Shivaji University, Kolhapur

Syllabus of Environmental Studies
as a Compulsory Paper for all Undergraduate Courses

1. Nature of Environmental Studies : (2 lectures)

Definition, scope and importance.
Multidisciplinary nature of environmental studies
Need for public awareness.

2. Natural Resources and Associated Problems : (8 lectures)

a) Forest resources: Use and over-exploitation, deforestation, dams and their effects on forests 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) Minral resources: Usage and explolitation. Environmental effects of extracting and using mineral resources.
d) Food resources: World food problem, changes caused by agriculture effect of modern agriculture, fertilizer-pesticide problems.
e) Energy resources: Growing energy needs, renewable and non-renewable energy resources, use of alternate energy sources. Solar energy , Biomass energy, Nuclear energy,
e) Land resources: Land as a resource, land degradation, man induced landslides, soil erosion and desertification.

Role of an individuals in conservation of natural resources.

3. Ecosystems : (8 lectures)

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, characteristics 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)

4. Biodiversity and its conservation : (8 lectures)

Introduction- Definition: genetic, species and ecosystem diversity.
Bio-geographical classification of India.
Value of biodiversity: consumptive use, productive use, social, ethical, aesthetic and option values.
India as a mega- diversity nation.
Western Ghat as a biodiversity region.

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.

5. Environmental Pollution : (8 lectures)

Definition: Causes, effects and control measures of: Air pollution,
Water pollution, Soil pollution, Marine pollution, Noise pollution, Thermal pollution, Nuclear hazards.
Solid waste Management: Causes, effects and control measures of urban and industrial wastes.
Role of a individual in prevention of pollution.

6. Social Issues and the Environment : (8 lectures)

Disaster management: floods, earthquake, cyclone, tsunami and landslides
Urban problems related to energy.
Water conservation, rain water harvesting, watershed management.
Resettlement and rehabilitation of people; its problems and concerns.
Environmental ethics: Issue and possible solutions.
Global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust.
Wasteland reclamation.
Consumerism and waste products.

7. Environmental Protection : (8 lectures)

From Unsustainable to Sustainable development
Environmental Protection Act.
Air (Prevention and Control of Pollution) Act.
Water (Prevention and control of Pollution) Act
Wildlife Protection Act
Forest Conservation Act
Population Growth and Human Health, Human Rights.

8. Field Work : (10 lectures)

Visit to a local area to document environmental assets-
River/forest/grassland/hill/mountain.
or
Visit to a local polluted site – Urban/Rural/Industrial/Agricultural
or
Study of common plants, insects, birds.
or
Study of simple ecosystems - ponds, river, hill slopes, etc.
(Field work is equal to 10 lecture hours)

References :

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10) Heywood, V.H.& Watson, R.T.1995, Global Biodiversity Assessment, Cmbridge Univ. Press 1140p.
11) Jadhav, H.& Bhosale, V.M.1995, Environmental Protection and Laws, Himalaya Pub. Hcuse, Delhi 284p.
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17) Sharma B.K., 2001, Environmental Chemistry, Gokel Publ. Hkouse, Meerut
18) Survey of the Environment, The Hindu (M)
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22) Wagner K.D.,1998, Environmental management, W.B. Saunders Co. Philadelphia, USA 499p.
23) Paryavaran shastra – Gholap T.N.
24) Paryavaran Sahastra – Gharapure

(M) Magazine (R) Reference (TB) Textbook

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Revised Syllabus For

B. A. Part-III & B. A. B. Ed.

Geography

(Evolution of Geographical Thought)

CBCS PATTERN

Syllabus to be implemented from

(Subject to the modifications to be made from time to time)

Syllabus to be implemented from June 2020 onwards

3.1.4 Application of GIS in Geography: Land use or Land Cover, Urban Sprawl Analysis, Forests Monitoring

3.2 Global Navigation Satellite System

3.2.1 Definition and components

3.2.2: GPS and its applications in Geography

3.2.3 Field work in GPS: Determining latitude, longitude and altitude

3.3: Exercise with Google earth Program.

Module-IV: Statistical methods and techniques **Lectures- 60**

Marks-10

4.1 Measures of Central Tendency: Mean, Median and Mode

4.2 Dispersion: Mean Deviation and Standard Deviation

4. 3Association and Correlation: Karl Pearson's Method (Product Moment)

4.4 Analysis of Time Series: Semi-average Method

Module-V: Surveying **Lectures- 60**

Marks-15

5.1 Introduction to Survey: Meaning and types

5.2 Preparation of plans of the given area with the following survey method

(Any one methods among them)

A- Plane Table survey (Radial, Intersection, and Traverse method)

B- Dumpy Level survey

C- Theodolite survey

D- Total Station

E- Abony Level Survey

5.3 Preparation of plans Prismatic compass survey (Radical, Intersection and Traverse method)

5.3.1 Types and conversion of bearings.

5.3.2 Correction of bearing.

Module-VI: Project work based on field work any one of following:

Marks-15

Resource survey, Population survey, Agricultural survey, Settlement Survey, Environmental issues, Industrial visit, Health survey, Natural Hazard or Disaster

1. Project Report must be content of following points:

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CHOICE BASED CREDIT SYSTEM

Syllabus For

B.Sc. Part -III Mathematics

SEMESTER V AND VI

(Syllabus to be implemented from June, 2020 onwards.)

B.Sc.Part-III [Semester V] (Credit - 8]

Course code	Title o the course	Instructions Lectures /Week	Duration of term end exam	Marks of Term end exam	Marks (Internal) Of Continuous Assessment	Credit
DSE E9	Mathematical Analysis	3	2 hours	40	10	2
DSE E10	Abstract Algebra	3	2 hours	40	10	2
DSE E11	Optimization Techniques	3	2 hours	40	10	2
DSE E12	Integral Transforms	3	2 hours	40	10	2

B.Sc.Part-III [Semester VI] (Credit - 8]

Course code	Title o the course	Instructions Lectures/Week	Duration of term end exam	Marks Term end exam	Marks (Internal) Of Continuous Assessment	Credit
DSE F9	Metric Spaces	3	2 hours	40	10	2
DSE F10	Linear Algebra	3	2 hours	40	10	2
DSE F11	Complex Analysis	3	2 hours	40	10	2
DSE F12	Discrete Mathematics	3	2 hours	40	10	2

Core Course Practical in Mathematics [CCPM IV to VII]

The practical examination will be conducted at the end of second term that is annual pattern

Total Credit 16

Course code	Title o the course	Instructions Lectures/Week	Duration of term end exam	Marks [End of academic year]	Credit
CCPM IV	Operations Research	5	6 hours	50	4
CCPM V	Laplace and Fourier Transforms	5	6 hours	50	4
CCPM VI	Mathematical Computation Using Python	5	6 hours	50	4
CCPM VII	Project, sturdy tour, viva.	5	6 hours	50	4

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Revised Syllabus For

B.Sc Part- III

Chemistry

Syllabus to be implemented from

June, 2020 onwards.

SHIVAJI UNIVERSITY, KOLHAPUR
B.O.S. in Chemistry
B.Sc. Part – III
Semester CBCS Syllabus
To be implemented from June – 2020

General Structure

Theory Examination:

There will be four theory papers of 40 marks each for each semester. Their titles and distribution of marks are as follows.

Semester V : Papers IX-DSE-E5, X-DSE-E6, XI- DSE-E7, XII- DSE-E8,

Semester VI: Papers XIII- DSE-F5, XIV-DSE-F6, XV-DSE-F7 and XVI- DSE-F8

Paper – **IX** DSE-E5, **& XIII** DSE-F5: Inorganic Chemistry – 40 marks

Paper – **X** DSE-E6 **& XIV** DSE-F6**:** Organic Chemistry – 40 marks

Paper – **XI** DSE-E7 **& XV** DSE-F7**:** Physical Chemistry – 40 marks

Paper – **XII** DSE-E8 **&XVI** DSE-F8**:** Analytical and Industrial Chemistry – 40 marks

The duration of each theory paper for examination will be of 2 hours

Internal examination (Oral/Seminar/test/home assignment) will be conducted for 10 marks for each paper.

Practical Examination:

Practical examination will be of 200 marks. The distribution of marks will be as follows:

1. Physical Section : 60 marks
2. Inorganic Section : 65 marks
3. Organic Section : 60 marks
4. Project : 15 marks

Total: 200 marks

The duration of practical examination will be of three days – six and half hours per day.

Estd. 1962
NAAC 'A++' Grade

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शिवाजी विद्यापीठ, कोल्हापूर – 416004.
दुरध्वनी (ईपीएबीएक्स) २६०९००० (अभ्यास मंडळे विभाग– २६०९०९४)
फॅक्स : ००९१-०२३१-२६९१५३३ व २६९२३३३.e-mail:bos@unishivaji.ac.in

Ref../SU/BOS/Com & Mgmt./ No 0 0 3 1 7 **Date : 16/09/2021**

To,

The Principal
All Affiliated (Commerce & Management) Colleges/Institutions,
Shivaji University, Kolhapur

Subject : Regarding Syllabi of BCA Part-II (Sem-III/IV) Choice Based Credit System (CBCS) degree programme under the Faculty of Commerce & Management.

Sir/Madam,

With reference to the subject mentioned above, I am directed to inform you that the university authorities have accepted and granted approval to the revised syllabi of **BCA Part-II (Sem-III/IV) Choice Based Credit System (CBCS)** under the Faculty of Commerce & Management.

This syllabi shall be implemented from the academic **year 2021-2022** onwards. A soft copy containing the syllabus is attached herewith and it is also available on university website www.unishivaji.ac.in (Student - Online Syllabus).

The question papers on the pre-revised syllabi of above mentioned course will be set for two examination These chances are available for repeater students, if any.

You are therefore, requested to bring this to the notice of all students and teachers concerned.

Thanking you,

Yours faithfully,

Dy. Registrar

Encl : As above

Copy to,

1. I/c Dean, Faculty of Commerce & Management
2. Chairman, Board of Studies

} for information

3. Director, BOEE
4. Appointment Section
5. P. G. Admission Section
6. B.Com and O. E. 1 Section
7. Affiliation Section (U.G./P.G.)
8. Computer Center/I.T.
9. Eligibility Section
10. Distance Education
11. P.G. Seminer Section

} for information and necessary action.

BCA-II (Sem IV)

Course code: CCL 408	Mini Project	Credit :02	Marks:50

Course Outcomes	After completion of this course student should be able to- 1. Implement fundamental domain knowledge of core courses for developing simple business applications. 2. Utilize the software development techniques, skills and modern tools.
	Guidelines for Project
	1. A group of maximum **two to four** students prepare a mini project under the guidance of internal teacher. 2. Students should adopt SDLC approach 3. Project guide should provide progress report to each group & student should follow it.(Encl. Progress report) 4. Number of Copies: The student should submit two Hard-bound copies of the Project Report. 5. The project report is duly signed by Principal or Head of Department, Project Guide and Student. 6. Acceptance/Rejection of Project Report: o The student should submit progress report with draft project report to the guide. o Respective guide has right to suggest modifications for resubmission or accept the project. o Only on acceptance of draft project report, the student should make the final copies.
	Following format for the submission of the Project Report. **a. Paper:** The Report shall be typed on white paper, A4 size, for the final submission. The Report to be submitted must be original and subsequent copies may be photocopied on any paper. **b. Typing**: The typing shall be of standard letter size, 1.5 spaced and on **both** side of the paper. (Normal text should have Times New Roman, Font size 12. Headings can have bigger size) **c. Margins:** The typing must be done in the following margins: Left -----1.5 inch, Right ----- 1 inch Top ----- 1 inch, Bottom ----- 1 inch **d. Front Cover:** The front cover should contain the following details: TOP : The title in block capitals of 6mm to 15mm letters. CENTRE: Full name in block capitals of 6mm to 10mm letters. BOTTOM: Name of the University, Course, Year of submission -all in block capitals of 6mm to 10mm letters on separate lines with proper spacing with center alignment. **e. Blank Sheets:** At the beginning and end of the report, two white black papers should be provided, one for the purpose of binding and other to be left blank.
IV	**Documentation Format**