



BOARD OF STUDIES MEETING

17.02.2018

Department : Environmental Science
Board : Environmental Assessment and Remediation

The Third Board of Studies Meeting for the course B. Voc. Environmental Assessment and Remediation will be held on Saturday the afternoon of 17th February 2018, at 2.00 p.m. in the department of environmental science (B.Voc.).

Agenda:

1. To discuss and approve the draft syllabus for the III year.
2. To prepare the panel of examiners for each paper.
3. Other matters with the permission of the Chair person.

S.No.	Name and Official Address	Category
1.	Dr. M. VIGNEESWARAN Head & Assistant Professor of Environmental Science, VHNSN College (Autonomous), Virudhunagar.	Chair Person
2.	Dr. M. ANAND Assistant Professor, Department of Marine and Coastal Studies, School of Energy, Environment & Natural Resources, Madurai Kamaraj University, Palkalai Nagar, Madurai-625 021	University Nominee
3.	Dr. S. MUTHURAMKUMAR Assistant Professor, Research Department of Botany, VHNSN College (Autonomous), Virudhunagar.	Subject Expert
4.	Dr. S. VIVEKANANDHAN Assistant Professor, Research Department of Physics, VHNSN College (Autonomous), Virudhunagar.	Subject Expert
5.	Dr. M. KANNAN Assistant Professor, Research Department of Zoology, VHNSN College (Autonomous), Virudhunagar.	Subject Expert
6.	Dr. G. MAHENDRA PERUMAL, Research Department of Botany, VHNSN College (Autonomous), Virudhunagar.	Subject Expert
7.	Mr. R. MANIKANDAN Manager of sugapriya mineral water company Pvt.Ltd. 6/24 C, Pillayarnatham, Srivilliputtur – 626 125, Virudhunagar.	Industrial / Corporate Sector

17.02.2018



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**Board of studies meeting held on 17.02.2018 for B.Voc. Programme on
Environmental Assessment and Remediation**

Minutes of the meeting

The board of studies meeting for B.Voc. Programme on Environmental Assessment and Remediation was held today at 2.00 p.m. in the Department of Environmental science (B.Voc.).

The following resolutions were passed in the meeting:

1. Resolved to approve the content of the syllabus is reduced the following titles like Solid Waste Recycling and Processing, Ecotoxicology and Human Health and Bioremediation-II papers.
2. Some additional information like microscopic techniques included in Environmental Nanotechnology paper.
3. The e-waste management also included in lab V1- Solid waste Assessment and Remediation –II practical's.
4. We included the references books for each paper.
5. Detailed discussion was made on the draft syllabus, modifications were made in them and the final syllabus was approved.



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17.02.2018

Members Present :

S.No.	Name and Official Address	Signature
1.	Dr. M. VIGNEESWARAN Head & Assistant Professor of Environmental Science, VHNSN College (Autonomous), Virudhunagar.	<i>M. Vigneeswaran</i>
2.	Dr. M. ANAND Assistant Professor, Department of Marine and Coastal Studies, School of Energy, Environment & Natural Resources, Madurai Kamaraj University, Palkalai Nagar, Madurai-625 021	<i>M. Anand</i> 17/2/18.
3.	Dr. S. MUTHURAMKUMAR Assistant Professor, Research Department of Botany, VHNSN College (Autonomous), Virudhunagar.	<i>S. Muthuramkumar</i>
4.	Dr. S. VIVEKANANDHAN Assistant Professor, Research Department of Physics, VHNSN College (Autonomous), Virudhunagar.	<i>S. Vivekanandhan</i>
5.	Dr. M. KANNAN Assistant Professor, Research Department of Zoology, VHNSN College (Autonomous), Virudhunagar.	<i>M. Kannan</i> 17/2/18.
6.	Dr. G. MAHENDRA PERUMAL, Research Department of Botany, VHNSN College (Autonomous), Virudhunagar.	<i>G. Mahendra Perumal</i> 17/2/2018
7.	Mr. R. MANIKANDAN Manager of sugapriya mineral water company Pvt.Ltd. 6/24 C, Pillayarnatham, Srivilliputtur - 626 125, Virudhunagar.	Not present



**BOARD OF STUDIES MEETING OF ENVIRONMENTAL ASSESSMENT AND
REMEDICATION HELD ON 19.03.2022**

MINUTES OF THE MEETING

The Board of Studies Meeting of Environmental Assessment and Remediation was held today (19.03.2022) at **2.30 p.m.** in the Department of Environmental Science. After having a detailed discussion, the Board resolved the following:

1. Resolved to revise the syllabus of the courses for I year Environmental Assessment and Remediation as follows:

Semester I

Subject Core / Elective / SBE / NME / SLS	Title of the Existing Course	Title of the Course after revision	Focus on Employability / Entrepreneurship / Skill Development	Revised / New / No Change / Interchanged If revised % of change
Allied-1	Communicative English - Paper I	Communicative English - Paper I	Skill Development	No change
Allied-2	Mathematics-I	Mathematics-I	Skill Development	No change
Part-IV	Value education	Value education	Skill Development	No change
Core-1	Environmental Science	Environmental Science	Skill Development	Revised – 50%
Core-2	Environmental Pollution- I	Environmental Pollution- I	Skill Development	Revised – 30%
Core 1 Lab	LAB: Environmental Chemistry	LAB: Environmental Chemistry	Skill Development	Revised – 20%
	Internship	Internship	Skill Development	No change



Semester II

Subject Core / Elective / SBE / NME / SLS	Title of the Existing Course	Title of the Course after revision	Focus on Employability / Entrepreneurship / Skill Development	Revised / New /No Change / Interchanged If revised % of change
Allied-3	Communicative English – Paper II	Communicative English – Paper II	Skill Development	No change
Allied-4	Mathematics-II	Mathematics-II	Skill Development	No change
Allied-5	Basic Computing	Basics of Computers for Reports Maintenance	Skill Development	New
Core-3	Water Quality Assessment	Water Quality Assessment	Skill Development	No change
Core-4	Water and Wastewater Remediation Techniques	Water and Wastewater Remediation Techniques	Skill Development	Revised – 10%
Core 2 Lab	LAB: Water Analysis	LAB: Water analysis	Skill Development	Revised– 20%
	Industrial Visit	Industrial Visit	Skill Development	No change

The detailed syllabus passed in the Board of Studies Meeting is given in Annexure – I.



The other resolutions were passed in the meeting

1. Resolved to approve the changes made in the content of syllabus of papers included in Semester-I such as Environmental Science, Environmental Pollution – I, Lab-I: Environmental Chemistry, and Semester-II such as Water Quality Assessment, Water and Wastewater Remediation Techniques and Lab: Water Analysis.
2. In Semester-II, Basic Computing changed to Basics of Computers for Reports Maintenance.
3. In Semester-I, Environmental Science paper, concept, scope and importance of environmental science and Renewable and non-renewable resources were included and natural cycles were deleted in Unit-I. Unit-II (Atmosphere) and Unit-IV (Lithosphere) were deleted. Unit-III (Ecosystem and Energy flow) changed as Unit-II. Unit-III (Biodiversity and Conservation) and Unit-IV (Environmental Pollution) were included. Unit-V (Environmental Law) was changed as Environmental Policy and Law with some topics.
4. In Environmental Pollution-I paper, some topics were added and some were deleted in Unit-I, Unit-II and Unit-IV. One topic was included in Unit-V.
5. In Lab: Environmental Chemistry, two old outdated experiments were removed and one topic was included.
6. In Semester-II, Water Quality Assessment paper the topic ozonation of water was added.
7. In Water and Wastewater Remediation Techniques, no changes were made on Unit-I to Unit-4. Some topics were removed in Unit-V.
8. In Lab: Water Analysis, some experiments were removed, some experiments were included and some topics were inter changed.
9. Resolved to approve the syllabus for the Value Added Courses viz., Bakery and Confectionery, Biofertilizers, Computer Aided Drug Designing, Organic Gardening and Vermicompost Technology.
10. The board suggested preparing and submitting the list of examiners to the Controller of Examination.
11. Detailed discussions were made on the syllabus and all the suggested modifications were made in them.
12. Resolved to approved 2nd and 3rd year syllabus skeleton by Board of Studies Members as an Annexure-III



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2. Resolved to approve the panel of Examiners suggested by the members of the Board as given in Annexure-II

Members Present:

19.03.2022

S.No.	Name and Official Address	Category	Signature
1.	Dr. S. Jeyakumar Assistant Professor and Head	Chairman	
2.	Dr. S. Kannan Professor & Head, Department of Environmental Studies, School of Energy, Environmental & Resources, Madurai Kamaraj University, Madurai – 625021 Email: skseen@mkuniversity.org Mobile: 9442021368	University Nominee	
3.	Dr. R. Manikandan, Sugapriya Mineral Water, Srivilliputtur - 626125. Email: sugapriyamineralwater@gmail.com Mobile: 8903054414	Industrial Representative	
4.	Dr. A. Ganesh Kumar, Assistant Professor, Department of B.Voc., VHNSN College (Autonomous), Virudhunagar.	Member	 19/03/2022
5.	Dr. P. Senthil Kumar, Assistant Professor, Department of B.Voc., VHNSN College (Autonomous), Virudhunagar.	Member	
6.	Ms. G. Deivanai, Assistant Professor, Department of B.Voc., VHNSN College (Autonomous), Virudhunagar.	Member	
7.	Dr. M. Kannan, Assistant Professor, Department of Zoology, VHNSN College (Autonomous), Virudhunagar.	Member	

B.Voc. Environmental Assessment & Remediation**List of Examiners**

1. Dr. V. Jeyasinga,
Assistant Professor & Head,
Department of Biotechnology,
V.V.Vanniaperumal College for Women (Autonomous),
Virudhunagar – 626001.
Mobile No.: 9942619304
E-mail: jeyasinga@gmail.com
2. Dr. S. Radha,
Assistant Professor,
Department of Microbiology,
The Standard Fireworks Rajaratnam College for Women (Autonomous),
Thiruthangal Road,
Sivakasi – 626123
Mobile No. : 9443670200
E-mail: radha-mb@sfrcollege.edu.in
3. Dr. A. Sarvalingam,
Assistant Professor
Department of Botany & Biotechnology
Sri Kaliswari College (Autonomous),
Virudhunagar main road,
Sivakasi – 626123,
Mobile No. 9047410293
Email: slvmlingam@gmail.com
4. Dr. S. Subha Ranjani,
Assistant Professor & Head,
Department of Microbiology,
The Standard Fireworks Rajaratnam College for Women (Autonomous),
Thiruthangal Road,
Sivakasi – 626123
Mobile No. : 8012232805
E-mail: srjeni10@gmail.com
5. Dr. A. Baskar,
Assistant Professor,
Department of Zoology,
Saiva Bhanu Kshatriya College,
Aruppukottai – 626101.
Mobile No.: 9442531854
E-mail: drarulbaskar@gmail.com



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Course Name: **Bachelor of Vocational**
 Discipline: **Environmental Assessment and Remediation**
II - Year Syllabus

Annexure - II

COURSE SCHME: Semester – 3

Sem	Subject	Hours / Week	Credits			Int + Ext =Total	Subject Code	Focus on Employability/ Entrepreneurship/ Skill Development
			Theory	Skill	Total			
III	Soft Skills Development	4	2	1	3	25+75=100	EV16T31	Skill Development
	Human impact on the Environment	4	2	1	3	25+75=100	EV16T32	Skill Development
	Environmental Pollution- II	4	2	1	3	25+75=100	EV16T33	Skill Development
	Air Quality Assessment & Remediation	5	3	1	4	25+75=100	EV16T34	Skill Development
	Climate change and Carbon Sequestration	5	3	1	4	25+75=100	EV16T35	Skill Development
	LAB: III Air Quality Assessment I	8	0	5	5	40+60=100	EV16P31	Skill Development
	Internship		0	4	4	50(Internal)	EV16ISP3	Skill Development
	Industrial Visit		0	1	1	20(Internal)		
	Project Work		0	3	3	30(Internal)		
Total		30	12	18	30			

Semester – 4

Sem	Subject	Hours/ Week	Credits			Int+Ext =Total	Subject Code	Focus on Employability/ Entrepreneurship/ Skill Development
			Theory	Skill	Total			
IV	Remote sensing and GIS	4	2	1	3	25+75=100	EV16T41	Skill Development
	Air Pollution Control Technologies	4	2	1	3	25+75=100	EV16T42	Skill Development
	Hazardous Waste Management	4	2	1	3	25+75=100	EV16T43	Skill Development
	Bioremediation	5	3	1	4	25+75=100	EV16T44	Skill Development
	Indoor Environment Monitoring	5	3	1	4	25+75=100	EV16T45	Skill Development
	LAB IV : Air Quality Assessment II	8	0	5	5	40+60=100	EV16P41	Skill Development
	Internship		0	4	4	50(Internal)	EV16ISP4	Skill Development
	Industrial Visit		0	1	1	20(Internal)		
	Project Work		0	3	3	30(Internal)		
Total		30	12	18	30			



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Course Name: **Bachelor of Vocational**
 Discipline: **Environmental Assessment and Remediation**
III -Year Syllabus

COURSE SCHME:
Semester – 5

Sem	Subject	Hours / Week	Credits			Int + Ext =Total	Subject Code	Focus on Employability/ Entrepreneurship/ Skill Development
			Theory	Skill	Total			
V	Solid Waste Recycling and Processing	5	3	1	4	25+75=100	EV16T51	Skill Development
	Bioremediation-II	5	3	1	4	25+75=100	EV16T52	Skill Development
	Ecotoxicology and Human Health	4	2	1	3	25+75=100	EV16T53	Skill Development
	Circular Economy	4	2	1	3	25+75=100	EV16T54	Skill Development
	Workplace Hazardous and Occupational Health	4	2	1	3	25+75=100	EV16T55	Skill Development
	LAB: V Solid Waste Assessment and Remediation-I	8	0	5	5	40+60=100	EV16P51	Skill Development
	Internship		0	4	4	50(Internal)	EV16ISP5	Skill Development
	Industrial Visit		0	1	1	20(Internal)		
	Project Work		0	3	3	30(Internal)		
		Total	30	12	18	30		

Semester – 6

Sem	Subject	Hours/ Week	Credits			Int+Ext =Total	Subject Code	Focus on Employability/ Entrepreneurship/ Skill Development
			Theory	Skill	Total			
VI	Applied Pyrolysis and Gasification	5	3	1	4	25+75=100	EV16T61	Skill Development
	Waste to product Conversion Techniques	5	3	1	4	25+75=100	EV16T62	Skill Development
	Industrial Hazardous Waste Management	4	2	1	3	25+75=100	EV16T63	Skill Development
	Natural Resources and Conservation	4	2	1	3	25+75=100	EV16T64	Skill Development
	Environmental Nanotechnology	4	2	1	3	25+75=100	EV16T65	Skill Development
	LAB: VI Solid Waste Assessment and Remediation-II	8	0	5	5	40+60=100	EV16P61	Skill Development
	Internship		0	4	4	50(Internal)	EV16ISP6	Skill Development



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Industrial Visit		0	1	1	20(Internal)		
Project Work		0	3	3	30(Internal)		
Total	30	12	18	30			



BOARD OF STUDIES MEETING OF ENVIRONMENTAL ASSESSMENT AND REMEDIATION HELD ON (07-06-2023)

MINUTES OF THE MEETING

The Board of Studies Meeting of Environmental Assessment and Remediation was held today (07-06-2023) at **2.00 p.m.** in the Department of Environmental Science. After having a detailed discussion, the Board resolved the following:

- Resolved to revise the syllabus of the courses for I year Environmental Assessment and Remediation as follows:

Semester III

Subject Core / Elective / SBE / NME / SLS	Title of the Existing Course	Title of the Course after revision	Focus on			Revised / New / No Change / Interchanged If revised % of change	Course Contribution Local/ National/ Global Level
			Employability	Entrepreneurship	Skill Development		
Part-IV	Soft Skills Development	Soft Skills Development			√	No change	National Level
Core-5	Human impact on the Environment	Human impact on the Environment			√	Revised – 30%	Global Level
Core-6	Environmental Pollution- II	Environmental Pollution- II			√	Revised – 20%	National Level
Core-7	Air Quality Assessment & Remediation	Air Quality Assessment & Remediation			√	Revised – 50%	National Level
Core-8	Climate change and Carbon Sequestration	Climate change and Carbon Sequestration			√	Revised – 30%	Global Level
Core-3 Lab	LAB: III Air Quality Assessment I	LAB: III Air Quality Assessment I			√	No change	National Level
	Internship	Internship		√		No change	Global Level
	Industrial Visit	Industrial Visit	√			No change	National Level
	Project Work	Project Work			√	No change	Global Level



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Semester IV

Subject Allied/ Core / Elective / SBE / NME / SLS	Title of the Existing Course	Title of the Course after revision	Focus on			Revised / New / No Change / Interchanged If revised % of change	Course Contribution
			Employability	Entrepreneurship	Skill Development		Local/ National/ Global Level
Core-9	Remote sensing and GIS	Remote sensing and GIS			√	Revised – 10%	Global Level
Core-10	Air Pollution Control Technologies	Air Pollution Control Technologies			√	Inter change – 10%	Global Level
Core-11	Hazardous Waste Management	Hazardous Waste Management			√	Revised – 10%	National Level
Core-12	Bioremediation	Bioremediation – I			√	Revised – 10%	Global Level
Core-13	Indoor Environment Monitoring	Indoor Environment Monitoring			√	No change	National Level
Core-4 Lab	LAB IV : Air Quality Assessment II	LAB IV : Air Quality Assessment II			√	No change	National Level
	Internship	Internship		√		No change	Global Level
	Industrial Visit	Industrial Visit	√			No change	National Level
	Project Work	Project Work			√	No change	Global Level

The detailed syllabus passed in the Board of Studies Meeting is given in Annexure – I.

- Resolved to approve the draft syllabi for **Environmental Assessment and Remediation** with the following changes:

Course	Unit No.	Changes
Human impact on the Environment	Unit-I	Basic concepts of environment; food safety, and sustainability for public health were added and urbanization were deleted
	Unit-III	Effects of energy crisis were deleted. Energy crisis on the environment was added
	Unit-IV	Unit-V from the previous syllabus is shifted over to Unit-IV.
	Unit-V	Goals, importance and advantages of water conservation were added.



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Environmental Pollution- II	Unit-I	Unit-IV from the previous syllabus was shifted over to Unit-I. Causes of environmental pollution was added
	Unit-II	Implementation rules of e-waste and reduction steps was changed as a e-waste management and handling Rules.
	Unit-III	Range, hazardous effects, radiation limits and regulations, suggested solutions of Mobile phone tower radiation were included.
	Unit-IV	Objectives, treatment and disposal of biomedical waste were added
	Unit-V	Environmental Protection Act (1986) was added.
Air Quality Assessment & Remediation	Unit-I	Introduction, importance, sources; issues of Emission inventories were added.
	Unit-II	Principle, applications, advantages, preventing measures of Air pollution monitoring was included.
	Unit-III	Definition and Calculation of AQI, Air Quality Index India, Particulate Matter, categories, National Ambient Air Quality Standards (NAAQS) was added.
	Unit-IV	Types, impact on soil and crop productivity, advantages and disadvantages of Carbon capture and sequestration were added. Renewable energy and CO ₂ emission was added.
Climate change and Carbon Sequestration	Unit-I	Definition – causes – effects – facts – control strategies, Mechanisms of Greenhouse effects and Regional climate change in Indian context were added. The topic, Global climate changes was deleted.
	Unit-II	Health impacts, causes and effects of Global Warming, Solutions to Global Warming in Asia were added.
	Unit-III	Impacts of climate change were deleted and shifted over to Unit-II.
LAB: III Air Quality Assessment I		No changes
Remote sensing and GIS	Unit-I	Advantages and limitations of Remote Sensing were included.
	Unit-II	Sources of data, Categorization, Image processing system were included.
	Unit-IV	Unit-V (as per old syllabus) merged to Unit-IV
	Unit-V	Web GIS newly introduced in this unit.
	Section-B	In Skill Component, “using any one GIS tools” was added in skill 5



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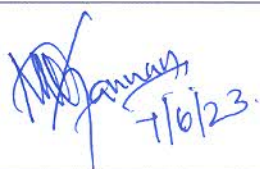
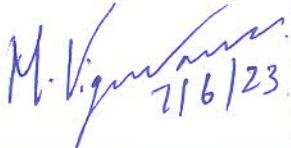


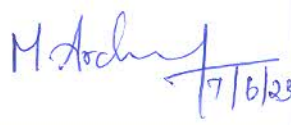



Air Pollution Control Technologies	Unit-I	Formation and harmful impacts of Gaseous pollutants on environment were added.
	Unit-III	Healthcare waste – types was added
Hazardous Waste Management	Unit-I	Characteristics, classification of hazardous waste were included.
Bioremediation – I	Heading changed as Bioremediation - I	
	Unit-I	The topic, bioaugmentation & biostimulation were included.
	Unit-II	Types, factors effecting bioleaching process were added.
	Unit-V	Heavy metal pollution: Definition was added
Indoor Environment Monitoring		No changes
LAB IV : Air Quality Assessment II		No changes

3. Resolved to approve the panel of Examiners suggested by the members of the Board as given in Annexure – II.

4. (Any other resolutions passed in the meeting) : Nil

Members Present:

Name	Category	Signature
Dr. A. Ganesh Kumar Assistant Professor and Head	Chairman	 07/06/2023
Dr. M. Anand Assistant Professor & Head i/c Department of Marine and Coastal Studies Madurai Kamaraj University Madurai-625 021 Email: anandm21@yahoo.com msaseen@mkuniversity.org	University Nominee	 07/06/2023
Mr. R. Manikandan Sugapriya Mineral Water, Srivilliputtur – 626125 Email: sugapriyamineralwater@gmail.com Mobile: 89030 54414	Industrial Representative	 07/06/23
Dr. M. Kannan Assistant Professor, Department of Zoology, VHNSN College (Autonomous), Virudhunagar.	Member	 7/6/23.
Dr. M. Vigneeswaran, Assistant Professor, Department of Zoology, VHNSN College (Autonomous), Virudhunagar.	Member	 7/6/23.
Mrs. S. Udaya Geetha, Assistant Professor, Department of B.Voc., VHNSN College (Autonomous), Virudhunagar.	Member	 7/6/2023
Mrs. R. Abarna Assistant Professor, Department of B.Voc, VHNSN College (Autonomous), Virudhunagar.	Member	 7/6/23
Ms. M. Archanabharathi, Assistant Professor, Department of B.Voc, VHNSN College (Autonomous), Virudhunagar.	Member	 7/6/23.
Ms. L. Kavithasri Assistant Professor Department of B.Voc VHNSN College (Autonomous) Virudhunagar	Member	 7/6/23