

S-SYLL. OF COMP.COUR & ENV. SCI.

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A.C. dt. 11-06-2008.

**DR. BABASAHEB AMBEDKAR  
MARATHWADA UNIVERSITY,  
AURANGABAD.**



**REGULATION – 1473 pertaining to :-**

- [1] Compulsory “Computer Course” of 100 Marks [as per directives of State Govt.].**
- [2] Compulsory “Six Months Course in Environmental Science” of 100 Marks [as per directives of Supreme Court].**

**WITH SYLLABI**

**[ Effective from 2008 and onwards ]**

S-11062008 AC Circular

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**DR. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY****CIRCULAR NO.ACAD/NP/COMP.SCI./ENV.SCI./ 01 /2008**

It is hereby informed to all the concerned that the **Academic Council at its meeting held on 11-06-2008** has accepted the **Regulation-1473** pertaining to :-

[1] Compulsory "Computer Course"

and

[2] Compulsory "Six Months Course in Environmental Science" of [each of 100 Marks] at U.G. level.

**The following issues have been incorporated in the Regulation-1473:-**

a]	<b>Scheme of Examination,</b>
B]	<b>Fees Structure for Each Course,</b>
C]	<b>Eligibility of the Faculty,</b>
D]	<b>Remuneration to the teachers as per State Government rules.</b>

This is effective from the Academic Year 2008-2009 and onwards.

The enclosed Regulation-1473 and the syllabi of [1] Compulsory "Computer Course" and [2] Compulsory "Six Months Course in Environmental Science" are also available on University Website [www.bamu.net](http://www.bamu.net).

All the concerned are requested to note the contents of this Circular for their information and necessary action.

University Campus,  
Aurangabad-431 004.  
REF.NO. ACAD/NP/COMP.SCI.  
ENV.SCI./2008/  
6587-6786

Date:- 20-06-2008.

  
DEPUTY REGISTRAR,  
[ACADEMIC].

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**Copy forwarded with compliments to:-**

1] The Principals, affiliated concerned Colleges,  
Dr. Babasaheb Ambedkar Marathwada University

**Copy to :-**

1] The Controller of Examinations,  
2] The Finance and Accounts Officer,  
3] The Assistant Supdt. [B.A./B.Com./B.Sc./ Professional & Co-ordination Unit] Examination Branch.

S-[F] FACULTY OF SCI. [MINUTES]

A.C. dt. 10-12-2018  
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Encl to Item No. ( )

M.C. dt. \_\_\_\_\_

**Dr. Babasaheb Ambedkar Marathwada University****AMENDED REGULATION-1473:-**

Pertaining to "[1] Compulsory "Computer Course" and [2] Compulsory "Six Months Course in Environmental Science of 100 Marks" each at Under Graduate level.

[1] The University will conduct the Examinations of [1] Compulsory "Computer Course" and [2] Compulsory "Six Months Course in Environmental Science of 100 Marks each.

[2] [a] The Examination of Compulsory "Computer Course" shall be conducted at First Year Degree level.

[b] The Examination of Compulsory "Six Months Course in Environmental Science" shall be conducted from the Second Year Degree Course.

[4] It is Compulsory to Pass these Examinations upto Third Year, otherwise the student will not be permitted to appear for final examination.

[5] The Teaching Workload will be as per syllabus.

[6] There shall be following Scheme of Examination

**For "Computer Science" :-**

		Duration of Exam. (Hrs.)	Max. Marks	Minimum Marks for Passing
[a]	Theory	02	50	25
[b]	Practical	04	50	25
[c]	The medium of instructions will be English.			

[7] Theory papers will be objective type. All the questions are compulsory;-

- |    |                                       |          |
|----|---------------------------------------|----------|
| a) | The Practical consist of a Seminar :- | Marks-05 |
| b) | The Practical General :-              | Marks-10 |
| c) | Viva-voce :-                          | Marks-10 |
| d) | Practical Examination :-              | Marks-25 |



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**[8] Following shall be the Scheme of Examination  
For Compulsory "Six Months Course in  
Environmental Science".**

		Exam. Duration Hrs.	Max. Marks	Minimum Marks for Passing
[a]	Theory	2 ½	75	26
[b]	Field Work	--	25	09
[c]	The medium of instructions will be English / Marathi.			

The marks obtained by the students in this Examination be shown separately in the marks sheet of the students.

The Practical Exam. of these courses may be conducted at college level and the mark list be forwarded to the University.

**[9] The following fees Structure for Compulsory "Six Months Course in Environmental Science" and Compulsory "Computer Course" :-**

[a] Total Fees for each course per student :: Rs.200/-

[b] University examination fees per Student:: Rs.50/- per course.

[c] The amount of fees per student kept with the college for remuneration, conducting Practical Examination and administrative charges etc. :: Rs.150/-

[d] Since examinations are conducted by the University, appointment of Co-ordinator is not necessary.

**[10] Eligibility of the teacher to be appointed for "Computer Science" Course as under :-**

[a] M.Sc.(Comp.Sci.) I.T., M.C.M. and M.C.A.

If such candidates are not available, teachers in the subject of Physics, Electronics may be considered.

### **For Compulsory "Environmental Science"**

**A teacher having one of the following Degrees :-  
M.Sc.(Env. Science), M.Phil., Ph.D. may be appointed to  
teach this subject.**

**If such candidates are not available, teachers in  
Botany, Zoology and Chemistry may be considered for  
the teaching.**

- [11] Remuneration :-  
The concerned teachers may be appointed on Clock  
Hour Basis @ Rs. 85/- per period of 50 Minutes duration  
as per Govt. guidelines.**

**The following students have been exempted from the  
Examinations :-**

### **For Compulsory "Computer Science".**

- [i] Passed Standard-XII with "Computer" or "I.T." as an  
Optional Subject.**
- [ii] Passed MS-CIT, Certificate Course in "Computer, I.T. OR  
Diploma in Computer Science / I.T..**
- [iii] Having Optional "Computer Science or I.T." subject at  
Degree level.**

### **For "Compulsory "Six Months Course in Environmental Science"**

- [iv] The students of B.F.A. and B.Ed. Degree Courses have  
been exempted from these exams.**
- [v] Having Optional "Environmental Science" subject at  
Degree level.**

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Fac. of Science 31-08-2005

14(7) - 01-09-2005

**D.R. BABASAHEB AMBEDKAR  
MARATHWADA UNIVERSITY,  
AURANGABAD.**



**SYLLABUS OF**  
**“Six Months Course in**  
**Environmental Science”**

**(As per directives of Hon'ble Supreme Court)**

**[ EFFECTIVE FROM 2005-06 AND ONWARDS ]**



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

**Teaching Methodologies**

The Core Module Syllabus for Environmental Studies includes class room teaching and Field Work. The syllabus is divided into eight units covering 100 lectures. The first seven units will cover 70 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 30 lecture hours and would provide students 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 purposes.

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

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**Annual System:** The duration of the course will be 100 lectures. The exam will be conducted along with the Annual Examination.

**Semester System:** The Environment course of 100 lectures will be conducted in the second semester and the examination shall be conducted at the end of the second semester.

**Credit system:** The core 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	-	25 marks
Part-B, Essay type with inbuilt choice	-	50 marks
Part-C, Field Work	-	25 marks



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**CORE MODULE SYLLABUS FOR ENVIRONMENTAL STUDIES  
FOR UNDER GRADUATE COURSES OF ALL BRANCHES OF  
HIGHER EDUCATION.**

**UNIT 1: The 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 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) 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.

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- 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.

### **UNIT 3 : Ecosystems**

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

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**UNIT 4: Biodiversity and its conservation.**

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

**UNIT 5: Environmental Pollution****Definition**

- Causes, effects and control measures of :-
  - a) Air pollution
  - b) Soil pollution
  - c) Water pollution
  - d) Marine pollution
  - e) Noise pollution
  - f) Thermal pollution
  - g) Nuclear hazards



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- Solid waste Management: Causes, effects and control measures of urban and industrial wastes.
- Role of an individual in prevention of pollution.
- Pollution case studies.
- Disaster 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.
- Wild life Protection Act.
- Issues involved in enforcement of environmental legislation.
- Public awareness.

**UNIT 7: Human Population and the Environment.**

- Population growth, variation among nations.
- Population explosion-family welfare programme.

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- Human Rights.
- Value Education.
- Environment and human health.
- 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.

#### **REPORT COMPULSORY**

- Visit to a local polluted sites – Urban Rural / Industrial / Agricultural.
  - Study of common plants, insects, birds.
  - Study of simple ecosystem – pond, river, hill slopes, etc.
- (Field work Equal to 5 lecture hours)

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(M) Magazine

(R) Reference

(TB) Textbook