



YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING
(An Autonomous Institution affiliated to R T M Nagpur University Nagpur)
Accredited by NAAC (1st Cycle) with 'A' Grade (Score 3.25 on 4 Point Scale)

Wanadongri, Hingna Road, Nagpur-441110

Department of Civil Engineering (Honors in EE)



**B.E. Honors in Environmental Engineering
SoE & Syllabus 2021-22**



Nagar Yuwak Shikshan Sanstha's

Yeshwantrao Chavan College of Engineering

(An Autonomous Institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

Department of Civil Engineering

SoE and Syllabus

B.E Honors in Environmental Engineering

SoE No.
HON-101

Information Brochure of Honor Program

1. Title of Program: **Honors in Environmental Engineering**
2. Type of Program : **Honor**
3. Department offering the program: **Civil Engineering**
4. **Students of Department of Civil Engineering are only eligible to opt for this program.**
5. General information about courses in program

Students will gain the skills and knowledge needed to enter the diverse and rewarding field of environmental engineering. This course offers you the chance to specialize in fields of engineering critical to solving the world's environmental challenges. Land contamination and rehabilitation, energy, hydrogeology, wastewater treatment, and sustainable/smart cities are strong focus areas. As student with sound environmental engineering background, he/she will learn engineering concepts and technical skills in order to:

- 1) Preserve The Environment
- 2) Minimize Water, Soil And Air Pollution
- 3) Assess The Environmental Impact Of Engineering Projects (EIA)
- 4) Develop Remediation Measures For Environmental Degradation
- 5) Deliver Sustainable Solutions Through Engineering Processes

This course will provide students with the first-class knowledge and skills to study and change the effects of major environmental issues, as well as contribute in some of the most influential environmental sectors. Plan, design and implement change in the infrastructure of land development and rehabilitation, water and soil management and create innovative solutions to complex problems. Apply his knowledge through practical work experience and an exciting final year research project that will give students hands-on industry experience. Previous students have produced projects in the fields of an investigation into obtaining energy from wastewater, the revised field procedure for surface irrigation evaluation and the ranking of potential emissions

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reducing technologies for environment. Diversify his/her skillset and combine major studies in Environmental Engineering like Water Treatment Technology, Rural Water Supply and Sanitation, Water Distribution System, Waste Water Management, Industrial Waste Water Treatment, Water Quality Analysis, Water Distribution System, Wastewater Characterization.

6. Advance knowledge or research orientation of Program

Environmental engineering is the application of scientific and engineering principles to improve and maintain the environment to protect human health, protect nature's beneficial ecosystems, and improve environmental-related enhancement of the quality of human life. Environmental engineers devise solutions for wastewater management, water and air pollution control, recycling, waste disposal, and public health. They design municipal water supply and industrial wastewater treatment systems, and design plans to prevent waterborne diseases and improve sanitation in urban, rural and recreational areas. They evaluate hazardous-waste management systems to evaluate the severity of such hazards, advise on treatment and containment, and develop regulations to prevent mishaps. They implement environmental engineering law, as in assessing the environmental impact of proposed construction projects. Environmental engineers study the effect of technological advances on the environment, addressing local and worldwide environmental issues such as acid rain, global warming, ozone depletion, water pollution and air pollution from automobile exhausts and industrial sources. Although Environmental Engineering is a broad field, you can specialize in various sub-disciplines, like: Solid waste management, Environmental impact assessment and mitigation, Water supply and treatment, Wastewater treatment, Air pollution management

7. Employability potential of program

Environmental engineering is a professional engineering discipline and takes from broad scientific topics like chemistry, biology, ecology, geology, hydraulics, hydrology, microbiology, and mathematics to create solutions that will protect and also improve the health of living organisms and improve the quality of the environment. Environmental engineering is a sub-discipline of civil engineering and chemical engineering.

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Career Outcomes:

With his/her skills and knowledge, a wide variety of careers will be available to students after graduation as a qualified Professional Engineer, Environmental Engineer or Natural Resource Manager. This also means that he/she will have different career options to choose from. Here are several examples of popular Environmental Engineering jobs:

- Environmental consultant
- Water project manager
- Air quality inspector
- Green building engineer
- Wastewater engineer

Studies graduate in Environmental Engineering is prepared for design and management in the entire field of environmental engineering. The graduate is capable of working at design offices, water supply companies, water treatment plants, research-development institutes, and other environmental engineering institutions. The graduate is ready to apply for PG studies.

8. Departmental Steering committee

S N	Name of the Faculty Member	Post	Designation	e-mail ID	Contact Number
1	Dr. V.G. Meshram	Chairman	Associate Professor & Head	hod_ce@ycce.edu	9850340838
2	Dr. S.R. Khandeshwar	Member	Professor	khandeshwar333@yahoo.com	9822578533
3	Dr. S.V. Ambekar	Member	Professor	sv_ambekar@rediffmail.com	9422105597
4	Dr. A.R Gajbhiye	Member	Professor	yccehodcivil@yahoo.in	9850958980
5	Dr. Ms. M.S. Bhagat	Co-Ordinator	Assistant Professor	msbciv2gmail.com	7620494011

9. Departmental Coordinator

S N	Name of the Faculty Member	Post	Designation	e-mail ID	Contact Number
5	Dr. Ms. M.S. Bhagat	Co-Ordinator	Assistant Professor	msbciv2gmail.com	7620494011

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Scheme of Examinations

B.E. Honors in Environmental Engineering

SN	Sem	Sub Code	Subject	T/P	Contact Hours				Credits	% Weightage			ESE Duration Hours
					L	T	P	Hrs		MSEs*	TA	ESE	
B.E Honors in Environmental Engineering													
SN	Sem.	Sub. Code	Subject	T/P	Contact Hours				Credit	% Weightage			ESE Duration Hours
					L	T	P	Hrs		MSEs*	TA**	ESE	
1	V	CVH101	Environmental Management	T	3	0	0	3	3	30	30	40	3
2	V	CVH102	Lab- Environmental Management	P	0	0	2	2	1		60	40	
3	VI	CVH111	Air Pollution and Control	T	3	0	0	3	3	30	30	40	3
4	VI	CVH112	Solid Waste Management	T	3	0	0	3	3	30	30	40	3
5	VI	CVH113	Lab- Solid Waste Management	P	0	0	2	2	1		60	40	
6	VII	CVH121	Rural Water Supply and Sanitation	T	3	0	0	3	3	30	30	40	3
7	VII	CVH122	Advanced Wastewater Treatment	T	3	0	0	3	3	30	30	40	3
8	VII	CVH123	Lab- Advanced Wastewater Treatment	P	0	0	2	2	1		60	40	
TOTAL					15	0	6	21	18				

MSEs* = Three MSEs of 15 Marks each will conducted and marks of better 2 of these 3 MSEs will be considered for Continuous Assessment

TA ** = for Theory : 20 marks on lecture quizzes, 8 marks on assignments, 2 marks on class performance

TA** = for Practical : MSPA will be 15 marks each

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V Semester

CVH101	Environmental Management			L=3	T=0	P=0	Credits= 3
Evaluation Scheme *Best Two out of three MSE's would be considered	MSE-I*	MSE-II*	MSE-III*	TA	ESE	Tota	ESE Duration
	15	15	15	30	40	100	3 Hrs.
Prerequisites							

COURSE OBJECTIVE	COURSE OUTCOMES
Students should be able to <ol style="list-style-type: none">To develop, implement, monitor and maintain environmental strategies, policies, programmes and systems that promote sustainable developmentTo oversee the environmental performance including compliance with environmental legislation across the organization, and coordinating all aspects of pollution control, waste management, environmental health and conservationTo lead the implementation of environmental policies and practices and raise awareness, at all levels of an organization, about the emerging environmental issues.	Students should be able to <ol style="list-style-type: none">Identify the scientific and social aspects of environmental issues.Understand the procedure of environmental protection by legislation.Understand the role of environmental management system in protecting the resources.

Mapped Program Outcomes : 6,7,8,10,12

UNIT-1 : Introduction to Environmental Management: Standards of living, Objectives, Goals and components of Environmental Management, Socio-economic context. Sustainability and sustainable development, issues and constraints, Environmental values and ethics	[06 Hrs.]
UNIT-2 : EIA – Definition, History and Objective, Role, Benefits and flaws of EIA in India, EIA Procedures, Environmental Impact Statement, Key elements of EIA: Screening, scoping identifying and evaluating impacts, mitigations and issuing environmental statements.	[07 Hrs.]
UNIT-3 : Stages in the prior Environmental Clearance (EC), Process for New Projects: Screening, scoping, public consultation, MoEF questionnaire for environmental clearance, critical environmental issues and formulation of strategies of EMP, Risk Assessment.	[07 Hrs.]

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UNIT-4 : Environmental Policy, Law And Appraisals –various enactment and their provisions, Role of State & Central boards of pollution control, Cleaner Technology of production.	[07 Hrs.]
UNIT-5 : Environmental Audit- Concept of EA, procedural aspects of conducting environmental audit, EMS, Life Cycle Assessment and Management (LCA), ISO environmental standards, Eco marks and eco labeling: Assuring the quality.	[06 Hrs.]
UNIT-6 : Resource Management: Mineral, Energy, Water, Renewable, Food, Land and its depletion–causes & effects, Optimization of resource utilization.	[06 Hrs.]

Text Books:				
	Title	Edition	Author	Publisher
1	An Introduction to Environmental Management		Anand Bal	Himalaya Publishing House
2	Environmental Impact Assessment		John Rau & Wooten	Mc Graw Hill
3	Environmental Impact Assessment,		Larry Canter	McGraw Hill.
Reference Book:				
	Title	Edition	Author	Publisher
1	The New Environmental Age		R.K. Sapra, S. Bhardwaj,	Ashish Pub. House, New Delhi
2	Environmental Law and Policy in india, Cases, Materials And Statutes		Rosencranz, S. Divan, M.L. Nobal	Tripathi Pvt. Ltd. Bombay.

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V Semester

CVH102	LAB : Environmental Management			L=0	T=0	P=1	Credits=1
Evaluation Scheme	MSPA-I	MSPA-II	MSPA-III	TA	ESE	Total	ESE Duration
	--	--	--	60	40	100	3 Hrs

COURSE OBJECTIVE	COURSE OUTCOMES
Students should be able to 1. To develop, implement, monitor and maintain environmental strategies, policies, programmes and systems that promote sustainable development 2. To oversee the environmental performance including compliance with environmental legislation across the organization, and coordinating all aspects of pollution control, waste management, environmental health and conservation 3. To lead the implementation of environmental policies and practices and raise awareness, at all levels of an organization, about the emerging environmental issues.	Students should be able to 1. Identify the scientific and social aspects of environmental issues. 2. Understand the procedure of environmental protection by legislation. 3. Understand the role of environmental management system in protecting the resources.

Mapped Program Outcomes : 6,7,8,10,12

Any Four Assignment Related to following areas

1. Case studies on impact assessment: River valleys, mining projects.
2. Case studies on effective utilization of environmental laws: oil refineries, petrochemical industry.
3. Case studies on effective Ecolabeling in International and national stages
4. Case studies on recent natural environmental hazards
5. Case studies on successful implementation of sustainable development model.
6. Case studies on effects of climate change I: greenhouse gas emissions, sea level rise

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VI Semester

CVH111	Air Pollution & Control			L=3	T=0	P=0	Credits= 3
Evaluation Scheme *Best Two out of three MSE's would be considered	MSE-I*	MSE-II*	MSE-III*	TA	ESE	Tota	ESE Duration
	15	15	15	30	40	100	3 Hrs.
Prerequisites							

COURSE OBJECTIVES	COURSE OUTCOMES
<p>Students should be able to</p> <ol style="list-style-type: none"> To provide general understanding of air pollution, air pollutants, their sources & effects. To provide knowledge about meteorological parameters, air sampling & measurement of pollutants. To understand the techniques and instrumentation of ambient air monitoring, establishment of ambient air monitoring stations. To provide knowledge of air pollution controlling technologies, air pollution due to automobiles & general Idea of noise pollution. To understand the indoor air pollution, sources, causes and effects. 	<p>Students should be able to</p> <ol style="list-style-type: none"> An ability to understand the type, sources & effect of air pollutants. An ability to understand various meteorological factors and its influence on air pollution. An ability to understand air sampling and analysis. An ability to understand the basic principles, equipment, and methods used to control particulate matter, gaseous emission and automobile emission

Mapped Program Outcomes : 1,6,7,8

UNIT-1 : Introduction to air pollution: Air pollution episodes, Atmosphere and its zones, classification and sources of air pollutants, effects of air pollutants on man, plants animal & materials.	[06 Hrs.]
UNIT-2 : Meteorological aspects: Meteorological parameters, Temperature lapse rate, Plume behavior. Gaussian diffusion model for finding ground level concentration. Plume rise. Formulae for stack height and determination of minimum stack height.	[07 Hrs.]
UNIT-3 : Air sampling and analysis: Air pollution survey, basis and statistical considerations of sampling sites, devices and methods used for sampling gases and particulars. Ambient air quality monitoring.	[06 Hrs.]
UNIT-4 : Air pollution control methods : Principle of control methods for particulates and gaseous pollutants, Control of air pollution: Air pollution control equipment for particulate and gaseous	[07 Hrs.]

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pollutants. Design of control equipment as Settling chamber, Cyclone, Fabric filter, Electro static precipitator and Wet scrubber.

UNIT-5 :

Control of air pollution from automobiles: Pollution due to diesel and petrol engines, exhaust treatment and abatement,
Noise Pollution: Sources, ill effects, control measures.

[07 Hrs.]

UNIT-6:

Indoor air pollution: Causes of air pollution, sources and effects of indoor air pollutants, changes in indoor air quality, control of indoor air pollutants and air cleaning systems. Air pollution Index.

[06 Hrs.]

Text Books:

	Title	Edition	Author	Publisher
1	Air Pollution		M.N. Rao.,	Tata McGraw Hill
2	Fundamentals of Air Pollution		Stern, Wohlers, Bouble and Lower	Academic Press
3	Air Pollution and Control		P. P. Mowli and N. Venkata Subbayya	Divyajyoti Prakashan, Jodhpur
4	Environmental Pollution Control Engineering		C.S. Rao	New Age International
5	Environmental Noise Pollution		PE Cunniff	McGraw Hill, New York

Reference Book:

	Title	Edition	Author	Publisher
1	Air Quality Monitoring-- A Course Manual		-	NEERI
2	Air Pollution, Vol. I to IX		A. C. Stern	Academic, New York

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VI Semester

CVH112	Solid Waste Management			L=3	T=0	P=0	Credits= 3
Evaluation Scheme *Best Two out of three MSE's would be considered	MSE-I*	MSE-II*	MSE-III*	TA	ESE	Tota	ESE Duration
	15	15	15	30	40	100	3 Hrs.
Prerequisites							

COURSE OBJECTIVES	COURSE OUTCOMES
Students should be able to <ol style="list-style-type: none">To develop insight into the collection, transfer and transport of municipal solid waste.To examine the engineering and scientific principles of municipal solid waste (MSW) management.To Processing and disposal methods for solid waste.To understand the generation of plastic and e-waste.	Students should be able to <ol style="list-style-type: none">An ability to understand Solid waste management system and different characteristic of solid waste.An ability to understand different methods of collection, transfer and transport of solid waste.An ability to understand different Processing and disposal methods for solid waste.An ability to understand new hazards of plastic and e-waste.
Mapped Program Outcomes : 1,4,12	

UNIT-1 : Introduction to solid waste management, classification and sources, quantification and characterization. Problems and impacts of solid waste in developing countries.	[06 Hrs.]
UNIT-2 : Functional Elements of MSW. Characteristics of solid waste – Sampling – physical, chemical, and biological Analysis.	[07 Hrs.]
UNIT-3 : Storage, Collection, Transportation, Optimization of routes, Tools and equipment, Transfer station, Types. Volume reduction.	[06 Hrs.]
UNIT-4 : Biological processing- Composting – Aerobic and anaerobic composting, factors affecting composting, methods. Thermal processing- Incineration-Mechanism, types, and Operation, Mechanical Composting,	[07 Hrs.]
UNIT-5 : Pyrolysis. Refuse derived fuel. Sanitary Landfill-Process, mechanism, Classification, types, site considerations, Maintenance of site.	[07 Hrs.]

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UNIT-6 : Plastics waste –Types, Sources, Production, Plastic Waste Management Rules 2016 (India) and Global Rules and Regulations, Impact of Plastics on Marine Life, Wildlife, Human Health and Environment, Possible Alternate Materials to Plastics –Greener Alternatives, Plastics Resource Recovery and Circular Economy. E-waste- Definition, Classification of E-waste, Management of E-waste.	[06 Hrs.]
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Text Books:

	Title	Edition	Author	Publisher
1	Solid waste management in developing countries		A.D. Bhide, B.B. Sudresan	
2	Solid waste water management		D. Joshep Hangertey, Joseph L. Pavoni	
3	Integrated Solid Waste Management		George Techobanoglous	McGraw-Hill Publication

Reference Book:

	Title	Edition	Author	Publisher
1	CPHEEO manual on MSW			GoI, New Delhi
2	Waste Management: A Reference Handbook		Jacqueline Vaughn	ABC-Clio

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VI Semester

CVH113	LAB : Solid Waste Management			L=0	T=0	P=1	Credits=1
Evaluation Scheme	MSPA-I	MSPA-II	MSPA-III	TA	ESE	Total	ESE Duration
	--	--	--	60	40	100	3 Hrs

COURSE OBJECTIVES	COURSE OUTCOMES
Students should be able to 1. To determine the physical characteristics of municipal solid waste. 2. To determine the chemical characteristics of municipal solid waste. 3. To understand the municipal waste management system and collection of the city. 4. To understand the generation of plastic and e-waste.	Students should be able to 1. An ability to understand Solid waste management system and different characteristic of solid waste. 2. An ability to understand different methods of collection, transfer and transport of solid waste. 3. An ability to understand new hazards of plastic and e-waste.
Mapped Program Outcomes : 1,4,10,12	

List of Experiments: (Any Five)

1. To determine pH of the municipal solid waste sample.
2. To determine the moisture content municipal solid waste sample.
3. To determine the organic content of the municipal solid waste sample.
4. To determine the organic carbon content of the municipal solid waste sample.
5. To determine the carbon content of the municipal solid waste sample.
6. Survey of municipal solid waste management system.
7. Site visit on municipal solid waste management system of the city and report writing.
8. Assignment based on collection system of municipal solid waste of the city.
9. Report writing on generation and treatment of plastic waste of the city.
10. Report writing on generation and treatment of e-waste of the city.

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VII Semester

CVH121	Rural Water Supply and Sanitation			L=3	T=0	P=0	Credits= 3
Evaluation Scheme *Best Two out of three MSE's would be considered	MSE-I*	MSE-II*	MSE-III*	TA	ESE	Tota	ESE Duration
	15	15	15	30	40	100	3 Hrs.
Prerequisites							

COURSE OBJECTIVES	COURSE OUTCOMES
Students should be able to <ol style="list-style-type: none">To understand scheme of rural water supply and sanitation.To understand improvised method of treatment of wastewaterTo understand compact systems of treatment and disposal.	Students should be able to <ol style="list-style-type: none">An Ability to understand rural water supply and sanitation scheme.An Ability to understand different compact units of rural water treatment and supply.An Ability to tell simple wastewater treatment for rural water supply

Mapped Program Outcomes : 1,6,7

UNIT-1 : Concept and scope of sanitation in rural areas. Magnitude of problem of water supply and sanitation, National policy.	[06 Hrs.]
UNIT-2 : Various approaches for planning of water supply systems in rural areas. Selection and development of preferred sources of water, springs, wells, Infiltration wells, radial wells, and infiltration galleries.	[07 Hrs.]
UNIT-3 : Collection of raw water from surface source. Specific problems in rural water supply and treatment e.g. iron, manganese, fluorides, Low cost treatment.	[06 Hrs.]
UNIT-4 : Improvised methods and compact system of treatment of surface and ground waters such as MB settlers, slow sand filter, chlorine diffusion cartridges.	[07 Hrs.]
UNIT-5 : Water supply through spot sources, hand pumps, open dug wells Planning of distribution system in rural areas Water supply during fairs, festivals and emergencies, Treatment and disposal of wastewater /sewage various methods of collection and Disposal of night soil Onsite sanitation system and community latrines.	[07 Hrs.]

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UNIT-6 :

Simple wastewater treatment system for rural areas and small communities such as stabilization ponds, low cost sanitation, septic tank and soakage pits, Disposal of solids waste: Composting and Biogas plants.

[06 Hrs.]

Text Books:

	Title	Edition	Author	Publisher
1	Water supply for Rural areas and small communities		Wagner, E.G. and Lanoik, J.N.,	Geneva

Reference Book:

	Title	Edition	Author	Publisher
1	Manual of water supply and treatment	3rd Edition		GOI, New Delhi

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VII Semester

CVH122	Advanced Wastewater Treatment			L=3	T=0	P=0	Credits= 3
Evaluation Scheme *Best Two out of three MSE's would be considered	MSE-I*	MSE-II*	MSE-III*	TA	ESE	Tota	ESE Durat ion
	15	15	15	30	40	100	3 Hrs.
Prerequisites							

COURSE OBJECTIVES	COURSE OUTCOMES
Students should be able to 1. To understand the source, characteristics of Industrial wastewaters. 2. To understand the mechanisms and processes used to treat wastewaters from various industries 3. To understand various terms used in industrial wastewater treatment and to acquaint with different steps involved in treatment of industrial wastewater	Students should be able to 1. Learn physical/chemical/biological characteristics of and the evaluation technique for various industrial wastewater 2. Understand the theory, engineering application, and design technique for the industrial wastewater treatment unit processes.
Mapped Program Outcomes: 1,2,3,7	

UNIT-1 : Types of industries and industrial pollution, Environmental legislations related to prevention and control of industrial effluents. Condition of waste stream. Sampling – Grab, Composite and integrated samples.	[06 Hrs.]
UNIT-2 : Waste minimization, Equalization, Neutralization, Oil separation, Flotation.	[07 Hrs.]
UNIT-3 : Waste management Approach, Waste Audit, Volume and strength reduction, Material and process modifications, Recycle, reuse and byproduct recovery, Zero effluent discharge.	[06 Hrs.]
UNIT-4 Sources, Characteristics, waste water treatment flow sheets for -Textile, Tannery, Dairy, Sugar, Pulp and Paper, Distillery, Steel plants.	[07 Hrs.]
UNIT-5 Hazardous waste, introduction, definitions, sources, characterization, health effects, legislations, physico-chemical treatment of hazardous waste, biological treatment.	[06 Hrs.]
UNIT-6 Sources, measures and health effects; nuclear power plants and fuel production; waste generation from nuclear power plants; disposal options.	[07 Hrs.]

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Text Books:

	Title	Edition	Author	Publisher
1	Industrial Water pollution Control		Eckenfelder	McGraw hill Company, New Delhi
2	Pollution control in Process industries		Mahajan	TMH, New Delhi
3	Waste Water Treatment		Rao and Dutta	Oxford & IBH Publishing Co. Pvt. Ltd., New Delhi
4	Industrial Waste Disposal		Ross R.D.	Reinhold Environmental Series – New York

Reference Book:

	Title	Edition	Author	Publisher
1	Industrial Wastewater Management Hand Book		Azad N. S	McGraw Hill book Co., Newyork
2	Practical Waste Treatment and Disposal		Dickinson	Applied Science publication, London.
3	Liquid Waste of industry theories, "Practices and Treatment		Nemerow N.N	Addison Willey New York
4	Pollution Prevention and Abatement Handbook – Towards Cleaner Production			World Bank and UNEP, Washington D.C

		May 2021	1.00	Applicable for AY2021-22 Onwards
Chairperson	Dean (Acad. Matters)	Date of Release	Version	



Nagar Yuwak Shikshan Sanstha's

Yeshwantrao Chavan College of Engineering

(An Autonomous Institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

Department of Civil Engineering

SoE and Syllabus

B.E Honors in Environmental Engineering

SoE No.
HON-101

VII Semester

CVH123	LAB : Advanced Wastewater Treatment			L=0	T=0	P=1	Credits=1
Evaluation Scheme	MSPA-I	MSPA-II	MSPA-III	TA	ESE	Total	ESE Duration
	--	--	--	60	40	100	3 Hrs

COURSE OBJECTIVES	COURSE OUTCOME
Students should be able to 1. To study the wastewater quality criteria & permissible standards 2. To study the characteristics of wastewater and experimental procedure 3. To study the analysis of various parameters related to wastewater quality	Students should be able to 1. An ability to carry out different experiments to determine various characteristic of wastewater 2. To design and understand various wastewater treatments units

Mapped Program Outcomes :1,4,

A. Performance based on List of Experiments: - (Any Six)

1. Determination of Dissolved Oxygen
2. Determination of Turbidity
3. Determination of optimum coagulant dose-Jar test
4. Determination of Different Forms of Solids
5. Determination of pH
6. Determination of Biochemical Oxygen Demand
7. Determination of Chemical Oxygen Demand
8. Determination of Sludge Volume Index
9. Determination of oil & grease

B. Assignments: Assignments will be based on theory covered in the classroom. (Any Three)

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