

No.: UHF/EVS/3-63/2024/-2356
Department of Environmental Science -cum-Work Centre IGNOU
Dr. YS Parmar University of Horticulture & Forestry,
Nauni-173 230, Distt. Solan (H.P.)

Senior Regional Director
IGNOU Regional Centre
Shimla-171005 (HP)

Dated: 27/02/2024

Sub: Regarding practical schedule of MSc Environmental Science programme of IGNOU-submission thereof.

Sir,

In reference to your Email dated 23rd February, 2024 kindly find enclosed herewith the schedule of practical of three courses namely Lab course-1 (MEVL 011), Lab course-2 (MEVL 012) and Lab course-3 (MEVL 013) of MSc Environmental Science programme. The practical of these two MEVL11,MEVL12 lab courses will be conducted in four batches (33+33+33+34) and MEVL13 lab course will be conducted in 2 batches (35+37) each of 8 hours in the labs of this department wef 18th March to 4th August 2024. This is for kind perusal and further necessary action, please.

Thanking you.

Yours sincerely,

Professor and Head

Proposed schedule for conducting practical Examination for the course MEVL 011, Lab course-1, Environmental Science w.e.f 18th March, 2024 to 31st March 2024
(First Batch)

Venue: Department of Environmental Science, Dr YSP UHF, Nauni, Solan

Day	Date	Practical exercise	Theory	Hand on Exercises/ Lab Practical
1	18/03/2024	✓ Determination of minimum size of the quadrat by 'species-area-curve' method	Morning Session (9:30 am -1:30 pm)	Evening Session (2:00 -6:00 pm)
2	19/03/2024	✓ Determination of frequency of species by line transect method and point frame method ✓ Determination of Relative Density, Frequency and Abundance of different species present in community and calculation of IVI		
3	20/03/2024	✓ Measures of central tendency, dispersion, skewness and kurtosis ✓ Correlation and regression analysis; analysis of variance		
4	21/03/2024	✓ Determination of standing crop and biomass in Terrestrial ecosystem		
5	22/03/2024	✓ Study on the abiotic and biotic components of an aquatic ecosystem		
6	23/03/2024	✓ Estimation of net primary productivity by harvest method in grassland ecosystem		
7	24/03/2024	✓ Estimation of net primary productivity using light and dark bottle method in aquatic ecosystem		
8	25/03/2024	✓ Estimation of biodiversity indices ✓ Weather monitoring and data analysis		
9	26/03/2024	✓ Study on soil profile and physical characteristics of soil		
10	27/03/2024	✓ Determination of soil organic carbon		
11	28/03/2024	✓ Determination of available Nitrogen in soil		
12	29/03/2024	✓ Preparation of climatic maps and diagram ✓ Identification of Igneous, Sedimentary and Metamorphic rocks		
13	30/03/2024	✓ Determination of soil moisture content ✓ Determination of soil pH and electrical conductivity		
14	31/03/2024	✓ Preparation of station based wind rose ✓ Arial photographs interpretations		

Proposed schedule for conducting practical Examination for the course MEVL 012, Lab course-2, Environmental Science w.e.f 1st April, 2024 to 14th April, 2024

(First Batch)

Venue: Department of Environmental Science, Dr YSP UHF, Nauni, Solan

Day	Date	Practical Exercise	Theory	Hand on Exercises/ Lab Practical
1	01/04/2024	✓ Determination of Electrical Conductance of a Water Sample	Morning Session (9:30 am -1:30 pm)	Evening Session (2:00 -6:00 pm)
2	02/04/2024	✓ Determination of pH of a Water Sample		
3	03/04/2024	✓ Determination of Turbidity in Water		
4	04/04/2024	✓ Determination of Total Solids and Total Dissolved Solids in Water ✓ Determination of Hardness in Water Sample		
5	05/04/2024	✓ Determination of Biological Oxygen Demand in Water		
6	06/04/2024	✓ Determination of Dissolved Oxygen in Water		
7	07/04/2024	✓ Determination of Chemical Oxygen Demand in Water		
8	08/04/2024	✓ Determination of Chloride in Water Samples ✓ Determination of Residual Chlorine in Water		
9	09/04/2024	✓ Determination of Sulphates in Water		
10	10/04/2024	✓ Determination of Phosphate in Water		
11	11/04/2024	✓ Determination of Nitrate Nitrogen in water sample		
12	12/04/2024	✓ Determination of Nitrite Nitrogen in water sample		
13	13/04/2024	✓ Determination of Fluoride in Water		
14	14/04/2024	✓ Determination of Oil and Grease in Water		

Proposed schedule for conducting practical Examination for the course MEVL 013, Lab course-3, Environmental Science w.e.f 15th April, 2024 to 28th April, 2024

(First Batch)

Venue: Department of Environmental Science, Dr YSP UHF, Nauni, Solan

Day	Date	Practical exercise	Theory	Hand on Exercises/ Lab Practical
1	15/04/2024	<ul style="list-style-type: none"> ✓ Determination of Suspended Particulate Matter (SPM) in Ambient Air Using High Air Sampler (HVS) ✓ Isolation and Enumeration of Air Borne Microorganisms by All Glass Impinger Technique 	Morning Session (9:30 am -1:30 pm)	Evening Session (2:00 -6:00 pm)
2	16/04/2024	<ul style="list-style-type: none"> ✓ Determination of Sodium and Potassium in Water Using Flame Photometer 		
3	17/04/2024	<ul style="list-style-type: none"> ✓ Determination of Trace Metals in Environmental Samples using Inductively Coupled Plasma Optical Emission Spectroscopy (ICP-OES) 		
4	18/04/2024	<ul style="list-style-type: none"> ✓ Composting of Biodegradable Waste and determination of compost quality ✓ Determination of Biogas Production from Organic Waste by Liquid Displacement Method 		
5	19/04/2024	<ul style="list-style-type: none"> ✓ Determination of Pesticides in Environmental Samples Using Gas Chromatography ✓ Separation of Amino Acids by Thin Liquid Chromatography 		
6	20/04/2024	<ul style="list-style-type: none"> ✓ Determination of Effect of Industrial Effluents on Seed Germination and Seedling Growth of Rice and Wheat ✓ Determination of Alcoholic fermentation from Grape Juice by <i>Saccharomyces cerevisiae</i> 		
7	21/04/2024	<ul style="list-style-type: none"> ✓ Sterilization, Media Preparation and Isolation of Pure Culture ✓ Determination of Gram Staining of Bacterial Sample 		
8	22/04/2024	<ul style="list-style-type: none"> ✓ Isolation and Characterization of Bacteria from Soil Samples ✓ Isolation and Characterization of Actinomycetes from Soil Samples 		
9	23/04/2024	<ul style="list-style-type: none"> ✓ Isolation of Pure Culture by Streak Plate Method, Pour Plate Method and Spread Plate Method 		
10	24/04/2024	<ul style="list-style-type: none"> ✓ Isolation and Characterization of Fungi from Soil Samples 		
11	25/04/2024	<ul style="list-style-type: none"> ✓ Determination of Metabolic Activities of Bacteria through Biochemical Tests 		
12	26/04/2024	<ul style="list-style-type: none"> ✓ Determination of Biological Activity of Soil by Dehydrogenase Assay 		
13	27/04/2024	<ul style="list-style-type: none"> ✓ Isolation of Bio-Surfactant Producing Bacteria from Environmental Samples 		
14	28/04/2024	<ul style="list-style-type: none"> ✓ Detection of Coliform in Water Samples by Membrane Filter Technique 		

Proposed schedule for conducting practical Examination for the course MEVL 011, Lab course-1, Environmental Science w.e.f 29th April 2024 to 12th May 2024

(Second Batch)

Venue: Department of Environmental Science, Dr YSP UHF, Nauni, Solan

Day	Date	Practical exercise	Theory	Hand on Exercises/ Lab Practical
1	29/04/2024	✓ Determination of minimum size of the quadrat by 'species-area-curve' method	<p align="center">Morning Session (9:30 am -1:30 pm)</p>	<p align="center">Evening Session (2:00 -6:00 pm)</p>
2	30/04/2024	✓ Determination of frequency of species by line transect method and point frame method ✓ Determination of Relative Density, Frequency and Abundance of different species present in community and calculation of IVI		
3	01/05/2024	✓ Measures of central tendency, dispersion, skewness and kurtosis ✓ Correlation and regression analysis; analysis of variance		
4	02/05/2024	✓ Determination of standing crop and biomass in Terrestrial ecosystem		
5	03/05/2024	✓ Study on the abiotic and biotic components of an aquatic ecosystem		
6	04/05/2024	✓ Estimation of net primary productivity by harvest method in grassland ecosystem		
7	05/05/2024	✓ Estimation of net primary productivity using light and dark bottle method in aquatic ecosystem		
8	06/05/2024	✓ Estimation of biodiversity indices ✓ Weather monitoring and data analysis		
9	07/05/2024	✓ Study on soil profile and physical characteristics of soil		
10	08/05/2024	✓ Determination of soil organic carbon		
11	09/05/2024	✓ Determination of available Nitrogen in soil		
12	10/05/2024	✓ Preparation of climatic maps and diagram ✓ Identification of Igneous, Sedimentary and Metamorphic rocks		
13	11/05/2024	✓ Determination of soil moisture content ✓ Determination of soil pH and electrical conductivity		
14	12/05/2024	✓ Preparation of station based wind rose ✓ Arial photographs interpretations		

Proposed schedule for conducting practical Examination for the course MEVL 012, Lab course-2, Environmental Science w.e.f 13th May 2024 to 26th May 2024

(Second Batch)

Venue: Department of Environmental Science, Dr YSP UHF, Nauni, Solan

Day	Date	Practical Exercise	Theory	Hand on Exercises/ Lab Practical
1	13/05/2024	✓ Determination of Electrical Conductance of a Water Sample	Morning Session (9:30 am -1:30 pm)	Evening Session (2:00 -6:00 pm)
2	14/05/2024	✓ Determination of pH of a Water Sample		
3	15/05/2024	✓ Determination of Turbidity in Water		
4	16/05/2024	✓ Determination of Total Solids and Total Dissolved Solids in Water ✓ Determination of Hardness in Water Sample		
5	17/05/2024	✓ Determination of Biological Oxygen Demand in Water		
6	18/05/2024	✓ Determination of Dissolved Oxygen in Water		
7	19/05/2024	✓ Determination of Chemical Oxygen Demand in Water		
8	20/05/2024	✓ Determination of Chloride in Water Samples ✓ Determination of Residual Chlorine in Water		
9	21/05/2024	✓ Determination of Sulphates in Water		
10	22/05/2024	✓ Determination of Phosphate in Water		
11	23/05/2024	✓ Determination of Nitrate Nitrogen in water sample		
12	24/05/2024	✓ Determination of Nitrite Nitrogen in water sample		
13	25/05/2024	✓ Determination of Fluoride in Water		
14	26/05/2024	✓ Determination of Oil and Grease in Water		

Proposed schedule for conducting practical Examination for the course MEVL 013, Lab course-3, Environmental Science w.e.f 27th May 2024 to 09th June 2024

(Second Batch)

Venue: Department of Environmental Science, Dr YSP UHF, Nauni, Solan

Day	Date	Practical exercise	Theory	Hand on Exercises/ Lab Practical
1	27/05/2024	<ul style="list-style-type: none"> ✓ Determination of Suspended Particulate Matter (SPM) in Ambient Air Using High Air Sampler (HVS) ✓ Isolation and Enumeration of Air Borne Microorganisms by All Glass Impinger Technique 	Morning Session (9:30 am -1:30 pm)	Evening Session (2:00 -6:00 pm)
2	28/05/2024	<ul style="list-style-type: none"> ✓ Determination of Sodium and Potassium in Water Using Flame Photometer 		
3	29/05/2024	<ul style="list-style-type: none"> ✓ Determination of Trace Metals in Environmental Samples using Inductively Coupled Plasma Optical Emission Spectroscopy (ICP-OES) 		
4	30/05/2024	<ul style="list-style-type: none"> ✓ Composting of Biodegradable Waste and determination of compost quality ✓ Determination of Biogas Production from Organic Waste by Liquid Displacement Method 		
5	31/05/2024	<ul style="list-style-type: none"> ✓ Determination of Pesticides in Environmental Samples Using Gas Chromatography ✓ Separation of Amino Acids by Thin Liquid Chromatography 		
6	01/06/2024	<ul style="list-style-type: none"> ✓ Determination of Effect of Industrial Effluents on Seed Germination and Seedling Growth of Rice and Wheat ✓ Determination of Alcoholic fermentation from Grape Juice by <i>Saccharomyces cerevisiae</i> 		
7	02/06/2024	<ul style="list-style-type: none"> ✓ Sterilization, Media Preparation and Isolation of Pure Culture ✓ Determination of Gram Staining of Bacterial Sample 		
8	03/06/2024	<ul style="list-style-type: none"> ✓ Isolation and Characterization of Bacteria from Soil Samples ✓ Isolation and Characterization of Actinomycetes from Soil Samples 		
9	04/06/2024	<ul style="list-style-type: none"> ✓ Isolation of Pure Culture by Streak Plate Method, Pour Plate Method and Spread Plate Method 		
10	05/06/2024	<ul style="list-style-type: none"> ✓ Isolation and Characterization of Fungi from Soil Samples 		
11	06/06/2024	<ul style="list-style-type: none"> ✓ Determination of Metabolic Activities of Bacteria through Biochemical Tests 		
12	07/06/2024	<ul style="list-style-type: none"> ✓ Determination of Biological Activity of Soil by Dehydrogenase Assay 		
13	08/06/2024	<ul style="list-style-type: none"> ✓ Isolation of Bio-Surfactant Producing Bacteria from Environmental Samples 		
14	09/06/2024	<ul style="list-style-type: none"> ✓ Detection of Coliform in Water Samples by Membrane Filter Technique 		

Proposed schedule for conducting practical Examination for the course MEVL 011, Lab course-1, Environmental Science w.e.f 10th June 2024 to 23rd June 2024

(Third Batch)

Venue: Department of Environmental Science, Dr YSP UHF, Nauni, Solan

Day	Date	Practical exercise	Theory	Hand on Exercises/ Lab Practical
1	10/06/2024	✓ Determination of minimum size of the quadrat by 'species-area-curve' method	<p align="center">Morning Session (9:30 am -1:30 pm)</p>	<p align="center">Evening Session (2:00 -6:00 pm)</p>
2	11/06/2024	✓ Determination of frequency of species by line transect method and point frame method ✓ Determination of Relative Density, Frequency and Abundance of different species present in community and calculation of IVI		
3	12/06/2024	✓ Measures of central tendency, dispersion, skewness and kurtosis ✓ Correlation and regression analysis; analysis of variance		
4	13/06/2024	✓ Determination of standing crop and biomass in Terrestrial ecosystem		
5	14/06/2024	✓ Study on the abiotic and biotic components of an aquatic ecosystem		
6	15/06/2024	✓ Estimation of net primary productivity by harvest method in grassland ecosystem		
7	16/06/2024	✓ Estimation of net primary productivity using light and dark bottle method in aquatic ecosystem		
8	17/06/2024	✓ Estimation of biodiversity indices ✓ Weather monitoring and data analysis		
9	18/06/2024	✓ Study on soil profile and physical characteristics of soil		
10	19/06/2024	✓ Determination of soil organic carbon		
11	20/06/2024	✓ Determination of available Nitrogen in soil		
12	21/06/2024	✓ Preparation of climatic maps and diagram ✓ Identification of Igneous, Sedimentary and Metamorphic rocks		
13	22/06/2024	✓ Determination of soil moisture content ✓ Determination of soil pH and electrical conductivity		
14	23/06/2024	✓ Preparation of station based wind rose ✓ Arial photographs interpretations		

Proposed schedule for conducting practical Examination for the course MEVL 012, Lab course-2, Environmental Science w.e.f 24th June 2024 to 07th July 2024

(Third Batch)

Venue: Department of Environmental Science, Dr YSP UHF, Nauni, Solan

Day	Date	Practical Exercise	Theory	Hand on Exercises/ Lab Practical
1	24/06/2024	✓ Determination of Electrical Conductance of a Water Sample	Morning Session (9:30 am -1:30 pm)	Evening Session (2:00 -6:00 pm)
2	25/06/2024	✓ Determination of pH of a Water Sample		
3	26/06/2024	✓ Determination of Turbidity in Water		
4	27/06/2024	✓ Determination of Total Solids and Total Dissolved Solids in Water ✓ Determination of Hardness in Water Sample		
5	28/06/2024	✓ Determination of Biological Oxygen Demand in Water		
6	29/06/2024	✓ Determination of Dissolved Oxygen in Water		
7	30/06/2024	✓ Determination of Chemical Oxygen Demand in Water		
8	01/07/2024	✓ Determination of Chloride in Water Samples ✓ Determination of Residual Chlorine in Water		
9	02/07/2024	✓ Determination of Sulphates in Water		
10	03/07/2024	✓ Determination of Phosphate in Water		
11	04/07/2024	✓ Determination of Nitrate Nitrogen in water sample		
12	05/07/2024	✓ Determination of Nitrite Nitrogen in water sample		
13	06/07/2024	✓ Determination of Fluoride in Water		
14	07/07/2024	✓ Determination of Oil and Grease in Water		

Proposed schedule for conducting practical Examination for the course MEVL 011, Lab course-1, Environmental Science w.e.f 08th July 2024 to 21st July 2024

(Fourth Batch)

Venue: Department of Environmental Science, Dr YSP UHF, Nauni, Solan

Day	Date	Practical exercise	Theory	Hand on Exercises/ Lab Practical
1	22/07/2024	✓ Determination of minimum size of the quadrat by 'species-area-curve' method	Morning Session (9:30 am -1:30 pm)	Evening Session (2:00 -6:00 pm)
2	23/07/2024	✓ Determination of frequency of species by line transect method and point frame method ✓ Determination of Relative Density, Frequency and Abundance of different species present in community and calculation of IVI		
3	24/07/2024	✓ Measures of central tendency, dispersion, skewness and kurtosis ✓ Correlation and regression analysis; analysis of variance		
4	25/07/2024	✓ Determination of standing crop and biomass in Terrestrial ecosystem		
5	26/07/2024	✓ Study on the abiotic and biotic components of an aquatic ecosystem		
6	27/07/2024	✓ Estimation of net primary productivity by harvest method in grassland ecosystem		
7	28/07/2024	✓ Estimation of net primary productivity using light and dark bottle method in aquatic ecosystem		
8	29/07/2024	✓ Estimation of biodiversity indices ✓ Weather monitoring and data analysis		
9	30/07/2024	✓ Study on soil profile and physical characteristics of soil		
10	31/07/2024	✓ Determination of soil organic carbon		
11	01/08/2024	✓ Determination of available Nitrogen in soil		
12	02/08/2024	✓ Preparation of climatic maps and diagram ✓ Identification of Igneous, Sedimentary and Metamorphic rocks		
13	03/08/2024	✓ Determination of soil moisture content ✓ Determination of soil pH and electrical conductivity		
14	04/08/2024	✓ Preparation of station based wind rose ✓ Arial photographs interpretations		

Proposed schedule for conducting practical Examination for the course MEVL 012, Lab course-2, Environmental Science w.e.f 22nd July 2024 to 04th August 2024

(Fourth Batch)

Venue: Department of Environmental Science, Dr YSP UHF, Nauni, Solan

Day	Date	Practical Exercise	Theory	Hand on Exercises/ Lab Practical
1	05/08/2024	✓ Determination of Electrical Conductance of a Water Sample	Morning Session (9:30 am -1:30 pm)	Evening Session (2:00 -6:00 pm)
2	06/08/2024	✓ Determination of pH of a Water Sample		
3	07/08/2024	✓ Determination of Turbidity in Water		
4	08/08/2024	✓ Determination of Total Solids and Total Dissolved Solids in Water ✓ Determination of Hardness in Water Sample		
5	09/08/2024	✓ Determination of Biological Oxygen Demand in Water		
6	10/08/2024	✓ Determination of Dissolved Oxygen in Water		
7	11/08/2024	✓ Determination of Chemical Oxygen Demand in Water		
8	12/08/2024	✓ Determination of Chloride in Water Samples ✓ Determination of Residual Chlorine in Water		
9	13/08/2024	✓ Determination of Sulphates in Water		
10	14/08/2024	✓ Determination of Phosphate in Water		
11	15/08/2024	✓ Determination of Nitrate Nitrogen in water sample		
12	16/08/2024	✓ Determination of Nitrite Nitrogen in water sample		
13	17/08/2024	✓ Determination of Fluoride in Water		
14	18/08/2024	✓ Determination of Oil and Grease in Water		