



Navodaya Shaikshanik Sanstha, Dhule's

## Uttamrao Patil Arts & Science College,

Dahiwel, Tal. - Sakri, Dist. - Dhule- 424 304 (M.S.)

Out ward No.- UPCD/

Date :

1.3.2.1 No. of students undertaking project work/field work/ internships (Data for the latest completed academic year)

Response:

Programme Name	Programme Code	Subject	No. of students enrolled
BA	01	Environmental Science	108
BSc.	02	Environmental Science	74
BA	01	Geography	8
BSc.	02	Chemistry	32
Total			222

*Ireshakhad*

I.U Shaikh

**IQAC Coordinator**

NSS Dhule's Uttamrao Patil Arts & Science College Dahiwel, Dhule



*Sive*

Dr. S. C. Ahire

**PRINCIPAL**

Uttamrao Patil Arts & Sci. College  
Dahiwel, Tal Sakri, Dist.Dhule.



Navodaya Shaikshanik Sanstha, Dhule's

**Uttamrao Patil Arts & Science College,**

Dahiwel, Tal. - Sakri, Dist. - Dhule- 424 304 (M.S.)

Out ward No.- UPCD/

Date :

LIST OF THE STUDENTS

Subject: Environmental Studies (Project)

Class: FYBA

Academic Year: 2023-24

Sr. No	PRN	Student Name	Gender
1	2023015400037223	Ahire Dhanraj Dayaram	Male
2	2023015400037374	Ahire Kalpana Ravsaheb	Female
3	2023015400037304	Ahire Laxmi Devidas	Female
4	2023015400037246	Ahire Manohar Raosaheb	Male
5	2023015400050703	Ambekar Viki Keda	Male
6	2023015400039984	Bagul Amesh Sajan	Male
7	2023015400037327	Bagul Dhakalu Punjya	Male
8	2023015400037215	Bagul Roshani Manoj	Female
9	2023015400197961	Bagul Rutika Manoj	Female
10	2023015400042932	Bagul Savitabai Hiranman	Female
11	2023015400041484	Bagul Suchitra Sunil	Female
12	2023015400267785	Bagul Vishal Rohidas	Male
13	2023015400040314	Bahiram Gayatri Pitambar	Female
14	2023015400047987	Bahiram Laxmi Bhurya	Female
15	2023015400046864	Bahiram Mayuri Arun	Female
16	2023015400037335	Bahiram Vicky Laxman	Male
17	2023015400047794	Bharude Bharati Subhash	Female
18	2023015400039357	Bharude Dhurpata Bhila	Female
19	2023015400037382	Bharude Jitendra Ananda	Male
20	2023015400038273	Bhoye Pankaj Gulab	Male
21	2023015400041503	Chaudhari Ajay Prakash	Male
22	2023015400037416	Chaudhari Akash Lotan	Male
23	2023015400040306	Chaudhari Sonali Chhotiram	Female
24	2023015400047771	Chaudhari Sushil Tarachand	Male
25	2023015400041542	Chaure Dhavalu Ramesh	Male
26	2023015400267777	Chaure Rahul Magan	Male
27	2023015400040295	Chaure Rahul Shantaram	Male
28	2023015400037397	Chaure Suraj Abhiman	Male



29	2023015400038234	Chavan Pallavi Motiram	Female
30	2023015400047964	Chavan Vitthal Bhatu	Male
31	2023015400041492	Chavhan Kunti Bharat	Female
32	2023015400041557	Deore Divya Bhalchandra	Female
33	2023015400037432	Desai Dipak Hiranman	Male
34	2023015400075956	Desai Sagar Shivaji	Male
35	2023015400037277	Deshmukh Sachin Sahebrao	Male
36	2023015400046817	Dhangar Kanhaiyalal Madhukar	Male
37	2023015400039686	Gaikawad Dnyaneshwar Gopal	Male
38	2023015400050711	Gaikwad Kartik Anil	Male
39	2023015400037231	Gaikwad Kavita Papalal	Female
40	2023015400047925	Gangurde Sahil Dadabhau	Male
41	2023015400039655	Garde Himesh Manoj	Male
42	2023015400041534	Gavali Sunita Sanjay	Female
43	2023015400037262	Gavali Umesh Jibhau	Male
44	2023015400039976	Gavit Sachin Chandrasing	Male
45	2023015400041565	Gawali Aarati Anil	Female
46	2023015400041526	Gawali Bhati Sanbhaji	Female
47	2023015400039624	Gawali Sandip Lasha	Male
48	2023015400039647	Gawali Vikita Shankar	Female
49	2023015400303601	Gaykawad Amol Shatrughna	Male
50	2023015400040016	Hatkar Devendra Anil	Male
51	2023015400039632	Hire Hemant Arun	Male
52	2023015400040353	Jagtap Jyoti Gotya	Female
53	2023015400037312	Kadve Rahul Rohidas	Male
54	2023015400039671	Kapadi Sachin Vinod	Male
55	2023015400037351	Khare Sahil Siddharth	Male
56	2023015400037207	Kokani Dnyaneshwary Madhav	Female
57	2023015400037111	Mahale Dipali Manoj	Female
58	2023015400039992	Malache Gotu Suresh	Male
59	2023015400039365	Malache Rahul Jarilal	Male
60	2023015400037254	Malche Manoj Shankar	Male
61	2023015400075933	Malche Radhesham Shantilal	Male
62	2023015400037293	Malche Rahul Subhash	Male
63	2023015400037285	Malche Raimal Namdeo	Male
64	2023015400047805	Malche Somvel Mohan	Male
65	2023015400047786	Malche Vikas Ganshiram	Male
66	2023015400047956	Mali Rina Bhagawan	Female



67	2023015400039616	Malich Mahendra Gokul	Male
68	2022015400236573	Mhasde Siddharth Rajendra	Male
69	2023015400047763	Nandre Nayan Bhila	Male
70	2023015400039953	Patil Harish Bharat	Male
71	2023015400040345	Pawar Ajit Gajmal	Male
72	2023015400265891	Pawar Priynka Chotiram	Female
73	2023015400047972	Pawar Sagar Santosh	Male
74	2023015400042916	Pawar Vijay Santosh	Male
75	2023015400037401	Pingale Dhiraj Jagan	Male
76	2023015400050726	Pinjari Farhan Rafik	Male
77	2023015400125865	Rathod Aashwini Raju	Female
78	2023015400042924	Rathod Nilesh Kisan	Male
79	2023015400046872	Rathod Shital Natu	Female
80	2023015400037103	Rathod Vikas Gulab	Male
81	2023015400303616	Raut Roshani Mohan	Female
82	2023015400267762	Sabale Ujwala Kailas	Female
83	2023015400050676	Sadd Mohammad Jameel Ahmad	Male
84	2021015400079236	Sakhare Nayan Pradip	Male
85	2020015400108786	Shadab Husain Tanveer Husain	Male
86	2020015400108786	Shadab Husain Tanveer Husain	Male
87	2023015400050684	Shaikh Aasif Yusuf	Male
88	2023015400038242	Shaikh Danish Mayoddin	Male
89	2023015400037366	Shinde Chetana Shankar	Female
90	2023015400041511	Shinde Swami Pankaj	Male
91	2023015400047813	Sonawane Aakash Sharad	Male
92	2023015400075941	Sonawane Nandu Chandrasing	Male
93	2023015400040361	Sonawane Usha Gopa	Female
94	2023015400040322	Surave Pallavi Devagir	Female
95	2023015400050692	Suryawanshi Monali Brahmha	Female
96	2023015400047836	Suryawanshi Nainesh Gorakh	Male
97	2023015400297277	Suryawanshi Pravin Shankar	Male
98	2023015400037687	Suryawanshi Soni Gulab	Female



99	2023015400047933	Thakare Ajay Dinesh	Male
100	2023015400265902	Thakare Ajit Dharma	Male
101	2023015400037343	Thakare Dhanaji Jagan	Male
102	2023015400037424	Thakare Khandu Ramdas	Male
103	2023015400039663	Thakare Kiran Sanjay	Male
104	2023015400039342	Thakare Ritu Subhash	Female
105	2023015400047821	Thakare Suvarna Suresh	Female
106	2023015400333275	Wagh Ganesh Hilal	Male
107	2021015400207487	Wankhedkar Yash Satish	Male
108	2023015400040337	Zopale Shivani Ramesh	Female



*Ireshaikhad*  
**IQAC Coordinator**  
NSS Dhule's Uttamrao Patil Arts &  
Science College Dahivel, Dhule

*[Signature]*  
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Navodaya Shaikshanik Sanstha, Dhule's

## Uttamrao Patil Arts & Science College,

Dahiwel, Tal. - Sakri, Dist. - Dhule- 424 304 (M.S.)

Out ward No.- UPCD/

Date :

Subject: Environmental Studies (Project)

Class: FYBSc.

Academic Year: 2023-24

Sr.No	PRN	Student Name	Gender
1	2023015400042947	Ahire Ashwini Ravindra	Female
2	2023015400039334	Ahire Gaurav Devidas	Male
3	2023015400058022	Ahire Yash Rajendra	Male
4	2023015400037865	Bacchchhao Bhavesh Dipak	Male
5	2023015400042901	Bachhav Chirag Sharad	Male
6	2023015400037737	Bedase Nikita Sanjay	Female
7	2023015400039311	Bendre Rohit Rajendra	Male
8	2023015400042897	Bhamare Dhiraj Rakesh	Male
9	2023015400037695	Bhamare Harshada Dinesh	Female
10	2023015400042882	Bhamare Rohit Nilesh	Male
11	2023015400049367	Bhoye Sarita Anil	Female
12	2023015400046841	Borse Ganesh Kishor	Male
13	2023015400039961	Borse Kunal Suresh	Male
14	2023015400037915	Chaudhari Devendra Dhanraj	Male
15	2023015400038265	Chaudhari Hemant Bapu	Male
16	2023015400049305	Chaudhari Hemant Bhatu	Male
17	2023015400049007	Chaudhari Jayesh Sharad	Male
18	2023015400049375	Chaudhari Kunal Rameshwar	Male
19	2023015400301567	Dahite Shubham Jitendra	Male
20	2023015400049104	Deore Om Vilas	Male
21	2023015400039326	Desai Nilesh Pravin	Male
22	2023015400049344	Deshmukh Rakesh Dilip	Male
23	2023015400040001	Gavali Dipali Dilip	Female
24	2023015400046895	Gavit Bharat Gokul	Male
25	2023015400049313	Gavit Sunil Revaji	Male
26	2023015400037923	Gawale Nandani Ravsaheb	Female
27	2023015400049352	Gawali Archana Gotu	Female
28	2023015400058014	Gawali Dipak Laxman	Male
29	2023015400049321	Gayakwad Chetan Hiranman	Male
30	2022015400090185	Gharate Pramod Subhash	Male
31	2023015400049054	Gharte Pranali Pannalal	Female
32	2023015400049085	Jagatap Bhavika Rajendra	Female
33	2023015400038257	Jagtap Ashish Rajendra	Male
34	2023015400037745	Kshirsagar Chetna Anil	Female



35	2023015400042874	Kshirsagar Hemangi Avinash	Female
36	2023015400037896	Kshirsagar Jayashri Bhaskar	Female
37	2023015400037706	Kshirsagar Pallavi Ashok	Female
38	2023015400049077	Kshirsagar Prachi Anil	Female
39	2023015400049023	Kuwar Tejal Himmat	Female
40	2023015400046887	Malache Nilesh Vasant	Male
41	2023015400046825	Malche Amit Gorakh	Male
42	2023015400039303	Mali Harshada Dilip	Female
43	2023015400050653	Mali Sanjivani Uday	Female
44	2023015400046856	Mankar Kundan Yashwant	Male
45	2023015400040024	Mistri Hardik Uttam	Male
46	2023015400037873	Mohane Arpita Somnath	Female
47	2023015400039945	More Bhagyashri Devidas	Female
48	2023015400285663	More Digvijay Prashant	Male
49	2023015400037857	More Runali Rajendra	Female
50	2023015400037761	More Yashaswini Vinod	Female
51	2023015400048991	Nandan Rohini Bhatu	Female
52	2023015400049062	Nandre Kranti Jalindhar	Female
53	2023015400262312	Nandre Mohan Sunil	Male
54	2023015400037881	Nerkar Palak Devidas	Female
55	2023015400049015	Patil Gauravi Suresh	Female
56	2023015400075964	Patil Jayesh Suryabhan	Male
57	2023015400049112	Patil Nikhil Dilip	Male
58	2023015400037714	Patil Yash Vilas	Male
59	2023015400037722	Pawar Prithviraj Kishor	Male
60	2023015400050661	Pendhare Komal Ganesh	Female
61	2023015400039694	Rathod Dipali Ravindra	Female
62	2023015400048983	Rathod Khushabu Kisan	Female
63	2023015400046833	Rathod Viccki Sanjay	Male
64	2023015400247274	Sable Manjula Nanaji	Female
65	2023015400049135	Sable Nitu Sudha	Female
66	2023015400049336	Sonawane Harshal Dilip	Male
67	2023015400049031	Sonawane Ritika Devidas	Female
68	2023015400039292	Suryawanshi Anil Chhotilal	Male
69	2023015400037907	Suryawanshi Roshani Jitendra	Female
70	2023015400049127	Suryawanshi Savitri Chotiram	Female
71	2023015400058037	Suryawanshi Soni Bhagmal	Female
72	2023015400049093	Thakare Kamallesh Sukalal	Male
73	2023015400049046	Thorat Vaishali Bharat	Female
74	2023015400037753	Vasave Krunali Raju	Female



*Treshnakhad*  
**IQAC Coordinator**  
 NSS Dhule's Uttamrao Patil Arts &  
 Science College Dahiwal, Dhule

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 Uttamrao Patil Arts & Sci. College  
 Dahiwal, Tal Sakri, Dist. Dhule.



Navodaya Shaikshanik Sanstha, Dhule's

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e-mail: upcdahivel@yahoo.co.in  
College Code : 210068  
Cust No. : 101100064

## Uttamrao Patil Arts & Science College,

Dahivel, Tal. - Sakri, Dist. - Dhule- 424 304 (M.S.)

Out ward No.- UPCD/

Date :

Subject: Chemistry (Field Work)

Class: TYBSc.

Academic Year: 2023-24

Sr.No	PRN	Student Name	Gender
1	2021015400079693	Ahire Akshay Anil	Male
2	2021015400013114	Ahire Harshada Gulab	Female
3	2021015400013265	Ahire Shubhangi Digambar	Female
4	2021015400013555	Bachhav Dhananjay Naresh	Male
5	2021015400014512	Bachhav Om Kishor	Male
6	2021015400014284	Bhamare Dhanshri Sayaji	Female
7	2021015400013814	Bohari Burhanuddin Shabbir	Male
8	2021015400079712	Borase Ashwini Kiran	Female
9	2020015400023483	Chaudhari Nikita Ramdas	Female
10	2020015400023386	Chaudhari Siddhi Ravindra	Female
11	2021015400013482	Dahite Bhavesh Jitendra	Male
12	2021015400013822	Deore Durgesh Suresh	Male
13	2021015400013532	Deore Tejashvini Satish	Female
14	2021015400014485	Gawali Rohan Vasant	Male
15	2021015400014705	Hire Atish Popat	Male
16	2021015400013242	Kasar Priyanka Hiralal	Female
17	2021015400233144	Khairnar Harshal Juganu	Male
18	2021015400013211	Kshirsagar Janvi Suresh	Female
19	2021015400117055	Mohane Roshan Rajendra	Male
20	2021015400013725	Nandre Mehul Natthu	Male
21	2021015400013741	Nandre Prashant Pandit	Male
22	2021015400013331	Nandre Yogesh Ravindra	Male
23	2021015400013362	Patil Prachi Bhikan	Female
24	2021015400014601	Patil Pushkar Namdev	Male
25	2021015400013806	Patil Vaishnavi Rajendra	Female
26	2021015400013161	Pawar Damini Kishor	Female
27	2021015400013733	Pawar Nikhil Kailas	Male
28	2021015400014582	Pawar Nilesh Sudam	Male
29	2021015400165864	Shirsath Bhavesh Vijay	Male
30	2020015400023661	Suryawanshi Archana Rajendra	Female
31	2021015400013787	Thakre Sachin Sukram	Male
32	2021015400013683	Thorat Karan Dnyaneshwar	Male

**IQAC Coordinator**  
NSS Dhule's Uttamrao Patil Arts &  
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Navodaya Shaikshanik Sanstha, Dhule's

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## Uttamrao Patil Arts & Science College,

Dahiwel, Tal. - Sakri, Dist. - Dhule- 424 304 (M.S.)

Out ward No.- UPCD/

Date :

### List of the Students

Subject: Geography (Project)

Class: SYBA

Academic Year: 2023-24

Sr.No	Students Name
1	Suryawanshi Rahul Somnath
2	Bahiram Asita Suresh
3	Gangurade Sandip Sadashiv
4	Gavali Karan Devidas
5	Pingale Yoghesh Magan
6	Suryawanshi Shital Babulal
7	Mistari Amol Gangadhar
8	Sable Dongar Bapu



*Trishankhad*

**IQAC Coordinator**  
NSS Dhule's Uttamrao Patil Arts &  
Science College Dahiwel, Dhule

*Shive*

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Uttamrao Patil Arts & Sci. College  
Dahiwel, Tal Sakri, Dist. Dhule.



॥ अंतरी पेटवू जानज्यांत ॥

कवयित्री बहिणाबाई चौधरी उत्तर महाराष्ट्र विद्यापीठ, जळगाव  
Kavayitri Bahinabai Chaudhari North Maharashtra University, Jalgaon

अभ्यास मंडळ विभाग

जा.क्र. : उमावि/२१/Environmental Studies/५२७/२०१८

दिनांक:- २२/११/२०१८

प्रति,

क.ब.चौ.उमाविशी संलग्न सर्व महाविद्यालयांचे मा.प्राचार्य  
व मान्यता प्राप्त परिसंस्थांचे मा. संचालक आणि  
मा.विभाग प्रमुख विद्यापीठ शैक्षणिक प्रशाळा / विभाग यांना...

विषय :- Environmental Studies या विषयाचे अभ्यासक्रमा संदर्भात.

महोदय / महोदया,

उपरोक्त विषयांस अनुसरून आपणांस कळविण्यात येते की, मा.सर्वोच्च न्यायालयाचे निर्णयानुसार पर्यावरण संतुलन राखण्यासाठी प्रथम वर्षास प्रवेशित विद्यार्थ्यांसाठी सहा महिन्यांचा पर्यावरणशास्त्र विषयाचा अभ्यासक्रम जून, २००४ पासून सर्व विद्याशाखांमध्ये समाविष्ट करण्यात आलेला आहे.

शैक्षणिक वर्ष २०१८-१९ पासून प्रथम वर्ष कला विज्ञान व वाणिज्य वर्गांना Choice Based Credit System लागू करण्यात आलेली असल्याने Environmental Studies या विषयाचा अभ्यासक्रम Ability Enhancement Course अंतर्गत Choice Based Credit System प्रमाणे तयार करणेसाठी नियुक्त समितीच्या सभेत Environmental Studies विषयाच्या गुणांची विभागणी (Marks Pattern) देखील ६०:४० प्रमाणे करण्यात यावी, व गुणांकन (Marks Pattern) पुढील प्रमाणे करण्यात यावे, असे ठरले आहे.

लेखी परीक्षा (Theory)	६० गुण
अंतर्गत (Internal) परीक्षा फिल्ड वर्क / व्हायवा	४० गुण
एकूण	१०० गुण

अंतर्गत ४० गुणांची विभागणी पुढील प्रमाणे करण्यात यावी.

उपस्थिती (Attendance)	०५ गुण
वतणूक (Behaviour)	०५ गुण
व्हायवा (Viva-voce)	१० गुण
फिल्ड वर्क (Report of field Work)	२० गुण
	४० गुण

त्याअनुषंगाने Environmental Studies या विषयाचा अभ्यासक्रम विद्यापीठ अनुदान आयोगाने दिलेला असून तो जसाचे तसा लागू करण्यात आलेला असल्याने अभ्यासक्रमात बदल न करता अभ्यासक्रम तोच ठेवण्यात आला आहे. सदरचा अभ्यासक्रम उमाविच्या संकेत स्थळावर अपलोड करण्यात आला आहे. तरी वरील आशय सर्व संबंधित प्राध्यापक व विद्यार्थी यांचे निदर्शनास आणून देवून पुढील योग्य ती कार्यवाही करून विद्यापीठास सहकार्य करावे, ही विनंती.

म.कळारवे,

आपला विश्वासू,

(ए.सी.मनोर)

उपकुलसचिव

अभ्यास मंडळ विभाग



☎ : (११) ०२५७- २२५७२१४, २१७

फॅक्स : (११) ०२५७- २२५८४०६

वेबसाईट : [www.nmu.ac.in](http://www.nmu.ac.in)

ई-मेल : [acmanore@nmu.ac.in](mailto:acmanore@nmu.ac.in)

Signature

PRINCIPAL  
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Dahiwel, Tal Sakri, Dist Dhule.

Six Months Module Syllabus  
for  
Environmental Studies  
for  
Under Graduate Courses



UNIVERSITY GRANTS COMMISSION

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NEW DELHI- 110 002

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conserve them in ex-situ and in-situ situations. Intellectual property rights (IPRs) have become important in a biodiversity-rich country like India to protect microbes, plants and animals that have useful genetic properties. Destruction of habitats, over-use of energy resource and environmental pollution have been found to be responsible for the loss of a large number of life-forms. It is feared that a large proportion of life on earth may get wiped out in the near future.

In spite of the deteriorating status of the environment, study of environment has so far not received adequate attention in our academic programmes. Recognizing this, the Hon'ble Supreme Court directed the UGC to introduce a basic course on environment at every level in college education. Accordingly, the matter was considered by UGC and it was decided that a six months compulsory core module course in environmental studies may be prepared and compulsorily implemented in all the University/Colleges of India.

The experts committee appointed by the UGC has looked into all the pertinent questions, issues and other relevant matters. This was followed by framing of the core module syllabus for environmental studies for undergraduate courses of all branches of Higher Education. We are deeply conscious that there are bound to be gaps between the ideal and real. Genuine endeavour is required to minimize the gaps by intellectual and material inputs. The success of this course will depend on the initiative and drive of the teachers and the receptive students.

## SYLLABUS

Unit I : Multidisciplinary nature of environmental studies

Definition, scope and importance

(2 lectures)

Need for public awareness.



## Unit 2 : Natural Resources :

### Renewable and non-renewable resources :

Natural resources and associated problems.

- a) Forest resources : Use and over-exploitation, deforestation, case studies.  
Timber extraction, mining, dams and their effects on forest and tribal people.
  - b) Water resources : Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems.
  - c) Mineral resources : Use and exploitation, environmental effects of extracting and using mineral resources, case studies.
  - d) Food resources : World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies.
  - e) Energy resources : Growing energy needs, renewable and non renewable energy sources, use of alternate energy sources. Case studies.
  - f) Land resources : Land as a resource, land degradation, man induced landslides, soil erosion and desertification.
- Role of an individual in conservation of natural resources.
  - Equitable use of resources for sustainable lifestyles.

(8 lectures)

### Unit 3 : Ecosystems

- Concept of an ecosystem.



- Structure and function of an ecosystem.
- Producers, consumers and decomposers.
- Energy flow in the ecosystem.
- Ecological succession.
- Food chains, food webs and ecological pyramids.
- Introduction, types, characteristic features, structure and function of the following ecosystem :-
  - a. Forest ecosystem
  - b. Grassland ecosystem
  - c. Desert ecosystem
  - d. Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries)

(6 lectures)

#### Unit 4 : Biodiversity and its conservation

- Introduction – Definition : genetic, species and ecosystem diversity.
- Biogeographical classification of India
- Value of biodiversity : consumptive use, productive use, social, ethical, aesthetic and option values
- Biodiversity at global, National and local levels.
- India as a mega-diversity nation



- Hot-spots of biodiversity.
- Threats to biodiversity : habitat loss, poaching of wildlife, man-wildlife conflicts.
- Endangered and endemic species of India
- Conservation of biodiversity : In-situ and Ex-situ conservation of biodiversity.

(8 lectures)

#### Unit 5 : Environmental Pollution

##### Definition

- Cause, effects and control measures of :-
  - a. Air pollution
  - b. Water pollution
  - c. Soil pollution
  - d. Marine pollution
  - e. Noise pollution
  - f. Thermal pollution
  - g. Nuclear hazards
- Solid waste Management : Causes, effects and control measures of urban and industrial wastes.
- Role of an individual in prevention of pollution.
- Pollution case studies.
- Diaster management : floods, earthquake, cyclone and landslides.

(8 lectures)



#### Unit 6 : Social Issues and the Environment

- From Unsustainable to Sustainable development
- Urban problems related to energy
- Water conservation, rain water harvesting, watershed management
- Resettlement and rehabilitation of people; its problems and concerns. Case Studies
- Environmental ethics : Issues and possible solutions.
- Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust. Case Studies.
- Wasteland reclamation.
- Consumerism and waste products.
- Environment Protection Act.
- Air (Prevention and Control of Pollution) Act.
- Water (Prevention and control of Pollution) Act
- Wildlife Protection Act
- Forest Conservation Act
- Issues involved in enforcement of environmental legislation.
- Public awareness.

(7 lectures)

#### Unit 7 : Human Population and the Environment

- Population growth, variation among nations.
- Population explosion – Family Welfare Programme.





- Environment and human health.
- Human Rights.
- Value Education.
- HIV/AIDS.
- Women and Child Welfare.
- Role of Information Technology in Environment and human health.
- Case Studies.

(6 lectures)

#### Unit 8 : Field work

- Visit to a local area to document environmental assets-  
river/forest/grassland/hill/mountain
- Visit to a local polluted site-Urban/Rural/Industrial/Agricultural
- Study of common plants, insects, birds.
- Study of simple ecosystems-pond, river, hill slopes, etc. (Field work Equal to 5  
lecture hours)



SIX MONTHS COMPULSORY CORE MODULE COURSE IN  
ENVIRONMENTAL STUDIES : FOR UNDERGRADUATES

Teaching Methodologies

The core Module Syllabus for Environment Studies includes class room teaching and Field Work. The syllabus is divided into eight units covering 50 lectures. The first seven units will cover 45 lectures which are class room based to enhance knowledge skills and attitude to environment. Unit eight is based on field activities which will be covered in five lecture hours and would provide student first hand knowledge on various local environmental aspects. Field experience is one of the most effective learning tools for environmental concerns. This moves out of the scope of the text book mode of teaching into the realm of real learning in the field, where the teacher merely acts as a catalyst to interpret what the student observes or discovers in his/her own environment. Field studies are as essential as class work and form an irreplaceable synergistic tool in the entire learning process.

Course material provided by UGC for class room teaching and field activities be utilized.

The universities/colleges can also draw upon expertise of outside resource persons for teaching purpose.

Environmental Core Module shall be integrated into the teaching programmes of all undergraduate courses.

**Annual System :** The duration of the course will be 50 lectures. The exam will be conducted along with the Annual Examination.



**Semester System :** The Environment course of 50 lectures will be conducted in the second semester and the examination shall be conducted at the end of the second semester.

**Credit System :** The course will be awarded 4 credits.

**Exam Pattern :** In case of awarding the marks, the question paper should carry 100 marks. The structure of the question paper being :

Part-A, Short answer pattern	-	20 marks
Part-B, Essay type with inbuilt choice	-	40 marks
Part-C, Field Work	-	40 marks



  
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North Maharashtra University,  
Jalgaon**



**S. Y. B.A  
(Semester III & IV)  
Syllabus of Geography  
(Under the Faculty of Science)**

**Choice Based Credit System (CBCS)**

**With effect from June-2019**



# Kavayitri Bahinabai Chaudhari North Maharashtra University, Jalgaon

Under faculty of Science and Technology

S.Y.B.A. SEMESTER- IV

New Syllabus (CBCS Pattern)

(with effect from: June 2019)

Gg. 243 (DSE 2 B): PRACTICAL GEOGRAPHY

(Surveying)

(Work load – 06 Periods per week per batch of 12 students)

Total Credits – 3.

Internal Marks - 40

Total Clock Hours – 90

External Marks – 60

## Objectives

1. To acquire knowledge of survey language and sense of technique of surveying.
2. To know the scale and distance of surveying.
3. To know how to draw layout by surveying of region.
4. To acquaint the students with basic knowledge and technique of ground survey.
5. To acquire the knowledge of survey instruments.
6. To provide basic information about mechanism of survey instruments.
7. To acquaint the knowledge how to use survey instruments.
8. To know the importance of surveying and survey instruments.

Unit	Topic	Sub-Topic	Hours
I.	Introduction to Surveying	A) Introduction to Surveying: Definitions B) Basic principles of surveying. C) Types of Survey: a) Plane Survey b) Geodetic Survey D) Classification of Survey: a) According to purpose: 1) Topographical 2) Cadastral 3) Geodetic 4) Engineering 5) Railway 6) Military b) According to instruments used: 1) Chain or Tape Survey 2) Compass Survey 3) Levelling Survey 4) Theodolite Survey E) Various Methods of deciding North direction: True, Magnetic and Grid North.	30



2.	Plane Table Survey	<p>A) Plane Table Survey.</p> <p>B) Necessary Equipments of Plane Table Survey:</p> <ol style="list-style-type: none"> <li>1) The plane table with a tripod stand</li> <li>2) Alidade</li> <li>3) Chain or Tape</li> <li>4) Spirit level</li> <li>5) Trough Compass</li> <li>6) Ranging Rods</li> <li>7) Plumb bob</li> <li>8) Drawing essential: Paper, pencil, rubber, drawing pins, pencil, sharpener, scale etc.</li> </ol> <p>C) Methods of Plane Table Survey:</p> <ol style="list-style-type: none"> <li>1) Radiation Method</li> <li>2) Intersection Method</li> </ol> <p>D) Advantages and Disadvantages of Plane Table Survey.</p> <p>E) At Least Experiment of Actual Measurement of Piece of Land or Ground.</p>	40
3.	Study Tour/ Village Survey	Tour / Excursion or Village Survey Report	20

### Weightage of Marks

Unit No	Weightage
1	15
2	25
3	20
<b>Total</b>	<b>60</b>

University Assessment (U.A)	60
College Assessment (C.A)	40
<b>Total Marks</b>	<b>100</b>



### Internal Practical Test Exam.

- 1) Attendance and Behavioral: 10 Marks
- 2) Internal Test : 30 Marks

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Total : 40 Marks

**Note:** The educational tour or village survey should be conduct and organized by the directions of Maharashtra Govt. rules and regulations.

  
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**Syllabus**

**T.Y.B.Sc.**

**Subject: Chemistry**

**Choice Based Credit System**

**With Effect from June -2020**

**As Per U.G.C. Guidelines**

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**Prepared By**

**Board of Studies**

**Chemistry,**

**Kavayitri Bahinabai Chaudhari**

**North Maharashtra University, Jalgaon**

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# Syllabus

Class- T.Y.B.Sc. Subject- Chemistry

Choice Based Credit System (CBCS) (60-40) Pattern

with effect from June-2020

Structure of Curriculum of T.Y.B.Sc. (Chemistry)

Semester – V

Course Type	Course code	Course Title	Credits	Hours per week	Teaching Hours
Core I	CH – 501	Principles of Physical Chemistry-I	3	3	45
Core II	CH – 502	Inorganic Chemistry	3	3	45
Core III	CH – 503	Organic Reaction Mechanism	3	3	45
Core IV	CH – 504	Industrial Chemistry	3	3	45
Skill Enhancement (SEC)	CH – 505	Analytical Instrumentation	3	3	45
Elective (Any One)	CH – 506 (A)	Biochemistry	3	3	45
	CH – 506 (B)	Green Chemistry	3	3	45
Core course (Practical)	CH – 507	Physical Chemistry Practical	2	4 (Per Batch)	60
	CH – 508	Inorganic Chemistry Practical	2	4 (Per Batch)	60
	CH – 509	Organic Chemistry Practical	2	4 (Per Batch)	60
Non-Credit Audit Course (Any One)	AC-510	NSS	No Credit	2- Batches	60
	AC-511	NCC		2- Batches	60
	AC-512	Sports		2- Batches	60

Note:

1. Each lecture is of one hour (60 Minutes) duration.
2. Each theory paper has three lectures per week.
3. Each practical course has four lectures per week.
4. An industrial study tour is compulsory for the T.Y.B.Sc. Students. The students should submit their tour reports at the time of practical examination of VI<sup>th</sup> Semester.





5. Use of Chart/Text book/Hand book of practical is allowed during examination.
6. Scientific calculator (non-programmable) is allowed during theory and practical examination.
7. All units should be in SI unit.

### Semester VI

Course Type	Course code	Course Title	Credits	Hours per week	Teaching Hours
Core I	CH – 601	Principles of Physical Chemistry-II	3	3	45
Core II	CH – 602	Chemistry of Inorganic Solids	3	3	45
Core III	CH – 603	Spectroscopic Methods of Structure Determination	3	3	45
Core IV	CH – 604	Chemistry of Industrially Important Products	3	3	45
Skill Enhancement	CH – 605	Analytical Techniques	3	3	45
Elective (Any One)	CH – 606 (A)	Polymer Chemistry	3	3	45
	CH – 606 (B)	Research Methodology for Chemistry	3	3	45
Core course (Practical)	CH – 607	Physical Chemistry Practical	2	4 (Per Batch)	60
	CH – 608	Inorganic Chemistry Practical	2	4 (Per Batch)	60
	CH – 609	Organic Chemistry Practical	2	4 (Per Batch)	60
Non-Credit Audit Course (Any One)	AC-610	Soft Skill	No Credit	2- Batches	60
	AC-611	Yoga		2- Batches	60
	AC-612	Practicing Cleanliness		2- Batches	60

**Note:**

1. Each lecture is of one hour (60 Minutes) duration.
2. Each theory paper has three lectures per week.
3. Each practical course has four lectures per week.



## STRUCTURE OF INTERNAL PRACTICAL EXAMINATION

Time allowed – 3 Hours

Marks – 40

- |  |          |
|--|----------|
| Q.1 Any One experiment from (CH-507/607) | 30 Marks |
| Q.2 Oral                                 | 10 marks |

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Total: 40 Marks

## STRUCTURE OF EXTERNAL PRACTICAL EXAMINATION

Time allowed: 3 Hours

Marks: 60

### Semester V (CH-507)

- |                                      |          |
|--------------------------------------|----------|
| Q. 1. Any One experiment from CH-507 | 40 Marks |
| Q.2 Oral                             | 10 Marks |
| Q.3 Certified Journal                | 10 Marks |

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Total: 60 Marks

## STRUCTURE OF EXTERNAL PRACTICAL EXAMINATION

Time allowed: 3 Hours

Marks: 60

### Semester VI (CH-607)

- |                                       |          |
|---------------------------------------|----------|
| Q. 1. Any One experiment from CH-607) | 40 Marks |
| Q.2 Oral                              | 10 Marks |
| Q.3 Certified Journal                 | 05 Marks |
| Q.4 Industrial Tour Report            | 05 Marks |

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Total: 60 Marks



  
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**Inorganic Chemistry Practical**  
**CH-608, Semester-VI**

**Internal Examination Pattern**

**Time Allowed: 3Hrs.**

**Max. Marks: 40**

Q 1. Gravimetric Estimations/Volumetric Analysis/colorimetric Analysis/ Inorganic Preparation and Paper Chromatography	30 Marks
Q 2. Oral	10 Marks
	<hr/> 40 Marks

**External Examination Pattern**

**Time Allowed: 3Hrs.**

**Max. Marks: 60**

Q 1. Gravimetric Estimations/Volumetric Analysis/colorimetric Analysis/ Inorganic Preparation and Paper Chromatography	40 Marks
Q 2. Oral	10 Marks
Q 3. Journal (completed and certified)	05 Marks
Q 4. Industrial Tour Report	05 Marks
	<hr/> 60 Marks



  
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