

**Ahmednagar Jilha Maratha Vidya Prasarak Samaj's
New Arts, Commerce, and Science College, Ahmednagar
(Autonomous)
(Affiliated to Savitribai Phule Pune University, Pune)**



**National Education Policy (NEP)
Choice Based Credit System (CBCS)**

**Syllabus for
Co-Curricular Courses(CC)
For
UG Programmes**

**Implemented from
Academic Year 2023-24**

Credit Distribution: UG Programme

	Type of Courses	III Yr	IV Yrs (Honours)	IV Yrs Research
Major Marathi	Discipline-Specific Courses (DSC)	46	74	66
	Discipline Specific Elective (DSE)	08	16	16
	Skill Enhancement Courses (SEC)	06	06	06
	Vocational Skill Courses (VSC)	08	08	08
	On-Job Training (OJT)	04	08	04
	Field Project (FP)	04	04	04
	Community Engagement and Service (CEP)	02	02	02
	Research project	00	00	12
	Research Methodology	00	04	04
	Total (I, II and III Year)	78	122	122
Minor	Minor	20	20	20
Other Courses	Open Elective (OE)/ Multidisciplinary Courses	12	12	12
	Indian Knowledge System	02	02	02
	Co-Curricular Courses	08	08	08
	Ability Enhancement Courses	08	08	08
	Value Education Courses	04	04	04
	Total	132	176	176

Bucket List of Co-curricular Courses (CC)

Sr. No.	Course Code	Year	Semester	Humanities	Commerce	Science	Credits
1.	CC-01	I	I	Environmental Studies	Environmental Studies	Environmental Studies	02
2.	CC-02	I	II	Physical Education	Physical Education	Physical Education	02
3.	CC-03	II	III	(Any one of the following) * 1. NSS/NCC 2. Publication of an article, essay, or poem in the college magazine 'Spandan', newspapers, or any other recognized magazine. 3. Small project work showcasing achievements of India in different fields (Ex. Literature, Science and Technology, Women Empowerment, Democracy etc.) 4. Participation in cultural or sports activities at university/state/national level. 5. Participation in community works related to national integration, environment, Human rights, disaster management, etc. with recognized GO or NGO or College other than NSS and NCC Activities. 6. Completion of Certificate Course organized by any department of the college 7. SWAYAM Courses 8. Book Review as per guidelines prescribed by the college.			02

				9. College representation in any dance /music /theatre/visual arts competitions at the university/state/national level.	
4.	CC-04	II	IV	<p>(Any one of the following) *</p> <ol style="list-style-type: none"> 1. NSS/NCC 2. Publication of an article, essay, or poem in the college magazine '<i>Spandan</i>', newspapers, or any other recognized magazine. 3. Small project work showcasing achievements of India in different fields (Ex. Literature, Science and Technology, Women Empowerment, Democracy etc.) 4. Participation in cultural or sports activities at university/state/national level. 5. Participation in community works related to national integration, environment, Human rights, disaster management, etc. with recognized GO or NGO or College other than NSS and NCC Activities. 6. Completion of Certificate Course organized by any department of the college 7. SWAYAM Courses 8. Book Review as per guidelines prescribed by the college. 9. College representation in any dance /music /theatre/visual arts competitions at the university/state/national level. 	
<p>* One Co-curricular course/activity shall have a capping of 02 credits except for SWAYAM Courses. If a student completes 02 SWAYAM courses in two semesters(III and IV) shall be considered under CC.</p>					

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Title of the Course: Environmental Education								
Year: I				Semester: I				
Course Type	Course Code	Credit Distribution		Credits	Allotted Hours	Allotted Marks		
		Theory	Practical			CIE	ESE	Total
CC	CC-1	02	00	02	30	15	35	50

Learning Objectives:

1. Summarize about environment and its importance and Discuss environment and importance of ecosystems.
2. Provides the information regarding ecosystem and applicability. Acquire knowledge of how all the animals are competing with their food requirements and also understand the various trophic levels in the food chain.
3. Describe the flow of energy through the various components of ecosystem. Examine the importance a of nutrients and flow of nutrients in ecosystem
4. Analyze the information regarding different causes for loss of biodiversity. Analyze various reasons for conflict of species. Illustrate different methods to protect the biodiversity. Correlate national biodiversity act
5. Evolve strategies to environmental issues. Describe the role of government and legal aspects in environmental protection

Course Outcomes (Cos)

- I. Analyze the interrelationship between living organism and environment.
- II. Understand the importance of environment by assessing its impact on the human world.
- III. Enrich the knowledge on themes of biodiversity, natural resources, pollution control and waste management.
- IV. Develop critical-thinking skills, analyze real-world problems
- V. Understand the power of narrative to create sustainable solutions for local and global communities

VI Understand the constitutional protection given for environment.

Detailed Syllabus:

UNIT	TITLES	HOURS
I	<p>Humans and the Environment</p> <ul style="list-style-type: none"> • Humans as Nomads, Hunter-gatherers, invention of Fire • Evolution of River Valley Civilization- origin of agriculture, Emergence of settlements- hutments, villages, cities • Middle ages and Renaissance • Modern age—Industrial revolution • Population rise and Natural resources depletion, overexploitation • Consumerist lifestyle, waste generation and its impacts on environmental quality, Global Climate change • The emergence of Environmentalism and Possibilism, Eco-centric perspectives • International efforts- UN Conference on Human Environment 1972 (UNCHE), World Commission on Environment and Development, Concept and goals of Sustainable Development, Rio summit • Role of females in environment conservation 	6
II	<p>Natural Resources and Sustainable Development</p> <p>Overview of natural resources: Definition of resource; Classification of natural resources- biotic and abiotic, renewable and non-renewable.</p> <ul style="list-style-type: none"> • Biotic resources: Major type of biotic resources- forests, grasslands, wetlands, wildlife and aquatic (fresh water and marine); Microbes as a resource; Status and challenges. • Water resources: Types of water resources- fresh water and marine resources; Availability and use of water resources; Environmental impact of over-exploitation, issues and challenges; Water scarcity and stress; Conflicts over water. 	8

	<ul style="list-style-type: none"> • Soil and mineral resources: Important minerals; Mineral exploitation; Environmental problems due to extraction of minerals and use; Soil as a resource and its degradation. • Energy resources: Sources of energy and their classification, renewable and non-renewable sources of energy; Conventional energy sources- coal, oil, natural gas, nuclear energy; Non-conventional energy sources- solar, wind, tidal, hydro, wave, ocean thermal, geothermal, biomass, hydrogen and fuel cells; Implications of energy use on the environment. <p>Sustainable Development Goals and Issues</p> <p>Strategies and Framework for Sustainable Development The 2030 Agenda for Sustainable Development, UN Sustainable Development Knowledge Platform, Sustainable Development Goals, Criticisms in Sustainability: Women and Gender Equality, Education, Public Engagement and Sustainable Development</p> <p>Environmental Conservation and Sustainability</p> <p>Technical Skills in Environment and Sustainability, Environmental Governance and Sustainability, Environmental Economics and Sustainability, Water Conservation and Sustainable Development, Urbanization and Sustainable Cities, Challenges in Energy, Food, Forest and Agriculture</p>	
III	<p>Environmental Issues: Local, Regional and Global</p> <ul style="list-style-type: none"> • Environmental issues and scales: Concepts of micro-, meso-, synoptic and planetary scales; Temporal and spatial extents of local, regional, and global phenomena • Environmental issues and scales: Concepts of micro-, meso-, synoptic and planetary scales; Temporal and spatial extents of local, regional, and global phenomena. • Pollution: Impact of sectoral processes on Environment, Types of Pollution- air, noise, water, soil, municipal solid waste, hazardous waste; Transboundary air pollution; Acid rain; Smog. 	8

	<ul style="list-style-type: none"> Land use and Land cover change: land degradation, deforestation, desertification, urbanization. 	
IV	<p>Conservation of Biodiversity and Ecosystems</p> <p>Biodiversity Types, levels, biogeographic zones in India and its classification, values of biodiversity</p> <ul style="list-style-type: none"> Biological Diversity at National Level, Hotspots of Biodiversity major threats to Biodiversity: Land use and land cover change , Commercial exploitation of species , Invasive species , Fire , Disasters ,Climate change and Man- Wildlife Conflicts Endangered and Major Endemic Species in India Conservation of Biodiversity: In-Situ, Ex-Situ Conservation ,Major conservation policies, National and International Instruments for Biodiversity Conservation , The laws – Environment Protection Act1986, Forest Act, Wildlife Act, Biodiversity Act 2002 , The Convention on Biological Diversity (CBD) , International Union for the Conservation of Nature (IUCN) ,United Nations Environmental Programme (UNEP) , World Wildlife Fund (WWF) The role of traditional knowledge, People’s Participation – NBSAP, PBR , Community Participation – JFM, EDP , People’s Movement – Silent Valley Movement, Beej Bachao Andolan. ,Gender wise conservation Awareness Activities.,Importance and Need of Awareness Ecosystems and ecosystem services: Major ecosystem types in India and their basic characteristics- forests, wetlands, grasslands, agriculture, coastal and marine; Ecosystem services- classification and their significance. 	8

Suggested Readings/Material:

1. Fisher, Michael H. (2018) An Environmental History of India- From Earliest Times to the Twenty-First Century, Cambridge University Press.
2. Headrick, Daniel R. (2020) Humans versus Nature- A Global Environmental History, Oxford University Press.
3. Hughes, J. Donald (2009) An Environmental History of the World- Humankind’s Changing Role in the Community of Life, 2nd Edition. Routledge.
4. Perman, R., Ma, Y., McGilvray, J., and Common, M. (2003) Natural Resource and Environmental Economics. Pearson Education.

5. Simmons, I. G. (2008). *Global Environmental History: 10,000 BC to AD 2000*. Edinburgh University Press
 6. Chiras, D. D and Reganold, J. P. (2010). *Natural Resource Conservation: Management for a Sustainable Future*. 10th edition, Upper Saddle River, N. J. Benjamin/Cummins/Pearson.
 - 7.. John W. Twidell and Anthony D. (2015). *Renewable Energy Sources*, 3rd Edition, Weir Publisher (ELBS)
 8. William P. Cunningham and Mary A. (2015) *Cunningham Environmental Science: A Global Concern*, Publisher (Mc-Graw Hill, USA)
 - 9.. Gilbert M. Masters and W. P. (2008). *An Introduction to Environmental Engineering and Science*, Ela Publisher (Pearson)
 10. Singh, J.S., Singh, S.P. & Gupta, S.R. 2006. *Ecology, Environment and Resource Conservation*. Anamaya Publications <https://sdgs.un.org/goals>
 - Harper, Charles L. (2017) *Environment and Society, Human Perspectives on Environmental Issues* 6th Edition. Routledge.
 11. Harris, Frances (2012) *Global Environmental Issues*, 2nd Edition. Wiley- Blackwell.
 12. William P. Cunningham and Mary A. (2015). *Cunningham Environmental Science: A global concern*, Publisher (Mc-Graw Hill, USA)
 12. Manahan, S.E. (2022). *Environmental Chemistry* (11th ed.). CRC Press. <https://doi.org/10.1201/9781003096238>
 13. Rajagopalan, R. (2011). *Environmental Studies: From Crisis to Cure*. India: Oxford University Press.
 14. Bawa, K.S., Oomen, M.A. and Primack, R. (2011) *Conservation Biology: A Primer for South Asia*. Universities Press.
 15. Sinha, N. (2020) *Wild and Wilful*. Harper Collins, India.
 16. Varghese, Anita, Oommen, Meera Anna, Paul, Mridula Mary, Nath, Snehlata (Editors) (2022) *Conservation through Sustainable Use: Lessons from India*. Routledge.
 17. Bhagwat, Shonil (Editor) (2018) *Conservation and Development in India: Reimagining Wilderness*, Earthscan Conservation and Development, Routledge.
 - 18 . Krishnamurthy, K.V. (2003) *Textbook of Biodiversity*, Science Publishers, Plymouth, UK
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