6">None</td></tr>
<tr><td rowspan="2">Hourly Breakdown</td><td colspan="2">Theory</td><td>Practical</td><td>Independent Learning</td><td>Assessments</td><td>Total</td></tr>
<tr><td>Sessions 17 x 2 = 34hrs</td><td>DS hrs = 12hrs</td><td>Lab+ field = 27hrs</td><td>● Sessions (17x 3) = 51hrs
● Online and other learning resources = 9.5hrs
● Lab/field/other (27x 0.5 = 13.5hrs</td><td>● Continuous Assessments (CA)= 2hrs
● Practical assessments (PA) = 1hr</td><td>150 hrs</td></tr>
<tr><td>Course Aim/s</td><td colspan="6">To provide the understanding of ecological concepts, principles, processes and interactions occur in natural ecosystems and to provide the basic laboratory and field skills in Ecological survey and develop the ability of team work, leadership, communication skills, time management, data analysis, interpret information and report writing and presentation skills.</td></tr>
<tr><td>PLOs addressed by course</td><td colspan="6">PLO1: Knowledge: Explain the fundamental, principles and broader knowledge pertaining to the chosen science disciplines offered for the BSc degree.
PLO2: Practical Knowledge and Application. Acquire competency in practical skills and the necessary knowledge to appropriately use these skills.
PLO3: Communication: Communicate reliably, efficiently and effectively to present information, ideas and concepts to the scientific community as well as to the wider society.
PLO4: Individual Work, Team Work and Leadership: Function effectively as an individual, and as a team member, sharing work and experiences, leading and managing assigned tasks to completion on time, demonstrating leadership to address situations in diverse and multi- disciplinary environments in day to day life.
PLO5: Creativity and Problem Solving: Identify problems and argue out and analyze such problems using qualitative and/or quantitative practical approaches in scientific methodology to provide valid conclusions.
PLO6: Adaptability and Flexibility: Develop appropriate strategies to adapt to changing environments.
PLO7: Information and Communication Technology Literate: Effectively use ICT skills for numerical and statistical analysis, keeping up to date with knowledge and skills
PLO8: Vision for Life: Identify where one wants to be and develop long term goals maintaining competency to conduct scientific investigations and proceed to undertake further studies.
PLO9: Lifelong Learning: Foresee new trends and recognize their impact, and update knowledge and develop new skills to meet future changes and challenges</td></tr>
<tr><td>Course Learning Outcomes (CLO)</td><td colspan="6">At the completion of this course student will be able to
CLO1: Describe the principles, broad concepts of Ecology and the ecological processes and phenomena that occur in nature (PLO1)
CLO2: Apply the knowledge to understand the interactions between organisms and organisms and their environment (PLO1, 2).
CLO3: Demonstrate practical skills in laboratory and field work. (PLO1,2,3,4,5,6)
CLO4: Demonstrate ICT skills related to interpret results obtained from practical data (field/laboratory) (PLO1, 2,3,4,5,8)
CLO5: Present information and ideas clearly in written form and verbally (PLO1,2,3,4,5,6,7,8,9)</td></tr>
<tr><td>Content
(Main topics, sub topics)</td><td colspan="6">Introduction to Ecology and Ecosystems
Introductions to Ecology, Ecosystems, Environmental factors affecting organisms, Habitat, Niche & tolerance levels, productivity and biomass, food and feeding relationships, energy flow in ecological systems, biogeochemical cycles.
Population Ecology
Deals with population characteristics, population interactions, population growth, population fluctuations and regulations.
Community Ecology
Deals with concepts and characteristics of communities, Species richness in communities, Community dynamics, Spatial variation of terrestrial communities and Aquatic and maritime communities of Sri Lanka.</td></tr>
<tr><td>Teaching-Learning methods (TL)</td><td colspan="6">Self-Learning/Independent learning of Self-study (IL)
- course material in print and web based material
- practical exercises related to group work
- Additional reading material / recommended reading
- Online interactivity through MOODLE
Contact sessions</td></tr>
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	- Day schools, video conferencing classes Non- compulsory - Laboratory practical exercises (compulsory) - Field work as group projects (compulsory)	
Assessment Strategy	Overall CA Mark (OCAM): 40% OCAM	Final Assessment:60%
	Details: Continuous Assessment (CA) OCAM =50% of the best NBT + 20 % of the other NBT (Theory- 2 hrs) + 30% Practical -1 hour (Spot test -15% + Report & presentation 15%).	Final Evaluation Theory: 100 % - 2 hrs (SEQ/ Essay)
Recommended Reading	1. Pinka, E.R. (1994). Evolutionary Ecology, Harper Collins College Publishers. 2. Odum E. P., Barrett, G. A. (2005) Fundamentals of Ecology, Thomson Brooks/Cole. 3. Townsend C.R., Begon, M., Harper J. L. (2005) Essential of Ecology, Blackwell Publishing 4. Krebs. C.J. (1985). Ecology: the experimental analysis of distribution and abundance, Benjamin Cummings Publishing 5. Smith, R.L., Smith, T.M. (2009). Elements of Ecology. Benjamin Cummings Publishing	