



ST.PHILOMENA'S COLLEGE (AUTONOMOUS), MYSURU

(AFFILIATED TO UNIVERSITY OF MYSORE)

REACCREDITED BY NAAC WITH A GRADE

**Three year six semesters Choice Based Credit System (CBCS) –LOCF
and Continuous Assessment & Grading Pattern (CAGP) Under
Graduate Programme under Autonomous Structure**

**SYLLABUS FOR
B.A/B.Sc/B.Com/ BBA/BSW/BCA/B.Voc/BBA(TH)COURSES**

The academic year 2018-19 onwards

DEPARTMENT OF ENVIRONMENTAL STUDIES

VISION AND MISSION OF THE COLLEGE:

VISION:

The college is guided by the visionary zeal of providing value- based education to everyone irrespective of religion, caste, creed or sex by which the character is formed, intellect is explained and one can stand on his/her feet.

MISSION:

To transform young men and women who come to learn not from books, but also from life and to share the experience of working and playing together, this inculcates life skills to become good citizens with integrity and discipline.

Programme Educational Objective (PEO):

PEO-1	Graduates will be able to master and display competency and leadership to become successful professionals, employees and entrepreneurs or pursue higher education and research.
PEO-2	Graduates will be able to demonstrate the commitment towards professional ethics, gender sensitivity, preservation of environment and sustainable development
PEO-3	Graduates will continue to learn and advance their careers through activities such as participation in professional organizations, attainment of professional certification and seeking higher education

Programme Outcomes (PO):

PO-1	Disciplinary Knowledge: The graduates will be acquainted with the social, science, ideological, philosophical, tradition and thinking.
PO-2	Cognitive and Communicative skills: Students learn two languages along with three major subjects. At the end of the programme, the students would have developed reading, writing, speaking, interpretive and composition skills. They would be able to communicate with others using appropriate media; confidently share one's views and express themselves

PO-3	Research related skills: The students would acquire skills required for research in social sciences.
PO-4	Ethics: Education in social sciences lay emphasis on human values and cultural diversity.
PO-5	Problem Solving: The programmes enable the students to acquire the knowledge pertaining to solving various problems in life with courage and humanity.
PO-6	Critical Thinking: Demonstrate the ability to articulate an insightful response. It equips them to think critically about the issues of contemporary relevance and hold an informed opinion on them.
PO-7	Social Interaction: Elicit views of others, mediate disagreements and help reach conclusions in a group setting.
PO-8	Environment and Sustainability: Graduates will be able to understand the issues of environment and work towards sustainable development.
PO-9	Employability: After completing the programme, the graduates will have competency to be employed or to be an entrepreneur.
PO10	Leadership Quality: In the graduation programme students are inculcated moral and ethical values, managerial skills, adaptability, problem solving, taking initiative, decision making, risk taking to make them confident leaders.

Mapping of PEOs with Programme Outcomes(PO)											
PEO No.	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11
PEO-1		✓	✓		✓					✓	
PEO-2	✓			✓					✓		
PEO-3						✓	✓	✓			
Mapping of Mission of the College with PEO											
Mission	PEO-1			PEO-2			PEO-3				
Mission -1	✓			✓			✓				

ST. PHILOMENA'S COLLEGE (AUTONOMOUS), MYSORE

COMPULSORY SUBJECT – ENVIRONMENTAL STUDIES

PREAMBLE

When the college became autonomous in the year 2011, the Environmental Studies syllabus of the University of Mysore was adopted with a few modifications for the academic year 2011-12. The second revision of the syllabus was done in the year 2013 wherein new topics were included. The third revision was done for the academic year 2015 onwards.

The existing syllabus has been revised for its implementation under the CBCS from the academic year 2018-19. It was reviewed and refined in the BoS meeting with valuable inputs from esteemed members.

The paper will introduce students to the basic structure and composition of the Environment and will explore various surface processes and their impact on and role in living systems. This course Environmental Studies attempts to bring students in direct contact with nature, environmental problems and possible solutions, and also to empower the students to enrich their knowledge towards encountering environmental issues.

SYLLABUS FOR
B.A/B.Sc/B.Com/ BBM/BSW/BCA/B.Voc/BBA(TH)

UNDER CBCS-LOCF SCHEME

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CLASS DURATION – 03 HOURS PER WEEK 48 Hours

Marks-Theory – 70 + Internal Assessment -30= 100

Credits - 3

Subject Description: This subject provides basic knowledge and understanding of how our world works from an environmental perspective. The study revolves around basic principles of ecosystem function; biodiversity and its conservation; human population growth; water resources and management; water, air and soil pollution; climate change; energy resources, and sustainability.

Course Objectives :

- ➔ Creating awareness about environmental problems among students.
- ➔ Imparting basic knowledge about the environment and its allied problems.
- ➔ Developing an attitude of concern for the environment.
- ➔ Striving to attain harmony with Nature.
- ➔ To use natural resources more efficiently.
- ➔ To know the behaviour of organisms under natural conditions.
- ➔ To know the interrelationship between organisms in populations and communities.
- ➔ To make aware and educate people regarding environmental issues and problems at local, national and international levels.

Course Learning Outcome (CO) :

CO	After the completion of this course, the student will be able to	Cognitive level
CO- 01	Describe the natural resources, conventional and non-conventional sources of energy and their advantages and disadvantages	Evaluate
CO- 02	Demonstrate various ecological aspects of the environment and biodiversity and its conservation	Analyse
CO-03	Describe the analysis of various pollutants, their effects and remedial measures.	Evaluate
CO- 04	Explain Sustainable development, major environmental problems and implementation of Environmental Acts for control of pollution	Understanding
CO-05	Explain the effect of population growth, major diseases with no proper vaccination and its control by family welfare programmes	Understanding

Unit 1- Introduction		
1.1	Definition, scope and importance. Need for Public awareness.	2 Hrs
1.2	The multidisciplinary nature of environmental studies	
Unit 2 -Biodiversity and its Conservation:		
2.1	Introduction - Definition, Levels of biodiversity - genetic, species, ecosystem diversity.	
2.2	Biogeographical classification of India.(In Brief)	
2.3	Significance and Values of biodiversity: consumptive use, productive use, social, ethical, aesthetic and option value.	
2.4	India as a Mega - Biodiversity nation	
2.5	Hot - spots of Biodiversity.	

2.6	Threats to biodiversity: habitat loss, poaching of wildlife, man - wildlife conflicts.	10 Hrs
2.7	Endangered and endemic species of India. (In – Brief)	
2.8	Conservation of biodiversity- In - situ and Ex-situ conservation	
Unit -3- Ecosystem		
3.1	Concept of an ecosystem.	6Hrs
3.2	Structure and functions of an ecosystem.	
3.3	Producers , consumers and decomposers.	
3.4	Energy flow in an ecosystem.	
3.5	Food chains, food web and ecological pyramids and their types.	
3.6	Introduction, types, characteristic features, structure and functions of the following ecosystem	
3.6.1	Forest ecosystem	
3.6.2	Grassland ecosystem	
3.6.3	Desert ecosystem	
3.6. 4	Aquatic ecosystem (Ponds)	
Unit-4 - Natural Resources:		
4.1	Renewable and non-renewable natural resources. Natural resources and associated problems	
4.2	Forest Resources : use and over- exploitation , deforestation. Timber extraction, mining, resort construction, ecotourism, dams and their effects on forest and tribal people.	

4.3	Water Resources: use and over-exploitation of surface and groundwater, dams - benefits and problems.	8Hrs
4.4	Mineral Resources: use and exploitation, environmental effects of extracting and using minerals.	
4.5	Food Resources: World food problems, changes caused by agricultural and overgrazing. Effects of modern agriculture, chemical fertilizer - pesticide problems, waterlogging, salinity, genetically modified plants and their impact.	
4.6	Energy Resources: Renewable and non-renewable energy resources, use of alternate energy sources,	
4.7	Land Resources: Land as a resource, land degradation, (man-induced landslides), soil erosion and desertification.	
4.8	A brief account on natural and its management – Floods, earthquakes, cyclones and landslides. Impact of destroying and depleting natural resources.	
4.9	Role of an individual in conservation of natural resources.	
Unit – 5- Environmental Pollution		
5.1	Definition, Pollutants and their types. Causes, effects and control measures of the following pollution: Air Pollution.- (Case study – Bhopal gas tragedy)	11Hrs
5.2	Soil Pollution	
5.3	Water Pollution – (Case study Ganga river ,Bellendur lake)	
5.4	Marine Pollution - (Coral reefs over exploitation)	
5.5	Noise Pollution	
5.6	Thermal Pollution	
5.7	Nuclear hazards	
5.8	Impact of disposable goods and modern lifestyle on the environment.	
5.9	Solid Waste Management : (Urban and Industrial wastes) Role of an individual in prevention of pollution(4 R's)	

Unit-6: Social issues and the Environment:		
6.1	Sustainable development	7 hrs
6.2	Sustainable lifestyle - Water conservation(Case study – Cauvery river), rain water harvesting, watershed management.	
6.3	Impact of pollution on tribals and rural populations.	
6.2	Resettlement and rehabilitation of people - its problems and concerns.	
6.3	Climate change: greenhouse effect, carbon footprint. ozone layer depletion, global warming. acid rain.	
6.4	Wasteland reclamation.	
6.5	Consumerism	
6.6	Environmental Protection Act, Air (Prevention and Control) Act, Water (Prevention and Control of Pollution) Act, Wildlife Protection Act, Forest Conservation Act.	
6.7	Issues involved in the enforcement of environmental legislation. Public awareness	
Unit – 7 Human Population and the Environment:		
7.1	Population explosion – causes and effects	4Hrs
7.2	Environment and human health	
7.3	HIV/AIDS, Vector-borne diseases. Preventing the spread of infectious diseases.	
7.4	Family welfare Programme .and Women and child welfare.	
7.5	Role of information technology in environmental awareness.	
Unit 8		

	<p>Fieldwork - Visit to a local area to document environmental assets- river/forest/grassland/hill/mountain</p> <ul style="list-style-type: none"> • Visit to a local polluted site-Urban/Rural/Industrial/Agricultural • Study of common plants, insects, birds. 	
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References

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2.	Agarwal K.C.(2001) Environmental Biology, Nidi Publications, Bikaner.
3.	Biodiversity Hot spots for conservation priorities Nature 403:853, fifth report, New Delhi; centre for science and environment.
4.	E.P.Odum (1971) Fundamental of Ecology, W.B.Saunders Co.USA.
5.	S.Sinha, M Shukla and R.Shukla (2005) Text Book of Environmental Studies by AITBS, New Delhi.
6.	Hand Book on Environmental laws by R.K.Trivedy.
7.	Environmental Studies by Dr Syed Fasihuddin Vidyanidhi Prakashana Gadag.
8.	Ecology and Environment 10th revised edition by P.D.Sharma, Rastogi publications.
9.	Text Book of Environmental Studies – student edition (2009), Saraswati purohit for Student Edition India.
10	Text Book of Environmental Studies by Dr Rajendra.
11	FSI (1999) FRA 2000 input tables of India. Dehradun; India. Forest Survey of India, Ministry of Environment and forest.
