

# **SYLLABUS**

**FOR**

**M. Sc. (Environment & Safety)**

**Faculty of Science – Under CBCS System**

**(To be implemented from Academic Year 2021-22)**



**DEPARTMENT OF ENVIRONMENT MANAGEMENT**

**CHHATRAPATI SHAHU INSTITUTE OF  
BUSINESS EDUCATION AND RESEARCH (CSIBER),  
(AN AUTONOMOUS INSTITUTE)  
UNIVERSITY ROAD, KOLHAPUR 416 004 (M. S.), INDIA**

**2021**



## **REVISED CURRICULUM OF M. Sc. (Environment & Safety) PROGRAMME**

The M. Sc. (Environment & Safety) Programme is of Two-year duration and is divided into four semesters. Semester I & II will be taught in the First Year of the programme and Semester III & IV during the second year of the programme.

### **Objectives:**

The specific objectives of Master's Degree Programme are:

- (i) To provide in-depth knowledge to the students in respect of current environmental problems faced by human society and to develop among students scientific attitude based on interdisciplinary approach to enable them to take holistic view in decision taking.
- (ii) To provide students typical problem-oriented situations in environmental protection and safety management
- (iii) To develop managerial competence among students in managing environmental development programs sponsored by the Government.
- (iv) To provide information about the importance of industrial safety, occupational health and prevention of accidents/incidents which cause loss of life / property.

### **Eligibility for Admission:**

Graduates in Science discipline, passed under 10+2+3 pattern from any recognized University are eligible to take admission.

**Intake:** 30

### **Reservation:**

Reservation for special categories such as SC, ST, NT, OBC, etc. will be as per the Government of Maharashtra and Shivaji University.

### **Selection Procedure:**

All eligible applicants will be required to be present themselves at the Institute for the Written Test, Group Discussion Test and the Personal Interview at their own cost.

The final selection of students will be on merit on the basis of

Basic Degree	100 marks
Written Test	50 marks
Group Discussion Test	25 marks
Personal Interview	25 marks
Total:	<hr style="width: 150px; margin: 0 auto;"/> 200 marks

Seats will be reserved for the Scheduled Castes, Scheduled Tribes and other Backward Classes as per Government circular.

The written test will be of 2 hours duration having 3 sections viz.

- |  |          |
|--|----------|
| a) English                               | 30 marks |
| b) General knowledge & Intellectual Test | 40 marks |
| c) Elementary Mathematics                | 30 marks |

(These marks shall be converted out of 50)

On the basis of marks at the degree level and the performance at the written test, the candidate will be selected for Group Discussion and Personal Interview.

#### **The Written test:**

The written test will be held by the Institute after the last degree examination is held, which is one of the qualifications for admission.

#### **The Interview:**

- The Interview will consist of Group Discussion (GD) and Personal Interview (PI) to be held by the selection committee.
- The topics for Group Discussion will be notified and a batch of 10 to 12 candidates will be discussing one topic given by the members of the committee. The discussion will take place under strict supervision and the student's ability to express, to understand the problem, to think clearly and to present systematically will be assessed.
- At the time of interview the selection committee will take into consideration normally the candidates academic qualifications as well as personal qualities, aptitude, interest, general knowledge and work experience in the field of management.
- The final selection will be strictly done on merit. The committee after conduct of the group discussion and personal interview will prepare the final list of selected candidates.

#### **Duration:**

The degree of **M. Sc.** (Environment & Safety) shall be fulltime programme and its duration shall be of Two Years. The programme consists of four semesters. The examination to be held in the First, Second semester will be called Part – I (First Year) and the examination to be held in the third and fourth semester will be called Part – II (Second Year).

If a candidate fails to clear all the theory papers and project report within four years of his/her registration, the past performance will stand automatically nullified.

If a candidate discontinues any of the terms (i. e. semester – I to IV) on any account, he/she will be allowed to complete the in-completed terms in the subsequent years subject to the condition that it is within the stipulated time duration of **Six** years.

In addition to the above, once a student's term (semester) is granted, he/she shall be allowed to appear and pass in any of the subsequent examinations held, provided the examinations are within the stipulated period of **Six** years.

In case the term (semester) is not granted the student has to seek fresh admission in the next year and complete the term and pass the examination. This too within **Six** years of his/her registration.

#### **Course Completion with Break in Between:**

A student who has passed M. Sc. – I and is seeking admission to M.Sc. – II after a long gap (Provided the gap lies within the stipulated duration of **Six** years) should complete the course syllabus which is in existence at the time he has sought the admission for the academic year.

#### **Award of degree:**

After successful completion of four semesters of **M. Sc.** (Environment & Safety) mark list ledgers will be forwarded to the Shivaji University for the award of degree.

#### **CBCS Pattern:**

M. Sc. (Environment & Safety) under CBCS pattern shall carry certain number of credits. Credits normally represent the weightage of a course and area function of teaching, learning and evaluation strategies such as number of contact hours, the course content, teaching methodology, learning expectations, etc. The credits shall be based on the number of instructional hours perweek, generally 1credit per one hour of instruction in and 1creditfor 2 hours of practical/summer in- plant project/ lab based project / Fieldwork/internship.

#### **General features of the Choice Based Credit System are:**

- a) The **M. Sc.** (Environment & Safety) programme is structured CBCS Patten.
- b) The Programme consists of Compulsory Core (CC), Discipline Specific Electives (DSE), Generic Electives (GE) and Ability Enhancement Compulsory Courses (AEC). The core papers deal with the specific discipline and the other papers deal with interdisciplinary nature including soft skill aspects.
- c) The relative importance of subjects of study is quantified in terms of credits.
- d) The choice based courses may be offered with in the faculty and/or across the faculty.
- e) The curricula should be unitized giving equal weightage in terms of contact hours and marks.
- f) Well defined model outline of question paper consisting of long answers, brief answers and short notes

- g) The evaluation will be on Continuous Internal Assessment (CIA) and End Semester Assessment (ESA). The final results shall be declared after integration of CIA and ESA
- h) The declaration of result is based on the Grade Point Average (GPA) earned towards the end of each semester and the Cumulative Grade Point Average (CGPA) earned towards the end of the program.
- i) Under the CBCS, students have option to choose courses from other departments as well.

## **Outline of Choice Based Credit System:**

### **1. Core Courses:**

#### **1.1 Compulsory Core (CC):**

A course which should compulsorily be studied by a candidate as Core Course.

#### **1.2 Summer Inplant Project (SIP):**

An elective course in the terms of topic & Industry/organization, designed to acquire special/advanced knowledge, such as supplement study/support study to a project work, and a candidate studies such a course on his own with an advisory support by a teacher / faculty member is called Summer Inplant Project.

#### **1.3 Lab Based/ Survey Project (Research Oriented):**

An elective course designed to acquire special/advanced knowledge such as supplement study/support study, which is research oriented work, and a candidate studies such a course on his own with an advisory support by a teacher / faculty member is called lab based/survey project.

### **2. Elective Courses:**

Generally a course which can be chosen from a pool of courses and which may be very specific or specialized or advanced or supportive to the discipline/ subject of study or which provides an extended scope or which enables an exposure to some other discipline / subject / domain or nurtures the candidate's proficiency/skill is called an Elective Course.

#### **2.1 Discipline Specific Elective (DSE) Courses:**

Elective courses may be offered by the main discipline/subject of study is referred to as Discipline Specific Elective. The University/Institute may also offer discipline related Elective courses of interdisciplinary nature (to be offered by main discipline/subject of study).

#### **2.2 Generic Elective (GE) Courses:**

An elective course chosen generally from an unrelated discipline/subject, with an intention to seek exposure is called a Generic Elective.

### **3. Ability Enhancement Courses (AEC):**

The Ability Enhancement (AEC) Courses are designed that leads to Knowledge enhancement in functional areas; such as Managerial communication at work, foreign languages, skill development

for career management. These courses may be chosen from a pool of courses designed to provide value-based and/or skill-based knowledge.

**Credit Pattern:**

Every course offered will have three components associated with the teaching-learning process of the course, namely

**Lecture - L, Tutorial - T, Practice - P**

Where, **L** stands for *Lecture* session, **T** stands for *Tutorial* Session consisting participatory discussion / self-study/ desk work/ brief seminar presentations by students and such other novel methods that make a student to absorb and assimilate more effectively the contents delivered in the Lecture classes and **P** stands for *Practice* Session on MOODLE , E – Library and it consists of Hands on experience / Laboratory Experiments / Field Studies / Case studies that equip students to acquire the much required skill component.

In terms of credits, every one hour session amounts to 1 credit per semester and a minimum of two hour session of T or P amounts to 1 credit per semester, over a period of one semester of 15 weeks for teaching-learning process. The total duration of a semester is 20 weeks inclusive of semester-end examination.

**M. Sc.** (Environment & Safety) consists of all the three components with weightage depending upon the paper. The total credits earned by a student at the end of the semester upon successfully completing the course are L + T + P. The credit pattern of the course is indicated as L: T: P.

If a course is of 4 credits then the different credit distribution patterns in L: T: P format could be:

Theory Papers: 3: 0.5: 0.5

Practical: 1: 0: 3.0

If a course is of 2 credits then the different credit distribution patterns in L:T: P format could be:

Theory Papers: 1.5: 0.25: 0.25

Practical: 0.5: 0: 1.5

Summer in-plant Project: 0:0.5:1.5

Project work: 0:0.5:1.5

**Teaching programme for each Semester shall consist of:**

- a) Theory Lectures: There will be 60 contact hours / paper / semester for four credits ; @ 4 lectures /paper /week and 30 contact hours / paper / semester @ 2 lectures /paper / week for two credits. Each lecture is of the duration of 60 minutes.
- b) Practical: 3 practical / week. Each practical is of the duration of 3 clock hours, number of students in batches should not exceed 15.

## Credit Grade Based Performance Assessment System (CGPA):

### I. ASSESSMENT:

Taking into consideration the UGC and AICTE requirements, CSIBER has adopted “Credit Grade Based Performance Assessment System” (CGPA). Each paper is of 100 marks and contact hours for each paper is 60. One credit is allotted to 15 contact hours. All papers are considered as Full credit papers i.e. **Four** credits are allotted to each paper. Practical of 50 marks are considered as half credit i.e. Two credit is allotted to each practical.

1. For the paper of 100 marks. The distribution of the marks for theory, practical and project work will be as follows –
  - i) Internal Marks i.e. Concurrent evaluation - 40 Marks
  - ii) External Marks i.e. End Semester examination - 60 marks
2. For the paper of 50 marks. The distribution of the marks will be as follows –
  - i) Internal Marks i.e. Concurrent evaluation - 20 Marks
  - ii) External Marks i.e. End Semester examination - 30 marks
3. SIP project/ Lab based Project Evaluation:
  - i) Internal Marks i.e. Concurrent evaluation - 20 Marks
  - ii) External Marks i.e. End Semester examination - 30 marks

External marks will be given at the time of viva by external and internal and average marks will be calculated out of 30.

#### 4. Breakup of Internal Marks (Concurrent Evaluation)

Sr. No.	Head	Marks Out of 40	Marks Out of 20
1.	Class Participation	10	05
2.	Field Based Visit Report / Case study	10	05
3.	Test / Quiz / Class Test	10	05
4.	Assignment / Seminar	10	05
	Total	40	20

The Internal Marks assessed by the teachers be shown to the students and their signature will be obtained.

The assessment of papers will be done by an Internal and External examiner. A difference of more than **20%** in the marks awarded by these examiners would necessitate the valuation of the paper by Third examiner. The **‘highest nearest’** marks will be considered for determining the average mark of such papers.

5. Once the Student passes in the internal marks (Concurrent evaluation out of 40) and the record is submitted to the examination department, it should be carried forward whenever required and it cannot be change.
6. Students who fail in the internal marks (Concurrent evaluation out of 40) should reappear for the same, then only the revised marks will be considered for further calculation.

## II. STANDARD OF PASSING:

1. In order to pass in a paper / head, a candidate will have to obtain 50% in the internal marks (Concurrent evaluation), 40% marks in theory, and a minimum of 50% of the marks in aggregate in each paper head.
2. To pass the M. Sc. examination, a candidate will have to pass in all Four Semester in Two Parts i.e. Part – I (Semester – I & II) and Part – II (Semester – III & IV )
3. A candidate from the first year M. Sc. will be eligible to proceed to the Semester III, if he /she is not having more than **5 (Five)** papers backlog of the First Year (that is Semester – I & II).

### I Grading System:

#### Full Credit 100 Marks

Grade Table for Trimester/Semester Examination			
Marks Obtained	Letter Grade	Grade Point	Description of Performance
96-100	S+	10.0	SUPER
91-95	S	9.0	
86-90	E+	8.5	Exemplary
81-85	E	8.0	
76-80	O+	7.5	Outstanding
71-75	O	7.0	
66-70	A+	6.5	Good
61-65	A	6.0	
56-60	B+	5.5	Average
50-55	B	5.0	
--	X	0.0	Defaulter
--	XX	---	Incomplete



### Half Credit 50 Marks

<b>Grade Table for Trimester/Semester Examination</b>			
<b>Marks Obtained</b>	<b>Letter Grade</b>	<b>Grade Point</b>	<b>Description of Performance</b>
48 – 50	S+	10.0	SUPER
46 – 47	S	9.0	
43 – 45	E+	8.5	Exemplary
41 – 42	E	8.0	
38 – 40	O+	7.5	Outstanding
36 – 37	O	7.0	
33 – 35	A+	6.5	Good
31 – 32	A	6.0	
28 – 30	B+	5.5	Average
25 – 27	B	5.0	
--	X	0.0	Defaulter
--	XX	---	Incomplete

Final Result: For the final result of the student Cumulative Performance Index (CPI) based on total earned credits vis-à-vis total earned grade points shall be calculated will be as follows.

Total earned grade points / Total credits i.e. **108** credits.

<b>Result</b>		
<b>CPI</b>	<b>Final Grade</b>	<b>Classification of Final Result.</b>
9.0 – 10.0	S	Extraordinary
8.0 – 8.9	E	Excellent
7.0 – 7.9	O	Outstanding
6.0 – 6.9	A	Very Good
5.5 – 5.9	B+	Good
5.0 – 5.4	B	Average
0.0 – 4.9	X	Unsatisfactory (Fail)

**Note:** An aggregate of **5.0** credit points are required to pass the MCA program.

## **CALCULATION OF PERFORMANCE INDICES:**

A distinction of the performance of one student from the other student is rather impossible to carry out from the grades obtained by a student in all the courses taken by him in a semester/year. Hence, the evaluation of various courses is cumulated in two performance indices termed as semester performance index (SPI) and cumulative performance index (CPI), the explanation of which is given below:

### **Semester Performance Index (SPI):**

The performance of a student in a semester is indicated by a number called Semester Performance Index (SPI). SPI is the weighted average of all the grade points obtained by him in all the courses registered during the semester. If  $g_i$  is a grade with numerical equivalent as  $g_i$  obtained by a student for the course with credit  $C_i$  then, SPI for that semester is calculated using formula.

$$SPI = \frac{\sum_i C_i g_i}{\sum_i C_i}$$

where summation is for all the courses registered by a student and Semester SPI is calculated to two decimal places and rounded off. SPI once calculated shall never be modified. Generally, for the students failed in regular examinations SPI is calculated only after the declaration of re-examination grades.

### **Cumulative Performance Index (CPI):**

An up-to-date assessment of the overall performance of a student from the first semester till completion of the programme is obtained by calculating an index called as Cumulative Performance Index (CPI). The CPI is weighted average of the grade points obtained in all the courses registered by a student since the first semester of the programme.

$$CPI = \frac{\sum_i C_i g_i}{\sum_i C_i}$$

Besides SPI, CPI is also calculated at the end of every semester upto two decimal places and is rounded off. It is necessary to ensure that one course appears only once in calculation of CPI and the denominator in above equation does not exceed the total number of credits registered by him.

## **GRACE MARKS UNDER DIFFERENT ORDINANCE.**

**S.O. No. 1:-**Grace Marks for Passing in each head of Passing (Theory/Practical/Oral/Sessional/External).

The Examinee shall be given the benefit of grace marks only for passing in each head of Passing Theory/Practical/Oral/Sessional/ in External examination as follows.

<b>Head of Passing</b>	<b>Grace Marks</b>
Up to – 50	2
051-100	3
101-150	4
151-200	5
201-250	6
251-300	7
301-350	8
351-400	9
And 401 and above.	10

Subject to the following conditions:

The benefit of such gracing marks in different heads of passing shall not exceed 1% of the aggregate marks in that examination.

The benefit of gracing of Marks under this Ordinance shall be applicable only if the candidate passes the entire examination of Semester.

The gracing is concurrent with the rules and guidelines of Professional statutory bodies at the All India level such as AICTE, MCI, Bar Council, CCIM, and CCIH. NCTE, UGC etc.

### **S.O. No. 2:- Grace Marks for Getting Higher Class**

A Candidate who passes in all the courses and heads of passing in the examination without the benefit of either gracing or condonation rules and whose total number of Marks falls short for securing Second Class/Higher Second Class or First Class by marks not more 1% of the aggregate marks of that examination or up to 10 marks, whichever is less, shall be given the required marks to get the next higher class of grade as the case may be.

Provided that benefits of above mentioned grace marks shall not be given, if the candidate fails to secure necessary passing marks in the aggregate head of passing also, if prescribed in the examination concerned.

Provided further that the benefits of above mentioned grace marks shall be given to the candidate for such examination/s only for which provision of award of class has been prescribed.

Provided further that this gracing is concurrent with the rules and guidelines of Professional statutory bodies at the All India level such as AICTE, MCI, Bar Council, CCIM, and CCIII. NCTE, UGC etc.

### **S.O. No. 3 Condonation**

If a candidate fails in more than one head of passing, his/her deficiency of marks in such head of passing may be condoned by not more than 1% at the aggregate marks of the examination. However condonation, whether in one head of passing or aggregate head of passing be restricted to maximum upto 10 marks only.

Condonation of deficiency of marks be shown in the statement of Marks in the form of asterisk and Ordinance number

Provided further that this gracing is concurrent with the rules and guidelines of Professional statutory bodies at the All India level such as AICTE, MCI, Bar Council, CCIM, and CCIII. NCTE, UGC etc..

### **BACKLOG:**

1. A candidate will be permitted to proceed to the second Semester unconditionally even though he/she fails in one or more courses of the first semester, provided the first semester term is granted.
2. The students who have a backlog of not more than **five courses (25% of passing heads)** in the First year examination (Semester I & II) will be eligible to be admitted to the Second year (III Semester) of MCA.
3. A Candidate will be permitted to proceed to the Fourth Semester unconditionally even though he/she fails in one or more courses of the third semester, provided the third semester term is granted.

### **Assessment of AEC and AECC Courses**

AEC Courses will be assessed as follows:

i) Internal Marks i.e. concurrent evaluation	-	20 Marks
ii) External Marks	-	30 Marks

- External Marks (out of 30) will be given on the Viva or presentation by panel consisting of one internal and one external member.
- The Internal Marks assessed by the teachers be shown to the students and their signature will be obtained.

**CBCS Structure of M. Sc. (Environment & Safety)**  
**(To be Implemented from 2021-22)**  
**M.Sc. - I Year**

**Semester – I**

<b>Nature of Choice Base</b>	<b>Choice Code</b>	<b>Subject</b>	<b>Total Credits</b>	<b>L:T:P</b>	<b>Contact Hours</b>	<b>Int. Marks</b>	<b>Ext. Marks</b>	<b>Total Marks</b>
<b>Core Courses (CC)</b>	<b>CC-101</b>	Introduction to Ecology and Environment	4	3:0.5:0.5	60	40	60	100
	<b>CC-102</b>	Natural Resources	4	3:0.5:0.5	60	40	60	100
	<b>CC-103</b>	Fundamentals of Safety	4	3:0.5:0.5	60	40	60	100
	<b>CC-104</b>	Practical-I	4	1:0:3	60	40	60	100
	<b>CC-105</b>	Practical –II	4	1:0:3	60	40	60	100
<b>Discipline Specific Elective (DSE)</b>	<b>DSE-101 (Any One )</b>	<b>DSE-101(A) : Environmental Chemistry</b> <b>DSE-101(B) : Ecological Foot Prints and Carbon sequestration</b>	4	3:0.5:0.5	60	40	60	100
		<b>Total Credits</b>	<b>24</b>		<b>360</b>	<b>240</b>	<b>360</b>	<b>600</b>

## Semester – II

Nature of Choice Base	Subject Code	Subject	Total Credits	L:T:P	Hours	Int. Marks	Ext. Marks	Total Marks
Core Courses (CC)	CC-201	Water Pollution	4	3:0.5:0.5	60	40	60	100
	CC-202	Environmental Engineering and Design	4	3:0.5:0.5	60	40	60	100
	CC-203	Computer Applications	2	1.5:.25:.25	30	20	30	50
	CC-204	Statistical Methods	2	1.5:.25:.25	30	20	30	50
	CC-205	Practical –III	4	1:0:3	60	40	60	100
	CC-206	Practical –IV	4	1:0:3	60	40	60	100
Discipline Specific Elective (DSE)	DSE-201 (Any One )	DSE-201(A): Industrial Hygiene and Occupational Health DSE-201(B): Aquaculture and Agriculture	4	3:0.5:0.5	60	40	60	100
Generic Elective Course (GE)	GE-201 (Any one elective paper from other department courses )	GE-201-A: Fundamentals of Management GE-201-B: Office Automation GE-201-C: Indian Social Problems & Social Services GE-201-D: Principles of Economics GE 201-E : Environment and Development.	2	1.5:.25:.25	30	20	30	50
Ability Enhancement Courses (AEC)	AEC 201	Foreign Languages : AEC-201-A: German AEC-201-B: Japanese AEC-201-C: French	2	1.5:0.25:0.25	30	20	30	50
Ability Enhancement Compulsory Course (AECC)	AECC-201	AECC-201(A) : Professional Communication Skills	2	1.5:0.25:0.25	30	20	30	50
<b>Total Credits</b>			<b>30</b>		<b>450</b>	<b>300</b>	<b>450</b>	<b>750</b>

**M.Sc. - II Year**

**Semester – III**

<b>Nature of Choice Base</b>	<b>Subject Code</b>	<b>Subject</b>	<b>Total Credits</b>	<b>L:T:P</b>	<b>Hours</b>	<b>Int. Marks</b>	<b>Ext. Marks</b>	<b>Total Marks</b>
<b>Core Courses (CC)</b>	<b>CC-301</b>	Environmental Education, Policy, forest and wildlife management	4	3:0.5:0.5	60	40	60	100
	<b>CC-302</b>	Air and Noise Pollution	4	3:0.5:0.5	60	40	60	100
	<b>CC-303</b>	Disaster management	4	3:0.5:0.5	60	40	60	100
	<b>CC-304</b>	Summer In-plant Project (SIP)	2	0:0.5:1.5	30 Days	20	30	50
	<b>CC-305</b>	Practical V	4	1:0:3	60	40	60	100
	<b>CC-306</b>	Practical VI	4	1:0:3	60	40	60	100
<b>Discipline Specific Elective (DSE)</b>	<b>DSE-301 ( Any One Specializations)</b>	<b>DSE-301(A) :</b> Environmental Impact Assessment (EIA) And Environment Management System (EMS). <b>DSE-301(B):</b> Safety Legislations and Management.	4	3:0.5:0.5	60	40	60	100
<b>Generic Elective (GE)</b>	<b>GE-301</b> (Any one elective paper from other department courses )	<b>GE-301(A):</b> Entrepreneurship Development <b>GE-301(B):</b> E-Commerce <b>GE-301(C) :</b> Corporate Social Responsibility <b>GE-301(D):</b> Basics of Indian Economy. <b>GE- 301 ( E) :</b> Disaster Management	2	1.5:0.25:0.25	30	20	30	50
<b>Ability Enhancement Courses (AEC)</b>	<b>AEC 301</b>	<b>AEC 301-A :</b> Environment Legislation <b>AEC 301-B :</b> Remote Sensing and GIS	2	1.5:0.25:0.25	30	20	30	50
<b>Ability Enhancement Compulsory Course (AECC)</b>	<b>AECC-301</b>	<b>AECC-301(A):</b> Employability Skills	2	1.5:0.25:0.25	30	20	30	50
		<b>Total Credits</b>	<b>32</b>		<b>480</b>	<b>320</b>	<b>480</b>	<b>800</b>

## Semester – IV

Nature of Choice Base	Subject Code	Subject	Total Credits	L:T:P	Contact Hours	Int. Marks	Ext. Marks	Total Marks
Core Courses (CC)	CC-401	Environmental Microbiology, Biotechnology and Toxicology	4	3:0.5:0.5	60	40	60	100
	CC-402	Management of Industrial and Civic Wastes.	4	3:0.5:0.5	60	40	60	100
	CC-403	Project Work (Lab./Field/ Survey)	2	0:0.5:1.5	30	20	30	50
	CC-404	Practical VII	4	1:0:3	60	40	60	100
	CC-405	Practical VIII	4	1:0:3	60	40	60	100
Discipline Specific Elective (DSE Any One )	DSE-401	DSE-401(A): Land and Water Management. DSE-401(B): Safety Engineering	4	3:0.5:0.5	60	40	60	100
		<b>Total Credits</b>	<b>22</b>		<b>330</b>	<b>220</b>	<b>330</b>	<b>550</b>

## M. Sc. (Environment & Safety)

### Total Credits:

Semester	Core Credits	DSE	GE	AEC	AECC	Total Credits	Contact Hours	Total marks
I	5 x 4 = 20	1 x 4 = 4				24	360	600
II	4 x 4 = 16 2 x 2 = 4	1 x 4 = 4	1 x 2 = 2	1 x 2 = 2	1 x 2 = 2	30	450	750
III	5 x 4 = 20 1 x 2 = 2	1 x 4 = 4	1 x 2 = 2	1 x 2 = 2	1 x 2 = 2	32	480	800
IV	4 x 4 = 16 1 x 2 = 2	1 x 4 = 4				22	330	550
<b>Total</b>	<b>80</b>	<b>16</b>	<b>04</b>	<b>04</b>	<b>04</b>	<b>108</b>	<b>1620</b>	<b>2700</b>
<b>Percentage</b>	<b>74.07</b>	<b>14.81</b>	<b>3.70</b>	<b>3.70</b>	<b>3.70</b>	<b>99.98</b>		