

Anekant Education Society's
Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati
(Autonomous)
(Affiliated to Savitribai Phule Pune University, Pune)

A REPORT
MEETING OF BOARD OF STUDIES IN ENVIRONMENTAL SCIENCE

The **Third Online Meeting** of Board of Studies in Environmental Science was held on 07th April, 2021 during 12.00 noon to 02.00 pm.

AGENDA

1. To design the syllabi and academic framework of **Semester-V of T.Y.B.Sc.** Environmental Science.
2. Any other matter with the permission of the chair.

The following BoS members were present for the meeting :

1. Dr. Chandrashekar Murumkar – Hon. Principal
2. Dr. Shashikant Chavan – BoS Chairman
3. Dr. Bhagawan Mali - Member
4. Dr. Mahadev Kanade - Member
5. Dr. Ajit Telave - Member
6. Dr. Rupali Chitale - Member
7. Dr. Smt. Madhuri Patil – Member
8. Dr. S.D.Kulkarni - Member (Expert from other university)
9. Dr. M.M.Sardesai- Member (Expert from other university)
10. Dr. V. B. Shimpale - Member (Expert from other university)
11. Dr. M. V. Gokhale - Member (Expert from other university)
12. Dr. G. C. Nikalje - Member (Invitee) (Meritorious Alumni)
13. Dr. H. S. Patil (Invitee)
14. Mr. Juned Bagwan (Invitee)
15. Miss.S.S.Sonawane-Member

The following issues were discussed during the meeting :

1. Already syllabi e-copies were sent to BoS members on their personal mail and then Google Meet organized to discuss critical issues regarding the theory and practical syllabi of T.Y.B.Sc. Environmental Science.
2. At the beginning of the meeting welcome speech was delivered by Dr. S. J. Chavan.
3. After welcome speech agenda of the meeting in detail was discussed by Hon. Prin. Dr. C. V. Murumkar.
4. Dr. S. J. Chavan explained the titles of T.Y.B.Sc. and unanimously the titles of T.Y.B.Sc. were finalized (**Please see the Annexure - I**).
5. T.Y.B.Sc., Semester - V, Papers were discussed following faculty :

Paper Code	Title of Paper	Teacher In-charge
EVS3501	Ecosystem Management	Dr. S. J. Chavan
EVS3502	Wildlife Biology	Dr. B. S. Mali
EVS3503	Geoscience	Dr. M.B.Kanade
EVS3504	Nature Conservation	Dr. A. B. Telave
EVS3505	Environmental Governance, Laws and Ethics	Dr. R.D.Chitale
EVS3506	Environmental Biotechnology	Dr. M.P.Patil
EVS3607	SEM-V Practical based on EVS-3501 to EVS-3503 and SEM-VI Practical based on EVS-3601 to EVS3603	Miss.S.S.Sonawane
EVS3608	SEM-V Practical based on EVS-3504 to EVS-3506 and SEM-VI Practical based on EVS-3604 to EVS3606	Miss.S.S.Sonawane
EVS3609	Project	Miss.S.S.Sonawane

6. After discussion the syllabi the following suggestions given by BoS members :

Paper	BoS Member	Suggestions
Ecosystem Management	Dr.S.D. Kulkarni	<ul style="list-style-type: none"> • Add Ethanobotany point in terrestrial ecosystem management
	Dr. M. V. Gokhale	<ul style="list-style-type: none"> • In Ethanobotany add wood and non-wood forest.
Wildlife Biology	Prin. Dr. C. V. Murumkar	<ul style="list-style-type: none"> • Change the name of unit-2 in Credit-I Outline of diversity major groups. • Add Molluscas in Invertebrates

	Dr. M. V. Gokhale	<ul style="list-style-type: none"> • Add Unmanned aerial vehicles(UAV) and Remotely piloted aircrafts • Add one unit –Tools and Techniques in assessment in wildlife biology
Geoscience	Prin. Dr. C. V. Murumkar	<ul style="list-style-type: none"> • Change the name of unit-1 in Credit-I Origin and evolution of earth.
	Dr. G. C. Nikalje	<ul style="list-style-type: none"> • Add lithosphere point in unit-1
	Dr.S.D. Kulkarni	<ul style="list-style-type: none"> • Add one reference book-Physical geography by Mazid Husen
Nature Conservation	Dr.V.B. Shimpale	<ul style="list-style-type: none"> • Add role of NBA(National Biodiversity Authority) and SBA(State Biodiversity Authority)
	Prin. Dr. C. V. Murumkar	<ul style="list-style-type: none"> • In Credit-II ,Unit-2 only IUCN and WWF Organization.
	Dr. H.S.Patil	<ul style="list-style-type: none"> • In Credit-III ,Unit-1 add climate change(CC) Point.
Environmental Governance, Laws and Ethics	Dr.S.D. Kulkarni	<ul style="list-style-type: none"> • Add need and necessity of environmental governance
Environmental Biotechnology	Dr. H.S.Patil	<ul style="list-style-type: none"> • Add risk assessment management , need and importance of GMO's.
	Dr.S.D. Kulkarni	<ul style="list-style-type: none"> • Add Biomedical Waste(medical and hospital waste) • Add bioleaching
SEM-V Practical based on EVS-3501 to EVS-3503 and SEM-VI Practical based on EVS-3601 to EVS3603	Mr.J.F. Bagwan	<ul style="list-style-type: none"> • Add pure culture method. • Add study of invasive species in agriculture ecosystem
	Dr. S.D. Kulkarni	<ul style="list-style-type: none"> • Add Hardness, Phosphate, and Sulphate, COD. • Heavy metals(Arsenic from ground water by titrimetric method) • Conservation practices(water and soil)
SEM-V Practical based on EVS-3504 to EVS-3506 and SEM-VI Practical based on EVS-3604 to EVS3606	Dr. S.D. Kulkarni	<ul style="list-style-type: none"> • Preparation of PDA. • Isolation and enumeration of bacteria from soil. • Total viable count. • PIL(Public Interest Litigation) • Legal survey questionnaires and psychology • Visit
Project		<ul style="list-style-type: none"> • No any Sugesions.

7. At the end of meeting Dr. S. J. Chavan extended vote of thanks.

Dr. Shashikant J. Chavan
Head, Department of Botany
Chairman, BoS Botany

Anekant Education Society's
Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati
(Autonomous)
(Affiliated to Savitribai Phule Pune University, Pune)

A REPORT
MEETING OF BOARD OF STUDIES IN ENVIRONMENTAL SCIENCE

The **Fourth Online Meeting** of Board of Studies in Environmental Science was held on 08th December, 2021 during 12.00 noon to 02.00 pm.

AGENDA

3. To design the syllabus and academic framework of **Semester-VI of T.Y.B.Sc.** Environmental Science.
4. Any other matter with the permission of the chairman.

The following BoS members were present for the meeting :

16. Dr. Chandrashekar Murumkar – Hon. Principal
17. Dr. Shashikant Chavan – BoS Chairman
18. Dr. Bhagawan Mali - Member
19. Dr. Mahadev Kanade - Member
20. Dr. Ajit Telave - Member
21. Dr. Rupali Chitale - Member
22. Dr. Smt. Madhuri Patil – Member
23. Dr. S.D.Kulkarni - Member (Expert from other university)
24. Dr. M.M.Sardesai- Member (Expert from other university)
25. Dr. V. B. Shimpale - Member (Expert from other university)
26. Dr. M. V. Gokhale - Member (Expert from other university)
27. Dr. G. C. Nikalje - Member (Invitee) (Meritorious Alumni)
28. Dr. H. S. Patil (Invitee)
29. Mr. Juned Bagwan (Invitee)
30. Dr. B.P. Kalgaonkar - Member (Meritorious Alumni)
31. Miss.S.S.Sonawane-Member

The following issues were discussed during the meeting :

8. Already syllabus e-copies were sent to BoS members on their personal mail and then Google Meet organized to discuss critical issues regarding the theory and practical syllabus of T.Y.B.Sc. Environmental Science.
9. At the beginning of the meeting welcome speech was delivered by Dr. S. J. Chavan.
10. After welcome speech agenda of the meeting in detail was discussed by Hon. Prin. Dr. C. V. Murumkar.
11. Ms.S.S.Sonawane explained the titles of T.Y.B.Sc. and unanimously the titles of T.Y.B.Sc. were finalized (**Please see the Annexure - I**).
12. T.Y.B.Sc., Semester - VI, Papers were discussed following faculty :

Paper Code	Title of Paper	Teacher In-charge
EVS3601	Climate Change	Miss.S.S.Sonawane
EVS3602	Analytical Methods	Miss.N.P..Sarode
EVS3603	Sustainable Development	Mr.A.D.More
EVS3604	Environmental Statistics	Miss.S.S.Sonawane
EVS3605	Environmental Risk and Assessment Management	Miss.N.P..Sarode
EVS3606	Environmental Economic and Audit	Mr.A.D.More
EVS3607	SEM-VI Practical based on EVS-3601 to EVS-3603	Miss.N.P..Sarode
EVS3608	SEM-VI Practical based on EVS-3604 to EVS-3606	Mr.A.D.More
EVS3609	Project	Miss.S.S.Sonawane

13. After discussion the syllabi the following suggestions given by BoS members :

Paper	BoS Member	Suggestions
Climate Change	Dr.S.D. Kulkarni	<ul style="list-style-type: none"> • Add Glasgow Climate Change Conference.
	Prin. Dr. C. V. Murumkar	<ul style="list-style-type: none"> • Add History and Evolution of Green Gases and Carbon Sequestration. • Role of NGO's • Add Kyoto G-7, G-17 Recent norms.
	Dr.G.C.Nikalje	<ul style="list-style-type: none"> • To Change the Objectives and Outcomes. • Add ICP-MS, ICP-OES points • Add Reference Bioinstrumentation- By L. Veera Kumari • Biophysical Chemistry- By Upadhyay, Upadhyay and Nath
Analytical Methods	Prin. Dr. C. V. Murumkar	<ul style="list-style-type: none"> • Change the Sequence of Syllabus. • Change the Topic name from Spectrophotometer to Spectrophotometry • Change name of Credit III Unit -2 Residual effects of Hazardous substances and their properties
	Dr.S.D. Kulkarni	<ul style="list-style-type: none"> • Change name of first unit Analytical Instrumentation. • Rearrange the syllabus.
	Dr.B.S.Mali	<ul style="list-style-type: none"> • Add Isocyanides Point in Credit III
	Dr.G.C.Nikalje	<ul style="list-style-type: none"> • Change the sequence of Syllabus (biosynthesis of DNA and RNA)
Sustainable Development	Dr. A.B.Telave	<ul style="list-style-type: none"> • Remove Environmental Governance and Sustainability point
	Dr.B.S.Mali	<ul style="list-style-type: none"> • Change name of Unit -2 Recent Developments in Sustainability • Add water resource conservation
	Dr.S.D. Kulkarni	<ul style="list-style-type: none"> • Remove Sustainability word that repeated again and again.
Environmental Statistics	Dr.M.P.Patil	<ul style="list-style-type: none"> • Add frequency Distribution
	Prin. Dr. C. V. Murumkar	<ul style="list-style-type: none"> • Change the sequence of Univarriate and bivariate data
	Dr. A.Jagatap (Vice principal)	<ul style="list-style-type: none"> • Rearrange the Syllabus • Change the objectives and outcomes from syllabus. • Add sample, space, Events and Probibility Unit.

		<ul style="list-style-type: none"> • Add Raw moments (μ_r'), Central moments(μ_r)
Environmental Risk and Assessment Management	Dr.S.D. Kulkarni	<ul style="list-style-type: none"> • Change title of the paper Environmental Safety & Risk Management. • Add Point Environmental Safety • Add Red, Orange and Green industry.
	Dr.Kalgaonkar	<ul style="list-style-type: none"> • Add Fire audit and Water audit
Environmental Economics and Audit	Dr.H.S.Patil	<ul style="list-style-type: none"> • Add green audit and Energy Audit
	Dr.S.Patil	<ul style="list-style-type: none"> • Add Concept of Cost, Importance of rural economy in Development, Agricultural Environment and Factors affecting on it.
SEM-VI Practical based on EVS-3601 to EVS3603	Dr. S.D. Kulkarni	<ul style="list-style-type: none"> • Add Green Building Practical. • Specify the methods and title of the practical.
	Dr.C.V. Murumkar	<ul style="list-style-type: none"> • Change the method of heavy metal estimation(Different technique)
	Dr.G.C. Nikalje	<ul style="list-style-type: none"> • Specify the methods for practicals.
SEM-VI Practical based on EVS-3604 to EVS3606		<ul style="list-style-type: none"> • No any Suggestion
Project		<ul style="list-style-type: none"> • No any Suggestion

14. At the end of meeting Ms.S.S.Sonawane extended vote of thanks.

Dr. Shashikant J. Chavan
Head, Department of Botany
Chairman, BoS Botany

**Anekant Education of Society's
Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati
Autonomous**

SYLLABUS (CBCS) FOR T. Y. B. Sc. ENVIRONMENTAL SCIENCE

(w.e. from June, 2020)

Semester - VI

Semester	Paper	Title of Paper	Credits
VI	EVS3501	Climate Change	03
	EVS3502	Analytical Methods	03
	EVS3503	Sustainable Developments	03
	EVS3504	Environmental Statistics	03
	EVS3505	Environmental Safety and Risk Management	03
	EVS3506	Environmental Economics and Audit	03
	EVS3607	SEM-VI Practical based on EVS-3601 to EVS3603	02
	EVS3608	SEM-VI Practical based on EVS-3604 to EVS3606	02
	EVS3609	Project	02

**Anekant Education of Society's
Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati
Autonomous**

SYLLABUS (CBCS) FOR T. Y. B. Sc. ENVIRONMENTAL SCIENCE

(w.e. from June, 2020)

Semester - V

Semester	Paper	Title of Paper	Credits
V	EVS3501	Ecosystem Management	03
	EVS3502	Wildlife Biology	03
	EVS3503	Geoscience	03
	EVS3504	Nature Conservation	03
	EVS3505	Environmental Governance, Laws and Ethics	03
	EVS3506	Environmental Biotechnology	03
Annual	EVS3607	SEM-V Practical based on EVS-3501 to EVS-3503 and SEM-VI Practical based on EVS-3601 to EVS3603	04
Annual	EVS3608	SEM-V Practical based on EVS-3504 to EVS-3506 and SEM-VI Practical based on EVS-3604 to EVS3606	04
Annual	EVS3609	Project	04