University of Kerala

Discipline	**BOTANY**				
Course Code	**UK1DSCBOT104**				
Course Title	**PLANTS IN DAILY LIFE**				
Type of Course	**DSC**				
Semester	**I**				
Academic Level	**100 - 199**				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours/Week
	04	03 Hours	-	02 Hours	05 Hours
Pre-requisites	No Pre-requisites				
Course Summary	The course 'Plants in Daily Life' explores the diverse roles plants play in our everyday lives, such as nutrition, medicine, industry, and culture. Students learn about the botanical characteristics, innovative uses, and practical applications of various plant species. The course emphasizes the importance of sustainable practices and the conservation of plant resources for future generations.				

Module	Unit	Content	Hrs
I		**Plant services to humans in everyday life**	**06**
	1	Introduction to the science of Botany, plant resources in everyday life.	
	2	Role of plants: Air purifier (Photosynthesis); Plants used in rituals/festivals; pollution removal (Phytoremediation), Pollution indicator (lichens), and nutrient source (litter, manure).	
	3	Herbal basket: Following plants to be studied with respect to botanical source, part of the plant used, and medicinal uses: *Ocimum sanctum, Adhatoda vasica, Zingiber officinale, Curcuma longa, Aloe vera, Andrographis paniculata, Cymbopogon citratus, Coleus aromaticus, Acorus calamus, Boerhaavia diffusa, Oldenlandia corymbosa.*	
II		**Plant resources and utilization-I**	**04**
	4	Botany and utility of the following plants: a. Cereals: Rice, Wheat, Maize b. Millets: Ragi, Jowar, and Bajra c. Legumes: Bengal gram, Green gram, Black gram d. Cash crops: Cashew, Sugarcane, and Cocoa e. Non-alcoholic beverages: Tea, Coffee	

		f. Alcoholic beverage: Toddy (Coconut tree), Palm vine (Palm) g. Vegetable Crops: Cabbage, Brinjal	
III	**Plant resources and utilization-II**		**06**
	5	Fibers: Cotton, Coir, Banana (Separation, storing, and drying of fibers from Banana leaf sheath). (in brief). Psychoactive drugs from Hemp and poppy and their mode of action. (in brief).	
IV	**Utilization of plants in value-added products**		**14**
	6	Herbal Cosmetics- Introduction, scope and advantages over Synthetic Cosmetics- Cosmaceuticals.	
	7	Plants used in Skincare - Aloe, Cucumber, Facewash- Rosewater, Hair wash - Hibiscus and Amla, Face creams - Papaya, Turmeric, Hair dyes - Henna, Indigofera, Hair growth- Eclipta.	
	8	Herbal infusions – Clitoria, Hibiscus, Tulsi, Guava leaf	
	9	Preparation of natural dyes from Marigold, Hibiscus. (Brief account only).	
	10	Plants used for Aromatherapy – Essential oils from Citrus, Sandal, and Lavender.	
V	**Modern applications and innovations**		**15**
	11	Innovative uses of plants in fields such as a) Biofuels- plant sources-bio-diesel production process - converting plant materials into biofuels (brief account) b) Phytoremediation- Use of plants to remediate polluted environments - contaminated soil and water bodies. c) Case studies of successful phytoremediation projects targeting different types of pollutants (brief account)	

Practicals		
	1. Study and identification of plants mentioned in the floral basket category 2. Visit to tea and coffee processing unit and report the same 3. Collect and properly preserve the economically used plants or plant products 4. Identify the plants of economic importance within the Campus and preparation of a report 5. To conduct an exhibition of the economically used plants or plant products. 6. Demonstration on Preparation of herbal dye 7. Demonstration on the preparation of herbal infusion	**30**

Suggested Reading

1. Kochhar, S.L. (2012). Economic Botany in Tropics, MacMillan & Co. New Delhi, India.
2. Wickens, G.E. (2001). Economic Botany: Principles & Practices. Kluwer Academic Publishers, The Netherlands.

3. Chrispeels, M.J. and Sadava, D.E. 1994 Plants, Genes and Agriculture. Jones &Bartlett Publishers,

Course Outcomes

No.	Upon completion of the course the graduate will be able to	Cognitive Level	PSO addressed
CO-1	Understand the role of plants in human welfare.	U, An	PSO-1,2
CO-2	Course familiarizes with the use of various plans used by humans for food, fiber, beverages, and medicine.	R, U	PSO-1
CO-3	Gain knowledge about various plants of economic use.	R, U	PSO-2
CO-4	Create awareness on the conservation of medicinal plants and the use of natural plant products as alternatives to synthetic products	R, U, C	PSO-I,4
CO-5	Identify various plant-based industries and their economic significance	R, U, An	PSO-1,8

R-Remember, U-Understand, Ap-Apply, An-Analyse, E-Evaluate, C-Create

Name of the Course: Plants in Daily Life

Credits: 3:0:1 (Lecture:Tutorial:Practical)

CO No.	CO	PO/PSO	Cognitive Level	Knowledge Category	Lecture (L)/Tutorial (T)	Practical (P)
1	1	1,2	R,U	F, C	L, T	
2	2	1	R, U	F, C	L, T	
3	3	2	R, U	F, C	L, T	
4	4	1,4.8	R, U, C	F, C,Ap	L, T	P
5	5	1.2.4	R, U, An	F, P, M	L	P

F-Factual, C- Conceptual, P-Procedural, M-Metacognitive

Mapping of COs with PSOs and POs :

	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6	PO1	PO2	PO3	PO4	PO5	PO6
CO 1	1	2										
CO 2		1										

CO 3		2										
CO 4	1			4						4		6
CO 5						6						

Assessment Rubrics:

- Quiz / Assignment/ Quiz/ Discussion / Seminar
- Midterm Exam
- Programming Assignments
- Final Exam

Mapping of COs to Assessment Rubrics :

	Internal Exam	**Assignment**	**Project Evaluation**	**End Semester Examinations**
CO 1	✓	✓		✓
CO 2	✓	✓		✓
CO 3	✓	✓		✓
CO 4	✓	✓		✓
CO 5	✓	✓	✓	✓