

# **SYLLABUS**

**FOR**

**M.B.A. (Environment Management)**

**Faculty of Commerce & Management – Under CBCS System**

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



**DEPARTMENT OF ENVIRONMENT MANAGEMENT**

**CHH. SHAHU INSTITUTE OF BUSINESS EDUCATION AND  
RESEARCH (CSIBER),**

**(AN AUTONOMOUS INSTITUTE)**

**UNIVERSITY ROAD, KOLHAPUR 416 004 (M.S), INDIA**

**2021**

## **REVISED STRUCTURE OF M. B. A. (ENVIRONMENT MANAGEMENT) PROGRAMME WITH DUAL SPECIALIZATION**

The M. B. A. (Environment Management) 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. Student can opt any one of the following specializations along with Environment i.e. Agri-Business, Finance, Human Resource, Marketing, Production and Systems.

### **Objectives:**

The specific objectives of programme are:

1. To infuse environmental concepts in all the functional area of business management
2. To provide in-depth knowledge to the students in respect of current business and environmental problems faced by human society and to develop scientific attitude among students based on interdisciplinary approach to enable them to take holistic view in planning and decision-making.
3. To develop managerial competence among students in managing environmental development programs initiated by the Government.
4. To provide students a typical problem-oriented situations in environmental protection, development and management.
5. To inculcate modern concept of Green Industry to the students for sustainable development.

### **Eligibility:**

Candidates should have passed graduation under 10+2+3 pattern from the recognized University.

**Intake:** 60

### **Admission process:**

Student will be admitted purely on merit basis through DTE-CET / ATMA / C-MAT .

### **Reservation:**

Reservation for special categories such as SC, ST, NT, OBC, etc. will be as per the Government of Maharashtra, AICTE and other statutory bodies.

### **Duration:**

The degree of **M. B. A. (Environment Management)** is a full time course and its duration is of **Two Years**. The course 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. B. A. – I and is seeking admission to M. B. A. – 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 MBA(Environment Management) mark list ledgers will be forwarded to the Shivaji University for the award of degree.

#### **CBCS PATTERN:**

MBA (Environment Management) under CBCS pattern carry certain number of credits. Credits normally represent the weightage of a course and are a function of teaching, learning and evaluation strategies such as number of contact hours, the course content, teaching methodology, learning expectations, etc. The credits are based on the number of instructional hours per week, generally 1 credit per one hour of instruction in theory and 1 credit for 2 hours of practical/project work/Field work/internship.

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

- a) The MBA (Environment) programme is structured in 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 inter and intra disciplinary 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 within 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 answer 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 Course:** A course, which should compulsorily be studied by a candidate as a core requirement is termed as a Core course.

1.1 **Summer Inplant Project:** An elective course 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.

2. **Elective Course:** 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) Course:** 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) Course:** 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 and advanced MS- Excel. 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 **Lecture session.**

T stands **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.

P stands **Practice session** on MOODLE , E – Library and it consists of Hands on experience / Laboratory Experiments / Field Studies / Industrial visits/ Case studies that equip students to acquire the much required skill component.

In terms of credits, every one hour session of L 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 16 weeks for teaching-learning process. The total duration of a semester is 20 weeks inclusive of semester-end examination.

MBA (Environment Management) 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

Practicals : 1 : 0 : 3.0

Field Work : 0 : 0 : 4.0

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

Practicals : 0.5 : 0 : 1.50

Field Work : 0 : 0 : 2.0

#### **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 and
- b) Practicals: 1 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 Evaluation:
- i) Internal Marks i.e. Concurrent evaluation - 40 Marks
- ii) External Marks i.e. End Semester examination - 60 marks

External marks will be given at the time of viva by external and internal and average marks will be calculated out of 60.

Breakup of Internal Marks i.e. Concurrent evaluation

Sr. No	Head	Marks 40	Marks 20
1.	Class Participation	10	5
2.	Field Based Project	10	5
3.	MOODLE Test	10	5
4.	Library Based Assignment	10	5
	<b>Total</b>	<b>40</b>	<b>20</b>

**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 '**nearest highest**' marks will be considered for determining the average mark of such papers.

4. 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 improve in any case.
5. 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.

#### **Assessment of AEC 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 basis of 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.

## 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.B.A. 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.B.A. 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).
5. A candidate will be permitted to proceed to the second Semester even though he/she fails in one or more subjects of the first Semester.
6. The students who have a backlog of not more than **five papers** in the First year (Sem. I & II) examination will be eligible to be admitted to the Second year (III<sup>rd</sup> Semester) of M.B.A(Environment Management)
7. A candidate will be permitted to proceed to the Fourth Semester even though he/she fails in one or more subjects in third Semester.
8. Semester Performance Index (SPI) will be as follows:

## III. Grading System:

There shall be numerical marking for each course, which will be placed into credits. Each subject is classified as a major or minor. The major and minor subjects will be given 2 and 1 credits respectively.

### a) Full Credit 100 Marks

Grade Table for 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

**b) Half Credit 50 Marks**

Grade Table for Semester Examination			
Marks Obtained	Letter Grade	Grade Point	Description of Performance
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

**c) 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 116

Result		
CPI	Final Grade	Classification of Final Result.
9.6-10.0	S+	SUPER
9.1-9.5	S	
8.6-9.0	E+	Exemplary
8.1-8.5	E	
7.6-8.0	O+	Outstanding
7.1-7.5	O	
6.6-7.0	A+	Good
6.1-6.5	A	
5.6-6.0	B+	Average
5.0-5.5	B	

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

**IV. 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 r. 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 in that Semester. SPI is calculated to two decimal places and rounded off. SPI once calculated shall 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.

Initially there is certain trepidation in the minds of students and there are some difficulties in understanding the mechanics of this system. Therefore, it was decided that for the first year of implementation, on the mark sheets, both, the marks and the grade points and credits should be shown.

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

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

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

<b>Head of Passing</b>	<b>Grace Marks</b>
00-50	2
051-100	3
101-150	4
151-200	5
201-250	6
251-300	7
301-350	8
351-400	9
401 and above.	10

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

Provided further that the benefit of gracing of Marks under this Ordinance shall be applicable only if the candidate passes the entire examination of Semester/year.

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,CCIII. NCTE, UGC etc.

### **S.O. No. 2:- Grace Marks for getting higher Class**

A Candidate who passes in all the subjects 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 Higher Class or Grade by marks not more than 1% of the aggregate marks of that examination or upto 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,CCIII. NCTE, UGC etc.

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

If a candidate fails in one or more head of passing, having passed in all other heads 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 that examination or 10 marks of the total Number of marks of that of passing in which he/she is failing whichever is less. 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,CCIII. NCTE, UGC etc.

### **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 MBA (Environment Management)**  
**(Implemented from 2021-22)**  
**M. B. A. - I Year**

**Semester – I**

Nature of Choice Base	Choice Code	Name of the Subject	Total Credits	L:T:P	Contact Hours	Int. Marks	Ext. Marks	Total Marks
<b>Core Courses (CC)</b>	<b>CC101</b>	Introduction to Ecology and Natural Resources	4	3:0.5:0.5	60	40	60	100
	<b>CC 102</b>	Air and Noise Pollution	4	3:0.5:0.5	60	40	60	100
	<b>CC 103</b>	Forest and Wildlife Management	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>	Organizational Behavior and Human Resource Management	4	3:0.5:0.5	60	40	60	100
	<b>CC106</b>	Marketing Management	4	3:0.5:0.5	60	40	60	100
<b>Discipline Specific Elective (DSE)</b>	<b>DSE101</b> (Any One )	<b>DSE-101-A:</b> Service Sector Management  <b>DSE-101-B:</b> Family Business Management  <b>DSE-101- C:</b> Information Technology for Managers	4	3:0.5:0.5	60	40	60	100
<b>Ability Enhancement Compulsory Courses (AECC)</b>	<b>AECC 101</b>	<b>AECC- 101-:</b> 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>

Semester – II

Nature of Choice Base	Subject Code	Name of the Subject	Full Credits	L:T:P	Hours	Int. Marks	Ext. Marks	Total Marks
<b>Core Courses (CC)</b>	<b>CC 201</b>	Water Pollution	4	3:0.5:0.5	60	40	60	100
	<b>CC 202</b>	Environmental Engineering and Design	4	3:0.5:0.5	60	40	60	100
	<b>CC 203</b>	Practical - II	4	1:0:3	60	40	60	100
	<b>CC 204</b>	Accounting for Managerial Decisions	4	3:0.5:0.5	60	40	60	100
	<b>CC 205</b>	Business statistics for Environment	4	3:0.5:0.5	60	40	60	100
	<b>CC 206</b>	Legal Frame work of Business	2	1.5:0.25:0.25	30	20	30	50
	<b>CC 207</b>	Research Methodology	2	1.5:0.25:0.25	30	20	30	50
<b>Discipline Specific Elective (DSE)</b>	<b>DSE 201 (Any One)</b>	<b>DSE-201-A:</b> Environmental Microbiology & Biotechnology <b>DSE-201-B:</b> Energy Resource Management & Environmental Toxicology <b>DSE-201-C:</b> Disaster Management	4	3:1:0	60	40	60	100
<b>Generic Elective Course (GE)</b>	<b>GE 201 (Any one elective paper from other department courses)</b>	<b>GE-201-A:</b> Fundamentals of Management <b>GE-201-B:</b> Office Automation <b>GE-201-C:</b> Indian Social Problems & Social Services <b>GE-201-D:</b> Principles of Economics <b>GE 201-E :</b> Environment and Development	2	1:5:0.25:0.25	30	20	30	50
<b>Ability Enhancement Courses (AEC)</b>	<b>AEC 201</b>	<b>Foreign Languages :</b> <b>AEC-201-A:</b> German <b>AEC-201-B:</b> Japanese <b>AEC-201-C:</b> French	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>

**CBCS Structure of MBA (Environment Management)**  
**(Implemented from 2021-22)**  
**M. B. A. - II Year**

**Semester – III**

Nature of Choice Base	Subject Code	Name of the Subject	Full Credits	L:T:P	Hours	Int. Marks	Ext. Marks	Total Marks
<b>Core Courses (CC)</b>	<b>CC 301</b>	Corporate Environmental Strategies	4	3:0.5:0.5	60	40	60	100
	<b>CC 302</b>	EIA and Environmental Management System	4	3:0.5:0.5	60	40	60	100
	<b>CC 303</b>	Practical - III	4	1:0:3	60	40	60	100
	<b>CC 304</b>	Summer In plant Project	4	--	(50days training)	40	60	100
	<b>CC 305 (Specializations)</b>	<b>Any One</b> <b>CC-Spl-I-305-A:</b> International Trade and Finance  <b>CC-Spl-I-305-B:</b> Employee Relations and Labour Laws  <b>CC-Spl-305-C:</b> Buying Behaviour  <b>CC-Spl-I-305-D:</b> Logistics and Supply Chain Management  <b>CC-Spl-I-305-E:</b> Agri-Business, Entrepreneurship and Cooperatives  <b>CC-Spl-I-305-F:</b> Knowledge Management and ERP System	4	3:0.5:0.5	60	40	60	100
<b>Discipline Specific Elective (DSE)</b>	<b>DSE 301 (Specializations)</b>	<b>Any One</b> <b>DSE-Spl-II-301-A:</b> Direct and Indirect Taxes  <b>DSE-Spl-II-301-B:</b> Strategic and International Human Resource Management  <b>DSE-Spl-II-301-C:</b> Marketing Sectors	4	3:0.5:0.5	60	40	60	100

		<b>DSE-Spl-II-301-D:</b> Purchasing and Inventory Management  <b>DSE-Spl-II-301-E:</b> Rural and Agriculture Marketing  <b>DSE-Spl-II-301-F:</b> Information System Audit and Control						
<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
		Total Credits	<b>28</b>		<b>420</b>	<b>280</b>	<b>420</b>	<b>700</b>

Semester – IV

Nature of Choice Base	Subject Code	Name of the Subject	Full Credits	L:T:P	Hours	Int. Marks	Ext. Marks	Total Marks
<b>Core Courses CC</b>	<b>CC 401</b>	Land and Water Management	4	3:0.5:0.5	60	40	60	100
	<b>CC 402</b>	Management of Industrial and Civic Wastes	4	3:0.5:0.5	60	40	60	100
	<b>CC 403</b>	Strategic Management	4	3:0.5:0.5	60	40	60	100
	<b>CC404</b>	Business Ethics and Corporate Governance	4	3:0.5:0.5	60	40	60	100
	<b>CC 405 (Specialization)</b>	<p><b>Any one</b></p> <p><b>CC-Spl-I-405-A:</b> Management Accounting and Control System</p> <p><b>CC-Spl-I-405-B:</b> Performance and compensation Management</p> <p><b>CC-Spl-I-405-C:</b> Sales and Distribution Management</p> <p><b>CC-Spl-I-405-D:</b> Modern Approaches to Quality Management</p> <p><b>CC-Spl-I-405-E:</b> Agri Production and Supply chain Management</p> <p><b>CC-Spl-I-405-F:</b> Applied Data Science and Business Analytics using R</p>	4	3:0.5:0.5	60	40	60	100
<b>Discipline Specific Elective (DSE)</b>	<b>DSE 401</b>	<p><b>Any One</b></p> <p><b>DSE-Spl-II-401-A:</b> Investment and Portfolio Management</p> <p><b>DSE-Spl-II-401-B:</b> Talent and Human Capital Management</p> <p><b>DSE-Spl-II-401-C:</b> Integrated Marketing Communication</p> <p><b>DSE-Spli-II-401-D:</b> Project Management</p>	4	3:0.5:0.5	60	40	60	100



		<b>DSE-Spl-II-401-E:</b> Agri Commodity Markets and Agri Business  <b>DSE-Spl-II-401-F:</b> Software Engineering and I. T. Project Management						
Ability Enhancement Compulsory Courses (AECC)	AECC 401	AECC-401-Employability Skill.	2	1.5:0.25:0.25	30	20	30	50
<b>Total Credits</b>			<b>26</b>		<b>390</b>	<b>260</b>	<b>390</b>	<b>650</b>

Note : 1. L stands for lectures, T for tutorial and P for practice

2. Average Contact hours per semester are 435 contact hours.

Semesters	Core Credits	DSE	AECC	AEC	GE	Total Credits	Contact Hours	Total marks
I	6 x 4 = 24	1 x 4 = 4	1 x 2 = 2			30	450	750
II	5x 4 = 20 2 x 2 = 4	1 x 4 = 4		1 x 2 = 2	1 x 2 = 2	32	480	800
III	5 x 4 = 20	1 x 4 = 4		1 x 2 = 2	1 x 2 = 2	28	420	700
IV	5x4 = 20	1x 4 = 4	1 x 2 = 2			26	390	650
<b>Total</b>	<b>88</b>	<b>16</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>116</b>	<b>1740</b>	<b>2900</b>
<b>Percentage</b>	<b>75.86</b>	<b>13.79</b>	<b>3.44</b>	<b>3.44</b>	<b>3.44</b>	<b>99.97</b>		

# **MBA(ENVIRONMENT MANAGEMENT)**

## **SEMESTER – I**

<b>Semester</b>	<b>I</b>	<b>Total Credit</b>	<b>4</b>
<b>Course Code</b>	<b>CC 101</b>	<b>Credit Pattern</b>	<b>L-45, T-8, P-7</b>
<b>Course Title</b>	<b>INTRODUCTION TO ECOLOGY AND NATURAL RESOURCES</b>		

### **Course Objectives**

1	Infuse basic ecological concepts and use scientific skills and knowledge to manage ecological problems.
2	Sight and accomplish natural resources and its issues with special preference to India.

### **Course Outcomes: The students will able to**

1.	Acquire the knowledge of Environmental Science and its multidisciplinary approach, ecosystem, types of ecosystem and its components.
2.	Interpret the consequences the biogeochemical cycles and human interference in cyclic process.
3.	Develop ability to identify local issues related with environment and natural resources.
4.	Infer about land as a resource its management, classification, importance and about land use pattern.

### **Syllabus:**

<b>Unit Number</b>	<b>Contents</b>	<b>Number of Sessions</b>	
<b>1</b>	Introduction to Environmental Science as a multi-disciplinary subject, its scope and necessity. General Accounts of Biosphere and Limits of Biosphere. Concepts of Ecosystem, Structure and Functions of ecosystem: Principles of organism-environment relationship; Ecological amplitudes, limits and tolerance to stresses.	<b>L= 12</b>	
		<b>T=2</b>	<b>P=1</b>
<b>2</b>	Concept of habitat; Ecological succession & Types of Ecosystem. Ecological energetics, energy flow in the ecosystem and Ecological food chain. Autecology of plant species. Biogeochemical cycles - Carbon, Nitrogen, Phosphorous and Sulphur. Inventories of important elements, Human interference in cyclic process.	<b>L= 11</b>	
		<b>T= 2</b>	<b>P= 2</b>
<b>3</b>	<b>Natural Resources:</b> Structure and composition of the earth, concept of Natural Resources and their classification. Conventional and Non energy resources. Natural Resources of India: Mineral Resources: with special reference to their occurrence, distribution and utilization of metallic minerals and non-metallic minerals. Biological diversity and concept Forest resources: forest cover and types, Major and minor forest products, Marine resources: Food, Mineral and Energy. Water resources: Unique properties water, Concept of hydrological cycles, monsoons Distribution, Classification and sources of surface and groundwater, water resource scenario in India, issues related to water resources.	<b>L= 11</b>	
		<b>T= 2</b>	<b>P= 2</b>

<b>4</b>	Soil Resources Definition and composition of soil, Soil formation process, Soil profile, Components and properties of soil, Classification of soil, Soil erosion Universal Soil Loss Equation (USLE), Land as a resource - importance of land formation, basic concept of land, land resources, land cover and land use classification, land characteristics – issues related to land use.	<b>L=11</b>	
		<b>T=2</b>	<b>P= 2</b>

### Learning Resources

<b>1</b>	<b>Text Book</b>	<ul style="list-style-type: none"> <li>• Fundamentals of Ecology by Odum, E.P.</li> <li>• Environmental Science by Nobel, B.J. and Kormandy, E.J. (1981), The Way the World Works, Prentice-Hall Inc., N.J.</li> <li>• Environmental Science by Turk A., Turk, J. Wittes J.T. and Wittes, R.E. (1978)</li> <li>• Environmental Studies by Anindita Basak, 2009, Dorling Kindersley, New Delhi Publication.</li> <li>• Vogel's Textbook of Quantitative Chemical Analysis, 5<sup>th</sup> edition, J H Basett, J. Nendham and Denny, R.C.</li> <li>• Textbook Of Remote Sensing &amp; Geographical Inform. Systems by KALI CHARAN, Atlantic Publisiers, 2018</li> <li>• Text Book Of Soil Science by PAL, CBS publishers, 2018</li> <li>• Textbook Of Environmental Science And Technology by REDDY, BSP publishers, 2019</li> <li>• A Textbook Of Environmental Studies, Dr D K Asthana, S. Chand Publishers, 2018</li> <li>• A Text Book Of Environmental Studies by Vijay Tiwari, Himalaya Publishers, 2017</li> <li>• Textbook On Biotechnology by Hd Kumar, Affiliated East-West Press Pvt Ltd, 2003</li> </ul>
<b>2</b>	<b>Reference books</b>	<ul style="list-style-type: none"> <li>• Ecology of Urban India by Pramod Singh</li> <li>• Ecology of Rural India by Singh</li> <li>• Ecology 2000 by Sir Edmand Hillary</li> <li>• Environmental Chemistry – II Edition by A.K. De</li> <li>• Principles of Environmental Science by Watt, K.E.F. (1973), McGraw-Hill Book Company,</li> <li>• Basic Ecology by Odum, E.P. (1973)</li> <li>• Manual for field ecology by R. Mishra</li> <li>• Modern concepts of ecology by H.D. Kumar</li> <li>• Plant ecology by Ambhast</li> <li>• Elements of Ecology by Thomas M. Smith and Robert Leo Smith, 2007, Published by Dorling ,Kindersley, New Delhi.</li> <li>• Ecology and Environment by P.D. Sharma, 2012, Rastogi Publications, Meerut, India.</li> <li>• Mineral Resources by Krishna Swamy</li> <li>• Environmental Geology by KS Valdiya</li> <li>• Energy Resources and Science by Kirwan</li> <li>• Environmental Resources by Mathur</li> <li>• Handbook of Minerals, IBM (1993)</li> <li>• Biodiversity, MacMillan India Ltd., Swaminathan, M. S. and Jana, S. Eds. 1992: Madras</li> <li>• Singh, B. K. 2004: Biodiversity Conservation and Management, Mangaldeep Publications, Jaipur</li> <li>• Higman, S. <i>et al.</i>, 1999: The Sustainable Forestry Hand Book, Earth Scan Publications Ltd., London</li> <li>• Puri, G. S. <i>et al</i>: Forest Ecology, Oxford &amp; IBH, Bombay</li> </ul>

		<ul style="list-style-type: none"> <li>• Desai, V. : Forest Management in India : Issues and Problems, Himalaya Publishing House, New Delhi</li> <li>• Singh, A. K. 1987: Forest Resources, Ecology and Environment, Concept</li> <li>• Sarma, P. K.: Forest Resources and their Utilization in India, Mittal Publishers, New Delhi</li> </ul>
3	<b>Websites</b>	<ul style="list-style-type: none"> <li>• <a href="https://www.toppr.com/guides/biology/ecosystem/biogeochemical-cycle/">https://www.toppr.com/guides/biology/ecosystem/biogeochemical-cycle/</a></li> <li>• <a href="https://nca2014.globalchange.gov/report/sectors/biogeochemical-cycles">https://nca2014.globalchange.gov/report/sectors/biogeochemical-cycles</a></li> <li>• <a href="https://www.conserve-energy-future.com/what-is-environmental-science-and-its-components.php">https://www.conserve-energy-future.com/what-is-environmental-science-and-its-components.php</a></li> <li>• <a href="http://www.biologydiscussion.com/natural-resources/natural-resources-of-india-availability-and-problems/16685">http://www.biologydiscussion.com/natural-resources/natural-resources-of-india-availability-and-problems/16685</a></li> <li>• <a href="http://www.yourarticlelibrary.com/economics/what-are-the-different-types-of-natural-resources-produced-in-india/2683">http://www.yourarticlelibrary.com/economics/what-are-the-different-types-of-natural-resources-produced-in-india/2683</a></li> </ul>
4	<b>Journals</b>	<ul style="list-style-type: none"> <li>• Down to Earth</li> <li>• Every Thing About Water</li> <li>• Journal of Environmental Biology</li> </ul>
5	<b>Supplementary Reading</b>	<ul style="list-style-type: none"> <li>• National Geographic</li> </ul>
6	<b>Practical Component</b>	<ul style="list-style-type: none"> <li>• Field visit to various ecosystems</li> <li>• Group discussions on current topics of natural resource degradation</li> <li>• Debate on various issues</li> </ul>

<b>Semester</b>	<b>I</b>	<b>Total Credit</b>	<b>4</b>
<b>Course Code</b>	<b>CC 102</b>	<b>Credit Pattern</b>	<b>L-45, T-8, P-7</b>
<b>Course Title</b>	<b>AIR AND NOISE POLLUTION</b>		

### Course Objectives

1	Make the students aware about the facts of air pollution.
2	Explain the effect and control methods of the air and Noise pollution.

### Course Outcomes:

1.	Appraisal of present air pollution status.
2.	Identify existing and potential sources of air pollution.
3.	Identify and Classify existing sources of noise pollution.

### Syllabus:

Unit Number	Contents	Number of Sessions	
1	<b>Meteorology and Atmosphere:</b> Primary and secondary atmosphere, weather and climate, Atmosphere engine, physical and chemical properties off atmosphere, vertical structure of atmosphere. Meteorological elements – Definition and measurements: Temperature, pressure, humidity, Wind speed and direction, precipitation, forms of precipitation. Atmospheric circulation Lapse rate – Environmental, dry adiabatic lapse rate and effective. Atmospheric stability: concept and types, pasquill stability classification. wind rose, heat island effect, Inversion of temperature and turbulence, Mixing heights, plume behavior.	L= 12	
		T=2	P=1
2	<b>Air Pollution:</b> Definition, terminology, sources of air pollution Classification of air pollutants, Air quality standards Acid rain, Green house effect and Global Warming Ozone layer depletion, Dispersion of pollutants in the atmosphere: Gaussion dispersion model, Effect of air pollution and acid rain on plants, animals and property.	L= 11	
		T= 2	P= 2
3	<b>Air Pollution Control :</b> Particulate matter– settling chamber, cyclone, Wet collector, Fabric filter and Electro Static Precipitators Gaseous Pollutants: Adsorption and absorption, Condensation, wet scrubber Mobile sources: Incineration, Adsorption and absorption, alternative fuels Indoor air pollution, Air pollution episodes.	L= 11	
		T= 2	P= 2
4	<b>Noise Pollution:</b> Definition, scope, properties of sound; Theory of noise measurement; Sound pressure, loudness, sound intensity; Hearing mechanism; Threshold noise level, Sources of noise pollution, Effect of noise pollution on human-beings and wildlife, Noise control measures.	L=11	
		T=2	P= 2

## Learning Resources

<b>1</b>	<b>Text Book</b>	<ul style="list-style-type: none"> <li>• A Text Book of Engineering Chemistry, Dara, Chand</li> <li>• A Text Book Environmental Studies, Chatawal &amp; Sharma, HPH</li> <li>• Textbook Of Environmental Science And Technology by REDDY, BSP publishers, 2019</li> <li>• A Textbook Of Environmental Studies, Dr D K Asthana, S. Chand Publishers, 2018</li> <li>• A Text Book Of Environmental Studies by Vijay Tiwari, Himalaya Publishers, 2017</li> <li>• Textbook On Biotechnology by Hd Kumar, Affiliated East-West Press Pvt Ltd, 2003</li> <li>• Fundamentals of Ecology by Odum, E.P.</li> <li>• Environmental Science by Nobel, B.J. and Kormandy, E.J. (1981), The Way the World Works, Prentice-Hall Inc., N.J.</li> <li>• Environmental Science by Turk A., Turk, J. Wittes J.T. and Wittes, R.E. (1978)</li> <li>• Environmental Studies by Anindita Basak, 2009, Dorling Kindersley, New Delhi Publication.</li> <li>• Vogel's Textbook of Quantitative Chemical Analysis, 5<sup>th</sup> edition, J H Basett, J. Nendham and Denny, R.C.</li> </ul>
<b>2</b>	<b>Reference books</b>	<ul style="list-style-type: none"> <li>• Air Pollution By: Arthur C Stern. 3rd Edn. Vol. I, II, VI, VII, Academic Press (1986)</li> <li>• Air Quality By: Thad Godish, 3rd Edition, Lewis Publishers, New York (1997)</li> <li>• Understanding Environmental Pollution By: Marquita K Hill. Cambridge University Press (1997)</li> <li>• Pollution: Causes, Effects &amp; Control Edited By: Roy M Harrison. 2nd Edn. The Royal Society of Chemistry Cambridge (1995)</li> <li>• Environmental Chemistry: A Global Perspective By: Gary W vanLoon &amp; Stephen J Duffy. Oxford University Press (2000)</li> <li>• Handbook of Air Pollution Control Engineering &amp; Technology By: John C Mycock, John D McKenna &amp; Louis Theodore. Lewis Publishers, CRC London (1995)</li> <li>• Handbook of Pollution Control Processes By: Robert Noyes. Jaico Publishsing House, Mumbai (2001)</li> <li>• An Introduction to Air Pollution By: RK Trivedy &amp; PK Goel. ABD Publishers Jaipur, India (2003)</li> <li>• Air Pollution By MN Rao &amp; HVN Rao. Tata McGraw-Hill Publishing company Ltd., New Delhi (1994)</li> <li>• Environmental Chemistry By: AK De. 3rd Edn. New Age International (P) Ltd. Pub. (1999)</li> <li>• Environmental Air Pollution and its Control By: GR Chhatwal, MC Mehra, M Satake, T Katyal, Mohan Katyal, T Nagahiro. Anmol Publications, Delhi (1993)</li> <li>• Environmental Chemistry By: BK Sharma. Krishna Prakashan Media, Meerut (1994)</li> <li>• Air Pollution by Perkin HG</li> <li>• Air monitoring survey design by Noll KE and Miller TL</li> <li>• Fundamentals of Air Pollution by Stern AC, Henry Wohlers, GR Richard, Boulal, W and William Lowry, P.</li> <li>• Air Pollution by Wack, K and Warner CF</li> <li>• Air Pollution by Sainfeld JH</li> <li>• Air Pollution by HC Pertin</li> </ul>

		<ul style="list-style-type: none"> <li>• Air Pollution by Strauss</li> <li>• Air Pollution Control Theory by Crawford</li> <li>• The Atmosphere by Tarbuch and Lutgen</li> <li>• The Weather Book by Williams, Jack, USA</li> </ul>
3	Website	<ul style="list-style-type: none"> <li>• <a href="http://www.imd.gov.in/Welcome%20To%20IMD/Welcome.php">http://www.imd.gov.in/Welcome%20To%20IMD/Welcome.php</a></li> <li>• <a href="https://www.niwa.co.nz/education-and-training/schools/students/layers">https://www.niwa.co.nz/education-and-training/schools/students/layers</a></li> <li>• <a href="http://www.indiaenvironmentportal.org.in/category/37/thesaurus/air-pollution-control/">http://www.indiaenvironmentportal.org.in/category/37/thesaurus/air-pollution-control/</a></li> <li>• <a href="https://www.environmentalpollutioncenters.org/noise-pollution/">https://www.environmentalpollutioncenters.org/noise-pollution/</a></li> </ul>
4	Journals	<ul style="list-style-type: none"> <li>• International Journal of Environmental Engineering Science, ISSN No .2229-3094</li> <li>• International Journal of Environmental Pollution Control &amp; Management , ISSN No .0975-3842</li> <li>• Journal of Biosciences, ISSN No. 0250-5991</li> <li>• Current Science, ISSN No. 0011-3891</li> </ul>
5	Supplementary reading	<ul style="list-style-type: none"> <li>• CPCB reports</li> <li>• MPCB reports</li> </ul>
6	Practical Component	<ul style="list-style-type: none"> <li>• Industrial visit to learn air pollution sources</li> <li>• Noise monitoring during festivals like Ganpati, Navratra and Diwali</li> <li>• Traffic noise monitoring</li> <li>• Traffic air pollution monitoring</li> </ul>

<b>Semester</b>	<b>I</b>	<b>Total Credit</b>	<b>4</b>
<b>Course Code</b>	<b>CC 103</b>	<b>Credit Pattern</b>	<b>L-45, T-8, P-7</b>
<b>Course Title</b>	<b>FOREST AND WILDLIFE MANAGEMENT</b>		

### Course Objectives

1	Understand the importance of Forest & wildlife
2	Describe management methods for conservation & protection of forest & wildlife,

### Course Outcomes: The students will able to

1.	Explain importance of forest with its ecological functions.
2.	Develop a plan for forest management.
3.	Describe forest conservation strategies.
4	Distinguish between various wildlife conservation projects.
5.	Prepare a strategy for conservation of wildlife at local to international level.
6.	Elaborate various conservation practices at national level.

### Syllabus:

Unit Number	Contents	Number of Sessions	
1	<b>FOREST MANAGEMENT</b> <b>Unit I:</b> Forest and ecological balance. Productive, protective & regulatory benefits of forest, forest ecology, forest environment and development. Forest economics, Demand and supply of forests resources, Exploitation of forests, Deforestation. Joint Forest Management, Nursery establishment & measuring forest.	<b>L= 11</b>	
		<b>T=2</b>	<b>P=1</b>
2	<b>Unit II</b> Forest Management strategies vis-à-vis ecological balance. Protection/conservation forestry & Extension forestry. Afforestation: Concept & practices of Social forestry - Agro-forestry , forest and tribal, waste land development, Forest development corporation, Endangered species, concept of Biosphere reserves, rhyosphere flora and its role in forestry.	<b>L= 11</b>	
		<b>T= 3</b>	<b>P= 0</b>
3	<b>Unit III :</b> Wildlife as a Resource, threats to wildlife, wildlife environment, methods of study, Wildlife wealth of India, Endangered fauna of India, Wildlife diseases, Concept & Criteria of Ecological Sensitive Zone, Wild-life conservation and management strategy, Application of tissue culture in conservation of plant and animal species, wildlife censuses methods, censuses analysis & interpretation.	<b>L= 11</b>	
		<b>T=2</b>	<b>P= 2</b>
4	<b>Unit IV :</b> Measures of Conservation of wildlife: National Parks, Sanctuaries and facilities, National and international organizations, eco sensitive zones-concepts & criteria's. Improvement and development of wildlife environment, Project Tiger, Tiger Reserves in India, Crocodile Breeding, Project Elephant, Save Barasingha, Investigation and identification of potential and prospective threats.	<b>L= 12</b>	
		<b>T=2</b>	<b>P= 2</b>

### Learning Resources

1	<b>Text Books</b>	<ul style="list-style-type: none"> <li>Wildlife Management and Conservation: Contemporary Principles and Practices, Paul R. Krausman, James W. Cain, JHU Press</li> <li>Fundamentals of Wildlife Management, Author: Rajesh Gopal, Publisher: <a href="#">Natraj</a></li> </ul>
---	-------------------	---



		<ul style="list-style-type: none"> <li>• Concepts in Wildlife Management, by B.B. Hosetti (Author), Daya Publishing House, 2nd Revised edition edition, 2005</li> <li>• A Text Book of Ecology, S K Dubey, Dominant Publication</li> <li>• A Text Book of Ecology, Tyler Miller, Cengage Learning</li> <li>• A Text Book of Plant pathology, Sambamurty, I K Intarnetional.</li> <li>• A Text book of Agricultural Biotechnology, Ahindra Nag, PHI</li> </ul>
2	Reference books	<ul style="list-style-type: none"> <li>• Environmental Management Strategies: The 21st Century Perspective Volume 5 (Environmental Management and Engineering Series) Gabriele Crognale (Author) Publisher: Prentice Hall, 1999.</li> <li>• Corporate Environmental Strategy: The Avalanche of Change Since Bhopal Bruce Piasecki Wiley.</li> <li>• Environmental Strategies for Industry: International Perspectives On Research Needs And Policy Implications (The Greening of Industry Ne Island Press; 4th edition ( twork Series), <u>Kurt Fischer</u> (Editor), <u>Johan Schot</u> (Editor).</li> <li>• Corporate Environmental Strategy and Competitive Advantage (New Perspectives in Research on Corporate Sustainability Series) Hardcover – Import, 27 Jul 2005 by Sanjay Sharma (Editor), J. Alberto Aragon-Correa (Editor), Edward Elgar Publishing Ltd (27 July 2005).</li> <li>• Environmental Management, N K Uberoi, Published by Excel Books.</li> <li>• Forest Management and Planning <u>Peter Bettinger</u>, <u>Pete Bettinger</u>, <u>Kevin Boston</u>, <u>Jacek P. Siry</u>, <u>Donald L. Grebner</u>, Academic Press, 2010.</li> <li>• Forest Management in India, S.S. Negi, Published by Bishen Singh Mahendra Pal Singh, 2011.</li> <li>• Forest Management and Planning <u>Peter Bettinger</u>, <u>Pete Bettinger</u>. Forest Management in India, S.S. Negi, Published by Bishen Singh Mahendra Pal Singh, 2011.</li> <li>• Wildlife Management and Conservation: Contemporary Principles and Practices, Paul R. Krausman, James W. Cain, JHU Press.</li> <li>• <b>Fundamentals of Wildlife Management</b>, Author: Rajesh Gopal, Publisher: <u>Natraj</u>.</li> <li>• Concepts in Wildlife Management, by B.B. Hosetti (Author), Daya Publishing House.</li> <li>• Wildlife Management and Conservation: Contemporary Principles and Practices, Paul R. Krausman, James W. Cain, JHU Press.</li> </ul>
3	Websites	<ul style="list-style-type: none"> <li>• <a href="http://www.fao.org/forestry/sfm/85084/en/">http://www.fao.org/forestry/sfm/85084/en/</a></li> <li>• <a href="https://en.wikipedia.org/wiki/Forest_management">https://en.wikipedia.org/wiki/Forest_management</a></li> <li>• <a href="http://www.legalserviceindia.com/article/1215-Forest-Management-In-India.html">http://www.legalserviceindia.com/article/1215-Forest-Management-In-India.html</a></li> <li>• <a href="https://unfccc.int/process/transparency-and-reporting/greenhouse-gas-data/greenhouse-gas-data-unfccc/global-warming-potentials">https://unfccc.int/process/transparency-and-reporting/greenhouse-gas-data/greenhouse-gas-data-unfccc/global-warming-potentials</a>.</li> <li>• <a href="http://moef.gov.in/wildlife/">http://moef.gov.in/wildlife/</a></li> <li>• <a href="https://www.iucn.org/">https://www.iucn.org/</a></li> <li>• <a href="https://www.worldwildlife.org/">https://www.worldwildlife.org/</a></li> <li>• <a href="http://extwprlegs1.fao.org/docs/pdf/ind3171.pdf">http://extwprlegs1.fao.org/docs/pdf/ind3171.pdf</a></li> </ul>
	Journals	<ul style="list-style-type: none"> <li>• Current Science, ISSN No. 0011-3891</li> <li>• Down to Earth</li> <li>• Journal of Environmental Biology, ISSN No. 0254-8704</li> <li>• Journal of Biosciences, ISSN No. 0250-5991</li> </ul>
	Supplementary Reading	<ul style="list-style-type: none"> <li>• National Forest Policy</li> </ul>

<b>Semester</b>	<b>I</b>	<b>Total Credit</b>	<b>4</b>
<b>Course Code</b>	<b>CC 104</b>	<b>Credit Pattern</b>	<b>L-15, T-0, P-45</b>
<b>Course Title</b>	<b>PRACTICAL- I</b>		

#### Course Objectives

1. The students should know the experimental procedures for analysis of environmental samples.

#### Course Outcomes: The students will able to

1. Develop methodology for sample collection, processing and preservation for environmental analysis.

2. Make use of glassware, their appropriate cleaning.

3. Plan analytical techniques/experiments/ classical methods with easy to run experiments.

4. Interpret the experimental results to study ecological/ environmental processes.

#### Syllabus:

Sr.No.	Title	Number of Sessions	
		T=0	P=45
1	Estimation of Biomass prod .by grassland ecosystem	L= 15	
2	Acid Base Titration(Standardization)	T=0	P=45
3	Na & K in water		
4	Study of density & relative density of grassland species		
5	Study of Mineral & Rocks		
6	Estimation of Oxides of Nitrogen from ambient air		
7	Estimation of Sulphur dioxide from ambient air		
8	Estimation of Nitrate from water using UV-VIS		
9	Sound Level Meter		
10	Permanganate Value		
11	Estimation of Total hardness, Calcium & Magnesium		
12	Estimation of SPM & RPM by using HVS		
13	Water holding capacity, bulk density & moisture content of soil		
14	Calorific Value of fuel wood		
15	Determination of Chlorides & Total Alkalinity ( $\text{HCO}_3$ & $\text{CO}_3$ )		
16	Determination of freq. distribution from given set of data		
17	Estimation of pH & EC from given water sample		
18	Wood pyrolysis		
19	Audiometry		
20	Estimation OC & OM from soil		

#### Resources

<b>1</b>	<b>Reference books</b>	<ul style="list-style-type: none"> <li>Water &amp; Waste Water analysis : Dr. R.K. Trivedy &amp; Dr. P.K.Goel</li> <li>Standard Methods of water &amp; Waste water analysis: APHA</li> <li>Hand book of Methods in Environmental Studies (Vol.I) : S.K.Maiti</li> <li>Hand book of Methods in Environmental Studies (Vol.II) : S.K.Maiti</li> <li>A text book of Soil analysis : Baruah &amp; Barthakur</li> </ul>
----------	------------------------	--

<b>Semester</b>	<b>I</b>	<b>Total Credit</b>	<b>4</b>
<b>Course Code</b>	<b>CC 105</b>	<b>Credit Pattern</b>	<b>L-45, T-8, P-7</b>
<b>Course Title</b>	<b>ORGANIZATIONAL BEHAVIOR AND HUMAN RESOURCE MANAGEMENT</b>		
<b>Course Objectives:</b>			
1	To study individual and group perspectives of behavior in an organization.		
2	To develop skills in understanding and appreciating individual, inter-personal and group process for increased effectiveness, both within and outside organizations.		
3	To enable student to gain insights for effectively managing human resource in the organization.		
4	To design and implement different HR functions covered in the course.		
<b>Course Outcomes: Students will be able to</b>			
1	Demonstrate a thorough knowledge of organizational behavior.		
2	Apply relevant contemporary theories, concepts and models in order to analyze organizational environment, cases and issues.		
3	Identify the wide range of sources for attracting and recruiting talent and appropriate process for selecting candidates.		
4	Conduct job analysis interview develop job descriptions and job specifications, conduct performance appraisal.		
5	Develop, implement, and evaluate employee orientation, training, and development programs.		

<b>Unit Number</b>	<b>Contents</b>	<b>Number of Sessions</b>
1	Definition and Importance of OB, Perception – Definition, Importance and Factors Influencing Perception, Motivation: Definition, Theories in Motivation- Maslow, Theory X and Y, Z Theory. Individual Perspective: Personality – Determinants of personality, Theories of personality- Type A and B, Big five, Locus of control.	<b>L= 11</b>
		<b>T=2 P= 2</b>
2	Attitude – Characteristics, Components, Formation, Values. Concept of Groups, Stages in Group Formation, Types of power, Power and Politics. Human Resource Management- Meaning, Objectives, Scope, Functions, Job Analysis- Job Description and Job Specification.	<b>L = 12</b> <b>T=2 P=1</b>
3	Concept of Human Resource Planning and importance, Recruitment- Definition, Sources of Recruitment, Employee Selection Process. Training and development- Methods of training and development.	<b>L= 11</b> <b>T=2 P=2</b>
4	Performance Appraisal- Methods of Performance Appraisal, Problems in Performance Appraisals and solutions, Factors to be considered for Fixing Compensation, Employee Health, Safety and Welfare. Green HRM Practices	<b>L= 11</b>
		<b>T=2 P= 2</b>

Note:

1. Case Studies on Each of the Aspects Mentioned in the Syllabus need to be discussed.
2. Video cases and Documentary Films relating to the syllabus to be exhibited in the class

## Learning Resources

<b>1</b>	<b>Text Books</b>	<ol style="list-style-type: none"> <li>1. K. Aswathappa, Organisational Behaviour, Himalaya Publishing House, 12<sup>th</sup> Revised Edition 2016.</li> <li>2. Dr. S. S. Khanka , Organisational Behavior (Text and Cases), S.Chand Publication, Revised Edition 2013.</li> <li>3. P.Subba Rao , Personnel and Human Resource Management, Himalaya Publishing House 5<sup>th</sup> Revised Edition 2014.</li> </ol>
<b>2</b>	<b>Reference books</b>	<ol style="list-style-type: none"> <li>1. Fred Luthans, Organisational Behavior, McGraw Hill, 11<sup>th</sup> Edition, 2001.</li> <li>2. Hellrigal, Slocum and Woodman, Organisational Behavior, Cengage Learning, 11<sup>th</sup> Edition 2007.</li> <li>3. Ivancevich, Konopaske &amp; Maheson, Organisational Behaviour &amp; Management, 7<sup>th</sup> edition, Tata McGraw Hill, 2008.</li> <li>4. Mc Shane &amp; Von Glinov, Organisational Behaviour, 4<sup>th</sup> Edition, Tata McGraw Hill, 2007.</li> <li>5. Schermerhorn, Hunt and Osborn, Organisational behavior, John Wiley, 9<sup>th</sup> Edition, 2008.</li> <li>6. P G Aquinas, Organisational Behaviour : concepts, realities, applications and challenges, Excel Books.</li> <li>7. Gary Dessler, Human Resource Management Prentice Hall Of India, New Delhi, Tenth Edition.</li> <li>8. Bohlander And Snell, Managing Human Resources 13th Edition, Thomson – South Western.</li> <li>9. David A. Decenzo, Stephen P. Robbins, Personnel / HRM (3rd Edition), Prentice Hall Of India, New Delhi.</li> </ol>
<b>3</b>	<b>Websites</b>	<ol style="list-style-type: none"> <li>1. <a href="http://www.iupindia.in">www.iupindia.in</a></li> <li>2. <a href="http://www.istd.co.in">www.istd.co.in</a></li> <li>3. <a href="http://www.humancapital.com">www.humancapital.com</a></li> </ol>
<b>4</b>	<b>Journals</b>	<ol style="list-style-type: none"> <li>1. IUP Journal of Organizational Behavior</li> <li>2. Indian Journal of Training and Development</li> <li>3. Indian Journal of Human Development</li> <li>4. South Asian Journal of Human Resource Management.</li> </ol>
<b>5</b>	<b>Supplementary Reading</b>	<ol style="list-style-type: none"> <li>1. South Asian Journal of Practical Research</li> <li>2. Business India – The Magazine of Corporate World</li> </ol>
<b>6</b>	<b>Practical Component</b>	<ul style="list-style-type: none"> <li>• Study organizational Structure of any company and present in the class.</li> <li>• Class debate on different basis of departmentalization</li> <li>• Identify any business leader and list his qualities that made him a good leader.</li> <li>• Visit any organization and find out how it motivates its employees and discuss in class.</li> <li>• Library Exercise on CSR activities undertaken by any one company of your choice.</li> </ul>

<b>Semester</b>	<b>I</b>	<b>Total Credit</b>	<b>4</b>
<b>Course Code</b>	<b>CC 106</b>	<b>Credit Pattern</b>	<b>L-45, T-8, P-7</b>
<b>Course Title</b>	<b>MARKETING MANAGEMENT</b>		

#### Course Objectives

1	To create an awareness about fundamentals of marketing.
2	To cover the basic concepts of marketing and develop conceptual abilities and substantive knowledge in marketing through a variety of real-life marketing situations.
3	To understand the use of marketing mix in marketing decision making.

#### Course Outcomes: Students will be able to;

1	Discuss conceptual knowledge of Marketing Concepts.
2	Analyze marketing situation and provide appropriate solution for the issue.
3	Devise Market segmentation strategies for product and services.
4	Develop 4Ps of Marketing for Product and Services.

#### Syllabus:

Unit Number	Contents	Number of Sessions	
1	<b>Introduction to Marketing &amp; Demand Measurement</b> Definition – Importance and Scope – Core-concepts of Marketing – Company Orientation Towards Market place – Scanning the Marketing Environment Macro – Demographic, Economic, Social – Cultural –Political –Legal-Technology- Natural and Micro environment. Concept of Market Demand and Demand Measurement, Definition, Need & Benefits.	<b>L= 11</b>	
		<b>T= 2</b>	<b>P= 1</b>
2	<b>Market Segmentation &amp; Product Mix</b> Bases for market Segmentation, Segmentation of Consumer goods, Industrial goods and services. Effective segmentation criteria, Evaluating & Selecting Target Markets, differentiation, Positioning. Consumer and Business buying process. Concept of Product, Classification- Levels of Product– Product Life Cycle – New Product Development –Branding, Packaging and Labeling.	<b>L= 12</b>	
		<b>T= 2</b>	<b>P= 1</b>
3	<b>Price, Place &amp; Promotional Mix</b> Importance of pricing, Pricing Objectives, Price Determination Procedure – Methods of Pricing. Importance, Functions of Distribution channels – Introduction to the various Channels of Distribution – Channel Management Decision. – Advertising, Sales Promotion, Publicity and Personal Selling, Impact of Technology & Internet on Promotion.	<b>L= 11</b>	
		<b>T= 2</b>	<b>P= 2</b>
4	<b>Marketing Planning &amp; Control</b> Nature, Scope and Contents Of Marketing Plan – Process of planning Concept – Importance- Techniques of control- Annual Plan Control – Profitability Control – Efficiency Control – Strategic Control.	<b>L= 11</b>	
		<b>T= 2</b>	<b>P=2</b>

#### Note:

1. Case Studies on Each of the Aspects Mentioned in the Syllabus need to be discussed.
2. Video cases and Documentary Films relating to the syllabus to be exhibited in the class

#### Learning Resources

1	<b>Text Books</b>	<ul style="list-style-type: none"> <li>• Kotler Philip, “Marketing Management 17<sup>th</sup> Edition 2015”, Prentice Hall of India, New Delhi.</li> <li>• Saxena Rajan, “Marketing Management 2<sup>nd</sup> Edition 2002”, Tata McGraw Hill, New Delhi</li> </ul>
---	-------------------	---

2	<b>Reference books</b>	<ul style="list-style-type: none"> <li>• Station W.J. Etzel M.J., “Fundamentals of Marketing – 10<sup>th</sup> Edition 1994” , Mc Graw Walker B.J., Hill International Editions.</li> <li>• Srinivasan R., “Case Studies in Marketing”, Prentice Hall, New Delhi, 2000</li> <li>• Kaushal H., “Case Study Solutions in Marketing”, McMillan India 2001</li> <li>• V.S.Ramaswamy and S.Namakumari –Marketing Management – Macmilan Business Books</li> <li>• Arunkumar, M Meenakshi- Marketing Management-Vikas Publication</li> <li>• Walkar, Boyd, Mullins And Larreche. “Marketing Strategy. A Decision Forced Approach”, Tata Mcgraw Hill 4<sup>th</sup> Edition.</li> </ul>
3	<b>Websites</b>	<ul style="list-style-type: none"> <li>• <a href="https://www.ama.org/">https://www.ama.org/</a></li> <li>• <a href="https://www.academyofindianmarketing.org/">https://www.academyofindianmarketing.org/</a> (Academy of Indian Marketing (AIM)   Management Institutions)</li> <li>• <a href="https://www.ima-india.com/">https://www.ima-india.com/</a> (<a href="https://www.ima-india.com/">https://www.ima-india.com/</a>)</li> <li>• <a href="https://www.mrsi.co.in">https://www.mrsi.co.in</a> (Market Research Society Of India: MRSI)</li> <li>• <a href="http://www.rmai.in/">www.rmai.in/</a> (Rural Marketing Association of India: RMAI)</li> </ul>
4	<b>Journals</b>	<ul style="list-style-type: none"> <li>• Indian journal of marketing</li> <li>• Journal of digital marketing</li> <li>• Journal of Marketing: SAGE Journals</li> </ul>
5	<b>Supplementary Reading</b>	<ul style="list-style-type: none"> <li>• Economics Times, Brand Equity</li> <li>• Business Standard, The Strategist.</li> </ul>
6	<b>Practical Component</b>	<ul style="list-style-type: none"> <li>• Student will select any product of their choice and prepare a poster presentation on core concept of Marketing applicable for the product.</li> <li>• Student will select any industry of their choice, identify the major companies operating in industry and compare the segmentation strategy used by companies.</li> <li>• Group Activity: Students will develop a conceptual new product, identify the target market for the product and develop a marketing plan for the product.</li> <li>• Group Activity: Students will prepare an advertisement to promote the conceptual product developed to the target customer.</li> </ul>

<b>Semester</b>	<b>I</b>	<b>Total Credit</b>	<b>4</b>
<b>Course Code</b>	<b>DSE 101(A)</b>	<b>Credit Pattern</b>	<b>L-45, T-8, P-7</b>
<b>Course Title</b>	<b>SERVICE SECTOR MANAGEMENT</b>		

**Course Objectives:**

1. To understand the key elements in various Services Sector Management.
2. To know efficient and productive Management of Services Sector.
3. To Review Challenges For Service Sector Management.

**Course Outcome: The students will be able to**

- 1 Describe the concepts of service sector management
- 2 Apply different theories and Concepts of Service Sector management
- 3 Assess Challenges and Opportunities of Service Sector Management.

<b>Unit Number</b>	<b>Contents</b>
1	Introduction To Services Management : Stages of Development of Service Management, Reasons for growth of service sector, Different approaches for management of services, Nature , Scope and Importance of service management , Classification of services, Services marketing mix., Myths about of services management.
2	Application of 7 P's of Services Management– Selected Industries : Management of Financial Services (Bank, Insurance) ,Management of Professional services ,(Consultancy, healthcare,) Management of Media Services (Advertising , Print media) Tourism and Travel Services Management (Hotel Tourism and Transportation industry) Personal Care services management, management of education services.
3	Challenges For Services Management: Service Quality , Dimensions of Service Quality , Measuring service Quality , Service Gap Model , Principles of Service Quality, Importance of Service Quality Management, Benefits of Service Quality Initiative, Problems of Service Quality Control Globalization of Services Management : Challenges to Global services management, Prospects for Global services management.
4	Strategic Services Management : Various strategic approaches to services management, PESTLE and strategic services management, SWOT Analysis for Service organization Government and private sector initiatives in creating , developing and promoting services management.

**Note:**

- Case studies/ field visits on each of the aspects mentioned in the syllabus need to be discussed.
- Videos cassettes, CDS and documentary films exhibited.

## Learning Resources

1	<b>Reference books</b>	<ul style="list-style-type: none"><li>• Christopher H Lovelock, Services Marketing , Third edition.US:Prentice Hall International, 1996</li><li>• Valarie Zeithaml Mary Jo Bitner</li><li>• Services Marketing: Integrating Customer Focus Across The Firm. Third edition, New Delhi: Tata Mcgraw Hill 2003.</li><li>• Patankar V. Sanjay,</li><li>• Services Management. Delhi Himalaya Publishing House 1999.</li><li>• S.M.Jha Services Marketing , Sixth edition New Delhi: Himalaya Publishing House 2003</li><li>• Balchandran.S., Customer Driven Services Management. New Delhi : Response Books,1999.</li></ul>
2	<b>E- Libraries</b>	<ol style="list-style-type: none"><li>1. <u><a href="http://nlist.inflibnet.ac.in">INFLIBNET</a></u><a href="http://nlist.inflibnet.ac.in">http://nlist.inflibnet.ac.in</a></li><li>2. <u><a href="http://jgateplus.com">J-GATE</a></u><a href="http://jgateplus.com">http://jgateplus.com</a></li><li>3. <u><a href="http://search.ebscohost.com">EBSCO</a></u><a href="http://search.ebscohost.com">http://search.ebscohost.com</a></li></ol> Library online Opac Address: <a href="http://192.168.1.111:8080/opac">http://192.168.1.111:8080/opac</a>  *For INFLIBNET individual usernames and passwords are already given. Use the same



<b>Semester</b>	<b>I</b>	<b>Total Credit</b>	<b>4</b>
<b>Course Code</b>	<b>DSE 101 (B)</b>	<b>Credit Pattern</b>	<b>L-45, T-8, P-7</b>
<b>Course Title</b>	<b>FAMILY BUSINESS MANAGEMENT</b>		

**Course Objectives-**

1	To understand family business concept and its dynamics
2	To understand the family governance issues and succession planning in family business.
3	To understand challenges and issues involved in Family Business.

**Course Outcomes: Students will be able to;**

1.	Describe the Concepts of Family Business Management.
2.	Apply appropriate family business strategies in family firms.
3.	Analyze issues involved in the family businesses.
4.	Evaluate the factors affecting Family Business Growth.

**Syllabus:**

<b>Unit Number</b>	<b>Contents</b>
<b>1</b>	<b>Introduction of family business-</b> Family Business, various types of family businesses, Uniqueness of Family Business, advantages of family businesses, Building businesses to last. Forms of organization, Continuing entrepreneurship to the next generation, issues involved in creating room at the top, Issues and challenges in family business, factors affecting family business.
<b>2</b>	<b>Family business management and Family Business Governance system:</b> Responsibilities and Rights of the Family Shareholders in the family business, Building Family Values, family structure and composition, family communication style and role of every member. Gender and family business, Management of Human capital and financial capital. Family Business Governance system and its importance, role of Non-family members in the family businesses
<b>3</b>	<b>Planning strategy for family businesses:</b> Parallel Planning Process, Small Vs. large family businesses, Role of professional management and family members in strategy development. Family reunion strategies, improving family business performance. Succession planning in family businesses-Qualities to be seen in successor, Valuation of the business, Conflict management and transition in family business.
<b>4</b>	<b>Lessons learned from family businesses in India.</b> Case studies of three family businesses along with the family history. Analysis of success and non-success factors. Drawbacks of family business and How to save family business from break up. Using break up for growth.

**Note:**

1. Case Studies on Each of the Aspects Mentioned in the Syllabus need to be discussed.
2. Video cases and Documentary Films relating to the syllabus to be exhibited in the class.

## Learning Resources

1	<b>Text Books</b>	<ul style="list-style-type: none"> <li>• Family Business Management- Dr. Mukesh Bhatia-Regal Publication</li> <li>• Family Business-Ernesto J. Poza -Cengage Learning</li> </ul>
2	<b>Reference books</b>	<ol style="list-style-type: none"> <li>1. Family Business in India: Dutta, Sudipt (1997) Response books, New Delhi</li> <li>2. Business Legends, Gita Piramal, Viking New Delhi.</li> <li>3. Strategic Planning for the Family Business-Randel S. Carlock and John L. Ward</li> <li>4. Family Business -The essentials-Peter Leach</li> <li>5. Indian Family business Mantras: by <u>Peter Leach</u> and Tatwamasi Dixit, Rupa Publications, New Delhi</li> <li>6. Entrepreneurship and Small Business Enterprises: Poornima Charantimath Pearson Education</li> <li>7. Entrepreneurial Development Dr. S.S.Khanka S.Chand</li> <li>8. Strategic Alternatives for Family Business Houses By Srinivas Shirur Deep and Deep Publications, 01-Jan-2005 - Family corporations - 214 pages</li> </ol>
3	<b>Websites</b>	<ul style="list-style-type: none"> <li>• <a href="http://www.isb.edu">www.isb.edu</a></li> <li>• <a href="http://www.ijsrm.in/v2-i8/17%20ijsrm.pdf">www.ijsrm.in/v2-i8/17%20ijsrm.pdf</a></li> <li>• <a href="http://www.untag-smd.ac.id/files/Perpustakaan_Digital_1/FAMILY%20BUSINESS%20Handbook%20of%20Research%20on%20Family%20business.pdf">http://www.untag-smd.ac.id/files/Perpustakaan_Digital_1/FAMILY%20BUSINESS%20Handbook%20of%20Research%20on%20Family%20business.pdf</a></li> </ul>
4	<b>Journals</b>	<ol style="list-style-type: none"> <li>1. Business Today</li> <li>2. FIIB Business Review (New Sub.)</li> <li>3. Global Business Review (New Sub.)</li> <li>4. Journal of Family Business Strategy</li> <li>5. Family Business Review (FBR)</li> </ol>
5	<b>Supplementary Reading</b>	<ol style="list-style-type: none"> <li>1. Indian Family Businesses: their survival beyond three generations, working paper Indian School of Business, Hydrabad.</li> <li>2. The Economic Times</li> <li>3. Business Standard</li> </ol>
6	<b>Practical Component</b>	<ol style="list-style-type: none"> <li>1. Library assignment on identifying 3 family businesses with female successor and write detail about those lady successors.</li> <li>2. Find out challenges faced by family business in India.</li> <li>3. Case study discussion of three family businesses in India.</li> <li>4. Group Activity –Study one family business nearby Kolhapur or within Kolhapur by actual visit ,take interview by discussion method and prepare report which includes about the business, family history, family genogram, family governance system ,family value system, and success factors of that business etc.</li> </ol>

<b>Semester</b>	<b>I</b>	<b>Total Credit</b>	<b>4</b>
<b>Course Code</b>	<b>DSE 101 (C)</b>	<b>Credit Pattern</b>	<b>L-45, T-8, P-7</b>
<b>Course Title</b>	<b>INFORMATION TECHNOLOGY FOR MANAGERS</b>		

#### Course Objectives

1	To develop students discipline to manage I.T resources in accordance with business needs.
2	To make use of database management system using SQL.
3	To develop the Skill for preparing an effective presentation.
4	To understand of all aspects of E-Commerce.

#### Course Outcomes: Student will able to;

1	Analyze industry data using MS-Excel.
2	Develop an effective presentation using embedded software.
3	Determine enterprise IT architecture for different domain areas.
4	Design conceptual models of a database using ER for real life applications and also construct queries in Relational Algebra.

<b>Unit Number</b>	<b>Contents</b>	<b>Number of Sessions</b>	
1	Elements of Modern GUI, Information systems In HR, IT In Marketing, IT In Finance, I.T . Infrastructure, Storage Management, Security Management, Detection of computer frauds, Business Automation, I.S. Choices, MS-Word for Business Analysis. Basic Database Concept	<b>L= 11</b>	
		<b>T= 2</b>	<b>P= 2</b>
2	Using Visual Aids In Business – Factors To Be Considered Before Creating A Presentation, visual media, Designing, setting up the room, advance delivery techniques, Question and answering techniques, Organizing and creating visuals, Personal appearance in Presentation, Creating Effective Presentations With PowerPoint Introduction To Oracle, Introduction To SQL, Oracle Data Type	<b>L= 12</b>	
		<b>T= 2</b>	<b>P= 1</b>
3	Relational Database Model, Characteristics Of RDBMS, Role, And Responsibilities Of DBA, Creating A Table, Updating A Contents Of A Table, Select Command, Range Searching, Pattern Matching, Modifying The Structure Of The Table, Deleting A Table, Grouping Data From A Table – Group By, Having Clause, Sorting Data In A Table – Order By Clause , Computer Network, Network Topologies, e-Commerce - Introduction, Advantages of e-Commerce, Types of e-commerce, e-Governance	<b>L= 11</b>	
		<b>T= 2</b>	<b>P= 2</b>
4	Data Analysis And Business Module Through Excel – Using Excel Efficiency, Formatting Work Sheet, Naming Cells and Range, Advanced conditional Formatting, Data visualization using Sparklines and Excel Charts, Formula Functions and relative and absolute addressing, SUMIF, COUNT, COUNTIF, COUNTBLANK Functions, Amortization Tables, Basic Data Analysis – Sorting, Summarizing, Filtering, Validating Data, Subtotal	<b>L=11</b>	
		<b>T= 2</b>	<b>P= 2</b>

#### Note:

1. Students Will Have To Complete All Practical Assignments Based On Business Applications.
2. Students will have to complete all tutorials, assignments and lab session for internal credits.

## Learning Resources

1	<b>Text Books</b>	<ul style="list-style-type: none"> <li>• Fundamentals of Computers – V. Rajaraman</li> <li>• Fundamentals of Computers – P.K Sinha</li> <li>• Database Management System – Silberchaltz</li> <li>• SQL In 21 Days. – BPB Publication</li> <li>• Excel 2007 Step by Step – Microsoft Press PHI</li> </ul>
2	<b>Reference books</b>	<ul style="list-style-type: none"> <li>• Microsoft office 2007 - Schwartz</li> <li>• Information Technology for Management – Muthukumern – Oxfard</li> <li>• SQL/ PL SQL Programming With Oracle – Ivan Bayross</li> <li>• Teach Yourself SQL – Schaum</li> <li>• SQL The Complete Reference – Groft Weinberg</li> </ul>
3	<b>Website</b>	<ul style="list-style-type: none"> <li>• <a href="http://www.udemy.com">www.udemy.com</a></li> <li>• <a href="http://www.skillyouneed.com">www.skillyouneed.com</a></li> <li>• <a href="http://www.forbase.com">www.forbase.com</a></li> <li>• <a href="https://nptel.ac.in/courses/106105175/6">https://nptel.ac.in/courses/106105175/6</a></li> </ul>
4	<b>Journals</b>	<ul style="list-style-type: none"> <li>• IUP Journal of Management Research</li> <li>• Express Computer</li> <li>• International Journal of Computer Science &amp; Information Technology</li> <li>• Education World</li> <li>• Asian Journal of Management Cases (New Sub.)</li> </ul>
5	<b>Supplementary Reading</b>	<ul style="list-style-type: none"> <li>• Current affairs from news papers(economic times, Tiems of india, and news letters</li> <li>• Beyond the MBA – Sameer Kamat</li> </ul>
6	<b>Practical Component</b>	<p>Field Visit to Industries to learn about office automation in industries.</p> <p>Hands-on experience through practical based on Ms-Excel, Word and PowerPoint, Seminar and presentation on given topic</p>

<b>Semester</b>	<b>I</b>	<b>Total Credit</b>	<b>2</b>
<b>Course Code</b>	<b>AECC- 101</b>	<b>Credit Pattern</b>	<b>L-26, T-4</b>
<b>Course Title</b>	<b>Professional Communication Skills</b>		
<b>Course Objectives</b>			
1	To familiarize learners with the mechanics of communication.		
2	To develop students written expression of thought and build connections between content areas		
3	To develop students oral communication skills by a variety of communication activities, from informal discussion to formal presentation		
<b>Unit Number</b>	<b>Contents</b>		
1	<b>Effective Business Communication: ( 15)</b> <input type="checkbox"/> Meaning & Definition, Role of communication in today's business Basic Grammar and how to use in English Communication Personal Introductions, Facing Audience Verbal and Non-Verbal Communication <input type="checkbox"/> Effective communication in Formal and Informal Environment <input type="checkbox"/> Barriers to communication <input type="checkbox"/> Measures to overcome barriers to communication Understand and use JoHari Window for self-development <input type="checkbox"/> Non-verbal communication: Nonverbal Cues, Kinesics, Haptic and Proxemics Body language, Facial Expressions How to carry yourself professionally ( grooming and dining etiquettes) <input type="checkbox"/> Public Speaking		
2	<b>Communication Technology: (15)</b> <input type="checkbox"/> Social Media Communication <input type="checkbox"/> Email Writing & Professional Writing <input type="checkbox"/> Presentations Skills <input type="checkbox"/> Group Discussion <input type="checkbox"/> Critical Thinking		
<b>Practical Components:</b>			
1. To be well in Verbal and Non- verbal communication 2. Make students enact and analyze the non-verbal cues 3. Each student to give presentation of 15 minutes (this can be spread throughout the semester) and to be evaluated by the faculty 4. Each Student will give 10 minutes speech on given topic that will be evaluated by the Faculty			
<b>Learning Resources</b>			
<b>1</b>	<b>Recommended Books</b>	1. <b>1</b> Business Communication – Lesikar, Flatley, Rentz&Pande, 11/e, TMH, 2010 2. How to win Friends and Influence People by Dale Carnegie 3. Skill with People by Les Giblin 4. The Power of Communication: Skills to Build Trust, Inspire Loyalty, and Lead Effectively, by Helio Fred Garcia, 2012	
<b>2</b>	<b>Reference Books</b>	1. Business Communication - Sehgal M. K &Khetrapal V, Excel BOOKS. 2. Business Communication – Krizan, Merrier, Jones, 8/e, Cengage Learning, 2012.	

## SEMESTER – II

<b>Semester</b>	<b>II</b>	<b>Total Credit</b>	<b>4</b>
<b>Course Code</b>	<b>CC 201</b>	<b>Credit Pattern</b>	<b>L-45, T-8, P-7</b>
<b>Course Title</b>	<b>WATER POLLUTION</b>		

<b>Course Objectives</b>	
1	Examine the interrelationship between industrial activities and water pollution
2	Outline the various characteristics and parameters of water for water quality index
3	Prioritize the scientific, technological, economic and political solutions to waste water treatment

<b>Course Outcomes: The students will able to</b>	
1	Identify sources for surface water, ground water and marine pollution.
2	Analyze parameters and standards for water and waste water.

### Syllabus:

<b>Unit Number</b>	<b>Contents</b>	<b>Number of Sessions</b>	
1	<b>Water Pollution:</b> Definition, Concept and sources of water pollution. Major Pollution parameters: pH, Solids, Dissolved Oxygen, Chemical Oxygen Demand, Biochemical Oxygen Demand, Trace inorganic, Most Probable Number of Coliform Bacteria. Methods of water sampling, handling and preservation.	<b>L= 11</b>	
		<b>T=2</b>	<b>P=2</b>
2	Characteristics of wastewater generated by industries: pulp and paper, sugar, distillery, textile, dairy, tannery, community (sewage), food processing industry and petrochemical industries.	<b>L= 12</b>	
		<b>T= 2</b>	<b>P=1</b>
3	Eutrophication: Meaning of eutrophication, Causes and effects of eutrophication on water quality. Water quality standards: World Health Organisation, Bureau of Indian Standards (BIS), Indian Council of Medical Research (ICMR).	<b>L= 11</b>	
		<b>T= 2</b>	<b>P= 2</b>
4	Ground Water Pollution, Causes of ground water pollution. Effects of pollutants on ground water table, Path (movement) of pollutants reaching to ground water. Thermal Pollution, concept of thermal pollution, Effects of thermal pollution on water quality and on aquatic flora and fauna. Marine pollution: Causes of marine pollution, Effects of marine pollution on ocean water quality, on marine flora and fauna.	<b>L=11</b>	
		<b>T=2</b>	<b>P= 2</b>

<b>Learning Resources</b>		
<b>1</b>	<b>Text Book</b>	<ul style="list-style-type: none"> <li>• Textbook Of Environmental Science And Technology by REDDY, BSP publishers, 2019</li> <li>• A Textbook Of Environmental Studies, Dr D K Asthana, S. Chand Publishers,</li> <li>• A Text Book Of Environmental Studies by Vijay Tiwari, Himalaya Publishers,</li> <li>• Textbook On Biotechnology by Hd Kumar, Affiliated East-West Press Pvt Ltd, 2003</li> <li>• Fundamentals of Ecology by Odum, E.P.</li> <li>• Environmental Science by Nobel, B.J. and Kormandy, E.J. (1981), The Way the World Works, Prentice-Hall Inc., N.J.</li> <li>• Environmental Science by Turk A., Turk, J. Wittes J.T. and Wittes, R.E.</li> <li>• Environmental Studies by Anindita Basak, 2009, Dorling Kindersley, New Delhi Publication.</li> </ul>

2	<b>Reference books</b>	<ul style="list-style-type: none"> <li>• Environmental Pollution of cadmium by Rohatgi .</li> <li>• Land Pollution, causes and control by Harrusson and Laxon.</li> <li>• Environmental Pollution and Bhopal killing.</li> <li>• Waste Water Treatment by M.N.Rao and A.K. Datta, Oxford and IBH Publication Co. New Delhi, 1978.</li> <li>• Environmental analysis of water, soil air by Saxena.</li> <li>• Water pollution and management by C.K. Vershney.</li> <li>• Responses to oil and chemical marine pollution by Cormack D. (1993), Appl. Science Publishers, New York.</li> <li>• Soil and Water conservation engineering by Schwab, SD, Frevert, RK, Edminster, TW and Barns, KK, John Wiley and Sons.</li> <li>• Analytical chemistry of industrial poisons, Hazards and solvents by Jacons, M.B. (1969) Interscience, New York.</li> <li>• Standard Methods for the Examination of Water and Wastewater (1984): American Public Health Association (APHA, AWWA, WPCF), New York.</li> <li>• Chemical and Biological Methods For Water Pollution Studies by R.K.Trivedy and P.K.Goel, 1984, Environmental publication , Karad,</li> <li>• Water Pollution- Causes, Effects and Control, by P.K.Goel,1997, New Age Publication, New Delhi.</li> </ul>
3	<b>Website</b>	<ul style="list-style-type: none"> <li>• <a href="https://www.lenntech.com/water-pollution-faq.htm">https://www.lenntech.com/water-pollution-faq.htm</a></li> <li>• <a href="https://www.everythingconnects.org/soil-pollution.html">https://www.everythingconnects.org/soil-pollution.html</a></li> <li>• <a href="http://www.fao.org/3/i9183en/i9183en.pdf">http://www.fao.org/3/i9183en/i9183en.pdf</a></li> <li>• <a href="https://wwf.panda.org/knowledge_hub/teacher_resources/webfieldtrips/water_pollution/">https://wwf.panda.org/knowledge_hub/teacher_resources/webfieldtrips/water_pollution/</a></li> </ul>
4	<b>Journals</b>	<ul style="list-style-type: none"> <li>• Journal of Earth System Science, ISSN No .2253-4126</li> <li>• Every Thing About Water</li> <li>• Current Science, ISSN No. 0011-3891</li> <li>• International Journal of Environmental Pollution Control &amp; Management , ISSN No .0975-3842</li> </ul>
5	<b>Supplementary reading</b>	<ul style="list-style-type: none"> <li>• UNEP reports</li> <li>• WHO notifications</li> </ul>
6	<b>Practical Component</b>	<ul style="list-style-type: none"> <li>• Industrial visit to learn water pollution sources</li> <li>• Field visit to water sources</li> </ul>

<b>Semester</b>	<b>II</b>	<b>Total Credit</b>	<b>4</b>
<b>Course Code</b>	<b>CC 202</b>	<b>Credit Pattern</b>	<b>L-45, T-8, P-7</b>
<b>Course Title</b>	<b>ENVIRONMENTAL ENGINEERING AND DESIGN</b>		

### Course Objectives

1	Explain the students the waste water treatments.
2	Describe the effect and control methods of the effluent and sewage.

### Course Outcomes:

1.	Design water treatment plant.
2.	Select appropriate method for water and wastewater treatment.
3.	Grade the existing water and wastewater treatment methods.

### Syllabus:

<b>Unit Number</b>	<b>Contents</b>	<b>Number of Sessions</b>	
1	<b>Fundamentals of Water Treatment:</b> Flow diagram of general water treatment plant Water demand, factors affecting water demand, population forecasting, Concept of wastewater flows and variations, Flow measurement and types of notches, Sanitary survey of source, protection of source	<b>L= 11</b>	
		<b>T=2</b>	<b>P=2</b>
2	<b>Methods of Water Treatment:</b> Unit operation in water treatment: intakes, aeration. Coagulation and flocculation process, common coagulants, Filtration, mechanism of filtration, slow sand, rapid sand and dual media filters, backwashing of filters, Sedimentation, particle settling theory and types of sedimentation tank, Disinfection of water, minor methods of disinfection, ideal disinfectant, Types of hardness and methods of water softening, Iron and manganese removal, fluoridation and de-fluoridation Taste and odor removal	<b>L= 12</b>	
		<b>T= 2</b>	<b>P=1</b>
3	<b>Waste Water Treatment:</b> General methods of volume and strength reduction of waste water. Flow diagram of general waste water treatment plant. Low cost treatments, stabilization ponds, septic tanks, lagoons. Primary treatments– racks and screens, types of screens, grit removal, types of grit chambers, disposal of grit, oil and grease removal, corrosion, types of corrosion and corrosion control.	<b>L= 11</b>	
		<b>T= 2</b>	<b>P= 2</b>
4	<b>Secondary and Tertiary Treatment</b> Secondary treatments– Trickling filers, types of trickling filters, Activated sludge process, modifications of activated process, Rotating biological contactors, bio-digesters, significance of F/M ratio Tertiary treatment– Wet land and aquatic treatment, Root zone treatment, Reverse osmosis, carbon adsorption, phosphorus removal, nitrogen removal.	<b>L=11</b>	
		<b>T=2</b>	<b>P= 2</b>



Learning Resources		
1	Text Book	<ul style="list-style-type: none"> <li>• Textbook Of Remote Sensing &amp; Geographical Inform. Systems by KALI CHARAN, Atlantic Publisiers, 2018</li> <li>• Text Book Of Soil Science by PAL, CBS publishers, 2018</li> <li>• Textbook Of Environmental Science And Technology by REDDY, BSP publishers, 2019</li> <li>• A Textbook Of Environmental Studies, Dr D K Asthana, S. Chand Publishers, 2018</li> <li>• A Text Book Of Environmental Studies by Vijay Tiwari, Himalaya Publishers, 2017</li> <li>• Textbook On Biotechnology by Hd Kumar, Affiliated East-West Press Pvt Ltd, 2003</li> <li>• Fundamentals of Ecology by Odum, E.P.</li> <li>• Environmental Science by Nobel, B.J. and Kormandy, E.J. (1981), The Way the World Works, Prentice-Hall Inc., N.J.</li> <li>• Environmental Science by Turk A., Turk, J. Wittes J.T. and Wittes, R.E. (1978)</li> <li>• Environmental Studies by Anindita Basak, 2009, Dorling Kindersley, New Delhi Publication.</li> <li>• Vogel's Textbook of Quantitative Chemical Analysis, 5<sup>th</sup> edition, J H Basett, J. Nendham and Denny, R.C.</li> </ul>
2	Reference books	<ul style="list-style-type: none"> <li>• Wastewater Engineering Treatment Disposal Reuse, By Metcalf &amp; Eddy, Publisher: Tata-McGraw-Hill Publishing Company Ltd., New Delhi, Fourth Edition, (2010).</li> <li>• A Text Book of Sanitary Engineering, Theory, Design and Practice, By Prof. Vinayak N. Ghorpade, Publisher: Engineering Book Publishing Company, Poona-16 Fourth Edition (1984).</li> <li>• Environmental Engineering: Water Supply, Sanitary Engineering and Pollution, By A. Kamala and D. L. Kanth Rao, Publisher: Tata-Mc. Graw Hill Publishing Company Ltd., New Delhi, (1988).</li> <li>• Fundamentals of Water Supply and Sanitary Engineering, By S. C. Rangwala &amp; K. S. Rangwala, Publisher: Chartor Publishing House, Anand, India, Eleventh Edition, (1986).</li> <li>• Water and Wastewater Technology, By Mark J. Hammer &amp; Mark J. Hammer, Jr., Publisher: Prentice-Hall of India Pvt. Ltd., New Delhi (1998).</li> <li>• Water Supply and Sanitary Engineering Including Environmental Engineering, By G. S. Birdie &amp; J. S. Birdie, Publisher: Dhanpat Rai &amp; Sons, New Delhi, Fifth Edition, (1997).</li> </ul>
3	Website	<ul style="list-style-type: none"> <li>• <a href="https://globalhydration.com/waterborne-disease/common-methods-of-water-purification/">https://globalhydration.com/waterborne-disease/common-methods-of-water-purification/</a></li> <li>• <a href="https://www.cdc.gov/healthywater/drinking/public/water_treatment.html">https://www.cdc.gov/healthywater/drinking/public/water_treatment.html</a></li> <li>• <a href="https://www.asce.org/fundamentals-of-water-treatment-processes-physical-chemical-and-biological/">https://www.asce.org/fundamentals-of-water-treatment-processes-physical-chemical-and-biological/</a></li> <li>• <a href="https://www.organicawater.com/primary-secondary-tertiary-wastewater-treatment-work/">https://www.organicawater.com/primary-secondary-tertiary-wastewater-treatment-work/</a></li> </ul>

4	<b>Journals</b>	<ul style="list-style-type: none"> <li>• Current Science, ISSN No. 0011-3891</li> <li>• Journal of Environmental Biology, ISSN No. 0254-8704</li> <li>• Resonance, ISSN No. 0971-8044</li> <li>• Journal of Earth System Science, ISSN No .2253-4126</li> <li>• Down to Earth</li> </ul>
5	<b>Supplementary reading</b>	<ul style="list-style-type: none"> <li>• CPCB and MPCB reports</li> </ul>
6	<b>Practical Component</b>	Practicals based on this paper will be conducted under Paper No. CC 203 (Practical- II)

<b>Semester</b>	<b>II</b>	<b>Total Credit</b>	<b>4</b>
<b>Course Code</b>	<b>CC 203</b>	<b>Credit Pattern</b>	<b>L-15, T-0, P-45</b>
<b>Course Title</b>	<b>PRACTICAL- II</b>		
<b>Course Objectives</b>			
1	The students should know the experimental procedures for analysis of environmental samples.		
<b>Course Outcomes: The students will able to</b>			
1	Relate and demonstrate the basic laboratory instruments used in environmental analysis and understand the principle of measurements using those instruments.		
2	Experiment with work safely and competently in an environmental laboratory settings, with confidence.		
3	Determine water pollution levels using appropriate methodology/ instrumentation.		
4	Perceive skills in analytical techniques/experimental for BOD,COD measurements and Interpret the experimental results to study water pollution levels.		

**Syllabus:**

Sr. No.	Title	Number of Sessions	
		T=0	P=45
1	Determination of Do & CO <sub>2</sub> in water & wastewater	<b>L= 15</b>	
2	Determination of COD from water & wastewater	<b>T=0</b>	<b>P=45</b>
3	Determination of BOD from water & wastewater		
4	Jar Test		
5	MPN from water		
6	Residual chlorine & Bleaching Powder Analysis		
7	Chlorine dose		
8	Volatile fatty acid		
9	SVI,MLSS,MLVSS		
10	Oil & Grease from water		
11	TS.TDS,TSS		
12	Available "P" in soil		
13	Available "K" in soil		
14	Available Nitrogen in soil		
15	Available Sulphur in soil		
16	Langlier I Saturation Index		
17	Water Quality Index		
18	Mechanical analysis of soil & use of Textural triangle		
19	Design of Physical unit		
20	Determination of H <sub>2</sub> S from water		

<b>Learning Resources</b>		
<b>1</b>	<b>Reference books</b>	<ul style="list-style-type: none"> <li>Water &amp; WasteWater analysis : Dr. R.K. Trivedy &amp; Dr. P.K.Goel (1984)</li> <li>Standard Methods of water &amp; Waste water analysis: APHA (1992)</li> <li>Hand book of Methods in Environmental Studies (Vol.I) : S.K.Maiti.</li> <li>Hand book of Methods in Environmental Studies (Vol.II) : S.K.Maiti.</li> <li>A text book of Soil analysis : Baruah &amp; Barthakur.</li> </ul>

<b>Semester</b>	<b>II</b>	<b>Total Credit</b>	<b>4</b>
<b>Course Code</b>	<b>CC 204</b>	<b>Credit Pattern</b>	<b>L-45, T-6, P-9</b>
<b>Course Title</b>	<b>ACCOUNTING FOR MANAGERIAL DECISIONS</b>		

**Course Objectives:**

- 1 The objective of this course is to acquaint the students regarding various accounting concepts and its application in managerial decision making.
- 2 The course attempts to build potential to use appropriate accounting tools and techniques of financial accounting and management accounting for preparing and analyzing financial statements.

**Course Outcomes: The students will able to learn:**

- 1 Apply basic accounting principles and concepts for preparation of financial statements.
- 2 Asses funds from operation with the help of funds flow statement.
- 3 Evaluate the financial position by preparing the financial statement as per Schedule-III.

**Syllabus:**

<b>Unit Number</b>	<b>Contents</b>	<b>Number of Sessions</b>	
<b>1</b>	<b>Introduction to Accounting:</b> Accounting as an information system, concepts, convention and principles of Accounting, Types of Business Organizations, Legal Regulatory And Tax Framework., Role of accountant in an organization, Accounting Process. Branches of accounting: Financial, Cost and Management Accounting and their inter-relationships, Introduction of Accounting Standards.	<b>L= 11</b>	
		<b>T= 2</b>	<b>P= 2</b>
<b>2</b>	<b>Financial Statement Analysis:</b> Preparation and Understanding of Financial Statements, Exposure to format of schedule VI of Public Limited, Introduction of IFRS & Introduction of Tally Software Package in Accounting – Creating Companies, journal entries and ledger accounts.	<b>L= 12</b>	
		<b>T= 1</b>	<b>P= 3</b>
<b>3</b>	<b>Ratio Analysis:</b> Concepts of Ratio Analysis, Interpretation of Ratio Analysis, Advantages and Limitations of Ratio Analysis, Analysis and Interpretation of Financial Statement Using the techniques of Ratio Analysis.	<b>L= 11</b>	
		<b>T= 2</b>	<b>P= 2</b>
<b>4</b>	<b>Working Capital Management:</b> Concept of Gross and Net Working Capital, Use and Importance of Working Capital, Working Capital Cycle, Influencing Factors, Requirement of Working Capital.	<b>L=11</b>	
		<b>T= 1</b>	<b>P= 2</b>

**Note:**

1. Case Studies on Each of the Aspects Mentioned in the Syllabus need to be discussed.
2. Video cases and Documentary Films relating to the syllabus to be exhibited in the class

## Learning Resources

<b>1.</b>	<b>Text Books</b>	<ul style="list-style-type: none"> <li>• Kapil Sheeba, "Financial Management" Pearson Publication House.</li> <li>• Jonathan Berk, Peter, "Financial Management" Pearson Publication House.</li> <li>• Sharan Vyuptakesh, "Fundamentals of Financial Management" Pearson Publication.</li> <li>• James C Van harne, "Financial Management &amp; Policy" Pearson Publication House.</li> <li>• ICSI : Handbook on Mergers Amalgamations and takeovers.</li> </ul>
<b>2.</b>	<b>Reference Books</b>	<ul style="list-style-type: none"> <li>• Khan &amp; Jain, "Financial Management", Tata Mcgraw Hill, 6<sup>th</sup> edition.</li> <li>• R.P.Rustagi, "Financial Management", PHI, 10<sup>th</sup> edition.</li> <li>• 3.Garrison, Managerial Accounting, Tata McGraw</li> <li>• 4.Maheshwari, Financial Accounting, Vikas Publishing</li> <li>• 5.Khan and Jain, Management Accounting, Tata McGraw</li> <li>• 6.Ramchandran, Financial Accounting for Management, Tata McGraw</li> <li>• 7.JawaharLal, Accounting For Management, Himalaya Publishing</li> <li>• 8.J.Madegowda, Accounting For Managers, Himalaya Publishing</li> </ul>
<b>3.</b>	<b>Websites</b>	<ul style="list-style-type: none"> <li>• <u>INFLIBNET</u> <a href="http://nlist.inflibnet.ac.in">http://nlist.inflibnet.ac.in</a></li> <li>• <u>J-GATE</u> <a href="http://jgateplus.com">http://jgateplus.com</a></li> <li>• <u>EBSCO</u> <a href="http://search.ebscohost.com">http://search.ebscohost.com</a></li> <li>• Library online Opac Address: <a href="http://192.168.1.111:8080/opac">http://192.168.1.111:8080/opac</a></li> </ul> <p><b>*For INFLIBNET individual usernames and passwords are already given. Use the same</b></p>
<b>4.</b>	<b>Journals</b>	<ul style="list-style-type: none"> <li>• The Chartered Accountant Journal.</li> <li>• The Chartered Secretary Journal.</li> <li>• The Management Accountant Journal, Printer &amp; Publisher, CMA Kaushik Banerjee, <b>and Editor:</b> CMA Dr Debaprosanna Nandy, <b>ISSN: 09723528.</b></li> <li>• Prabhandan: Indian Journal of Management</li> <li>• IUP Journals</li> <li>• ICSI Journals</li> <li>• Finance India</li> <li>• Journal of Accounting &amp; Finance</li> </ul>
<b>5.</b>	<b>Supplementary Reading</b>	<ul style="list-style-type: none"> <li>• Financial Express</li> <li>• Economics Times</li> <li>• Business Standard</li> </ul>
<b>6.</b>	<b>Practical Component</b>	<ul style="list-style-type: none"> <li>• Practical Problems on accounting equation (journal book)</li> <li>• Practical Problems on Ratio Analysis</li> <li>• Practical Problems on Working capital</li> <li>• Financial statement analysis using Prowess-IQ</li> <li>• Companies Financial Reports &amp; Corporate case studies.</li> </ul>

<b>Semester</b>	<b>II</b>	<b>Total Credit</b>	<b>4</b>
<b>Course Code</b>	<b>CC 205</b>	<b>Credit Pattern</b>	<b>L-45, T-7, P-8</b>
<b>Course Title</b>	<b>BUSINESS STATISTICS FOR ENVIRONMENT</b>		
<b>Course Objectives:</b> Equip students with the ability to:			
1	Frame business problems in appropriate statistical terms and use data to make better decisions.		
2	To make sense of data along with the basics of statistical inference and regression analysis.		
3	Develop critical and integrative thinking in order to communicate the results of the analysis clearly in the context of the problem.		
<b>Course Outcomes:</b> Students will be able to			
1.	Analyze company/organization data for taking decisions.		
2.	Evaluate the data collected for management decision.		
3.	Interpret the relevance of statistical findings for business problem solving and decision making.		
4.	Provide solution to management decision problems.		

**Syllabus:**

<b>Unit Number</b>	<b>Contents</b>	
1	<p><b>Sampling:</b> Simple random sampling (with &amp; without replacement). Stratified random sampling, Systematic Sampling, Cluster sampling, Convenience sampling, Judgment sampling. Quota sampling, Snowball sampling, Random versus Non-random sampling.</p> <p><b>Classification &amp; Tabulation:</b> Data measurement levels (Nominal, Ordinal, Interval, Ratio). Frequency Tables, Charts and Graphs: Frequency Tables (Ungrouped &amp; Grouped), Histogram, Frequency Polygon, Frequency Curve, Pie Chart, Bar diagram.</p>	L 11, T 2, P 2
2	<p><b>Measures of Central Tendency:</b> Introduction, Objectives of statistical average, Requisites of a Good Average, Statistical Averages - Arithmetic Mean - Properties of arithmetic mean - Merits and demerits of arithmetic mean, Median - Merits and demerits of median, Mode - Merits and demerits of mode,</p> <p><b>Measures of Dispersion:</b> Appropriate Situations for the Use of Various Averages, Positional Averages, Dispersion – Range - Quartile deviations, Mean deviation, Standard Deviation -Properties of standard deviation, Coefficient of Variation.</p>	L 11, T 2, P 2
3	<p><b>Simple Correlation:</b> Introduction , Correlation - Causation and Correlation - Types of Correlation -Measures of Correlation - Scatter diagram - Karl Pearson's correlation coefficient - Properties of Karl Pearson's correlation coefficient, Spearman's Rank Correlation Coefficient.</p> <p><b>Regression:</b> Regression analysis - Regression lines - Regression coefficient,</p> <p><b>Permutation &amp; Combination:</b> Principles of counting, Permutations of n dissimilar objects taken r at a time (with and without repetitions), Properties, Combination of n objects taken r at a time, Properties, examples on Permutations and Combinations.</p>	L 12, T 1, P 2
4	<p><b>Probability:</b> Random experiment, sample space and classification of sample spaces, Classical definition of probability, Properties, Addition Theorem, Conditional probability, Multiplication law of probability, Baye's theorem, Independence of events, Examples.</p> <p><b>Probability Distribution:</b> Random variable, Probability mass function, Cumulative distribution function, Mathematical expectation, Variance, Definition and properties of Binomial, Poisson distribution-examples, Probability density function, Definition and properties of Normal distributions. Examples.</p>	L 11, T 2, P 2

**Note:**

1. Case Studies on Each of the Aspects Mentioned in the Syllabus need to be discussed.
2. Video cases and Documentary Films relating to the syllabus to be exhibited in the class.

Learning Resources		
1	Text Books	<ul style="list-style-type: none"><li>• S C Gupta, Fundamentals of Statistics</li><li>• S C Gupta, Business Statistics</li><li>• C R Kothari, Research Methodology – Methods Techniques</li></ul>
2	Reference books	<ul style="list-style-type: none"><li>• N D Vohra, <i>Business Statistics</i>, Tata McGraw Hill</li><li>• G C Beri, <i>Business Statistics</i>, Tata McGraw Hill</li><li>• Devid M Levine etc, <i>Business Statistics – A First Course</i>, Pearson Publication.</li><li>• Glyn Davis &amp; Branko Pecar, <i>Business Statistics Using Excel</i>, Oxford University Press.</li><li>• Albright, Winston, Zappe, <i>Decision Making Using Microsoft Excel</i>, Cengage Learning.</li></ul>
3	Journals	<ul style="list-style-type: none"><li>• International Journal of Statistics &amp; Management Systems</li><li>• Calcutta Statistical Association Bulletin</li><li>• Vikalpa: The Journal for Decision Makers</li></ul>
4	Websites	<ul style="list-style-type: none"><li>• <a href="http://www.stattrek.com">www.stattrek.com</a></li><li>• <a href="http://www.statisticsbyjim.com">www.statisticsbyjim.com</a></li><li>• <a href="http://www.pinkmonkey.com/studyguides/subjects/stats/contents.asp">www.pinkmonkey.com/studyguides/subjects/stats/contents.asp</a></li></ul>
5	Practical Component	<ul style="list-style-type: none"><li>• Analyzing collected raw data or online available data.</li><li>• Finding relations among two or more variables and fitting regression equation to predict value of dependent variables.</li></ul>

<b>Semester</b>	<b>II</b>	<b>Total Credit</b>	<b>2</b>
<b>Course Code</b>	<b>CC 206</b>	<b>Credit Pattern</b>	<b>L-22, T-2, P-6</b>
<b>Course Title</b>	<b>LEGAL FRAMEWORK OF BUSINESS</b>		

### Course Objectives

- |          |   |
|----------|---|
| <b>1</b> | To enable students to appreciate the relevance of business law to individuals and businesses.     |
| <b>2</b> | To equip students with knowledge needed to manage business successfully from legal point of view. |

### Course Outcomes: Students will be able to;

- |    |  |
|----|--|
| 1. | Explain the legal principles of Business Laws. |
| 2. | To solve legal issues of Business.             |

### Syllabus:

<b>Unit Number</b>	<b>Contents</b>	<b>Number of Sessions</b>	
1	<b>A) Indian Contract Act – 1872:</b> Meaning and sources of law, Definition of contract and essential elements of a valid contract, Modes of discharge of contract, Remedies for breach of contract. <b>B) The Sale of Goods Act – 1932:</b> Definition of Sale, essentials of a valid Sale, Conditions and Warranties, caveat emptor, passing of property, Unpaid seller. <b>C) Consumer Protection Act – 1986:</b> Definition of consumer, complaint, complainant, unfair trade practice, Consumer dispute Redressal Agencies. (15)	<b>L= 11</b>	
		<b>T=1</b>	<b>P=3</b>
2	<b>A) The Companies Act – 2013:</b> Definition of company, kinds of companies, Memorandum of Association, Articles of Association, Boards of Directions: duties and powers, Meetings in a company, Winding up. <b>B) Information Technology Act – 2008:</b> Objectives of IT Act, Digital Signature, E-Governance, Controller, Certifying authority, offences and penalties. <b>C) The Negotiable Instrument Act – 1881:</b> Definition and characteristics of NI, kinds of Negotiable Instruments, Holder and holder in due course, Crossing of Cheque, Discharge of Negotiable Instruments. (15)	<b>L= 11</b>	
		<b>T= 1</b>	<b>P= 3</b>

### Note:

1. Case Studies on Each of the Aspects Mentioned in the Syllabus need to be discussed.
2. Video cases and Documentary Films relating to the syllabus to be exhibited in the class.



## Learning Resources

<b>1</b>	<b>Text Books</b>	<ul style="list-style-type: none"><li>• Mercantile Law by N. D. Kapoor</li><li>• Business Law by S. S. Gulshan &amp; G. K. Kapoor</li></ul>
<b>2</b>	<b>Reference books</b>	<ul style="list-style-type: none"><li>• Business Law by Kuchhal M. C.</li><li>• Business Law by K. R. Bulchandani</li></ul>
<b>3</b>	<b>Websites</b>	<ul style="list-style-type: none"><li>• <a href="http://www.lawctopus.com">www.lawctopus.com</a></li><li>• <a href="https://indiacorplaw.in">https://indiacorplaw.in</a></li></ul>
<b>4</b>	<b>Journals</b>	<ul style="list-style-type: none"><li>• India Law Journal</li><li>• Corporate Law reporter</li><li>• India Business Law Journal- Delhi High Court</li><li>• IOSR Journals</li></ul>
<b>5</b>	<b>Supplementary Reading</b>	<ul style="list-style-type: none"><li>• Bare Acts on Consumer Protection Act 1986</li><li>• Bare Act on Information Technology Act 2008</li></ul>
<b>6</b>	<b>Practical Components</b>	<ul style="list-style-type: none"><li>• Case studies to be discussed on all the above topics</li><li>• Seminars to be conducted on the above topics</li></ul>

<b>Semester</b>	<b>II</b>	<b>Total Credit</b>	<b>2</b>
<b>Course Code</b>	<b>CC 207</b>	<b>Credit Pattern</b>	<b>22L+8TP</b>
<b>Course Title</b>	<b>RESEARCH METHODOLOGY</b>		
<b>Course Objectives</b>			
<b>1</b>	To expose the students to various methods of research and enable them to understand the importance of research in management decision-making process.		
<b>2</b>	To Equip students with knowledge needed to Interpret The Research Findings.		
<b>Course Outcomes: Students will be able to;</b>			
<b>1</b>	Explain fundamental concepts of research methodology.		
<b>2</b>	Develop Research Report.		

**Syllabus:**

<b>Unit Number</b>	<b>Contents</b>	<b>Number of Sessions</b>	
1	<b>Introduction to Research &amp; Research Design</b> Meaning, objectives & Motivation in research. Use of research in functional areas of Management. Types of research – Research process, relevance & scope of research in management. Research Design- Features of good Design, Types of Research Design, Sampling Design- Census vs Sample, Characteristics of good sampling Design. Different types of sample Design. Measurement & scaling techniques- Errors in measurement. Test of sound measurement, scaling & Scale construction techniques for Attitude measurement.	<b>L= 11</b>	
		<b>T= 4</b>	<b>P=0</b>
2	<b>Methods of data collection, Analysis of Data &amp; Report writing:</b> Methods of data collection – Primary data –Collection of secondary data. Data Processing-Editing, Coding and Tabulation of data. Data analysis and Interpretation. Formats of Research Report, Methods and importance of Citation & bibliography in Research, Ethical issues in Research and plagiarism. Use of ICT tools for conducting of research.	<b>L= 11</b>	
		<b>T=4</b>	<b>P=0</b>

**Note:**

1. Case Studies on Each of the Aspects Mentioned in the Syllabus need to be discussed.
2. Video cases and Documentary Films relating to the syllabus to be exhibited in the class.

**Learning Resources**

<b>1</b>	<b>Text Books</b>	<ul style="list-style-type: none"> <li>• C.R. Kothari Research Methodology Methods And Techniques, Wiley Eastern.</li> <li>• G.C. Beri: Marketing Research Tata Mcgraw Hill Publishing Company Limited, New Delhi, 2000</li> </ul>
<b>2</b>	<b>Reference books</b>	<ul style="list-style-type: none"> <li>• Goode And Hatt : Methods In Social Research, Mc-Graw Hill, Kogakusha Ltd., New York.</li> <li>• V.P. Michael: Research Methodology In Management, Himalaya Publishing House, Mumbai, 1985.</li> <li>• Kerllnger. Fred N.: Foundations Of Behaviourial Research, New York, Holt, Rinehart And Winston, 1973.</li> <li>• Dorald S. Tull, Del I Hawkins: Marketing Research, Prentice Hall Of India, New Delhi, 1996.</li> <li>• Hans Raj: Theory And Practice In Social Research, Surjeet Publications, Delhi</li> </ul>

3	<b>Websites</b>	<ul style="list-style-type: none"> <li>• <a href="https://www.spss-tutorials.com/basics/">https://www.spss-tutorials.com/basics/</a></li> <li>• <a href="https://www.nielsen.com/in/en/">https://www.nielsen.com/in/en/</a></li> </ul>
4	<b>Journals</b>	<ul style="list-style-type: none"> <li>• The Journal for Decision Makers - Vikalpa</li> <li>• Indian journal of marketing</li> </ul>
5	<b>Supplementary Reading</b>	<ul style="list-style-type: none"> <li>• Journal of Business Research – Elsevier</li> <li>• <a href="https://www.iresearchservices.com">https://www.iresearchservices.com</a></li> <li>• Economics Times,</li> <li>• Business Standard,</li> </ul>
6	<b>Practical Component</b>	<ul style="list-style-type: none"> <li>• Students will actually conduct research and submit the research report using following guidelines.</li> <li>• Identify the research problem of your choice.</li> <li>• Formulate it into a Research title.</li> <li>• Collect at least five published research paper and conduct the review of that research paper.</li> <li>• Identify different variables that can be studied in the stated research problem.</li> <li>• Prepare at least five hypotheses on the research problem.</li> <li>• Suggest Research design to conduct the research on the problem. (Sampling Design and Data Collection method).</li> <li>• Collection, analysis and interpretation of data.</li> <li>• Writing a detail research report using citation and bibliography</li> </ul>

<b>Semester</b>	<b>II</b>	<b>Total Credit</b>	<b>4</b>
<b>Course Code</b>	<b>DSE 201-A</b>	<b>Credit Pattern</b>	<b>L-45, T-7, P-8</b>
<b>Course Title</b>	<b>ENVIRONMENTAL MICROBIOLOGY &amp; BIOTECHNOLOGY</b>		
<b>Course Objectives: Equip students with the ability to:</b>			
1	Equip the students with the application of bio-technology to all Aspects of the Environment.		
2	Implement the Concept of Green Chemistry for Eco-friendly improved Production technology.		
<b>Course Outcomes: After completion of this course students will have capacity to</b>			
1.	Describe the importance of microbial diversity, beneficial and harmful properties of MOs with potential applications in the innovative environmental management technologies		
2.	Describe and apply existing and emerging technologies like <i>in-situ</i> , <i>ex-situ</i> , & engineered bioremediation, phyto-remediation that are important in the area of environmental clean up / pollution & forest management.		
3.	Demonstrate an awareness about emerging concerns of reductions in fossil fuels through new biotechnological interventions in the harnessing renewable biomass energy.		
4.	Describe and apply biotechnological solutions like bio-plastics, bio-fertilizers, bio-pesticides, bio-mining, biosensors to address present environmental concerns.		

<b>Unit Number</b>	<b>Contents</b>	<b>Number of Sessions</b>	
1	Introduction to the world of microbes & History, Types of Microbes & Microbial structure, Harms & Benefits of MOs with their Environmental Significance. Modern Environmental Microbiology, Microbial Diversity and Metabolism Microbial Nutrition, Media components, & Media Preparations, Classification of microorganisms according to Nutrition, Enrichment culture technique for the isolation of desired types of microorganism.	<b>L= 11</b>	
		<b>T=2</b>	<b>P=2</b>
2	Microbial population and community dynamics, Microbial growth in closed and open environments, Binary Fission, Generation Time, Growth Curve Factors Affecting Microbial Growth-: pH, Temperature, Salinity, Moisture Content, Radiation, Heavy Metals, Toxic chemicals etc. Concept & Importance of Pure Culture, Methods of Isolation of Pure Culture Enumeration of MOs in Environmental Samples by Direct and Indirect Methods, Biosafety of GMOs.	<b>L= 11</b>	
		<b>T= 2</b>	<b>P=2</b>
3	Concept and Terminologies in Environmental Biotechnology, Biotechnological approach of environmental pollution abatement, Bioremediation of contaminated sites, <i>in situ</i> , <i>ex situ</i> and engineered, Solid Phase – Composting, Slurry Phase- Bioreactors, Phyto-remediation- Organic & Metal Phyto-remediation, Construction of Wet lands, Rotating Biological Contactors, Biotechnology in the Energy Management, Biomass Energy, Resources, Energy Crops, Biomass Conversion Technologies- Production & Scope of Liquid Fuel, Production & Scope of Biogas, Production & Scope of Biodiesel.	<b>L= 12</b>	
		<b>T= 2</b>	<b>P= 1</b>
4	Biotechnology and Forest Management, Micro-propagation, Artificial Seeds, Plant Improvement, Industrial Biotechnology- Microbes & Industries, Concept of Green chemistry, Immobilized Enzymes for Green Chemistry, Biopolymers and Bioplastics, Bioleaching and Biomining, Biofertilizers, Biosensors, Biofilms, Biosurfactants.	<b>L=11</b>	
		<b>T=2</b>	<b>P= 2</b>

## Learning Resources

<b>1</b>	<b>Text Book</b>	<ul style="list-style-type: none"> <li>• General Microbiology By: SB Sullia &amp; S Shantharam. Oxford &amp; IBH Publishing Co. Pvt. Ltd., New Delhi (1998).</li> <li>• Environmental Biotechnology, Buddolla, Narosa</li> <li>• Environmental Biotechnology, Allen, CBS</li> <li>• Environmental Biotechnology, Fulekar, CRC</li> <li>• Environmental Biotechnology, Scragg, Oxford</li> <li>• Essentials of Biotechnology, Michael Chrichton, MEDTEC</li> <li>• Biotechnology, Smith, Cambridge</li> <li>• Textbook On Biotechnology by Hd Kumar, Affiliated East-West Press Pvt Ltd, 2003</li> <li>• Fundamentals of Ecology by Odum, E.P.</li> <li>• Environmental Science by Nobel, B.J. and Kormandy, E.J. (1981), The Way the World Works, Prentice-Hall Inc., N.J.</li> <li>• Environmental Science by Turk A., Turk, J. Wittes J.T. and Wittes, R.E. (1978)</li> <li>• Environmental Studies by Anindita Basak, 2009, Dorling Kindersley, New Delhi Publication.</li> <li>• Vogel's Textbook of Quantitative Chemical Analysis, 5<sup>th</sup> edition, J H Basset, J. Nendham and Denny, R.C.</li> </ul>
<b>2</b>	<b>Reference books</b>	<ul style="list-style-type: none"> <li>• Microbiology By: Michael J Pelczar, Jr; ECS Chan &amp; NR Krieg. Tata McGraw-Hill Edition, New Delhi (1998).</li> <li>• Principles of Microbiology By: Ronald M Atlas 2nd Edn, WCB McGraw-Hill, Boston (1997).</li> <li>• General Microbiology By: RY Stanier, JL Ingraham, ML Wheelis &amp; PR Painter. 5th Edn Macmillan Press Ltd., London (1995).</li> <li>• Microbial Ecology – Fundamentals and Application By: Ronald M Atlas &amp; Richard Bartha. 4th Edn. An Imprint of Addison Wesley Longman, Inc. California (1998).</li> <li>• Microbiology: Fundamentals and Applications By: SS Purohit. 6th Edn. Agro Botanica (1997-98).</li> <li>• Microbiology – Diversity, Disease &amp; Environment By: Abigail A Salyers &amp; Dixie D Whitt. Fitzgerald Science Press, Maryland (2001).</li> <li>• Industrial Microbiology – An Introduction y: Michael J Waites, Neil L Morgan, John S Rockey &amp; Gary Higton. Blackwell Science, London (2002).</li> <li>• Microbiology – A Laboratory Manual (International Students Edition) By: James G Cappuccina &amp; Natalie Sherman. Addison – Wesley Longman, Inc. California (1990).</li> <li>• Renewable Energy, Power for Sustainable Future, Third Edition, Godfrey Boyle, Oxford University Press, (2014).</li> <li>• Environmental Bio-Technology, Second edition, A K Chatterji, Prentice Hall of India Pvt. Ltd., (2007).</li> <li>• Environmental Biotechnology, K Allen, CBS Publishers &amp; Distributors, (2016).</li> <li>• Environmental Biotechnology-Basic Concepts &amp; Applications, Indu Shekhar Thakur, I K International Pvt. Ltd., (2006).</li> <li>• Environmental Biotechnology (Industrial Pollution Management), S N Jogdand, Himalaya Publishing House, (2012).</li> <li>• Green Chemistry, Environmentally Benign Reactions, V K Ahluwalia, Ane Books Pvt. Ltd (2016).</li> </ul>
<b>3</b>	<b>Website</b>	<ul style="list-style-type: none"> <li>• <a href="https://www.britannica.com/technology/biotechnology">https://www.britannica.com/technology/biotechnology</a></li> <li>• <a href="https://en.wikipedia.org/wiki/History_of_biotechnology">https://en.wikipedia.org/wiki/History_of_biotechnology</a></li> </ul>

<b>4</b>	<b>Journals</b>	<ul style="list-style-type: none"><li>• International Journal of Environmental Pollution Control &amp; Management , ISSN No .0975-3842</li><li>• Journal of Biosciences, ISSN No. 0250-5991</li><li>• Journal of Environmental Biology, ISSN No. 0254-8704</li><li>• Resonance, ISSN No. 0971-8044</li><li>• Current Science, ISSN No. 0011-3891</li></ul>
<b>5</b>	<b>Practical Component</b>	<ul style="list-style-type: none"><li>• Practicals based on this paper will be conducted under Paper No. CC 203 (Practical- II)</li></ul>

<b>Semester</b>	<b>II</b>	<b>Total Credit</b>	<b>4</b>
<b>Course Code</b>	<b>DSE 201-B</b>	<b>Credit Pattern</b>	<b>L-45, T-7, P-8</b>
<b>Course Title</b>	<b>ENERGY RESOURCE MANAGEMENT AND ENVIRONMENTAL TOXICOLOGY</b>		
<b>Course Objectives:</b> Equip students with the ability to:			
1	Equip with an ability to rephrase the concept and significance of energy resources		
2	Summarize the concept and significance of environmental toxicology.		
<b>Course Outcomes:</b> Students will be able to			
1	Identify and compare various forms and energy resources.		
2	Compare and contrast conventional and non conventional energy sources and relate technologies for harnessing renewable energy resources.		
3	Identify and evaluate the toxic chemicals, mutagens, carcinogens and their relationships between exposure and dose-response relationships.		
4	Evaluate effects on living/physiological systems like neurotoxicity, nephro-toxicity, hepato-toxicity, and reproductive toxicity.		

<b>Unit Number</b>	<b>Contents</b>	<b>Number of Sessions</b>	
1	<b>ENERGY RESOURCE MANAGEMENT</b> Basics of Energy and its various forms, Energy: Energy; work and power, first and second law of thermodynamics, concept of entropy, Energy, Environment and Economics of Development: Resources of energy and energy use pattern in different parts of the world, Indian energy scenario for domestic, agriculture, transport and industrial sector and its impact on the environment.	<b>L= 11</b>	
		<b>T=2</b>	<b>P=2</b>
2	Conventional Energy Sources and Technology: Coal, lignite; petroleum, natural gas, cracking of petroleum, furnace, boiler, turbines, fluidized bed, nuclear energy: fission and fusion energy, Renewable Energy Technology: Solar energy, Wind energy, Ocean energy, Geo-thermal energy, Hydel energy, Biomass Energy, bio-conversion technology, energy recovery from wastes, and environmental impacts of large scale exploitation of renewable energy. Energy Conservation and Energy Economics: Energy analysis: Capital recovery factor, Levelised annual cost, Economic analysis of wind electric generation and thermal power systems.	<b>L= 12</b>	
		<b>T= 2</b>	<b>P=1</b>
3	<b>ENVIRONMENTAL TOXICOLOGY</b> Toxicology - Scope, Definition, Evaluation of toxicity - routes of exposure; Acute, sub acute, chronic toxicity; LC50/LD50/NOEL - concepts and significance, their estimation, Some organ specific toxicity Studies- Neurotoxicity, Nephrotoxicity, Hepatotoxicity, Reproductive toxicity.	<b>L= 11</b>	
		<b>T= 2</b>	<b>P= 2</b>
4	Genotoxicity - Mutations, mutagenic agents, Toxic agents in environment: pesticides, agrochemicals, industrial chemicals, food additives, Safety regulations, legal control.	<b>L=11</b>	
		<b>T=2</b>	<b>P= 2</b>

<b>Learning Resources</b>		
1	<b>Text Books</b>	<ul style="list-style-type: none"> <li>• A Text book of Forest Taxonomy, Singh &amp; Nair, Anmol Publication.</li> <li>• A Text Book of Plant pathology, Sambamurty, I K International.</li> <li>• A Text Book Environmental Studies, Chatawal &amp; Sharma, HPH</li> <li>• A Text Book Environmental Science, Joshi &amp; Joshi, APH</li> <li>• A Text Book of Environmental Studies, Nambiar, STP</li> <li>• A Textbook Of Environmental Studies, Dr D K Asthana, S. Chand Publishers, 2018</li> <li>• Textbook Of Environmental Science And Technology by REDDY, BSP</li> </ul>

		<p>publishers, 2019</p> <ul style="list-style-type: none"> <li>• Park Textbook of Preventive and Social Medicine, Park Bhanot, Twenty Third edition.</li> </ul>
2	<b>Reference Books</b>	<ul style="list-style-type: none"> <li>• Alternative Energy Resources: The Quest for Sustainable Energy, Paul Kruger. Wiley, 2006, ISBN 0471772089</li> <li>• Non Conventional Energy Resources, B.H Khan, Tata McGraw-Hill Education. ISBN 1259081397</li> <li>• Energy Resources: Availability, Management, and Environmental Impacts, Kenneth J. Skipka, Louis Theodore, CRC Press, 2014 ISBN 1466517417.</li> <li>• Renewable and Alternative Energy Resources: A Reference Handbook Contemporary world issues, Zachary Alden Smith, Katrina D. Taylor, ABC-CLIO, 2008 ISBN 1598840894.</li> <li>• Energy Security and Economic Development in India: a holistic approach, Bala Bhaskar, TERI Press.</li> <li>• Energy Resources Survey in India, Allied Publishers Pvt. Ltd. (1995)</li> <li>• Desai, A. V.: Energy Economics, Wiley Eastern, Bombay.</li> <li>• Tyner, W.E.: Energy Resources and Economic Development in India, Allied Pub. Pvt. Ltd.</li> <li>• Mital, K.M. 1997: Non-conventional Energy System, Wheeler Publishers, New Delhi.</li> <li>• Pachauri, R. K.: Energy, Environment and Development, Vol. I &amp; II, Har Anand Pub. Pvt. Ltd.</li> <li>• Varadarajan, D. B.: Energy Economics, Sterling Publishers.</li> <li>• Edward H. Thorndike, Energy &amp; Environment: A Primer for Scientists and Engineers, Addition-Wesley Publishing Company, Reading, 1976.</li> <li>• Handbook of Toxicology, Third Edition, Michael J. Derelanko, Carol S. Auletta Publisher CRC Press, 2014 ISBN 143989014.</li> <li>• Casarett &amp; Doull's Toxicology: The Basic Science Of Poisons, Curtis Klaassen, Graw Hill Education/Exclusively distd . By Jaypee; 8 edition (2013)</li> <li>• Casarett &amp; Doull's Essentials of Toxicology, Third Edition (Casarett and Doull's Essentials of Toxicology), Curtis Klaassen &amp; John Watkins, McGraw-Hill Education.</li> <li>• Principles and Practice of Toxicology in Public Health Ira S. Richards Jones and Bartlett Publishers</li> <li>• Understanding Environmental Health Nancy Irwin Maxwell (Author) Jones and Bartlett Publishers, Inc.</li> </ul>
3	<b>Websites</b>	<ul style="list-style-type: none"> <li>• <a href="https://mnre.gov.in">https://mnre.gov.in</a></li> <li>• <a href="https://en.wikipedia.org/wiki/Renewable_energy">https://en.wikipedia.org/wiki/Renewable_energy</a></li> <li>• <a href="https://en.wikipedia.org/wiki/Environmental_toxicology">https://en.wikipedia.org/wiki/Environmental_toxicology</a></li> <li>• <a href="https://www.britannica.com/science/environmental-toxicology">https://www.britannica.com/science/environmental-toxicology</a></li> <li>• <a href="https://openoregon.pressbooks.pub/envirobiology/chapter/6-3-environmental-toxicology/">https://openoregon.pressbooks.pub/envirobiology/chapter/6-3-environmental-toxicology/</a></li> </ul>
4	<b>Journals</b>	<ul style="list-style-type: none"> <li>• Current Science, ISSN No. 0011-3891</li> <li>• Down to Earth</li> <li>• Journal of Biosciences, ISSN No. 0250-5991</li> <li>• Journal of Environmental Biology, ISSN No. 0254-8704</li> <li>• Resonance, ISSN No. 0971-8044</li> <li>• Journal of Earth System Science, ISSN No .2253-4126</li> </ul>
5	<b>Practical Component</b>	<p>Practicals based on this paper will be conducted under Paper No. CC 203 (Practical- II)</p>



Semester	II	Total Credit	4
Course Code	DSE 201-C	Credit Pattern	L-45, T-7, P-8
Course Title	DISASTER MANAGEMENT		
<b>Course Objectives:</b> Equip students with the ability to:			
1	Understand the concept and significance of disasters.		
2	Interpret the causes, effects and control measures of disasters.		
<b>Course Outcomes:</b> After completion of this course students will have capacity to			
1.	Recognize the various global and regional environmental concerns due to natural causes and/or human activities, and the impact of these on various forms of life .		
2.	Obtain and communicate information on risks, relief needs and lessons learned from earlier disasters in order to formulate strategies for mitigation in future scenarios		
3.	Describe and evaluate the environmental, social, economic, legal and organizational aspects influencing vulnerabilities and capacities to face disasters.		
4.	Relate theoretically and practically in the processes of disaster management (disaster risk reduction, response, and recovery)		
Unit Number	Contents	Number of Sessions	
1	Definition of hazard and Disaster, Fundamentals of disasters, Classification of disasters, Disaster Management Act, 2005. Disaster Management - Pre-disaster Planning, Planning During Disaster, Post- Disaster Planning.	L= 11	
		T=2	P=2
2	<b>Natural and Man-made disasters – causes, effects and control</b> Earthquakes, Floods, Droughts, Landslides, Cyclones, Storms, Tornadoes, Coastal & Marine disasters, Air, Water, Road & Rail and Nuclear disasters .	L= 11	
		T= 2	P=2
3	Concept of disaster management, Disaster Management Cycle, Hazard vulnerability, Hazard Zoning, Physical & Biological indicators of hazard, Risk Assessment & Hazard Preparedness Plan, collection of data for preparation of hazard preparedness plan.	L= 11	
		T= 2	P= 2
4	Role of various organizations - District Disaster Management Committee, National Disaster Management Authority (NDMA), NDRF, Non-Governmental Organisations, Military.	L=12	
		T=2	P= 1
<b>Learning Resources</b>			
1	<b>Text Books</b>	<ul style="list-style-type: none"> <li>Textbook Of Environmental Science And Technology by REDDY, BSP publishers, 2019</li> <li>A Textbook Of Environmental Studies, Dr D K Asthana, S. Chand Publishers, 2018</li> <li>A Text Book Of Environmental Studies by Vijay Tiwari, Himalaya Publishers, 2017</li> <li>A Text Book of Ecology, Tyler Miller, Cengage Learning</li> <li>A Text Book Environmental Studies, Chatawal &amp; Sharma, HPH</li> <li>A Text Book Environmental Science, Joshi &amp; Joshi, APH</li> <li>A Text Book of Environmatal Studies, Nambiar, STP</li> </ul>	
2	<b>Reference books</b>	<ul style="list-style-type: none"> <li>Nuclear Accidents (Man Made Disasters) Mark Mayell Publisher: Lucent Books.</li> <li>Management of Man-made Disasters, <b>S. L. Goel, Motilal Banarsidass Publishers Private Limited, New Delhi.</b></li> <li>Handbook of Pollution Control Processes By: Robert Noyes. Jaico Publishing House, Mumbai (2003).</li> <li>Fire &amp; Explosion Hazards Handbook of Industrial Chemicals By: TA Davletshina &amp; NP Cheremisinhoff, Noyes Publications, Mumbai (2003).</li> </ul>	

		<ul style="list-style-type: none"> <li>• Environmental Geology by K. Valdiya, Tata McGraw Hill Publishing Co.</li> <li>• Perspectives on Environment by I.R. Manners, M.W. Micksell.</li> <li>• Our Planet, Our Health by WHO (1992).</li> <li>• Report of the Panel on Industry by WHO (1992).</li> <li>• Natural Disasters, Author: Claire Watts / Trevor Day Publisher: Dk Publishing, ISBN: 9781465438096.</li> <li>• Environmental Biology by K.C. Agarwal .</li> <li>• Resource Book on Chemical (Industrial) Disaster Management, <a href="http://nidm.gov.in/PDF/pubs/chemical_mdc.pdf">http://nidm.gov.in/PDF/pubs/chemical_mdc.pdf</a></li> </ul>
3	Websites	<ul style="list-style-type: none"> <li>• Directory of Institutions and Resource Persons for Landslide Management In India</li> <li>• <a href="http://nidm.gov.in/PDF/pubs/directory%20landslide.pdf">http://nidm.gov.in/PDF/pubs/directory%20landslide.pdf</a></li> <li>• <a href="https://www.ifrc.org/en/what-we-do/disaster-management/about-disaster-management/">https://www.ifrc.org/en/what-we-do/disaster-management/about-disaster-management/</a></li> <li>• <a href="https://en.wikipedia.org/wiki/Disaster_management_in_India">https://en.wikipedia.org/wiki/Disaster_management_in_India</a></li> </ul>
4	Journals	<ul style="list-style-type: none"> <li>• Current Science, ISSN No. 0011-3891</li> <li>• Down to Earth</li> <li>• Journal of Biosciences, ISSN No. 0250-5991</li> <li>• Journal of Environmental Biology, ISSN No. 0254-8704</li> <li>• Resonance, ISSN No. 0971-8044</li> <li>• Journal of Earth System Science, ISSN No .2253-4126</li> <li>• Industrial Safety Chronicle</li> <li>• International Journal of Environmental Engineering Science, ISSN No .2229-3094</li> </ul>
5	Supplementary Reading	<ul style="list-style-type: none"> <li>• News Paper</li> <li>• Case studies of various disasters</li> <li>• Report of Bhopal Gas Tragedy</li> </ul>
6	Practical Component	<ul style="list-style-type: none"> <li>• Mock drill for various disaster</li> </ul>

<b>Semester</b>	<b>II</b>	<b>Total Credit</b>	<b>2</b>
<b>Course Code</b>	<b>GE 201 A</b>	<b>Credit Pattern</b>	<b>L-22, T-8</b>
<b>Course Title</b>	<b>FUNDAMENTALS OF MANAGEMENT</b>		
<b>Course Objectives</b>			
1	To Understand the different concepts in Management.		
2	To understand the different Functions of Management		
<b>Course Outcomes:</b> Students will be able to;			
1.	Discuss management functions and how it can affect future managers		
2.	Analyze and attain elementary level of skills in management process and functions: planning, organizing, directing and controlling.		

**Syllabus:**

<b>Unit Number</b>	<b>Contents</b>	<b>Number of Sessions</b>
<b>1</b>	<b>Introduction to Management</b> Management- Definition, Scope, Characteristics, Significance. Managerial Skills, Levels of Management and their functions, Henri Mintzberg- Roles of a Manager, Management Vs Administration.	<b>L= 11</b> <b>T= 4</b>
<b>2</b>	<b>Functions of Management</b> <b>Planning</b> -Nature, Types, Process and Importance of Planning, Limitations of Planning. <b>Organizing</b> - Meaning, Departmentalization, Span of Management, Concept of Responsibility, Authority, Accountability and Delegation <b>Directing</b> - Definition, Characteristics and Importance. <b>Controlling</b> - Need, Process of Controlling, Benefits of Controlling.	<b>L= 11</b> <b>T= 4</b>

**Note:**

1. Case Studies on Each of the Aspects Mentioned in the Syllabus need to be discussed.
2. Video cases and Documentary Films relating to the syllabus to be exhibited in the class

**Learning Resources**

<b>1</b>	<b>Text Books</b>	<ol style="list-style-type: none"> <li>1. Principles of Management – T Ramasamy</li> <li>2. Principles of Management – P.C. Tripathi and P.N. Reddy</li> <li>3. Fred Luthans, Organisational Behavior, McGraw Hill, 11th Edition, 2001</li> </ol>
<b>2</b>	<b>Reference books</b>	<ol style="list-style-type: none"> <li>1. Essentials Of Management – Koontz And Weinrich</li> <li>2. Modern Management – Certo – Prentice Hall</li> <li>3. Principles Of Management – L.M. Prasad</li> <li>4. Principles Of Management – R.M. Srivastava</li> <li>5. New Era of Management – Richard L. Daft</li> <li>6. Essentials of Management – Peter Drucker</li> <li>7. Management – Stephen P. Robins – Prentice Hall</li> <li>8. Modern Business Administration and Management – S. A. Sherlekar - Himalaya Publication</li> <li>9. Management Concept and Strategies – J. S. Chandra</li> </ol>
<b>3</b>	<b>Websites</b>	<ol style="list-style-type: none"> <li>1. <a href="http://www.iupindia.in">www.iupindia.in</a></li> <li>2. <a href="https://iedunote.com">https://iedunote.com</a></li> <li>3. <a href="http://www.yourarticlelibrary.com">http://www.yourarticlelibrary.com</a></li> </ol>

4	<b>Journals</b>	<ol style="list-style-type: none"> <li>1. Asian Journal of Management</li> <li>2. AIMS Journal of Management</li> <li>3. Casefolio The IUP Journal of Management case studies.</li> <li>4. IUP Journal of Management Case Studies</li> <li>5. IUP Journal of Organisational Behavior</li> </ol>
5	<b>Supplementary Reading</b>	<ol style="list-style-type: none"> <li>1. South Asian Journal of Practical Research</li> <li>2. Business India – The Magazine of Corporate World.</li> <li>3. Articles in Economic Times, Deccan Herald, Times of India</li> </ol>
6	<b>Practical Component</b>	<ul style="list-style-type: none"> <li>• Study organizational Structure of any company and present in the class.</li> <li>• Class debate on different basis of departmentalisation</li> <li>• Identify any business leader and list his qualities that made him a good leader.</li> <li>• Visit any organization and find out how it motivates its employees and discuss in class.</li> <li>• Library Exercise on CSR activities undertaken by any one company of your choice.</li> <li>• To interview Manager of any local business to understand responsibilities and limitations of manager.</li> <li>• Identifying a job profile and list the various types abilities required for that job and also the personality traits/attributes required for that job.</li> <li>• Management games on <b>Team building</b> will be conducted.</li> </ul>

<b>Semester</b>	<b>II</b>	<b>Total Credit</b>	<b>2</b>
<b>Course Code</b>	<b>GE-201 B</b>	<b>Credit Pattern</b>	<b>L-30, T-8, P-7</b>
<b>Course Title</b>	<b>Office Automation</b>		
<b>Course Objectives</b>			
1	To teach basic concepts about computers and peripheral devices		
2	To explain the concept of computer languages and features of operating system		
3	To demonstrate use of Word processor for documentations.		
4	To explain effective use of presentation technology.		
5	To demonstrate use of spreadsheet for analysis of data		
<b>Course Outcomes</b>			
After completion of this course the student will be able to:			
1	Understand basic concepts and computer terminology.		
2	Use operating system features		
3	Prepare proper documents		
4	Prepare effective presentation		
5	Analyze any data with the help of spreadsheets.		

<b>Unit Number</b>	<b>Contents</b>		
1	<b>Introduction to Computer, Concept of Operating System &amp; Word Processing</b> Definition of Computer, Characteristics & Limitations of Computer, Generations of Computer, Block Diagram of Computer, Concept of Hardware and Software, <b>Operating System:</b> Function of Operating System, Types of O.S., Features of Windows Operating System, Default Icons on Desktop – My Computer, Recycle Bin, My Network Places and Internet Explorer, Important Terms in Windows – Icons, Desktop, Folder, Star Button, Concept of Cut, Copy and Paste operation, Concept of Start Button <b>MS-Word:</b> Component of MS-Word window, Page-Setup in MS-Word, How of Print Document, Formatting the Document, Inserting & Formatting table, Inserting various objects in the document, Mail-Merge Utility, Cursor Control Keys,	<b>L=3</b>	
		<b>T=1</b>	<b>P=0</b>
2	<b>Data Analysis Through Excel and Presentation Techniques.</b> <b>MS-Excel:</b> Features Of Excel, Formatting Work Sheet- Formatting cell, conditional formatting, Lookup Functions, IF, SUM, SUMIF, SUMIFS, COUNT, COUNTIF, COUNTIFS, COUNTBLANK Functions, Function For Financial Decision – PV, FV, PMT, PPMT, IPMT Functions, TEXT Functions, Date and Time Functions, Decision Making Using – Goal Seek, Scenario Manager, Basic Data Analysis – Sorting, Summarizing, Filtering, Validating Data, Summarizing Data With Chart, Describe Data Using Pivot Table,	<b>L=3</b>	
		<b>T=1</b>	<b>P=0</b>

	<b>MS-PowerPoint:</b> Factors To Be Considered Before Creating A Presentation, Creating and setting Presentations With PowerPoint, Applying Animation Effects, Slide Transition Effects, Views In PowerPoint, Use of Text, Images, ClipArt's, Hyperlinks, Video and Audio and Action Buttons In Presentation,		
<b>Learning Resources</b>			
1	<b>Text books</b>	<ol style="list-style-type: none"> <li>1. Computer Fundamentals by P. K. Sinha&amp;PritiSinha, 5<sup>th</sup> edition, BPB pub.</li> <li>2. Computer Fundamentals by Balguruswami</li> <li>3. Microsoft Office 2013 All-In-One For Dummies By Peter Weverka, Wiley India Pvt Ltd, ISBN 10: 812654175X</li> <li>4. Microsoft Office 2010 Digital Classroom by AGI Creative Team John Wiley &amp; Sons; Pap/Psc edition (1 March 2011) ISBN-10: 0470577770</li> <li>5. Operating System Concepts: International Student Version By <u>Silberschatz</u> Wiley; Eighth edition (20 April 2009) ISBN-10: 8126520515</li> </ol>	
2	<b>References</b>	<ol style="list-style-type: none"> <li>1. Microsoft Office 2010 Bible By <u>John Walkenbach</u> Wiley India Private Limited (28 September 2010) ISBN-10: 8126528397</li> <li>2. Microsoft Windows Operating System Essentials By <u>Tom Carpenter</u>John Wiley &amp; Sons (9 February 2012) ISBN-10: 1118195523</li> <li>3. Microsoft Windows Operating System Essentials By<u>Tom Carpenter</u>ISBN: 978-1-118-19552-9</li> <li>4. Fundamentals Of Computers 5Ed By V. RajaramanPublisher: Phi Learning Pvt Ltd ISBN 10: 8120340114</li> </ol>	

<b>Semester</b>	<b>II</b>	<b>Total Credit</b>	<b>2</b>
<b>Course Code</b>	<b>GE-201- C</b>	<b>Credit Pattern</b>	<b>L-20, T-05, P-05</b>
<b>Course Title</b>	<b>Indian Social Problems And Social Services</b>		

**Course Outcomes: Students will be able to**

1	Implement various social welfare services provided by GO's & NGO's
2	Asses the socio- economic factors and their implications of beneficiaries

**Syllabus:**

<b>Unit Number</b>	<b>Contents</b>	<b>Number of Sessions</b>	
1	Genesis and nature of various categories of Social Problems Definition of Social deviance and control, social disorganization and social problems, study and analysis of specifics social problems in relation to their nature, causative factors, extent and magnitude	<b>L=10</b>	
		<b>T=3</b>	<b>P=2</b>
2	An overview of major social problems, Juvenile delinquency, Crime, Prostitution, Dowry, AIDS, Beggary-Alcoholism and Drug Addition.	<b>L=10</b>	
		<b>T=2</b>	<b>P=3</b>

<b>Learning Resources</b>		
1	<b>Text Books</b>	<ol style="list-style-type: none"> <li>Ahuja R 1993 Indian Social System-Rawat Publication New Delhi.</li> <li>Akbar M.J. 1988 Riot After Tiot; Reports on caste &amp; Communal Violence in India New Delhi : Penguin Books.</li> <li>Bardhan P. 1984 the Political Economy of Development in India Delhi: Oxford Press.</li> <li>Betelle A. 1966 Caste, Class and Power Bombay: Oxford Uni, Press.</li> <li>Black C.E. 1966 The Dynamics of Modernization: A study in Comparative History New York: Harper &amp; Row.</li> <li>Madan G.R. 1985 Indian Social Problems Vol. I and II Allied Pub. Pvt. Ltd. Bombay.</li> </ol>
2	<b>Reference Books</b>	<ol style="list-style-type: none"> <li>Coser I.A. 1956 The functions of Social Conflict Glencoc Illinois; Free Press.</li> <li>Dahrendorf R. 1957 Class &amp; Class ' Conflicts in an Industrialized Society London Routldge&amp;Kengan Paul.</li> <li>Dandekar V.M. 1977 Nature of Class Conflict in the Indian Society Bom Bharat Foundation.</li> <li>Das A. &amp; Nilkanth V. (Ed.) 1979Agrarian Relations in India Delhi: Manohar.</li> </ol>
3	<b>Website</b>	<a href="https://journals.sagpub.com">https://journals.sagpub.com</a> <a href="http://www.ndpublisher.in">www.ndpublisher.in</a> <a href="http://www.ukessays.com">www.ukessays.com</a> <a href="http://www.open.edu7.sociology">www.open.edu7.sociology</a>
4	<b>Journals</b>	International Journal of Social Science Indian Journal of Social Work
5	<b>Supplementary reading</b>	Encyclopedia in Social Work Vol-I & II Dictionary of Social Work
6	<b>Practical Component</b>	<ol style="list-style-type: none"> <li>Visit to various NGO's</li> <li>Concurrent Field Work</li> <li>Case studies on various social problems</li> <li>Organized Group discussion with problematic</li> <li>Celebrate different days related to Social issues.</li> </ol>

<b>Semester</b>	<b>II</b>	<b>Total Credit</b>	<b>2</b>
<b>Course Code</b>	<b>GE 201 D</b>	<b>Credit Pattern</b>	<b>L-22, T-04, P-04</b>
<b>Course Title</b>	<b>Principles of Economics</b>		

**Course Outcomes: Students will be able to**

1	Understand the micro variables and approach for microeconomic issues
2	Identify the macro variables in any economy

**Syllabus:**

<b>Unit Number</b>	<b>Contents</b>	<b>Number of Sessions</b>	
1	<b>Unit 1: Demand &amp; Supply Analysis</b> Basic Economic Concepts, Definitions of Economics, Branches or approaches to economics, Basic Economic Problems or the Central problems of a Society, Law of Diminishing Marginal Utility, Demand curve derivation and its properties, Elasticity of Demand Supply Analysis- Meaning, Types and Determinants of Supply, Supply Function and Law of Supply, Elasticities of Supply and Their Utilities.	<b>L= 11</b>	
		<b>T= 2</b>	<b>P= 2</b>
2	<b>Unit 2. Market Theory &amp; N.I</b> Types of Markets, Perfect Competition, Monopoly, Monopolistic Competition, Oligopoly: Features and price determination Basic Concepts of NI, GDP, GNP, etc, Estimation of NI and Difficulties, Circular Flow of Aggregate Income and Expenditure	<b>L= 11</b>	
		<b>T= 2</b>	<b>P= 2</b>

**Learning Resources**

1	<b>Text Books</b>	<ul style="list-style-type: none"> <li>Paul Samuelson(2000), Economics, McGraw Hill Inc, New Delhi, Ahuja H.L, Modern Micro Economics, S Chand&amp; Co., New Delhi,</li> <li>Koutsyanis (2015), Micro Economics.</li> <li>Jhingan M.L., Microeconomics, Vrinda Publications, New Delhi.</li> <li>C.Rangarajan and Dholokia B.H, Principles of Macro Economics, Tata Mcgraw-Hill, New Delhi, (1998).</li> <li>Blanchard, Olivier (2000), <i>Macroeconomics</i>, Prentice Hall.</li> </ul>
2	<b>Reference books</b>	<ul style="list-style-type: none"> <li>Robert S Pindyck and Daniel L Rubinfeld(2017), Microeconomics, Pearson Education Ltd., UP</li> <li>Mankwin Gregory N(2016), Principles of Microeconomics, Cengage Learning India Pvt. Ltd.</li> <li>Hal R Varian(2015), Microeconomic analysis, Viva Books Pvt. Ltd., New Delhi</li> <li>Mankiw Gregory (2002), Macroeconomics, 5th Edition, Worth Publishers</li> <li>Ahuja H L(2015), Macroeconomics Theory And Policy, 19th Edition, SCHAND</li> <li>Gupta G S(2011), Keynesian and Post Keynesian</li> </ul>
3	<b>Websites</b>	<p><a href="http://www.rbi.org.in">www.rbi.org.in</a>  <a href="http://www.mygov.gov.in">www.mygov.gov.in</a>  <a href="http://www.cmie.com">www.cmie.com</a></p>



4	<b>Journals</b>	Arth Samwad Economic and Political Weekly Indian-Economic-Journal Journal-of Indian-School-of-Political-Economy
5	<b>Supplementary Reading</b>	Economics Survey Union Budget of India
6	<b>Practical Component</b>	<ul style="list-style-type: none"> <li>• Conduct consumer survey and identify consumer utility for various consumer goods</li> <li>• Review reference books on economics, and prepare a report on liner, cubic and quadratic production functions</li> <li>• Visit various service vendors and prepare a report on price determining factors and challenges for their products in the market</li> </ul>

<b>Semester</b>	<b>II</b>	<b>Total Credit</b>	<b>2</b>
<b>Course Code</b>	<b>GE 201 E</b>	<b>Credit Pattern</b>	<b>L-23, T-07, P-0</b>
<b>Course Title</b>	<b>Environment And Development</b>		

### Course Objectives

1	Understand the basics functional areas of Environment.
2	Define concepts of pollution, pollutants and natural resources
3	Explain historical development of struggle for Environmental protection

### Course Outcomes: The students will able to

1.	Differentiate biotic and abiotic components of ecosystem & able to understand concept of habitat, interactions in between different components & their Interrelationships.
2.	Develop ability of identification of local issues related with natural resources.
3.	Adopt various pollution control techniques.
4.	Able to know various environmental policies as well as National & International Organizations involved.

### Syllabus:

Unit Number	Contents	Number of Sessions	
1	<b>Ecological concept and Natural Resources :</b> Introduction to Environmental Science as a multi-disciplinary, its scope and necessity; Concepts of Ecosystem and its Structure and Functions, Principles of Organism-environment relationship; Concept and classification of Natural Resources. Energy Resources, Renewable and Nonrenewable.	L= 11	
		T= 3	P=0
2	<b>Environmental Pollution and Policy:</b> Definition, sources and effects of water pollution. Definition, sources of air pollution, Effect of air pollution and acid rain, climate change, ozone depletion.  Definition, Sources of noise pollution. Effect of noise pollution on human-beings. Noise control measures.  Government policies in the protection and development of environment. National environmental policy. United Nations Environmental Programme (UNEP).	L= 12	
		T= 4	P= 0

### Learning Resources

1	<b>Text Books</b>	<ul style="list-style-type: none"> <li>• A Textbook Of Environmental Studies, Dr D K Asthana, S. Chand Publishers, 2018</li> <li>• A Text Book Of Environmental Studies by Vijay Tiwari, Himalaya Publishers, 2017</li> <li>• A Text Book of Environmental Chemistry &amp; Pollution Control, Dara, Chand</li> <li>• A Text Book of Ecology, S K Dubey, Dominant Publication</li> <li>• A Text Book of Ecology, Tyler Miller, Cengage Learning</li> <li>• A Text Book Environmental Studies, Chatawal &amp; Sharma, HPH</li> <li>• A Text Book Environmental Science, Joshi &amp; Joshi, APH</li> <li>• A Text Book of Environmatal Studies, Nambiar, STP</li> </ul>
2	<b>Reference books</b>	<ul style="list-style-type: none"> <li>• Fundamentals of Ecology by Odum, E.P.</li> <li>• Desert Ecology by Ishwar Prakash</li> <li>• Ecology of Urban India by Pramod Singh</li> </ul>

		<ul style="list-style-type: none"> <li>• Ecology of Rural India by Singh</li> <li>• Ecology 2000 by Sir Edmand Hillary</li> <li>• Environmental Protection and the Laws by CN Mehta, 1991</li> <li>• India's Forests, Myth and Reality by J.B. Lal 1989</li> <li>• Legal aspects of Environmental Pollution and its Management by Ed. S.M. Ali, 1992</li> <li>• Man – Nature and Environmental Law by GS Nathawal, S. Shastri and JP Vyyar, 1988</li> <li>• International Environmental Policy: Emergence and Dimensions by LK Caldwell, 1990</li> <li>• Lal's Commentaries on Water, Air Pollution Laws along with the Environmental (Protection) Act and Rules, 1986, 3<sup>rd</sup> Ed., 1992 Law Publisher – India</li> <li>• The Wildlife (Protection) Act, 1972 (with amendment-1991)</li> <li>• Our Common Future – WCED, 1991</li> <li>• Universal's Environment and Pollution Law Manual by SK Mohanty, 1998.</li> <li>• A Guide to Implementation of the ISO 14000 Series on Environmental Management (Prentice Hall Ptr Environmental Management and Engineering Series) Har/Dskt Edition</li> <li>• Environmental manager's guide to ISO 14000 by <a href="#">Bruce W Perry</a></li> <li>• Implementing ISO 14000 Hardcover – November 1, 1996 by <a href="#">Tom Tibor</a> (Author), <a href="#">Ira Feldman</a> (Author)</li> <li>• Environmental Impact Assessment By: Larry W Canter. McGraw-Hill International Editions, 2nd Edn, New York (1996).</li> <li>• EIA Theory &amp; Practice By: Peter Wathern. Unwin Hyman, London (1990)</li> <li>• Environmental Impact Assessment By: PR Trivedi. APH Publishing Corporation, New Delhi (2004)</li> <li>• EIA Practical Solutions to Recurrent Problems By: David P Lawrence. Wiley Interscience Publication (2003)</li> </ul>
3	Websites	<ul style="list-style-type: none"> <li>• <a href="https://www.toppr.com/guides/biology/ecosystem/biogeochemical-cycle/">https://www.toppr.com/guides/biology/ecosystem/biogeochemical-cycle/</a></li> <li>• <a href="https://nca2014.globalchange.gov/report/sectors/biogeochemical-cycles">https://nca2014.globalchange.gov/report/sectors/biogeochemical-cycles</a></li> <li>• <a href="https://www.conserve-energy-future.com/what-is-environmental-science-and-its-components.php">https://www.conserve-energy-future.com/what-is-environmental-science-and-its-components.php</a></li> </ul>
4	Journals	<ul style="list-style-type: none"> <li>• Current Science, ISSN No. 0011-3891</li> <li>• Every Thing About Water</li> <li>• Down to Earth</li> <li>• Resonance, ISSN No. 0971-8044</li> <li>• Journal of Earth System Science, ISSN No .2253-4126</li> </ul>
5	Supplementary Reading	<ul style="list-style-type: none"> <li>• National Geographic</li> <li>• Down to Earth, CSE</li> </ul>
6	Practical Components	<ul style="list-style-type: none"> <li>• Field visit to study pond water &amp; forest Ecosystem.</li> </ul>

<b>Semester</b>	<b>II</b>	<b>Total Credit</b>	<b>2</b>
<b>Course Code</b>	<b>AEC 201 -A</b>	<b>Credit Pattern</b>	<b>L-22, T-4, P-4</b>
<b>Course Title</b>	<b>GERMAN</b>		

**Course Objectives**

1	To create an awareness about a foreign language
2	To understand the basic script of the language
3	To understand the culture and tradition of the county

**Course Outcomes:** Students will be able to;

1	Use basic words & sentences in German Language
2	Develop basic vocabulary in German Language..

**Syllabus:**

<b>Unit Number</b>	<b>Contents</b>
1	Introduction ( Name, country, living place, languages etc.), Asking the person's information, Greeting German Alphabets, Number (1-100), Giving and asking information related to number (age, telephone number, mobile number etc. Difference between formal and informal, Personal Pronouns, verb conjugation Europa-Countries, capitates and languages Learning about the things in the class room, Definite, indefinite, negative articles Possessive Articles with the reference of all the nouns learnt in the last lecture Watching timing learning
2	Conjugation of strong verbs, Use of separable verbs in the sentences Routine activities, Questions related to time, (use of prepositions am, pm) Eating and drinking ( Grocery, fruits, vegetables, beverages), Learning of vocabulary related to eating and drinking, Use of accusative in the sentence Learning the professions, Telling about and asking for the professions Ordinal number Verbs- haben, sein, Revising the syllabus

**Note:**

1. There will not be any fixed text book for the above given syllabus
2. The extra notes will be provided to the students to complete the required syllabus.

<b>Semester</b>	<b>II</b>	<b>Total Credit</b>	<b>2</b>
<b>Course Code</b>	<b>AEC 201-B</b>	<b>Credit Pattern</b>	<b>L-22, T-4, P-4</b>
<b>Course Title</b>	<b>JAPANESE</b>		

<b>Course Objectives</b>	
--------------------------	--

1	To create an awareness about a foreign language
2	To understand the basic script of the language
3	To understand the culture and tradition of the county

<b>Course Outcomes:</b> Students will be able to;	
---	--

1	Use basic words & sentences in Japanese Language
2	Develop basic vocabulary in Japanese Language.

**Syllabus:**

<b>Unit Number</b>	<b>Contents</b>
1	Introduction to Japan as country and language basics. Hiragana Script, Hiragana Activity, Katakana Script, Katakana Activity, Cultural Ethics and Survival Greetings, Classroom Language (Speaking), Number system, Vocab for Daily Uses, Grammar, Calendar Family Tree, Grammar
2	Self-Introduction, Introduction to Japanese Work-Culture Grammar, Introduction to -Kanji, Visit Restaurant' (Speaking), Visit guest's house' (Speaking), Shopping' (Speaking), Farewell

<b>Learning Resources</b>	
---------------------------	--

<b>1</b>	<b>Reference books</b>	<ol style="list-style-type: none"> <li>1. Living Language Ultimate Japanese Beginner-Intermediate</li> <li>2. The Kanji Learner's Dictionary by Jack Halpern</li> <li>3. Japanese from zero 1 and 2 by George Tromphy</li> <li>4. Basic Japanese by Eriko Sato</li> <li>5. Handbook of Japanese verbs by Taeko Kamiya</li> <li>6. Japanese- English, English- Japanese Dictionary by Seigo Nakao</li> <li>7. Modern Japanese vocabulary A Guide for 21<sup>st</sup> century student by Edward Trimell</li> <li>8. Minna no Nihongo Series</li> <li>9. Seiichi Makino Michio Tsutsui Biiks (Dictionary)</li> <li>10. Genki An Integrated Course in Elementary Japanese</li> <li>11. Improving your communication skills</li> <li>12. Pod 101 series (audio)</li> </ol>
----------	------------------------	---

<b>Semester</b>	<b>II</b>	<b>Total Credit</b>	<b>2</b>
<b>Course Code</b>	<b>AEC 201-C</b>	<b>Credit Pattern</b>	<b>L-22, T-4, P-4</b>
<b>Course Title</b>	<b>FRENCH</b>		

<b>Course Objectives</b>	
1	To create an awareness about a foreign language
2	To understand the basic script of the language
3	To understand the culture and tradition of the county
<b>Course Outcomes:</b> Students will be able to;	
1	Use basic words & sentences in French Language
2	Develop basic vocabulary in French Language.

**Syllabus:**

<b>Unit Number</b>	<b>Contents</b>
<b>1</b>	Introduction (Name, country, living place, languages etc.), Asking the person's information, Greetings and Salutations, French Alphabets, French Accents, Numbers (1-1000), Giving and asking information related to numbers (age, telephone number, mobile number etc.) Difference between formal and informal, Personal Pronouns, Verb conjugations Countries, nationalities, capitals and languages Articles, Prepositions, Colours Gender, Nouns and Pronouns, Singular Plural Possessive Pronouns, Family Vocabulary Telling Time, Days of the week, Months of the Year, Parts of the Day About France and Francophone Countries, French Culture and Etiquettes, French Monuments
<b>2</b>	Conjugation of ER, IR and RE verbs, Use verbs in the sentences Routine activities, Questions related to time, (use of prepositions am, pm) Eating and drinking ( Grocery, fruits, vegetables, beverages), Learning of vocabulary related to eating and drinking, Use of accusative in the sentence Learning the professions, Telling about and asking for the professions Ordinal numbers Negative Sentences, Interrogatives Describing Oneself, Family Simple Letter Writing and Essay Writing Revising the syllabus

**Note:**

1. There will not be any fixed text book for the above given syllabus
2. The extra notes will be provided to the students to complete the required syllabus.

<b>Learning Resources</b>		
1	Reference books	<ol style="list-style-type: none"> <li>1. Echo A1 Méthode de Français – Goyalsaab Publishers</li> <li>2. Le Flambeau , Méthode de Français –Preeti Bhutani</li> <li>3. Saison 1 Méthode de français- Alliance française</li> <li>4. Larousse French Dictionary-W.R.Goyal</li> </ol>

### **SEMESTER –III**

<b>Semester</b>	<b>III</b>	<b>Total Credit</b>	<b>4</b>
<b>Course Code</b>	<b>CC 301</b>	<b>Credit Pattern</b>	<b>L-45, T-7, P-8</b>
<b>Course Title</b>	<b>CORPORATE ENVIRONMENTAL STRATEGIES</b>		
<b>Course Objectives:</b>			
1	Understand concept and significance of corporate environmental strategies.		
2	Interpret concept and significance of Environmental Education.		
<b>Course Outcomes: Students will be able to;</b>			
1	Design CSR for particular industry.		
2	Relate various international strategies with national strategies.		
3	Appreciate the ethical, cross-cultural, and historical context of environmental issues and the links between human and natural systems.		
4	Understand International efforts for Environment Protection		

<b>Unit Number</b>	<b>Contents</b>	
1	<b>Corporate Environmental Strategies</b> International efforts for environmental protection : United Nations Environmental Programme (UNEP), International Union for Conservation of Nature & Natural Resources (IUCN), World Wide Fund for Nature (WWF), Stockholm Conference. Rio Conference, Agenda 21 UNFCCC, IPCC, Basel convention; Montreal Protocol, Paris Agreement-2015 etc.	<b>L-11</b>
		<b>T-2 P-2</b>
2	Government policies and role of various institutions in protection and development of environment, Business strategy, Marketing strategy, Green marketing, Eco-labelling, Operation of Eco-mark Scheme of Govt. of India, Criteria for eco-mark, Status of eco-mark development, World Trade organization(WTO), General agreement on trade in services (GATS).	<b>L-11</b>
		<b>T-2 P-2</b>
3	Global Warming Potential (GWP), Concept of clean development mechanism (CDM), carbon trading, , carbon footprint, Concept of Corporate Social Responsibility, CSR guidelines by Company Law, Quality Management System (QMS-ISO 9001): Over view of ISO 9001, Quality Management Principles	<b>L- 11</b>
		<b>T-2 P-2</b>
4	<b>Environmental Education:</b> Environmental education - need and objectives, Status of environmental education in new education policy, Environmental considerations in economic planning and development in India. NCEP and district environmental committee. Emerging environmental concerns in India- Case study of Silent Valley, Sardar Sarovar project, Tehri Garwal dams.	<b>L- 11</b>
		<b>T-2 P-2</b>

Learning Resources		
1	<b>Text Books</b>	<ul style="list-style-type: none"> <li>• A Textbook Of Environmental Studies, Dr D K Asthana, S. Chand Publishers, 2018</li> <li>• A Text Book Of Environmental Studies by Vijay Tiwari, Himalaya Publishers, 2017</li> <li>• A Text book of Extension Education, S V Supe, ATPA</li> <li>• A Text book of Agricultural Biotechnology, Ahindra Nag, PHI</li> <li>• A Text Book of Green Chemistry, Ahluwalia, Narosa</li> <li>• A Text Book Environmental Studies, Chatawal &amp; Sharma, HPH</li> <li>• A Text Book Environmental Science, Joshi &amp; Joshi, APH</li> </ul>
2	<b>Reference books</b>	<ul style="list-style-type: none"> <li>• Environmental Management Strategies: The 21st Century Perspective Volume 5 Corporate Environmental Strategy: The Avalanche of Change Since Bhopal Bruce Piasecki Wiley.</li> <li>• Environmental Strategies for Industry: International Perspectives On Research Needs And Policy Implications Corporate Environmental Strategy and Competitive Advantage (New Perspectives in Research on Corporate Sustainability Series)</li> <li>• Environmental Management, N K Uberoi, Published by Excel Books. Publishing House, 2nd Revised edition edition, 2005.</li> </ul>
3	<b>Website</b>	<ul style="list-style-type: none"> <li>• <a href="https://unfccc.int/">https://unfccc.int/</a></li> <li>• <a href="https://sustainabledevelopment.un.org/milestones/unced">https://sustainabledevelopment.un.org/milestones/unced</a></li> <li>• <a href="http://www.ijpmbs.com/uploadfile/2015/0412/20150412030122401.pdf">http://www.ijpmbs.com/uploadfile/2015/0412/20150412030122401.pdf</a></li> <li>• <a href="https://www.wto.org/english/tratop_e/serv_e/gatsqa_e.htm">https://www.wto.org/english/tratop_e/serv_e/gatsqa_e.htm</a></li> <li>• <a href="https://www.wto.org/">https://www.wto.org/</a></li> <li>• <a href="http://www.oecd.org/corporate/mne/">http://www.oecd.org/corporate/mne/</a></li> <li>• <a href="https://asq.org/quality-resources/iso-14000">https://asq.org/quality-resources/iso-14000</a></li> <li>• <a href="https://www.iso.org/iso-14001-environmental-management.html">https://www.iso.org/iso-14001-environmental-management.html</a></li> <li>• <a href="http://www.environmentalpollution.in/environmental-audit/environmental-audit-concept-setting-and-process/3890">http://www.environmentalpollution.in/environmental-audit/environmental-audit-concept-setting-and-process/3890</a></li> <li>• <a href="https://www.iso.org/iso-9001-quality-management.html">https://www.iso.org/iso-9001-quality-management.html</a></li> </ul>
4	<b>Journals</b>	<ul style="list-style-type: none"> <li>• Current Science, ISSN No. 0011-3891</li> <li>• Down to Earth</li> <li>• International Journal of Environmental Pollution Control &amp; Management , ISSN No .0975-3842</li> <li>• Journal of Earth System Science, ISSN No .2253-4126</li> <li>• Resonance, ISSN No. 0971-8044</li> </ul>
5	<b>Supplementary Reading</b>	<ul style="list-style-type: none"> <li>• The Hindu</li> <li>• Paris Agreement</li> <li>• IPCC reports</li> </ul>



<b>Semester</b>	<b>III</b>	<b>Total Credit</b>	<b>4</b>
<b>Course Code</b>	<b>CC 302</b>	<b>Credit Pattern</b>	<b>L-45, T-9, P-6</b>
<b>Course Title</b>	<b>ENVIRONMENTAL IMPACT ASSESSMENT (EIA) AND ENVIRONMENT MANAGEMENT SYSTEM (EMS)</b>		

<b>Course Objectives</b>	
1.	Apprise concept and significance of environmental impact assessment.
2.	Explain concept and significance of Environmental Legislation.
3.	Discuss various steps in conducting environmental management plan.
<b>Course Outcomes:</b>	
1.	Design EMP for particular industry.
2.	Prepare Environmental Impact Assessment report.

**Syllabus:**

<b>Unit Number</b>	<b>Contents</b>	<b>Number of Sessions</b>	
<b>1</b>	<b>Concept and Components of EIA :</b> Environment and Development, Sustainable development Definition of EIA, its concept, scope and objectives. Negative and positive, primary and secondary, reversible and irreversible, tangible and intangible impacts, Elements or components of EIA, EIA in developed countries and developing countries, Baseline studies in EIA, Public participation in EIA Prediction of impacts and its methodology.	<b>L=11</b>	
		<b>T= 2</b>	<b>P= 2</b>
<b>2.</b>	<b>Methodologies of EIA :</b> Uncertainties in EIA, Environmental monitoring and environmental management plan, Planning and management of impacts studies, Cost-benefit analysis of the project: present and future worth of project, feasibility report. Preparation, writing and appreciation of EIA reports pertaining to Dam, Mining and other industries, Life Cycle Assessment as environmental management tool, Composition of expert committee Procedure & format of obtaining consent to establish and consent to operate from the State Pollution Control Board (SPCB). Concept of Social Impact Assessment (SIA).	<b>L= 12</b>	
		<b>T= 2</b>	<b>P= 1</b>
<b>3.</b>	<b>Environmental Management System (EMS):</b> Scope, application and benefits of ISO certification; Introduction, terms and definitions, Need for EMS, ISO 14000 (Series) – The Basic Principles; Environmental Management System Requirement - Deming Cycle of continual improvement. Environmental Policy, Environmental aspects and impacts. Environmental objectives. ISO 14001: Preparation of documentation. Steps for certifications; Actual conduct of audit for certification; Implementation of ISO 14000, Reporting of Non conformity and follow audit trails.	<b>L= 11</b>	
		<b>T= 2</b>	<b>P=2</b>

4.	<b>Environmental Auditing :</b> Preamble, scope and objectives of environmental auditing, Applicability of statutory environmental statement audit, Qualities of an environment auditor, Contents of EA report. Preparation of documents for consent to establish/ consent to operate / Renewal, Types of Environmental audits, - Preset audit, Impact assessment audit, compliance audit, Awareness audit and improvement / Green audit. General approach towards environmental audit, preparation of questionnaire for audit, presentation of data and certification	<b>L= 11</b>	
		<b>L=2</b>	<b>L= 2</b>

Learning Resources		
1	<b>Text Books</b>	<ul style="list-style-type: none"> <li>• A Textbook Of Environmental Studies, Dr D K Asthana, S. Chand Publishers, 2018</li> <li>• A Text Book Of Environmental Studies by Vijay Tiwari, Himalaya Publishers, 2017</li> <li>• A Text Book Environmental Studies, Chatawal &amp; Sharma, HPH</li> <li>• A Text Book Environmental Science, Joshi &amp; Joshi, APH</li> <li>• A Text Book of Environmatal Studies, Nambiar, STP</li> </ul>
1	<b>Reference books</b>	<ul style="list-style-type: none"> <li>• Environmental Impact Assessment By: Larry W Canter. McGraw-Hill International Editions, 2nd Edn, New York (1996)</li> <li>• EIA Theory &amp; Practice By: Peter Wathern. Unwin Hyman, London (1990)</li> <li>• Environmental Impact Assessment By: PR Trivedi. APH Publishing Corporation, New Delhi (2004)</li> <li>• EIA Practical Solutions to Recurrent Problems By: David P Lawrence. Wiley Interscience Publication (2003)</li> <li>• A Handbook of EIA By: VS Kulkarni, SN Kaul &amp; RK Trivedy. Scientific Publishers (India)</li> <li>• EIA (Available Techniques, Emerging Trends) By: SA Abbasi &amp; DS Arya. Discovery Publishing House, New Delhi (2000)</li> <li>• Environmental Impacts of Agricultural Production Activities By: Larry W Canter. Lewis Publishers, Inc. USA (1986)</li> <li>• Environmental audit by Mhaskar AK</li> <li>• EIA – A Bibliography with abstracts By: B.D. Clark, R. Bisset, P. Wathern (1980), Mansell London</li> <li>• Manners, IR, Micksell MW (1974) Perspectives on Environment Association American Geographers, Pub. 13.</li> <li>• Environmental Assessment and Statements by Harr and Hagerty (1977)</li> <li>• Environmental Auditing by Central Pollution Control Board.</li> <li>• Stoner, Freeman, Gilbert – Management – Prentice Hall of India Ltd., New Delhi – VI<sup>th</sup> Edition</li> <li>• Kathryan M. Bartol &amp; David C. Martin – Management – Mc Graw – Hill Services in management, Second Edition</li> <li>• Terry – Franklin – Principles of Management – All India Traveler Bookseller</li> <li>• R.S.Gupta, B.D. Sharma, N.S.Bhalla – Principles and Practic of Management – Kalyani Publishers Edition 1990</li> </ul>

		<ul style="list-style-type: none"> <li>• P.C. Tripathi , P.N.Reddy – Principles of Management – Tata Mc Graw – Hill publishing Co. Ltd. V<sup>th</sup> Edition</li> <li>• Harold Koontz &amp; Cyril O’ Donnell – Management - Mc Graw – Hill publication.</li> <li>• Environmental audit by Mhaskar AK.</li> </ul>
3	Website	<ul style="list-style-type: none"> <li>• <a href="https://www.cbd.int/impact/whatis.shtml">https://www.cbd.int/impact/whatis.shtml</a></li> <li>• <a href="https://nptel.ac.in/courses/120108004/module3/lecture3.pdf">https://nptel.ac.in/courses/120108004/module3/lecture3.pdf</a></li> <li>• <a href="https://nptel.ac.in/courses/120108004/module2/lecture2.pdf">https://nptel.ac.in/courses/120108004/module2/lecture2.pdf</a></li> <li>• <a href="http://mpcb.gov.in/">http://mpcb.gov.in/</a></li> <li>• <a href="https://www.cseindia.org/tag/state-pollution-control-board--(spcb)">https://www.cseindia.org/tag/state-pollution-control-board--(spcb)</a></li> <li>• <a href="https://www.iaia.org/wiki-details.php?ID=23">https://www.iaia.org/wiki-details.php?ID=23</a></li> </ul>
4	Journals	<ul style="list-style-type: none"> <li>• Current Science, ISSN No. 0011-3891</li> <li>• Every Thing About Water</li> <li>• Down to Earth</li> <li>• Industrial Safety Chronicle</li> <li>• International Journal of Environmental Pollution Control &amp; Management , ISSN No .0975-3842</li> <li>• Resonance, ISSN No. 0971-8044</li> <li>• Journal of Earth System Science, ISSN No .2253-4126</li> </ul>
5	Supplementary Reading	<ul style="list-style-type: none"> <li>• EIA reports of various developmental projects</li> </ul>

<b>Semester</b>	<b>III</b>	<b>Total Credit</b>	<b>4</b>
<b>Course Code</b>	<b>CC 303</b>	<b>Credit Pattern</b>	<b>L-15, T-0, P-45</b>
<b>Course Title</b>	<b>PRACTICAL - III</b>		
<b>Course Objectives</b>			
1	The students should know the experimental procedures for analysis of environmental samples.		
<b>Course Outcomes: The students will able to</b>			
1	Apply Screening of microbial cultures in the different areas of environment management and for further entrepreneurship development.		
2	Determining quality of irrigation water for optimal utilization to avoid further environmental consequences.		
3	Recommend gypsum requirement for the preparation of reclamation plans for saline alkali soils.		
4	Propose dose of lime for reclamation of an acid soil, by performing laboratory experiments and computing results.		

**Syllabus:**

Sr.No.	Title	Number of Sessions	
		T=0	P=45
1	Wildlife census by block count method	<b>L= 15</b>	
2	Site selection criteria under EIA	<b>T=0</b>	<b>P=45</b>
3	Prediction of Impact by Dispersion Model(AIR)		
4	Precipitation Analysis		
5	Geophysical Sounding		
6	Inorganic phosphorus in water		
7	Sulphate in water		
8	Scale of aerial photographs		
9	Hexavalent Chromium in water		
10	Determination of Cultural Characteristics of Microorganisms		
11	Standard Plate Count		
12	Isolation of pure culture		
13	Physical & Chemical Characteristics of MSW		
14	GIS - I		
15	CEC		
16	Determination of Gypsum Requirement of soil		
17	Determination of Lime Requirement of soil		
18	GIS - II		
19	Iron from water		
20	Determination of Nitrite in water		

**Learning Resources**

<b>1</b>	<b>Reference books</b>	<ul style="list-style-type: none"> <li>• Water &amp; WasteWater analysis : Dr. R.K. Trivedy &amp; Dr. P.K.Goel</li> <li>• Standard Methods of water &amp; Waste water analysis: APHA</li> <li>• Hand book of Methods in Environmental Studies (Vol.I) : S.K.Maiti</li> <li>• Hand book of Methods in Environmental Studies (Vol.II) : S.K.Maiti</li> <li>• A text book of Soil analysis : Baruah &amp; Barthakur</li> </ul>
----------	------------------------	---

<b>Semester</b>	<b>III</b>	<b>Total Credit</b>	<b>4</b>
<b>Course Code</b>	<b>CC 304</b>	<b>Credit Pattern</b>	<b>L-15, T-0, P-45</b>
<b>Course Title</b>	<b>SUMMAR INPLANT PROJET (SIP)</b>		
<b>Course Objectives</b>			
1	It is an academic requirement of the course to complete Summer Inplant Training by working in industry to learn practical knowledge from various sectors of Environment & allied.		
2	To gain an field experience in the real world situation.		

<b>Course Outcomes: After completion of this course students will able to</b>	
1	Select and defend a topic of their SIP and effectively plan, execute, evaluate and discuss their innovative ideas and experiments.
2	Systematically identify relevant theory and concepts, and relating these to appropriate methodologies and evidences.
3	Apply appropriate techniques and drawing appropriate conclusions, developing communication and interpersonal skills.
4	Propose scientific approach to solve the problem and Interpret, discuss and communicate scientific results in written form.

**Syllabus:**

	<b>Contents</b>	<b>Number of Sessions</b>		
		<b>T=0</b>	<b>P=45</b>	
<b>1</b>	They will study the working environmental conditions & problems in the organization.	<b>L= 15</b>		
	Areas for SIP are-			
	1. Waste Water Treatment	2. Solid Waste Management		
	3. Characterization of Effluent Technologies	4. Air Pollution & Control		
	5. Noise Pollution	6. Toxicological Study		
	7. Industrial Safety	8. Disaster Management		
	9. Environmental Auditing	10. ISO 14000		
	11. OSHAS-18001	12. Energy Management		
	13. Composting	14. Wormicomposting		
	15. Bioremediation	16. Phyto-remediation		
	17. Water Budget	18. Energy Audit		
	19. Carbon Footprint	20. Biomedical Waste Management		

**Finance Elective: I**

<b>Semester</b>	<b>III</b>	<b>Total Credit</b>	<b>4</b>
<b>Course Code</b>	<b>CC-Spl-I-305-A (F-I)</b>	<b>Credit Pattern</b>	<b>L-45, T-6, P-9</b>
<b>Course Title</b>	<b>INTERNATIONAL TRADE AND FINANCE - FI</b>		

**Course Objectives**

1	To make the students well aware about the formalities associated with International trade.
2	To make the students aware of the documentation of International Trade.
3	To make the students aware of the FOREX Management and Export Promotion Schemes.

**Course Outcomes: The students will able to learn:**

1.	Assess foreign exchange rates and develop export trade document.
2.	Apply international finance terms in trade.
3.	Evaluate foreign direct investment design.

**Syllabus:**

<b>Unit Number</b>	<b>Contents</b>	<b>Number of Sessions</b>	
<b>1</b>	<b>Introduction to International Finance:</b> concept and Principals of International Trade – Theories of International Trade – Comparative Advantage – Absolute Advantage – Hecksher Ohlin Theory – Imitation Gap Theory- Barriers to International Trade –Indian EXIM Policy. Concepts of DTAA and International Taxation.	<b>L= 11</b>	
		<b>T= 2</b>	<b>P= 2</b>
<b>2</b>	<b>Export and Import Finance:</b> Special need for Finance in International Trade –Terms used in International Trade (FOB, CIF, etc.,) – Payment Terms – Letters of Credit and its types – Pre Shipment and Post Shipment Finance – Forfaiting –Deferred Payment Terms – EXIM Bank – ECGC and its schemes – Import Licensing – Financing methods for import of Capital goods.	<b>L= 12</b>	
		<b>T= 1</b>	<b>P= 2</b>
<b>3</b>	<b>Foreign Exchange Markets:</b> Spot Prices and Forward Prices – Factors influencing Exchange rates – The effects of Exchange rates in Foreign Trade – Tools for hedging against Exchange rate variations –Forward, Futures and Currency options -Determination of Foreign Exchange rate and Forecasting – Law of one price – PPP theory – Interest Rate Parity – Exchange rate Forecasting. Two way and three way arbitrage, arbitrage with IRP and PPP.	<b>L= 12</b>	
		<b>T= 1</b>	<b>P= 2</b>
<b>4</b>	<b>Determination and Forecasting of Exchange Rates:</b> Currency risk management – Measuring and Managing Transaction – Translation and Economic Exposure. International Cash Management – Cost Of Capital for Foreign Direct Investment – Designing Global Capital Structure. Foreign Direct Investment – Cost and Benefits. Derivative in International Trade Important Export trade documents, like Proforma, commercial, legalized, invoice, packaging list, bills of leading, airway bill, insurance policy, export incentive, duty exemptions, export house.	<b>L= 11</b>	
		<b>T= 2</b>	<b>P= 2</b>

**Note:**

Practical Problems to be covered on

1. Calculation Of Foreign Exchange Rates – Forward Rates, Premium Discounts on forward rates
2. Simple problems on pay off from Derivatives
3. Problems on arbitrage

Learning Resources		
1.	Text Books	<ul style="list-style-type: none"> <li>• Kapil Sheeba, "Financial Management" Pearson Publication House.</li> <li>• Jonathan Berk, Peter, "Financial Management" Pearson Publication House.</li> <li>• Sharan Vyuptakesh, "Fundamentals of Financial Management" Pearson Publication.</li> <li>• James C Van harne, "Financial Management &amp; Policy" Pearson Publication House.</li> <li>• ICSI : Handbook on Mergers Amalgamations and takeovers.</li> </ul>
2.	Reference Books	<ul style="list-style-type: none"> <li>• Jeevanandam .C, INTERNATIONAL BUSINESS, M/s Sultan &amp; Chand, Delhi, 2008</li> <li>• Sumathi Varma, INTERNATIONAL BUSINESS, <i>Ane, Delhi, 2010</i></li> <li>• P.G. Apte – "Global Business Finance" – Tata McGraw Hills.</li> <li>• P.G. Apte – "International Finance Management" – Tata McGraw Hill</li> <li>• V.K. Bhalla – "International Financial Management" – Prentice Hall</li> <li>• Khan &amp; Jain, "Financial Management", Tata Mcgraw Hill, 6<sup>th</sup> edition.</li> <li>• R.P.Rustagi, "Financial Management", PHI, 10<sup>th</sup> edition.</li> </ul>
3.	Websites	<ul style="list-style-type: none"> <li>• <u>INFLIBNET</u> <a href="http://nlist.inflibnet.ac.in">http://nlist.inflibnet.ac.in</a></li> <li>• <u>J-GATE</u> <a href="http://jgateplus.com">http://jgateplus.com</a></li> <li>• <u>EBSCO</u> <a href="http://search.ebscohost.com">http://search.ebscohost.com</a></li> <li>• Library online Opac Address: <a href="http://192.168.1.111:8080/opac">http://192.168.1.111:8080/opac</a></li> </ul> <p><b>For INFLIBNET individual usernames and passwords are already given.</b></p>
4.	Journals	<ul style="list-style-type: none"> <li>• Prabhandan: Indian Journal of Management</li> <li>• IUP Journals</li> <li>• ICSI Journals</li> <li>• Finance India</li> <li>• Indian Journal of Finance (New Sub.)</li> <li>• Journal of Accounting &amp; Finance etc.</li> </ul>
5.	Supplementary Reading	<ul style="list-style-type: none"> <li>• Financial Express</li> <li>• Economics Times</li> <li>• Business Standard</li> <li>• Times of India</li> <li>• Indian Express.</li> </ul>
6.	Practical Component	<ul style="list-style-type: none"> <li>• Calculation Of Foreign Exchange Rates – Forward Rates, Premium Discounts on forward rates</li> <li>• Simple problems on pay off from Derivatives</li> <li>• Problems on arbitrage</li> <li>• Financial statement analysis using Proves-Q</li> <li>• Companies Financial Reports &amp; Corporate case studies.</li> </ul>

### Human Resource Elective - I

Semester	III	Total Credit	4
Course Code	CC- Spl-I-305 -B (HR- I)	Credit Pattern	L-45, T-8, P-7
Course Title	<b>EMPLOYEE RELATIONS AND LABOUR LAWS- HR I</b>		
Course Objectives			
1	To provide an exposure of theories, techniques and approaches to manage industrial relations.		
2	To familiarize the legal frame work governing the human resources relations within the industries.		
3	To compare, applications and interpretation of various laws and their implications.		
Course Outcomes : Students will be able to :-			
1	Discuss the concepts and theories to manage Industrial Relations and Labor Laws.		
2	Apply the concept of industrial relations, legal issues to the system in which it operates.		
3	Solve industrial Related legal issues used in the resolution of conflict.		
4	Critically evaluate emerging trends in employment law.		
5	Design the collective bargaining process, including preparation, negotiation, and settlement.		
Syllabus:			
Unit Number	Contents	Number of Sessions	
1	<b>Industrial Relations and Trade Union:- Industrial Relations:-</b> Concepts of Industrial Relations, Approaches to Industrial Relations, Role of Employer/Management, Trade Union and Government in Industrial Relations. <b>Trade Union:-</b> Purpose, Functions of trade unions, Problems of Trade unions, Measures to strengthen Trade Union Movement in India, Recognition of Trade Union as Collective Bargaining Agent. Trade Union Act (1926).	L= 11	
		T=2 P= 2	
2	<b>Collective Bargaining and Industrial Unrest:- Collective Bargaining:-</b> Structure, Procedure and machinery for collective bargaining process, Negotiation Skills, Productivity Bargaining, emerging trends in collective bargaining. <b>Industrial Unrest</b> :Causes of Industrial Disputes, Prevention and Settlement of Industrial Disputes- Relevant Provisions related to Industrial Disputes Act, 1947. Instruments of Economic Coercion:- Strike, Picketing, Gherao, Bandh, Lockout, Layoff and retrenchment. Purpose and procedure of disciplinary action, Meaning and scope of misconduct,.	L= 12	
		T=2 P= 1	
3	<b>Positive Employee Relations and LabourLaws:-</b> Building positive employee relations, Participative Management:- Workers participation in Management (statutory and Non statutory Schemes), VRS:- Reason and acceptance of VRS, Management of Sexual Harassment and Sexual Harassment Laws in India, The Payment Wages Act 1936, Minimum Wages Act 1948.	L= 11	
		T=2 P= 2	
4	<b>Social Security for emotional Bondage:-</b> Social Securities in India, ESI Act 1948, Workmen's Compensation Act, Maternity Benefit Act 1961, The employees Provident Fund Act, 1952. Payment of Gratuity Act 1972, Bonus Act 1965 and Management of Contract Labour.	L= 11	
		T= 2 P= 2	



**Note:**

1. Case Studies on Each of the Aspects Mentioned in the Syllabus need to be discussed.
2. Video cases and Documentary Films relating to the syllabus to be exhibited in the class.

<b>Learning Resources</b>		
1	<b>Text Books</b>	<ul style="list-style-type: none"><li>• Mamoria C.B, Dynamics of Industrial relations, Himalaya Publishing House</li><li>• A.M.Sarma, Industrial Relations, Himalaya Publishing House</li></ul>
2	<b>Reference books</b>	<ul style="list-style-type: none"><li>• ArunMonappa, Industrial Relations, Tata McGraw Hill Publishing Company Ltd.</li><li>• Dhyani S.N., Industrial Relations Systems, Printwell Publishers</li><li>• John Fossum, Labour Relations, Development, Structure, Process, McGraw Hill Education</li><li>• Michael R Carrell and Christina Heavrin, Labour Relations and Collective Bargaining- Private and Public Sectors, Merrill</li><li>• PromodVerma, Management of Industrial relations, Reading and Cases, Oxford and IBH Publications</li><li>• Singh B.D., Industrial Relations –Emerging Paradigms, Excel Books</li><li>• Srivastava S.C., Industrial Relations and Labour Laws, Vikas Publishing House Pvt. Ltd.,</li></ul>
3	<b>Websites</b>	<ul style="list-style-type: none"><li>• <a href="http://www.ILO.org">www.ILO.org</a></li><li>• <a href="http://www.labour.nic.in">www.labour.nic.in</a></li><li>• <a href="http://www.labourstat.org">www.labourstat.org</a></li></ul>
4	<b>Journals</b>	<ul style="list-style-type: none"><li>• Indian Journal of Industrial Relations</li><li>• Indian Labour Journal</li><li>• Current Labour Report</li><li>• Labour Law Journal</li></ul>
5	<b>Supplementary Reading</b>	<ul style="list-style-type: none"><li>• Labour Law Journals</li><li>• <a href="https://www.thehindubusinessline.com/opinion/the-recognition-question-in-trade-union-law-ep/article24988006.ece">https://www.thehindubusinessline.com/opinion/the-recognition-question-in-trade-union-law-ep/article24988006.ece</a></li><li>• <a href="https://www.labourfile.org/rights-of-women.aspx/">https://www.labourfile.org/rights-of-women.aspx/</a></li></ul>
6	<b>Practical Component</b>	<ul style="list-style-type: none"><li>• Role Play exercise on Collective Bargaining</li><li>• Arrange a debate in the classroom about rights and duties of trade union of workers.</li><li>• Students will draft a standing order for certification for a newly started garments factory employing 300 workers.</li><li>• Students will draft a charge sheet about a list of allegations reported against</li></ul>

		<p>an employee of an organization.</p> <ul style="list-style-type: none"><li>• Interaction with Trade Union Leaders to identify challenges faced by them and present in class.</li><li>• Students will prepare a policy document to prevent sexual harassment at workplace.</li><li>• Study the procedure including the documents required for PF and Gratuity benefit.</li><li>• Role Play on Economic Coercion</li></ul>
--	--	--

### Marketing Elective: I

<b>Semester</b>	<b>III</b>	<b>Total Credit</b>	<b>4</b>
<b>Course Code</b>	<b>CC-Spl- I – C -305</b>	<b>Credit Pattern</b>	<b>L-45, T-8, P-7</b>
<b>Course Title</b>	<b>BUYING BEHAVIOUR PAPER-I</b>		
<b>Course Objectives</b>			
<b>1</b>	Students will understand concepts related to buying behavior.		
<b>2</b>	Students will become familiar with marketing and CRM strategies.		
<b>Course Outcomes: Students will be able to;</b>			
<b>1</b>	Explain the conceptual aspects of buying behaviour		
<b>2</b>	Analyse factors influencing on buying behaviour		
<b>3</b>	Design Marketing and CRM strategies.		
<b>4</b>	Evaluate marketing situations.		

**Syllabus:**

<b>Unit Number</b>	<b>Contents</b>	<b>Number of Sessions</b>	
<b>1</b>	<b>Unit I Consumer Behaviour I</b> Meaning, Nature, scope, concepts. Buying Process, Models of consumer Behaviour, Organisational buying behaviour. Values & Lifestyle marketing.	<b>L=11</b>	
		<b>T=2</b>	<b>P=2</b>
<b>2</b>	<b>Unit II Consumer Behaviour II</b> Influences of consumer behaviour on individual, group. Perception, Motivation & Involvement. Attitude & change learning, memory. Personality & self-concept reference group influence, dynamics. Family Life cycle & its influence. Cultural influences.	<b>L=12</b>	
		<b>T=2</b>	<b>P=1</b>
<b>3</b>	<b>Unit III Strategic Marketing - Strategic marketing management concept &amp; overview, process, formulation &amp; implementation, sustainable competitive advantages. Types of competitive strategies adopted by goods &amp; services in market environment. Strategies for declining markets</b>	<b>L=11</b>	
		<b>T=2</b>	<b>P=2</b>
<b>4</b>	<b>Unit IV Customer Relationship Management</b> Customer relationship management importance, process, framework, customer relationship marketing, Creating value for customers, customer loyalty, Customer life time Value, use of technology in CRM.	<b>L=11</b>	
		<b>T=2</b>	<b>P=2</b>

Learning Resources		
1	<b>Text Books</b>	<p>1. <b>Kotler Philip</b>, “Marketing Management 17th Edition 2015”, Prentice Hall of India, New Delhi.</p> <p>2. <b>Saxena Rajan</b>, “Marketing Management 2nd Edition 2002”, Tata McGraw Hill, New Delhi</p>
2	<b>Reference books</b>	<p>1. <b>V.S.Ramaswamy and S.Namakumari</b> -Marketing Management –Macmillan Business Books</p> <p>2. <b>Arunkumar, M Meenakshi</b>- Marketing Management-Vikas Publication</p> <p>3. <b>Walkar, Boyd, Mullins And Larreche</b>. "Marketing Strategy. A Decision Forced Approach", Tata Mcgraw Hill 4th Edition.</p> <p>4. <b>Kaushal H.</b>, “Case Study Solutions in Marketing”, McMillan India 2001</p> <p>5. <b>Baker, M. (2000)</b> Marketing Management and Strategy, 3rd edition, Macmillan Business</p> <p>6. <b>S.A. Chunawalla</b> “Commentary on Consumer behaviour”</p> <p>7. <b>Nair Suja</b>- R Consumer Behaviour Text &amp; Cases</p> <p>8. <b>Consumer Protection Law &amp; practices</b> Niraj Kumar &amp; Nair suja 4<sup>th</sup> Edition</p>
4	<b>Journals</b>	<p>1. Indian Journal of Marketing</p> <p>2. IUP Journal of Business Strategy</p> <p>3. Current Contents In Management Marketing</p>
5	<b>Supplementary Reading</b>	<p>1. The Economic Times</p> <p>2. Business Standard</p>
6	<b>Practical Component</b>	<ul style="list-style-type: none"> <li>• Group Activity based on all units</li> <li>• Conduct different business games relevant to subject</li> <li>• Take Case discussion on all units</li> <li>• Show videos of subject related concepts to the students</li> <li>• Library assignment on all units</li> </ul>

### Operation Management Elective-1

<b>Semester</b>	<b>III</b>	<b>Total Credit</b>	<b>4</b>
<b>Course Code</b>	<b>CC- Spl-I-305-D (P-I)</b>	<b>Credit Pattern</b>	<b>L-44, T-8, P-8</b>
<b>Course Title</b>	<b>LOGISTICS &amp; SUPPLY CHAIN MANAGEMENT- P-I</b>		

<b>Course Objectives:</b>	
1	This course focuses on management and improvement in Logistics & Supply Chain.
2	We Explore Important Supply Chain Metrics, Making Supply Chain Decisions, Supply Chain Coordination & Planning.

<b>Course Outcomes:</b> Students will be able to;	
1	Describe the concepts of Logistics and Supply Chain Management.
2	Apply appropriate Logistics and Supply Chain Distribution Strategies in the organization.
3	Analyze Supply Chain Planning and Coordination strategies.
4	Evaluate the recent developments in Logistics and Supply Chain Management.

Unit Number	Contents	Number of Sessions	
1	<b>INTRODUCTION TO LOGISTICS MANAGEMENT</b> Definition & Meaning of Logistics, Principles of Logistics, Activities of Logistics: Transportation, Warehousing, Packaging, Material Handling. Need of Collaborative Relationship & Alliance, Principles, Advantages, Disadvantages. Logistics Outsourcing Activities: 3PL+4PL=7PL, Risk of Outsourcing.	<b>L=11</b>	
		<b>T=2</b>	<b>P=2</b>
2	<b>ESSENTIALS OF SUPPLY CHAIN MANAGEMENT</b> Concept & Definition of Supply Chain Flows in SCM, Drivers of SCM, Push/Pull SCM, SC Network Decisions. Distribution Strategies: Milk Runs, Hub & Spoke System, Cross Docking, Pool Distribution, Direct Shipping. Bullwhip Effect, Measuring Performance of SCM, Recent Trends In Supply Chain: Agile Supply Chain, Green Supply Chain, Lean Supply Chain, E-Supply Chain, E-Commerce Supply Chain.	<b>L=11</b>	
		<b>T=2</b>	<b>P=2</b>
3	<b>SUPPLY CHAIN PLANNING &amp; COORDINATION</b> Demand Planning & Forecasting, Characteristics of Forecasting, Forecasting Methods, Time Series Forecasting, Moving Averages, Forecasting Errors, Collaborative Planning Forecasting Replenishment (CPFR). Mass Customization: Drivers, Characteristics, Methods, Advantages, Disadvantages. (Numerical Treatment on Forecasting).	<b>L=11</b>	
		<b>T=2</b>	<b>P=2</b>

4	<b>GLOBAL SUPPLY CHAIN OPERATIONS</b> Global SCM, International Transportation: Sea, Air, Land, Multi-Modal Transportation. Containerization, International Documentation for Import/Export, Customs Clearance Formalities, Packaging for Export, International Logistics Infrastructure, Electronic Data Interchange (EDI). Supply Chain IT Framework: Barcoding & Scanning, RFID, EPOS, Image Processing, GPRS.	<b>L=11</b>	
		<b>T=2</b>	<b>P=2</b>

**Note:**

1. Case studies on each of the Aspects Mentioned in the Syllabus need to be discussed.
2. Video Cases and Documentary Films relating to the syllabus to be exhibited in the class.

<b>Learning Resources</b>		
1	<b>Text Books</b>	<ul style="list-style-type: none"> <li>• Janat Shah, Supply Chain Management 2/e: Text and Cases, Pearson Education India</li> <li>• S. L. Ganapathi &amp; Nandi, Logistics Management, Oxford University Press</li> <li>• Sunil Chopra, Peter Meindl &amp; D. V. Karla, Supply Chain Management, Sixth edition by Pearson Education India</li> <li>• Satish C Ailawadi &amp; Rakesh P Singh, Logistics Management, Prentice Hall India Learning Private Limited</li> </ul>
2	<b>Reference books</b>	<ul style="list-style-type: none"> <li>• David Simchi-Levi, Philip Kaminsky, Designing and Managing the Supply Chain 3<sup>rd</sup> Edition, McGraw Hill Education</li> <li>• Donald J. Bowerox, Tata Mcgrawhill Edition “Supply Chain Logistic Management”</li> <li>• N. Chandrasekaran, Supply Chain Management: Process, System &amp; Practice, Oxford University Press</li> </ul>
3	<b>Websites</b>	<ul style="list-style-type: none"> <li>• <a href="https://www.managementstudyguide.com/supply-chain-management-articles.htm">https://www.managementstudyguide.com/supply-chain-management-articles.htm</a></li> <li>• <a href="https://lecturenotes.in/materials/17685-note-of-supply-chain-management-by-dr-panneerselvam-s">https://lecturenotes.in/materials/17685-note-of-supply-chain-management-by-dr-panneerselvam-s</a></li> <li>• <a href="https://www.aims.education/study-online/supply-chain-management-notes/">https://www.aims.education/study-online/supply-chain-management-notes/</a></li> <li>• <a href="http://www.eiilmuniversity.co.in/downloads/Import-Export-Management.pdf">http://www.eiilmuniversity.co.in/downloads/Import-Export-Management.pdf</a></li> <li>• <a href="http://www.pondiuni.edu.in/storage/dde/downloads/ibiii_exim.pdf">http://www.pondiuni.edu.in/storage/dde/downloads/ibiii_exim.pdf</a></li> </ul>
4	<b>Journals</b>	<ul style="list-style-type: none"> <li>• Supply Chain Management: An International Journal - Emerald Insight</li> <li>• Journal of Supply Chain Management - Wiley Online Library</li> <li>• Supply Chain Management Journal</li> <li>• The International Journal of Logistics Management - Emerald Insight</li> </ul>
5	<b>Supplementary Reading</b>	<ul style="list-style-type: none"> <li>• Ram Singh, International Trade Logistics, Oxford University Press</li> <li>• C. Rama Gopal, Export Import Procedures - Documentation and Logistics, New Age International Publishers</li> <li>• <a href="https://www.managementstudyguide.com/import-and-export-management-articles.htm">https://www.managementstudyguide.com/import-and-export-management-articles.htm</a></li> </ul>

6	<b>Practical Component</b>	<ul style="list-style-type: none"><li>• Studying Supply Chain Distribution of any organization and classifying it according to different types of strategies which are studied and justifying why such system is chosen by that organization.</li><li>• Identifying and visiting local business to study its Logistics &amp; Supply Chain Strategies.</li><li>• Group Discussion on Recent Trends in Supply Chain Management.</li><li>• Identifying and visiting local Import/ Export Agency to study International Documentation required for Import/Export.</li></ul>
---	----------------------------	---

### Agri-Business Management Elective- I

<b>Semester</b>	<b>III</b>	<b>Total Credit</b>	<b>4</b>
<b>Course Code</b>	<b>CC- Spl-I-305- E (AB-I)</b>	<b>Credit Pattern</b>	<b>L-44, T-8, P-8</b>
<b>Course Title</b>	<b>AGRI BUSINESS, ENTREPRENEURSHIP AND COOPERATIVES – AB-I</b>		

Course Objectives:	
1	To Highlight the Importance of Agri Business in the Context of Developing Economies.
2	To Highlight the entrepreneurial aspects of Agri-business.
3	To Explain the Significance of Co-Operation in Agriculture and Agri-Business.

Course Out Comes: Students will be able to	
1	Explain the concepts of Agribusiness, Entrepreneurship and Cooperatives.
2	Make use of conceptual framework for the development of cooperatives and agribusiness sector.
3	Evaluate the role of national and international institutions in agribusiness sector.

#### Syllabus:

Unit Number	Contents	Number of Sessions	
1	<b>Agri Business, Agro Based Industries and Issues:</b> Salient features of Rural Economy, The concept of Agri-business, Historical Review, Scope, Nature of Successful Agri-business, Specific Areas of Agri Business, <b>Agro Based Industries and Issues:</b> New paradigms in Horticulture, Floriculture and Food Processing sectors, Indian Exports and Agriculture Sector: Export oriented Agribusiness, <b>Technology and Agri-Business:</b> Role and Importance, Bio-Technology and Agri-business, Socioeconomic and Environmental Impact of agribusiness.	L= 11	
		T= 2	P= 2
2	<b>International Organizations and Agri-Business:</b> WTO and FAO: Functions and Role in Agriculture, Trade liberalization and World Trade Agreements relating to Agriculture Trade, Agreement on Agriculture (AOA), Import and Export Procedures for agri products, Strategies of Exports for agro based industries, Services under Agri-business, Recent trends in Agri Business Management.	L= 11	
		T= 2	P= 2
3	<b>Introduction to Agriprenurship:</b> Concepts of Rural Entrepreneurship, Endowment Of Skill Sets And Natural Resources In Rural India, Aims Of Rural Entrepreneurship, Barriers To Entrepreneurship In Rural India, Process Of Entrepreneurship, Rural Applicability, Skills Requires To Succeed, Government Training Programmes And Public Private Partnership, ICT and Rural Entrepreneurship.	L= 11	
		T= 2	P= 2
4	<b>Co-Operation and Agri Business</b> Introduction to Cooperatives: Definition, Evolution, Principles and Benefits Of Co-Operatives, Cooperatives and Other forms of Business Enterprises, Co-and their Economic And Legal Differences, The organizational structure of Co-Operatives: Functions, Role, Powers And Responsibilities of entities, Outline Of Good Co-Operative Management, Co-Operative Structure and Development in Farming: Credit, Marketing, Dairy Etc. - Problems and Prospects, Development of Sugar and Dairy Co-Operatives in Maharashtra.	L= 11	
		T= 2	P= 2



**Note:**

1. Case Studies on Each of the Aspects Mentioned in the Syllabus need to be discussed.
2. Video cases and Documentary Films relating to the syllabus to be exhibited in the class.

<b>Learning Resources</b>		
<b>1</b>	<b>Text Books</b>	<ul style="list-style-type: none"> <li>• Smitha Diwase, Agri-Business Management,</li> <li>• Subhash W. Bhave: "Agri Business Management in India" 1997.</li> <li>• B.S. Harsha: "Agri Business" 2003.</li> <li>• B.S. Mathur: "Co-Operation". Sahitya Bhavan, Agra, 1999.</li> <li>• V. Sharda: "The Theory of Co-Operation". Himalaya Publishing, 1999.</li> </ul>
<b>2</b>	<b>Reference books</b>	<ul style="list-style-type: none"> <li>• RD. Bedi: "Theory, History and Practice of Co-Operation". Loyal Books Depot, 1997.</li> <li>• R Rajagopalan (Ed), "Rediscovering Co-Operation Vol I,II And III", Irma, Anand, 1996.</li> <li>• P.R Dubhashi, "Principles and Philosophy of Co-Operation". VMNICM, Pune, 1970.</li> <li>• B.P. Sinha: "Co-Operation: Instrument for Socio .Economic Justice". Himalaya Publishing House, New Delhi, 1992.</li> <li>• Divakar Jha: "A Perspective on Co-Operative Marketing" Vikas Publishing House, New Delhi, 1997.</li> </ul>
<b>3</b>	<b>Websites</b>	<ul style="list-style-type: none"> <li>• <a href="http://www.agriculture.gov.in/">www.agriculture.gov.in/</a></li> <li>• <a href="http://www.manage.gov.in">www.manage.gov.in</a></li> <li>• <a href="http://www.ica.coop/">www.ica.coop/</a> <a href="http://www.apeda.gov.in">www.apeda.gov.in</a></li> </ul>
<b>4</b>	<b>Journals</b>	<ul style="list-style-type: none"> <li>• Journal of Agribusiness</li> <li>• Vikalpa</li> <li>• Journal of Cooperative</li> <li>• Sugar cooperatives</li> </ul>
<b>5</b>	<b>Supplementary Reading</b>	<ul style="list-style-type: none"> <li>• Kurukshetra journal</li> <li>• MANAGE study material</li> </ul>
<b>6</b>	<b>Practical Component</b>	<ul style="list-style-type: none"> <li>• Prepare report on agriculture sector development in the country in the recent times by visiting to Ministry of Agriculture and Forestry department website and recent Economic Survey of the country</li> <li>• Visit any agro-based unit nearby, have an implant training for one year and submit a 3 page report</li> <li>• Interact with any one Farming Cooperative society and make a SWOT analysis for it</li> <li>• Make a video case study of an agripreneur of your area</li> </ul>

### System Elective-1

<b>Semester</b>	<b>III</b>	<b>Total Credit</b>	<b>4</b>
<b>Course Code</b>	<b>CC-Spl-I-305-F (S-I)</b>	<b>Credit Pattern</b>	<b>L-45, T-8, P-7</b>
<b>Course Title</b>	<b>KNOWLEDGE MANAGEMENT AND ERP SYSTEM- S-I</b>		

<b>Course Objectives</b>	
1	To understand the concept and importance of Knowledge Management.
2	To know enumerate knowledge management system in organization.
3	To make sense of the technical aspects of ERP systems.
<b>Course Outcomes : The Students will able to</b>	
1	Describe the Knowledge management strategies.
2	Discuss KM, learning organizations, intellectual capital and related terminologies in clear terms and understand the role of knowledge management in organizations.
3	Imitate the different technologies used in ERP.

<b>Unit Number</b>	<b>Contents</b>	<b>Number of Sessions</b>	
1	<b>Introduction and KM:</b> Knowledge management. Types of Knowledge, Importance of KM, KM Roles and responsibilities, KM in Information Technology, KM In Indian Software organization, KM In Banking Sector, KM Life Cycle, The Zack KM Life Cycle, The Bukowitz and Williams KM Cycle, The Wiig KM Cycle, major theoretical KM models : Von Krog and ROS, Nonka and Takeuchi, Choo sense-making KM model, Wig model,	<b>L=11</b>	
		<b>T=2</b>	<b>P=2</b>
2	<b>Knowledge Capture and codification:</b> Tacit Knowledge Capture at individual and group level Explicit Knowledge codification, Knowledge Transfer, in the e-World, KM Tools and Knowledge Portals-Brain Storming, Learning and idea capture, peer Assit, Storytelling, Taxonomy, knowledge Base, Voice and VOIP, Knowledge Portal, Managing Knowledge Worker, Knowledge audit, KM team	<b>L=12</b>	
		<b>T=2</b>	<b>P=1</b>
3	<b>ERP Meainng and Nature: Concept and benefits of ERP,</b> ERP Retaled technologies-BPR, OLAP, OLTP, Data mining, data Warehousing, Supply Chain Management; Role of Suppliers, Consultants and users; Contact with Vendors, Consultants and Employees, ERP implementation life , ERP Market Place- SAP AG, people Soft, Baan Company	<b>L=11</b>	
		<b>T=2</b>	<b>P=2</b>
4	<b>Business Modules of ERP: ERP Softwares-e-CRM,e-HRM,e-Logestics, e-Documents,,</b> Manufacturing Module, Finance Module, HR module, Material Management ,Sales and distribution Quality Management Module. Future directions in ERP, evaluation of ERP	<b>L=11</b>	
		<b>T=2</b>	<b>P=2</b>

**Note:**

1. Case Studies on Each of the Aspects Mentioned in the Syllabus need to be discussed.
2. Video cases and Documentary Films relating to the syllabus to be exhibited in the class.

<b>Learning Resources</b>		
1	<b>Text Books</b>	<ul style="list-style-type: none"> <li>• Knowledge Management in Theory and Practice- KimizDalkir – Butterworth- Heinemann 2011</li> <li>• ERP Demistified – Alexix Leon</li> </ul>
2	<b>Reference books</b>	<ul style="list-style-type: none"> <li>• Knowledge Leadership – Steven Cavaleri and Sharon Seivert with Lee W.</li> <li>• Knowledge management – SheldaDebowski, Wiley India, 2007</li> <li>• Concept in Enterprise Resource Planning – Ellen Monk, Bret Wanger, cengage Learning.</li> </ul>
3	<b>Website</b>	<ul style="list-style-type: none"> <li>• <a href="http://www.provintl.com">www.provintl.com</a></li> <li>• <a href="http://www.solutionsreview.com">www.solutionsreview.com</a></li> <li>• <a href="http://www.wilipedia.com">www.wilipedia.com</a></li> <li>• <a href="http://www.researchgate.net">www.researchgate.net</a></li> </ul>
4	<b>Journals</b>	<ul style="list-style-type: none"> <li>• IUP Journal of Management Research</li> <li>• Indian Management</li> <li>• Business India</li> <li>• Competition Affairs</li> <li>• Current Science</li> </ul>
5	<b>Supplementary Reading</b>	<ul style="list-style-type: none"> <li>• Current affairs from news papers and news letters</li> </ul>
6	<b>Practical Component</b>	<ul style="list-style-type: none"> <li>• Field Visit to Industries for learn actual implementation and integration of ERP system</li> </ul>

**DSE – Any One**

<b>Semester</b>	<b>III</b>	<b>Total Credit</b>	<b>4</b>
<b>Course Code</b>	<b>DSE-Spl-II-301-A(F-II)</b>	<b>Credit Pattern</b>	<b>L-45, T-6, P-9</b>
<b>Course Title</b>	<b>DIRECT &amp; INDIRECT TAXES- F-II</b>		

**Course Objectives:**

1	To understand the concept of project and steps in project management.
2	To enable the students to prepare business proposals and.
3	To enable the students to evaluate the Project feasibility.

**Course Outcomes:** The students will able to learn

1	Assess applicability of GST liability.
2	Analyze deductions from gross total income.
3	Evaluate the income under different heads and taxability.

**Syllabus:**

<b>Unit Number</b>	<b>Contents</b>	<b>Number of Sessions</b>	
<b>1</b>	<b>Direct Tax Basics:</b> Important definitions, incomes exempt under section 10, deductions from gross total income under chapter VI A, Statutory duties covered upon the assesses regarding payment of taxes, Filing of income tax, Maintenance of accounts and audit of accounts, acceptance and repayment of deposits, TDS and TCS.	<b>L= 11</b>	
		<b>T= 2</b>	<b>P= 2</b>
<b>2</b>	<b>Computation of Income:</b> Computation of Income under different heads of income namely- salary, house property. Profits and gains from business and profession, Income from other sources , Presumptive Taxation.	<b>L= 12</b>	
		<b>T= 1</b>	<b>P=2</b>
<b>3</b>	<b>Introduction to GST:</b> Existing Indirect Tax Structure in India, need of Constitutional Ammendment, Important Definitions under GST and Concept of Supply, Interstate and Intrastate Supply, Levy of GST.	<b>L= 11</b>	
		<b>T= 1</b>	<b>P= 3</b>
<b>4</b>	<b>GST Time and Place of Supply and Concept of Input Tax Credit (ITC):</b> Time and Value of Supply, Place of Supply, Concept of Input Tax Credit, Blocked Credit, Input Tax Credit Rules, Transitional Provision.	<b>L= 11</b>	
		<b>T= 2</b>	<b>P= 2</b>

Note:

1. Case studies on each of the aspects mentioned in the syllabus need to be discussed.
2. Videos cassettes, CDS and documentary films exhibited.

**Learning Resources**

<b>1.</b>	<b>Text Books</b>	<ul style="list-style-type: none"> <li>• Kapil Sheeba, "Financial Management" Pearson Publication House.</li> <li>• Jonathan Berk, Peter, "Financial Management" Pearson Publication House.</li> <li>• Sharan Vyuptakesh, "Fundamentals of Financial Management" Pearson Publication.</li> <li>• James C Van harne, "Financial Management &amp; Policy" Pearson Publication</li> </ul>
-----------	-------------------	--

		<p>House.</p> <ul style="list-style-type: none"> <li>• ICSI : Handbook on Mergers Amalgamations and takeovers.</li> </ul>
2.	<b>Reference Books</b>	<ul style="list-style-type: none"> <li>• Vinodkumar Singhania - Students Guide to Income Tax</li> <li>• Prasad Bhagawati – Incom Tax Law &amp; Practice</li> <li>• Mehotra H.C. – Income Tax Law</li> <li>• Dinkar Pagare – Income Tax Law and Practice</li> <li>• Ahuja &amp; Gupta – Systemetice Approach to Income Tax</li> </ul>
3.	<b>Websites</b>	<ul style="list-style-type: none"> <li>• <u>INFLIBNET</u> <a href="http://nlist.inflibnet.ac.in">http://nlist.inflibnet.ac.in</a></li> <li>• <u>J-GATE</u> <a href="http://jgateplus.com">http://jgateplus.com</a></li> <li>• <u>EBSCO</u> <a href="http://search.ebscohost.com">http://search.ebscohost.com</a></li> <li>• Library online Opac Address: <a href="http://192.168.1.111:8080/opac">http://192.168.1.111:8080/opac</a></li> </ul> <p><b>*For INFLIBNET individual usernames and passwords are already given. Use the same</b></p>
4.	<b>Journals</b>	<ul style="list-style-type: none"> <li>• Prabhandan: Indian Journal of Management</li> <li>• IUP Journals</li> <li>• ICSI Journals</li> <li>• Finance India</li> <li>• Indian Journal of Finance (New Sub.)</li> <li>• Journal of Accounting &amp; Finance etc.</li> </ul>
5.	<b>Supplementary Reading</b>	<ul style="list-style-type: none"> <li>• Financial Express</li> <li>• Economics Times</li> <li>• Business Standard</li> <li>• Times of India</li> <li>• Indian Express.</li> </ul>
6.	<b>Practical Component</b>	<ul style="list-style-type: none"> <li>• Practical Problems on income tax efilling</li> <li>• Practical Problems on income from salaries</li> <li>• Practical Problems on TDS</li> <li>• Practical Problems on e-filling of GST</li> <li>• Financial statement analysis using Proves-IQ</li> <li>• Companies Financial Reports &amp; Corporate case studies.</li> </ul>

<b>Semester</b>	<b>III</b>	<b>Total Credit</b>	<b>4</b>
<b>Course Code</b>	<b>DSE-Spl-II-301-B (HR- II)</b>	<b>Credit Pattern</b>	<b>L-45, T-8, P-7</b>
<b>Course Title</b>	<b>STRATEGIC AND INTERNATIONAL HUMAN RESOURCE MANAGEMENT- HR-II</b>		
<b>Course Objectives</b>			
1	To provide theoretical foundations of Strategic HRM to students and understand the role of HR as Strategic Partner.		
2	To equip students with the knowledge of HRM Practices in Multi-National Companies.		
3	To enable students to understand the implications of culture on HR Practices in MNCs.		
4	To enable students to understand HR interventions in successful cross-border Mergers and Acquisitions.		
<b>Course Outcomes : Students will be able to :-</b>			
1	Describe the different concepts in Strategic and International HRM.		
2	Interpret the implications of culture on HR Practices.		
3	Evaluate different HR interventions in cross-border mergers and acquisitions.		
4	Adapt HR management practices in changing International scenario.		
<b>Unit Number</b>	<b>Contents</b>	<b>Number of Sessions</b>	
1	Meaning, Scope, definition of SHRM, Difference between SHRM and HRM, 5 P Model of SHRM, Linking HR Strategy with Business Strategy. Globalization: Drivers of Globalization, Effects of Globalization on HRM, Model of International HRM, Differences and similarities between DHRM and IHRM.	L= 11	
		T=2 P= 2	
2	Multi-culturalism, Cultural pre-dispositions- Ethno-centricism –Polycentricism – Regio-centricism- Geocentricism. Geert Hofstede’s cultural dimensions, Communication, Leadership and Motivation across cultures, Issues in International Human Resource Planning, International Staffing: Linking staffing with stage of MNC.	L= 12	
		T=2 P= 1	
3	Identifying Potential expatriate, selection criteria of Expatriates, Challenges faced by Expatriates, Women Expatriates, Challenges and Advantages of Women expats, Process and Importance of Cross-cultural training, Emerging Trends. Issues in Performance Appraisal in International context.	L= 11	
		T=2 P= 2	
4	Compensation Management: Objectives, Components of International compensation package. Cross-border Mergers and Acquisitions: Motives, HR Interventions in cross border Mergers and acquisitions. Repatriation: Reasons, Process, benefits from returnees, Challenges of re-entry, Tips for successful repatriation.	L= 11	
		T= 2 P= 2	

**Note:**

1. Case Studies on Each of the Aspects Mentioned in the Syllabus need to be discussed.
2. Video cases and Documentary Films relating to the syllabus to be exhibited in the class.

**Learning Resources**

1	<b>Text Books:</b>	<ul style="list-style-type: none"> <li>• <u>Michael Armstrong</u>, <u>Angela Baron</u>, Strategic HRM: The Key to Improved Business Performance</li> <li>• Charles Greer, Strategic HRM- Pearson Education.</li> <li>• Monir H. Tayeb, International Human Resource Management - Oxford University Press, 2005.</li> </ul>
2	<b>Reference books</b>	<ul style="list-style-type: none"> <li>• Anne-Wil Harzing, Ashly Pennington, International HRMSage South Asia Edition.</li> <li>• <b><u>Julia Connell</u>, <u>Stephen Teo</u>, <u>Strategic HRM: Contemporary Issues in the Asia Pacific Region.</u></b></li> <li>• A. Ghanekar, Strategic HRM, Everest Publishing House.</li> </ul>
3	<b>Websites:</b>	<ul style="list-style-type: none"> <li>• www.shrm.com</li> <li>• www.hbr.com</li> <li>• www.citehr.com</li> </ul>
4	<b>Journals:</b>	<ul style="list-style-type: none"> <li>• The Journal of Indian Management and Strategy</li> <li>• Human Capital</li> <li>• Manpower Journal</li> <li>• AIMS Journal of Management</li> </ul>
5	<b>Supplementary Reading:</b>	<ul style="list-style-type: none"> <li>• online.wsj.com</li> <li>• Magazines like Outlook, Time, India today</li> </ul>
6	<b>Practical component:</b>	<ul style="list-style-type: none"> <li>• Debate on the cultural predispositions multinational context will be conducted in class</li> <li>• Write an essay on “The challenges I would face if my company sends to on foreign assignment“.</li> <li>• Case based on Recruitment strategy will be discussed and students will be asked to design and present the recruitment strategy for a given company.</li> </ul>

<b>Semester</b>	<b>III</b>	<b>Total Credit</b>	<b>4</b>
<b>Course Code</b>	<b>DSE-Spl-II-301-C</b>	<b>Credit Pattern</b>	<b>L-45, T-8, P-7</b>
<b>Course Title</b>	<b>MARKETING SECTORS</b>		<b>MM II</b>
<b>Course Objectives:</b>			
<b>1</b>	Students will become familiar with various aspects of marketing sectors		
<b>2</b>	Students will understand and implement concepts in marketing across different sectors.		
<b>3</b>	Students will understand the process of formulating marketing plans for various sectors.		
<b>Course Outcomes: Students will be able to;</b>			
<b>1</b>	Describe conceptual aspects of sectorial markets.		
<b>2</b>	Apply concepts for marketing of services & products across sectors		
<b>3</b>	Design marketing plans across various marketing sectors		

**Syllabus:**

<b>Unit Number</b>	<b>Contents</b>	<b>Number of Sessions</b>	
<b>1</b>	<b>Unit I Industrial Marketing</b> Introduction to concepts & history of Industrial marketing. Difference between consumer and industrial /business marketing. Organisational Markets & Marketing. STP & Marketing Mix for Industrial marketing. Blurring between B2B & B2C.Competitive tendering, bidding. Non tendering purchase, Solution selling. Advancing internet & marketing.	<b>L=11</b>	
		<b>T=2</b>	<b>P=2</b>
<b>2</b>	<b>Unit II Services Marketing</b> Concepts, Meaning, characteristics of services. Difference between service & product. Marketing of professional services. Marketing Mix, Service quality concept & model. Capacity & demand Management. Retaining customers. 7 Ps of services marketing. Sectorial application collectively & specifically to top ten sectors in India including health, education, financial services.	<b>L=12</b>	
		<b>T=2</b>	<b>P=1</b>
<b>3</b>	<b>Unit III International Marketing</b> Nature, scope, challenges in international markets. Concepts & theories overview. Trade distortions & market Barriers in world market environment. Financial environment & decisions. Current trends in import & export in international marketing. Process, procedure, opportunities from Indian & Asian perspectives. Global fact sheet for marketer	<b>L=11</b>	
		<b>T=2</b>	<b>P=2</b>
<b>4</b>	<b>Unit IV</b>	<b>L=11</b>	



	<p><b>Retail Management</b> Introduction to retail markets &amp; marketing overview. Retail evolution in India. Retail formats, marketing mix decisions. Franchising, Retail merchandise, objectives, process &amp; factors affecting store layout &amp; marketing mix decisions. Visual merchandising. Merchandising mix decision. Display, lighting, exhibition. Store location its evaluation. Build Lease or Buy decision.</p>	<b>T=2</b>	<b>P=2</b>
--	--	------------	------------

Learning Resources		
1	<b>Text Books</b>	<ol style="list-style-type: none"> <li>1. Industrial Marketing – Hill, Alexander, Cross</li> <li>2. Industrial Marketing – P K Ghosh</li> <li>3. Industrial Marketing-Krishna K. Havaldar Tata McGraw-Hill</li> <li>4. Strategic marketing: Text and Cases <b>Paperback</b> - <u>S Shajahan</u></li> </ol>
2	<b>Reference Books</b>	<ol style="list-style-type: none"> <li>1. <b>Services Marketing People, Technology, Strategy</b> – C. Lovelock, Jwirtz, J. chattarjee – Pearson Education</li> <li>2. <b>Services Marketing</b> – Integrating Customer Focus Across The Firm – V. Ieithaml, D DGremler, M J Bitner, A Pandit – Tata McGraw Hill</li> <li>3. <b>Services Marketing</b> – Dr. S. Shajahan – Himalaya Publishing House</li> <li>4. <b>“Services Marketing The Indian Experience”</b>- Ravi Shankar</li> <li>5. <b>“ Business To Business Marketing”</b> – Analysis And Practice In A Dynamic Environment - Thomson South Western- Vitale Giglierano</li> <li>6. Strategic Marketing – Michel Porter</li> <li>7. Strategic Marketing- 8<sup>th</sup> Edition -Tata Mcgraw Hill</li> <li>8. <b>Strategic Market Management: Global Perspectives</b>, <u>Damien Mcloughlin David A. Aaker</u></li> <li>9. <b>MR Czinkota and I A Rankainen</b> - International Marketing - Cengage Learning</li> <li>10. <b>U.C. Mathur- International Marketing Management</b> : Text and Cases- Sage Publication</li> <li>11. <b>Francis Cherunilam</b> - International Marketing- Text and Cases – Himalaya Publishing House</li> <li>12. <b>Ramaswam and Namakumari</b> - Marketing Management – Macmillan Publication</li> <li>13. <b>B K Chaterji</b> - Marketing Management : A Finance Emphasis– A Jaico Book</li> </ol>

<b>Semester</b>	<b>III</b>	<b>Total Credit</b>	<b>4</b>
<b>Course Code</b>	<b>DSE-Spl-II-301-D (P-II)</b>	<b>Credit Pattern</b>	<b>L-44, T-8, P-8</b>
<b>Course Title</b>	<b>PURCHASING AND INVENTORY MANAGEMENT- P-II</b>		

**Course Objectives:**

1	To make students understand fundamental concepts, principles and practices of purchase management, including the basic functions of materials management.
2	To make students knowledgeable about theoretical aspects and practical application of Inventory Management.
3	To introduce students to modern concepts and trends in Purchase & Stores Management.

**Course Outcomes:** Students will be able to;

1	Describe the concepts of Purchasing and Inventory Management.
2	Apply Purchasing and Inventory Management Techniques at Manufacturing and Service Sector.
3	Analyze issues involved in Purchasing and Inventory Management.
4	Evaluate Purchasing and Inventory Management strategies.

<b>Unit Number</b>	<b>Contents</b>	
1	<b>PURCHASING MANAGEMENT</b> Introduction, to Materials Management, Purchasing Principles & Procedure, Practices & Policies of Purchasing, 5R of Purchasing, Objectives, Scope, Responsibilities & Limitations of Purchasing Management, Methods of Buying, Centralised & Decentralised Purchasing, Sources of Supply & Supplier Selection, Legal Aspects of Purchasing.	<b>L 11 T 2 P 2</b>
2	<b>STORES MANAGEMENT</b> Meaning of Store Management, Functions of Scientific Store Management, Benefits of Scientific Store Keeping, Types of Stores, Stores Procedure, Store Location & Layout, Centralised & Decentralised Store, Preservation of Stores, Storage Safety And Security Aspects, Standardization & Variety Reduction, Codification, Stock Taking.	<b>L 11 T 2 P 2</b>
3	<b>INVENTORY MANAGEMENT &amp; CONTROL SYSTEM</b> Defining Inventory, The Need of Inventory & Its Control. Inventory Management: Objectives, Functions & Importance. Costs Associated with Inventory, Inventory Models: Basic EOQ Model, Quantity Discount Model, Safety Stock Determination, Replenishment Systems, Fixed Order Quantity (Q Model) Versus Fixed Time Period (P Model). (Numerical Treatment on Inventory Models).	<b>L 11 T 2 P 2</b>
4	<b>STRATEGIC MATERIALS MANAGEMENT</b> BoM, MPS, MRP I, MRP II, CRP, Vendor-Vendee Relations, Vendor Development, Vendor Evaluation & Rating Methods, Negotiations, Supplier Quality Assurance Programme, Material Accounting & Audit, Inventory Valuation, Worldwide Sourcing, Government Purchasing Practices & Procedure, Materials Management Information System (MMIS).	<b>L 11 T 2 P 2</b>

**Note:**

1. Case studies on each of the aspects mentioned in the syllabus need to be discussed.
2. Video cases and documentary films relating to the syllabus to be exhibited in the class.

<b>Learning Resources</b>		
<b>1</b>	<b>Text Books</b>	<ul style="list-style-type: none"> <li>• K. K. Ahuja, Material Management ,CBS Publishers &amp; Distributors</li> <li>• A.K. Datta, “Materials Management”, Procedure, Text &amp; Cases, Prentice-hallof India Pvt. ltd, New Delhi.</li> <li>• K. S. Menon, Sarika Kulkarni, Purchasing and Inventory Management, SPD Publications</li> <li>• Dr. K. C. Jain and Jeet Patidar, Purchasing and Materials Management, S. Chand</li> </ul>
<b>2</b>	<b>Reference books</b>	<ul style="list-style-type: none"> <li>• Max Müller, “Essentials of Inventory Management” Amacom, 2003.</li> <li>• Richard J. Tersine, “Principles of Inventory and Materials Management” North-Holland, 2007.</li> </ul>
<b>3</b>	<b>Websites</b>	<ul style="list-style-type: none"> <li>• <a href="http://www.materialsmanagement.info/defscope/index.htm">www.materialsmanagement.info/defscope/index.htm</a></li> <li>• <a href="http://www.materialsmanagement.info/inventory/functions-of-inventory.htm">http://www.materialsmanagement.info/inventory/functions-of-inventory.htm</a></li> <li>• <a href="https://www.managementstudyguide.com/inventory-management.htm">https://www.managementstudyguide.com/inventory-management.htm</a></li> <li>• <a href="http://www.ispatguru.com/stores-management/">http://www.ispatguru.com/stores-management/</a></li> </ul>
<b>4</b>	<b>Journals</b>	<ul style="list-style-type: none"> <li>• Journal of Purchasing and Materials Management - Wiley Online Library</li> <li>• Journal of Purchasing &amp; Supply Management - Journals - Elsevier</li> <li>• International Journal of Procurement Management (IJPM)</li> <li>• International Journal of Purchasing and Materials Management</li> </ul>
<b>5</b>	<b>Supplementary Reading</b>	<ul style="list-style-type: none"> <li>• P. Gopalakrishnan and M. Sundaresan, Material Management: An Integrated Approach, Prentice-Hall of India Pvt.Ltd</li> <li>• Robert M. Monczka and Robert B. Handfield, “Purchasing and Supply Chain Management” 6th Edition, Jan 2015.</li> </ul>
<b>6</b>	<b>Practical Component</b>	<ul style="list-style-type: none"> <li>• To interview Purchasing Manager of any local business to understand responsibilities and limitations of purchasing manager.</li> <li>• To visit any local manufacturing organization study functions of Store Management and storage security and safety aspects.</li> <li>• To interview Inventory Manager of any local business to study inventory control technique adopted by the organization.</li> <li>• Library Exercise on Materials Management Information System (MMIS) undertaken by any one company of your choice.</li> </ul>

<b>Semester</b>	<b>III</b>	<b>Total Credit</b>	<b>4</b>
<b>Course Code</b>	<b>DSE-Spl-II-301-E (AB-II)</b>	<b>Credit Pattern</b>	<b>L-45, T-8, P-8</b>
<b>Course Title</b>	<b>RURAL AND AGRICULTURAL MARKETING- AB-II</b>		

<b>Course Objectives</b>	
1	To explain Concepts Pertaining to Rural Marketing.
2	Discuss Strategies to be Developed while targeting Rural Markets.
3	Exposure to The Functioning Of Indian Rural Markets and Rural Market Research.
<b>Course Out Comes: Students will be able to</b>	
1	Discuss the features of rural and urban markets for consumer goods and non-consumer goods.
2	Apply rural marketing research techniques to understand the rural consumer behavior.
3	Adapt marketing strategies suitable to rural markets and agricultural inputs.

### Syllabus:

<b>Unit Number</b>	<b>Contents</b>	<b>Number of Sessions</b>	
<b>1</b>	<b>Introduction To Rural Marketing:</b> Definition, Classification And Characteristics Of Rural Markets; Problems And Constraints In Rural Marketing, Marketing Functions and Services: Marketing Institutions And Marketing Support Services, Rural Consumer: Classification and profile.	<b>L= 11</b>	
		<b>T= 2</b>	<b>P= 2</b>
<b>2</b>	<b>Rural Consumer Behavior and Rural Marketing Research:</b> Rural Consumer Buying Behavior – Major Forces Influencing Rural Consumer Behavior, Rural Segmentation, Market Targeting and Positioning and Procedures for Rural Markets In India; <b>Rural Marketing Research:</b> Introduction, significance and sources of information, key decisions, approaches and tools of market research- case for innovation, participatory approaches, innovative tools, rural vs urban marketing research, rural research business, challenges in rural marketing research.	<b>L= 12</b>	
		<b>T= 2</b>	<b>P= 2</b>
<b>3</b>	<b>Rural Marketing Planning And Strategy Development:</b> Planning For Rural Marketing – Strategic Issues In Rural Marketing. Rural Product Strategy – Rural Pricing Strategy – Rural Distribution Strategy – Rural Promotion Strategy, Introduction to PRA Technique and its importance in Rural Marketing.	<b>L= 11</b>	
		<b>T= 2</b>	<b>P= 2</b>
<b>4</b>	<b>Agricultural Marketing In India:</b> Marketing Of Agricultural Products, Agricultural Marketing Process - Markets And Classification Of Markets – Methods Of Sales – Marketing Agencies, Introduction to Krishi Mandis and New FMCG Act, Marketing of Agricultural Inputs – Fertilizers; Seeds; Agrochemicals; Tractors; Farm Equipments; Irrigation Equipments and Animal Feed.	<b>L= 11</b>	
		<b>T= 2</b>	<b>P= 2</b>

**Note:**

1. Case Studies on Each of the Aspects Mentioned in the Syllabus need to be discussed.
2. Video cases and Documentary Films relating to the syllabus to be exhibited in the class.

<b>Learning Resources</b>		
<b>1</b>	<b>Text Books</b>	<ul style="list-style-type: none"> <li>• Ramkishan Y. (2004): New Perspectives In Rural And Agricultural Marketing, Jaico Publishing House, 2<sup>nd</sup> Edition</li> <li>• Pradip Kashyap, Rural Marketing, Pearson Publications</li> <li>• Badi and Badi: Rural and Agricultural Marketing, Himalya Publications</li> </ul>
<b>2</b>	<b>Reference books</b>	<ul style="list-style-type: none"> <li>• Sarwade W.K. (2006) : Agricultural Marketing – Vatsala Baliram Prakashan Kendra, Mumbai</li> <li>• Abbott J.C.; Makcham J.P. (1992): Agricultural Economics and Marketing In The Tropics. Elbs With Longman, 2<sup>nd</sup> Edition.</li> <li>• Singh G.N.; Singh D.S., Singh R.I : Agricultural Marketing In India, Analysis Planning And Development. Chugh Publications, Allahabad</li> <li>• Rajagopal (1993) : Indian Rural Marketing, Rawat Publication.</li> <li>• Kamat M.; Krishnamurty R. (2003): Rural Marketing, Himalaya</li> <li>• Habeeb-ur-Rahman K.S. (2003), Rural Marketing In India; Himalaya</li> <li>• Gopalswamy T.P. (2006): Rural Marketing: Environment Problems and Strategies, Vikas</li> <li>• Verma S.B; Jiloka S.K. (2006): Rural Agricultural and Marketing, Deep and Deep</li> </ul>
<b>3</b>	<b>Websites</b>	<ul style="list-style-type: none"> <li>• <a href="http://www.agriculture.gov.in/">www.agriculture.gov.in/</a></li> <li>• <a href="http://www.manage.gov.in">www.manage.gov.in</a></li> <li>• <a href="http://www.ica.coop/">www.ica.coop/</a></li> <li>• <a href="http://www.apeda.gov.in">www.apeda.gov.in</a></li> </ul>
<b>4</b>	<b>Journals</b>	<ul style="list-style-type: none"> <li>• Rural Marketing</li> <li>• Indian Journal of Marketing</li> <li>• Vikalpa</li> </ul>
<b>5</b>	<b>Supplementary Reading</b>	<ul style="list-style-type: none"> <li>• <a href="http://www.martrural.com">www.martrural.com</a></li> <li>• <a href="http://www.ibef.org">www.ibef.org</a></li> <li>• <a href="http://www.ruralrdc.com.au/">http://www.ruralrdc.com.au/</a></li> </ul>
<b>6</b>	<b>Practical Component</b>	<ul style="list-style-type: none"> <li>• Make a visit to any one of the marketing service agency identify their activities</li> <li>• Organize PRA Activity at your/ any village and identify the marketing opportunities for various product categories</li> <li>• Prepare a questionnaire and conduct rural market research for various product categories and submit analysis in report format</li> </ul>

<b>Semester</b>	<b>III</b>	<b>Total Credit</b>	<b>4</b>
<b>Course Code</b>	<b>DSE-Spl-II-301-F (S-II)</b>	<b>Credit Pattern</b>	<b>L-45, T-8, P-7</b>
<b>Course Title</b>	<b>INFORMATION SYSTEM AUDIT AND CONTROL S-II</b>		

**Course Objectives**

1	To Develop Of Auditing Skills And Information Systems Approach Towards Business Activities Taking Into Account The New Business Technology Culture.
2	To Make Use of I.S Audit Procedures.
3	To develop skills in the theory, techniques and practical issues involved in computer-based information systems control and auditing.

**Course Outcoms: Student will able to**

1	Classify the concepts of computer security, computer security threats and the corresponding remedies.
2	Describe the trend of computer security threats.
3	Develop an audit plan to achieve the IT audit objectives.

<b>Unit Number</b>	<b>Contents</b>	<b>Number of Sessions</b>	
1	Introduction – Overview Of Information System Auditing, Need For Control And Audit Of Computers, Need for Assurance, Effect Of Computers On Auditing, Benefits of IS Audit for An Organization. IT Governance and Auditors. Conducting Information System Audit – Audit Charter And Engagement Letter, A Typical IS Audit Charter	<b>L=11</b>	
		<b>T=2</b>	<b>P=2</b>
2	Standard Practice And Guidelines, Audit Planning, Risk Assessment, Information Gathering Techniques, Vulnerability, System Security Testing, Development Of Security Requirements Checklist, The Road Map For Setting Up Information System Audit For Bank, The Management Control Framework: Introduction, IT Management Framework	<b>L=12</b>	
		<b>T=2</b>	<b>P=1</b>
3	Top Management Controls – Evaluating – Evaluating The Planning, Organizing-Policies and procedures, HR Policies and Procedures Relating To Information System, Leading Function, Controlling Function,. System Development Management Controls – Introduction, Normative Models Of The Systems Development Process, Audit of Program development, Audit of Program Modification	<b>L=11</b>	
		<b>T=2</b>	<b>P=2</b>
4	Techniques for testing unauthorized program modification; Operational Control Review – Control Requirements for Backup, Backup Procedures, Selection of storage media, Security Measurement Controls – Introduction, Conducting A Security Program, Major Security Threats And Remedial Measures, Need Of Disaster Recovery And Business Continuity, Data Disaster, Virus Disasters, Software Disasters, Data Center Disasters, Core Banking Solution	<b>L=11</b>	
		<b>T=2</b>	<b>P=2</b>

**Note:** The Small Audit Project. Students will have to complete all tutorials, assignments and lab session for internal credits.

<b>Learning Resources</b>		
<b>1</b>	<b>Text Books</b>	<ul style="list-style-type: none"> <li>• Information System Control And Audit, - Ron Weber Person Edition</li> </ul>
<b>2</b>	<b>Reference books</b>	<ul style="list-style-type: none"> <li>• Information System Auditing And Assurance – James A. Hall – South Western.</li> <li>• Auditor's Guide to Information Systems Auditing- Richard Cascarino</li> </ul>
<b>3</b>	<b>Web Sites</b>	<ul style="list-style-type: none"> <li>• <a href="http://en.wikipedia.org/wiki/Information_technology_audit">en.wikipedia.org/wiki/Information_technology_audit</a></li> <li>• <a href="http://www.isaca.org">www.isaca.org</a></li> <li>• <a href="http://www.simplilearn.com">www.simplilearn.com</a></li> <li>• <a href="http://www.icsi.in">www.icsi.in</a></li> <li>• <a href="http://Kb.icaai.org">Kb.icaai.org</a></li> </ul>
<b>4</b>	<b>Journals</b>	<ul style="list-style-type: none"> <li>• Indian Journal of Computer Science (New)</li> <li>• International Journal Of Computational Intelligence Research &amp; Application</li> <li>• IUP Journal of Computer Science</li> <li>• RBI Bulletin</li> </ul>
<b>5</b>	<b>Supplementary Reading</b>	<ul style="list-style-type: none"> <li>• CISA: Certified <i>Information Systems Auditor Study Guide</i></li> <li>• Bank Annual Reports</li> <li>• Economic Times News Letter</li> </ul>
<b>6</b>	<b>Practical Component</b>	<ul style="list-style-type: none"> <li>• Field Visit: Students should visit the banks and study the I.S. Audit report</li> <li>• During filed visit student should learn the process of I.S. Audit along with the Internal or External I.S. Auditor</li> <li>• Mini project on I.S. Audit</li> </ul>

### Generic Elective- Any One

<b>Semester</b>		<b>Total Credit</b>	<b>2</b>
<b>Course Code</b>	<b>GE 301-A</b>	<b>Credit Pattern</b>	<b>L-22, T-4, P-4</b>
<b>Course Title</b>	<b>Entrepreneurship Development</b>		

<b>Course Objectives</b>	
<b>1</b>	To understand the concept and importance of entrepreneurship
<b>2</b>	To develop entrepreneurial skills and abilities among the students to run business efficiently and effectively
<b>3</b>	To provide insights to the students on entrepreneurship opportunities
<b>4</b>	To familiarize students with the support system provided by the government for entrepreneurship.

<b>Course Outcomes: Students will be able to</b>	
<b>1</b>	Explain Basic Concept of Entrepreneurship and link the Entrepreneurship with Economic Development.
<b>2</b>	Develop the Business Plan for any kind of new enterprise.
<b>3</b>	Discuss Role of Central and State Government in Entrepreneurship Development.

#### Syllabus:

<b>Unit Number</b>	<b>Contents</b>	<b>Number of Sessions</b>	
<b>1</b>	<b>Introduction to Entrepreneurship</b> Concept of Entrepreneur & Entrepreneurship, Types of Entrepreneurs, Characteristics and Skills of Successful Entrepreneurs, Entrepreneur Vs Manager, Role of Entrepreneurship In Economic Development, Challenges faced by Entrepreneurs, Role of Central and State Governments in Promoting Entrepreneurship	<b>L= 11</b>	
		<b>T= 2</b>	<b>P= 2</b>
<b>2</b>	<b>Developing Business Plan</b> Sources of Business Ideas, Evaluation of New Business Ideas, Business Idea Feasibility Study, Developing a Business Plan: Contents, Importance, Advantages. Presentation of Business Plan, Sources of Business Finance: Internal and External Funds.	<b>L= 11</b>	
		<b>T= 2</b>	<b>P= 2</b>

<b>Learning Resources</b>		
<b>1</b>	<b>Text Books</b>	<ol style="list-style-type: none"> <li>S.S. Khanka, Entrepreneurial Development, S. Chand And Company Ltd., New Delhi</li> <li>Dr. R.R. Khan, Entrepreneurial Management, School Of Management Studies, Mumbai</li> <li>M.B. Shukla, Entrepreneurship And Small Business Management, Kitab Mahal, Allahabad</li> </ol>
<b>2</b>	<b>Reference books</b>	<ol style="list-style-type: none"> <li>Raj Shankar – “Entrepreneurship: Theory and Practice” – Vijay</li> </ol>



		<p>Nicole Imprints Pvt. Ltd.,</p> <ol style="list-style-type: none"> <li>2. D. F. Kuratko, T. V. Rao – “Entrepreneurship: A South Asian Perspective” – Cengage Learning</li> <li>3. David H. Holt, “Entrepreneurship – New Venture Creation”, Prentice Hall, New Delhi</li> </ol>
3	Websites	<ol style="list-style-type: none"> <li>1. <a href="http://www.startupindia.gov.in">www.startupindia.gov.in</a></li> <li>2. <a href="http://www.india.gov.in">www.india.gov.in</a></li> <li>3. <a href="https://www.sidbi.in/">https://www.sidbi.in/</a></li> <li>4. <a href="https://www.nstebd.com/">https://www.nstebd.com/</a></li> <li>5. <a href="https://www.nsic.co.in/">https://www.nsic.co.in/</a></li> <li>6. <a href="https://www.makeinindia.com/">https://www.makeinindia.com/</a></li> </ol>
4	Journals	<ol style="list-style-type: none"> <li>1. The Journal of Entrepreneurship   Sage India</li> <li>2. AMC Indian Journal of Entrepreneurship</li> <li>3. Entrepreneurship Journal - Publishing India</li> <li>4. <a href="https://www.Ediindia.org/the_journal_of_entrepreneurship">https://www.Ediindia.org/the_journal_of_entrepreneurship</a></li> <li>5. Journal Of Entrepreneurship, Management And Innovation</li> </ol>
5	Supplementary Reading	<ol style="list-style-type: none"> <li>1. <a href="https://articles.bplans.com/a-standard-business-plan-outline/">https://articles.bplans.com/a-standard-business-plan-outline/</a></li> <li>2. <a href="http://yie.in/">http://yie.in/</a></li> <li>3. <a href="http://tie.org/">http://tie.org/</a></li> </ol>
6	Practical Component	<ol style="list-style-type: none"> <li>1. Interview a local entrepreneur and understand attributes behind his/her success</li> <li>2. Visit to DIC to understand the Government Support</li> <li>3. Visiting NGOs to understand the concept of Social Entrepreneurship.</li> <li>4. Interview a local Woman Entrepreneur to understand the challenges faced by her.</li> </ol>

<b>Semester</b>	<b>III</b>	<b>Total Credit</b>	<b>4</b>
<b>Course Code</b>	<b>GE 301- B</b>	<b>Credit Pattern</b>	<b>L-24, T-06, P-00</b>
<b>Course Title</b>	<b>E-Commerce</b>		

<b>Course Objectives</b>	
1	To explain the nature and different models of E-commerce
2	To explain the technologies required to make e-Commerce viable.
3	To discuss the current drivers and inhibitors facing the business world in adopting and using e-commerce and
4	To discuss the trends in e-Commerce and the use of the Internet.
5	To discuss e-commerce from an enterprise point of view.
6	To demonstrate the concepts of security in e-commerce applications.

<b>Course Outcomes</b>	
After completion of this course the student will be able to:	
1	Recognize the business impact and potential of e-commerce
2	Develop a holistic perspective on the role of IT in organizations.
3	Identify target market based on numerous parameters.
4	Select appropriate e-commerce models for any organization.
5	Follow security measures while dealing with e-commerce applications.

<b>Unit Number</b>	<b>Contents</b>	<b>Number of Sessions</b>	
<b>1</b>	History of e-commerce and Indian business context, www, advantages and disadvantages of e-commerce, e-commerce in India, various Indian case studies. Business models for e-commerce, different type of e-commerce, brokerage model, aggregator model, info-mediary model, community model, value chain model, manufacturer model, advertising model, subscription model, affiliate model.	<b>L=12</b>	
		<b>T=03</b>	<b>P=00</b>
<b>2</b>	Technologies of the www & e-security, internet client-server applications, networks and internets, URL, software agents, internet service providers, html, java script and xml, e-security, security on the internet, hacking, various security risks, e-business risk management issues, firewall. E-marketing, identifying web presence goals, the browsing behavior model, online marketing, e-advertising, internet marketing trends, target markets, e-branding, marketing strategies. Legal and ethical issues, IT Law, phishing, copy right.	<b>L=12</b>	
		<b>T=03</b>	<b>P=00</b>

<b>References</b>		
1	<b>Text books</b>	a. E-commerce - An Indian Perspective by P.T. Joseph, S.J , PHI publication b. E-commerce - An Indian Perspective by P.T. Joseph, S.J , PHI publication
2	<b>Reference books</b>	1. The unofficial guide to starting an e-commerce business by Jason R.Rich, IDG books India. 2. E-Commerce (Pearson Custom Business Resources) by Kenneth C. Laudon 3. Electronic Commerce by Gary P. Schneider
3	<b>Websites</b>	1. <a href="http://notes4learners.blogspot.com">http://notes4learners.blogspot.com</a> 2. <a href="https://www.academia.edu/8099032/e_commerce_notes">https://www.academia.edu/8099032/e_commerce_notes</a> 3. <a href="https://examupdates.in/e-commerce-full-notes/">https://examupdates.in/e-commerce-full-notes/</a> 4. <a href="https://www.javatpoint.com/html-tutorial">https://www.javatpoint.com/html-tutorial</a> 5. <a href="http://www.echoecho.com/html.htm">http://www.echoecho.com/html.htm</a>
4	<b>Journals</b>	1. “Electronic Commerce Research”, ISSN: 1389-5753 (Print) 1572-9362 (Online), <a href="https://link.springer.com/journal/10660">https://link.springer.com/journal/10660</a> 2. “E - Commerce for future & Trends”, eISSN: 2454–9347, <a href="http://stmjournals.com/E-Commerce-for-future-and-Trends.html">http://stmjournals.com/E-Commerce-for-future-and-Trends.html</a> 3. “Journal of Web Development and Web Designing”, <a href="http://matjournals.com/Journal-of-Web-Development-and-Web-Designing.html">http://matjournals.com/Journal-of-Web-Development-and-Web-Designing.html</a>
5	<b>Supplementary Reading</b>	1. geeksforgeeks 2. tutorialspoint 3. w3Schools
6	<b>Practical Components</b>	-----

<b>Semester</b>	<b>III</b>	<b>Total Credit</b>	<b>2</b>
<b>Course Code</b>	<b>GE -301 C</b>	<b>Credit Pattern</b>	<b>L-20, T-5, P-5</b>
<b>Course Title</b>	<b>CORPORATE SOCIAL RESPONSIBILITY</b>		

<b>Course Objectives</b>	
1	To understand the scope and complexity of corporate social responsibility.
2	To gain knowledge of the impact of CSR implementation on societies
3	To acquire skills to frame and design CSR policies and practices appropriate to the Indian workplace.

<b>Course Outcomes: Students will be able to</b>	
1	know the Corporate Social Responsibility of different sector.
2	use the acquired skill for proper sustainable Corporate Social responsibility.

### Syllabus:

<b>Unit Number</b>	<b>Contents</b>	<b>Number of Sessions</b>	
1	Introduction to CSR: Meaning & Definition of CSR, History & evolution of CSR. International framework for corporate social Responsibility, Millennium Development goals, Sustainable development goals, Relationship between CSR and MDGs. United Nations (UN) Global Compact 2011. UN guiding principles on business and human rights.– Globalization and CSR.	<b>L= 10</b>	
		<b>T= 3</b>	<b>P= 2</b>
2	Indian perspectives and approaches: Models of CSR in India,. Initiatives in India. Corporate Governance and CSR , CSR Policy and guidelines , Legal frame work, rules and regulations, Company Act 2013 - relevant provisions of CSR. Role of Government and NGO in CSR. Business Benefits of CSR.	<b>L=10</b>	
		<b>T=2</b>	<b>P=3</b>

<b>Learning Resources</b>		
1	<b>Text Books</b>	<ol style="list-style-type: none"> <li>Benn &amp; Bolton, (2011). Key concepts in corporate social responsibility. Australia: Sage Publications Ltd.</li> <li>Bradshaw, T. and D. Vogel. (1981). Corporations and their critics: Issues and answers to the problems of corporate social responsibility. New York: McGraw Hill Book Company</li> <li>Brummer, J.J. (1991). Corporate Responsibility and Legitimacy: An interdisciplinary analysis. Westport, CT: Greenwood Press.</li> <li>Cannon, T. (1992). Corporate responsibility (1st ed.) London: Pitman Publishing.</li> </ol>

		5. Crane, A. et al., (2008). The Oxford handbook of corporate social responsibility. New York: Oxford University Press Inc.
2	<b>Reference books</b>	<ol style="list-style-type: none"> <li>1. Lourdes Poobala Rayen- Corporate Social responsibility.</li> <li>2. Ellington. J. (1998).Cannibals with forks: The triple bottom line of 21st century business. New Society Publishers</li> <li>3. Baxi C.V and Ajit P, Corporate Social Responsibility, Concept &amp; Cases: “The Indian Experience, Excel Books.</li> <li>4. Reddy S and Stefan S (2004). Corporate Social Responsibility: Sustainable Supply Chains. Hyderabad: ICFAI University Press.</li> <li>5. Werther, W. B. &amp; Chandler, D. (2011). Strategic corporate social responsibility. Thousand Oaks, CA: Sage</li> </ol>
3	<b>Websites</b>	<p><a href="http://www.forbes.com">www.forbes.com</a></p> <p><a href="http://www.referenceforbusiness.com">www.referenceforbusiness.com</a></p> <p><a href="http://www.justmeans.com">www.justmeans.com</a></p> <p><a href="http://www.corporatesocialresponsibility.org">www.corporatesocialresponsibility.org</a></p>
4	<b>Journals</b>	<p><a href="http://www.internationaljournalofcorporatesocialresponsibility.com">International Journal of Corporate Social Responsibility   Home</a></p> <p><a href="https://jcsr.springeropen.com">https://jcsr.springeropen.com</a></p> <p>Sustainability Accounting, Management and Policy Journal, Emerald, 2010- -World Review of Entrepreneurship, Management and Sustainable Development, Inderscience Publishers, 2005-</p>
5	<b>Supplementary Reading</b>	<ol style="list-style-type: none"> <li>1. <a href="http://www.diegdi.de/CMSHomepage/openwebcms3.nsf/%28ynDK_contentByKey%29/ENTR-7BMDUB/\$FILE/Studies%2026.pdf">http://www.diegdi.de/CMSHomepage/openwebcms3.nsf/%28ynDK_contentByKey%29/ENTR-7BMDUB/\$FILE/Studies%2026.pdf</a></li> <li>2. Modi P.K., Corporate Social Capital Liability. Arise Publishers &amp; Distributors. First editions - 2009</li> <li>3. Sharma, J.P., Corporate Governance, Business Ethics &amp; CSR, Ane Books Pvt Ltd, New Delhi.</li> </ol>
6	<b>Practical Component</b>	Visit to industries to study and record various CSR activities and discuss the same with students and teachers to know the merits and demerits od CSR.

(With Effect from 2021-22)

<b>Semester</b>	<b>III</b>	<b>Total Credit</b>	<b>2</b>
<b>Course Code</b>	<b>GE 301D</b>	<b>Credit Pattern</b>	<b>L-22, T- 04, P-04</b>
<b>Course Title</b>	<b>Basics of Indian Economy</b>		

**Course Outcomes: Students will be able to**

<b>1</b>	Identify the main issues in Indian economic development
<b>2</b>	Critically analyse the Indian economic policy environment

**Syllabus:**

<b>Unit Number</b>	<b>Contents</b>	<b>Number of Sessions</b>	
<b>1</b>	<b>UNIT-1: Indian Economic Environment:</b> Meaning of underdevelopment, Basic characteristics of India as a developing economy, Major issues of development: Poverty, Unemployment and Inequality, National Income of India: Trends, Growth and Structure. Features and importance, Green Revolution, Low productivity of agriculture and government measures Role of Industrialization, Industries and Five-year plans, Industrial Policy(1991), Services sector Role & Importance	<b>L= 11</b>	
		<b>T= 2</b>	<b>P= 2</b>
<b>2</b>	<b>UNIT-2: Indian Economic Planning and Reforms:</b> Objectives of Economic Planning, Redefining the role of the State, Brief review of Five-Year Plans, New Economic Reforms: Liberalization, Privatization and Globalization, NITI Ayog, Balanced Regional Development.	<b>L= 11</b>	
		<b>T= 2</b>	<b>P= 2</b>

**Learning Resources**

<b>1</b>	<b>Text Books</b>	<ul style="list-style-type: none"><li>• Agarwal A N (2016), Indian Economy, Vikas Publishing House Pvt. Ltd., New Delhi</li><li>• Gaurav Datt&amp; Ashwini Mahajan (2016), Indian Economy, S. Chand and Company Pvt. Ltd., New Delhi</li><li>• Misra and Puri (2013), Indian Economy, Himalaya Publishing House Pvt. Ltd., New Delhi.</li></ul>
<b>2</b>	<b>Reference books</b>	<ul style="list-style-type: none"><li>• Deepashree (2011), Indian Economy, Ane Books Ovt. Ltd., New Delhi</li><li>• Uma Kapila (2017), Indian Economy: Performance and Policies, Academic Foundation, New Delhi</li></ul>

3	<b>Websites</b>	<ul style="list-style-type: none"> <li>• <a href="http://www.rbi.org.in">www.rbi.org.in</a></li> <li>• <a href="http://www.mygov.gov.in">www.mygov.gov.in</a></li> <li>• www.cmie.com</li> </ul>
4	<b>Journals</b>	<ul style="list-style-type: none"> <li>• Arth Samwad</li> <li>• Economic and Political Weekly</li> <li>• Indian-Economic-Journal</li> <li>• Journal-of Indian-School-of-Political-Economy</li> <li>• Southern Economist</li> <li>• The Economist</li> <li>• Journal of Applied Economics</li> <li>• Indian-Economic-Journal</li> <li>• International Journal of the Economics of Business</li> <li>• Journal-of Indian-School-of-Political-Economy</li> <li>• Agricultural-Economic-Research-Review</li> </ul>
5	<b>Supplementary Reading</b>	<ul style="list-style-type: none"> <li>• Economics Survey</li> <li>• Union Budget of India</li> <li>• Niti Ayog Reports</li> <li>• Economics Times Daily</li> <li>• Business Standard Daily</li> <li>• Business Today Daily</li> <li>• Latest Monetary Policy</li> <li>• Latest Fiscal Policy</li> </ul>
6	<b>Practical Component</b>	<ul style="list-style-type: none"> <li>• Collect Economic Survey of India of last five years and prepare a report on trends in major macro-economic variables of the country</li> <li>• Establish the relationship between sectoral growth patterns and business environment by collecting data on three major sectors of the economy</li> </ul>

<b>Semester</b>	<b>III</b>	<b>Total Credit</b>	<b>2</b>
<b>Course Code</b>	<b>GE 301 E</b>	<b>Credit Pattern</b>	<b>L-23, T-07, P-0</b>
<b>Course Title</b>	<b>DISASTER MANAGEMENT ( For the students of other Department)</b>		

<b>Course Objectives</b>	
<b>1</b>	Understand the concept and impact of disasters.
<b>2</b>	Describe the causes, effects and control measures of disasters.

<b>Course Outcomes: After completion of this course students will have capacity to</b>	
1.	Recognize the various global and regional environmental concerns/hazards due to natural causes and/or human activities, and the impact of these on various forms of life .
2.	Obtain and communicate information on risks, relief needs and lessons learned from earlier disasters in order to formulate strategies for mitigation in future scenarios
3.	Describe and evaluate the environmental, social, economic, legal and organizational aspects influencing vulnerabilities and capacities to face disasters.
4.	Relate theoretically and practically in the processes of disaster management (disaster risk reduction, response, and recovery)

**Syllabus:**

<b>Unit Number</b>	<b>Contents</b>	<b>Number of Sessions</b>	
<b>1</b>	<b>Introduction to Disaster Management :</b> Hazard and Disaster, Classification of Disasters. Hydrological Disasters - Flood, Drought, Geological Disasters- Earthquakes, Landslides, Volcanic Eruptions. Wind Related Disasters- Cyclone Biological Disasters Man Made Disasters : Fire – Industrial, Domestic and wild fire Technological Disasters- Bhopal Gas Tragedy, Chernobyl and Fukushima. Marine and Social Disasters	<b>L= 11</b>	
		<b>T= 4</b>	<b>P= 0</b>
<b>2</b>	<b>Disaster Management :</b> Risk assessment, Disaster Management Act 2005, National Disaster Management Framework, Role of various organisations- National Disaster Management Authority (NDMA), State Disaster Management Authority (SDMA), District Disaster Management Authority (DDMA), Financial Arrangements for Disaster Management, Disaster management cycle, NDRF. Non-Governmental Organisations, community participation, Education, training for public in emergency preparedness plan, Rescue & rehabilitation programmes.	<b>L= 12</b>	
		<b>T= 3</b>	<b>P= 0</b>



Learning Resources		
1	Text Books	<ul style="list-style-type: none"> <li>• Textbook Of Environmental Science And Technology by REDDY, BSP publishers, 2019</li> <li>• A Textbook Of Environmental Studies, Dr D K Asthana, S. Chand Publishers, 2018</li> <li>• A Text Book Of Environmental Studies by Vijay Tiwari, Himalaya Publishers, 2017</li> <li>• A Text Book of Ecology, Tyler Miller, Cengage Learning</li> <li>• A Text Book Environmental Studies, Chatawal &amp; Sharma, HPH</li> <li>• A Text Book Environmental Science, Joshi &amp; Joshi, APH</li> <li>• A Text Book of Environmatal Studies, Nambiar, STP</li> </ul>
2	Reference books	<ul style="list-style-type: none"> <li>• Nuclear Accidents (Man Made Disasters) Mark Mayell Publisher: Lucent Books</li> <li>• Management of Man-made Disasters, S. L. Goel, Motilal Banarsidass Publishers Private Limited, New Delhi, ISBN: 8176297151</li> <li>• Handbook of Pollution Control Processes By: Robert Noyes. Jaico Publishing House, Mumbai (2003)</li> <li>• Fire &amp; Explosion Hazards Handbook of Industrial Chemicals By: TA Davletshina &amp; NP Cheremisinhoff, Noyes Publications, Mumbai (2003)</li> <li>• Environmental Geology by K. Valdiya, Tata McGraw Hill Publishing Co.</li> <li>• Perspectives on Environment by I.R. Manners, M.W. Micksell</li> <li>• Our Planet, Our Health by WHO (1992)</li> <li>• Report of the Panel on Industry by WHO (1992)</li> <li>• Natural Disasters, Author: Claire Watts / Trevor Day Publisher: Dk Publishing, ISBN: 9781465438096</li> <li>• Environmental Biology by K.C. Agarwal</li> <li>• Resource Book on Chemical (Industrial) Disaster Management, <a href="http://nidm.gov.in/PDF/pubs/chemical_mdc.pdf">http://nidm.gov.in/PDF/pubs/chemical_mdc.pdf</a></li> <li>• Directory of Institutions and Resource Persons for Landslide Management In India</li> <li>• <a href="http://nidm.gov.in/PDF/pubs/directory%20landslide.pdf">http://nidm.gov.in/PDF/pubs/directory%20landslide.pdf</a></li> </ul>
3	Websites	<ul style="list-style-type: none"> <li>• Directory of Institutions and Resource Persons for Landslide Management In India</li> <li>• <a href="http://nidm.gov.in/PDF/pubs/directory%20landslide.pdf">http://nidm.gov.in/PDF/pubs/directory%20landslide.pdf</a></li> <li>• <a href="https://www.ifrc.org/en/what-we-do/disaster-management/about-disaster-management/">https://www.ifrc.org/en/what-we-do/disaster-management/about-disaster-management/</a></li> <li>• <a href="https://en.wikipedia.org/wiki/Disaster_management_in_India">https://en.wikipedia.org/wiki/Disaster_management_in_India</a></li> </ul>
4	Journals	<ul style="list-style-type: none"> <li>• Current Science, ISSN No. 0011-3891</li> <li>• Down to Earth</li> <li>• Journal of Biosciences, ISSN No. 0250-5991</li> <li>• Journal of Environmental Biology, ISSN No. 0254-8704</li> <li>• Resonance, ISSN No. 0971-8044</li> </ul>

		<ul style="list-style-type: none"> <li>• Journal of Earth System Science, ISSN No .2253-4126</li> <li>• Industrial Safety Chronicle</li> <li>• International Journal of Environmental Engineering Science, ISSN No .2229-3094</li> </ul>
<b>5</b>	<b>Supplementary Reading</b>	<ul style="list-style-type: none"> <li>• Demonstration of Fire &amp; Water Safety.</li> </ul>
<b>6</b>	<b>Practical Components</b>	<ul style="list-style-type: none"> <li>• Mock drill for various disaster</li> <li>• Disaster Management Action Plan</li> </ul>

**Ability Enhancement Courses: Any One**

<b>Semester</b>	<b>III</b>	<b>Total Credit</b>	<b>2</b>
<b>Course Code</b>	<b>AEC 301-A</b>	<b>Credit Pattern</b>	<b>L-23, T-7, P-0</b>
<b>Course Title</b>	<b>ENVIRONMENTAL LEGISLATION</b>		

**Course Objectives**

1	Understand the Government policies and their application in the context of environmental protection.
2	Make use of the present legal provisions in current practices of his job and business.

**Course Outcomes:** The students will able to

1.	Classify the various environmental policies, laws and institutions involved in the protection and conservation of environment.
2.	Infer various strategies practiced across the globe for environmental conservation.
3.	Evaluate the environmental provisions and acts regarding environmental protection.
4.	Know environmental acts.

**Syllabus:**

<b>Unit Number</b>	<b>Contents</b>	<b>Number of Sessions</b>	
<b>1</b>	<b>Environmental Acts-I:</b> Constitutional provisions regarding environment protection: Article 47 (Directive principles of State Policies), Article 48A (1942 Amendment), Article 51A(g) (Fundamental duties) The Wild Life (Protection) Act, 1972 The Water (Prevention and Control of Pollution) Act, 1974. The Air (Prevention and Control of Pollution) Act, 1981. Forest (Conservation) Act, 1980.	<b>L= 12</b>	
		<b>T=4</b>	<b>P=0</b>
<b>2</b>	<b>Environmental Acts-II:</b> The environment (Protection) Act, 1986. Public Liability Insurance Act, 1991. Industrial Wastes and Law, Sec. 12 of Factories Act, (1948) and rules framed there under. Hazardous waste ( Management & Handling ) Rule, 1989 Noise Pollution and Law, Sec. 119 and 120 of the Motor Vehicles Act (1989) and rules framed there under. Note: any amendment to the act impinged time to time is to be covered.	<b>L= 11</b>	
		<b>T= 3</b>	<b>P= 0</b>

**Learning Resources**

<b>1</b>	<b>Text Books</b>	<ul style="list-style-type: none"> <li>• Environmental Protection and the Laws by CN Mehta, 1991</li> <li>• India's Forests, Myth and Reality by J.B. Lal 1989</li> <li>• Legal aspects of Environmental Pollution and its Management by Ed. S.M. Ali, 1992</li> <li>• Man – Nature and Environmental Law by GS Nathawal, S. Shastri and JP Vyyar, 1988</li> </ul>
----------	-------------------	--

2	<b>Reference books</b>	<ul style="list-style-type: none"> <li>• International Environmental Policy: Emergence and Dimensions by LK Caldwell, 1990</li> <li>• Lal's Commentaries on Water, Air Pollution Laws along with the Environmental (Protection) Act and Rules, 1986, 3rd Ed., 1992 Law Publisher – India</li> <li>• The Wildlife (Protection) Act, 1972 (with amendment-1991)</li> <li>• Our Common Future – WCED, 1991</li> <li>• Universal's Environment and Pollution Law Manual by SK Mohanty, 1998.</li> <li>• Ecology and Environment by P.D. Sharma, 2012, Rastogi Publications, Meerut, India.</li> </ul>
3	<b>Websites</b>	<ul style="list-style-type: none"> <li>• <a href="http://mpcb.gov.in/">http://mpcb.gov.in/</a></li> <li>• <a href="https://www.cseindia.org/tag/state-pollution-control-board--(spcb)">https://www.cseindia.org/tag/state-pollution-control-board--(spcb)</a></li> <li>• <a href="https://www.iaia.org/wiki-details.php?ID=23">https://www.iaia.org/wiki-details.php?ID=23</a></li> </ul>
4	<b>Journals</b>	<ul style="list-style-type: none"> <li>• Current Science, ISSN No. 0011-3891</li> <li>• Every Thing About Water</li> <li>• Down to Earth</li> <li>• Industrial Safety Chronicle</li> <li>• International Journal of Environmental Pollution Control &amp; Management , ISSN No .0975-3842</li> <li>• Resonance, ISSN No. 0971-8044</li> <li>• Journal of Earth System Science, ISSN No .2253-4126</li> </ul>
5	<b>Supplementary Reading</b>	<ul style="list-style-type: none"> <li>• Down to Earth, CSE</li> </ul>
6	<b>Practical Components</b>	<ul style="list-style-type: none"> <li>• Relevant Case Studies.</li> </ul>

<b>Semester</b>	<b>III</b>	<b>Total Credit</b>	<b>2</b>
<b>Course Code</b>	<b>AEC 301 B</b>	<b>Credit Pattern</b>	<b>L-24, T-7, P-0</b>
<b>Course Title</b>	<b>REMOTE SENSING AND GIS</b>		
<b>Course Objectives</b>			
<b>1</b>	Understand basic concepts of Remote Sensing and GIS		
<b>2</b>	Describe applications of GIS in the field of Environmental Science.		
<b>Course Outcomes: The students will able</b>			
1.	Define remote sensing and GIS.		
2.	Explain EMR, Energy interactions and types of Aerial photographs.		
3.	Elaborate applications of GIS in Environmental science.		
4.	Make use of GIS for various applications.		

**Syllabus:**

<b>Unit Number</b>	<b>Contents</b>	<b>Number of Sessions</b>	
<b>1</b>	<b>Remote Sensing :</b> Definition and Scope of Remote Sensing, Indian Space programme. In situ and Remote sensing, Electromagnetic spectrum, Transmission, Absorption, Reflection, Energy interaction with earth surface and atmosphere, Aerial photography- Classification Of Aerial Photographs , Types of aerial photographs Applications of Aerial Photographs. Satellite imageries-Scanners, pixels, grey levels, bands . Introduction of Remote Sensing Satellites, Meteorological Remote Sensing Satellite, (Polar and Geostationary Satellites), Non Meteorological RS Satellites (Landsat, Spot, IRS), Resolution (Spectral, Spatial and Frequency of Coverage). Satellite data products and selection of satellite data, Applications of Remote Sensing in Environmental Studies.	<b>L= 12</b>	
		<b>T=4</b>	<b>P=0</b>
<b>2</b>	<b>Geographical Information System (GIS):</b> Definition of GIS, Capabilities and advantages of GIS, Sources of data, types of data, hardware requirement, Components of GIS., Data structure, Raster and Vector data models, Advantages and disadvantages of vector data and raster data. GIS packages and Application of GIS in Environmental Management. <b>GIS Analysis :</b> Topology: Error and editing; GIS data quality, errors, policies. Vector data analysis: Buffering, Overlay analysis (point in polygon, line in polygon, polygon in polygon etc.); Network analysis; Terrain analysis: DEM, DTM and TIN. Interpolation techniques in GIS, Raster data analysis, Non-spatial data, Database Management system (DBMS).	<b>L= 12</b>	
		<b>T=3</b>	<b>P=0</b>

Learning Resources		
1	Text Books	<ul style="list-style-type: none"> <li>• Textbook Of Remote Sensing &amp; Geographical Inform. Systems by KALI CHARAN, Atlantic Publisiers, 2018</li> </ul>
2	Reference books	<ul style="list-style-type: none"> <li>• Principles of Photo geology by Singh</li> <li>• Principles of Remote Sensing by Currain</li> <li>• Fundamentals of Photo geology by SN Pandey</li> <li>• Remote Sensing and Image Interpretation:-Tomas M.Lillesand and Ralph W.Keifer John Wiley and sons Inc.New York.</li> <li>• Introduction to Remote sensing:-James B. Campbell, Tylor and Franeis Ltd.Londan.</li> <li>• Fundamentals of GISN:-Michael N.Demers..</li> <li>• Remote Sensing application in applied geosciences:-Sumitra Mukherjee, Milton Book Company.</li> <li>• Principles of Remote Sensing:-A.N.Gatel and S.Singh, Scientific Publishers (India). Jodhpur (1999Edition).</li> <li>• Remote Sensing for Environment and Forest Management:-A.Mehrotra and R.K.Suri. Indus Publishing Co.New.Dehli(1994 Edition)</li> <li>• Remote sensing for large wildfires:-E.Chuvienco, Springer, New York (1999 Edition).</li> <li>• Remote Sensing in Geoscience:-Tripathi N.K.</li> <li>• DeMers, Michael N.,2000. Fundamentals of Geographic Information System (2<sup>nd</sup> Ed.) (Wiley Student Edition). New York: Jhon Wiley &amp; Sons, Inc.</li> <li>• Foreseman, T. (Ed) 1998. The History of Geographic Information System- Perspectives from the Pioneers. Upper Saddle River. NJ : Prantice Hall.</li> <li>• Heywood, Ian: Cornelius, Sarah: Carver, Steve.2000. An Introduction to Geographic Information System(Pearson Education Asia Low Priced Edition). Longman.</li> <li>• Kraak, Menno-Jan and Ormeling, Ferjan. 2004. Cartography – Visualization of Geospatial Data (2<sup>nd</sup> Ed.) (Pearson Education Low Price Edition). Pearson Education.</li> <li>• Schuurman, Nadine. 2000. "Trouble in the Heart land: GIS and its Critics in the 1990s." Progress in Human Geography, vol. 24, no. 4, pp.569-590.</li> <li>• Schuurman, Nadine and G. Pratt. 2002. "Care of the Subject: Feminism and Critiques of GIS." Gender, Place and Culture, vol. 9, no. 3, pp. 291-299.</li> </ul>
3	Websites	<ul style="list-style-type: none"> <li>• <a href="https://oceanservice.noaa.gov/facts/remotesensing.html">https://oceanservice.noaa.gov/facts/remotesensing.html</a></li> <li>• <a href="https://gisgeography.com/what-gis-geographic-information-systems/">https://gisgeography.com/what-gis-geographic-information-systems/</a></li> <li>• <a href="https://www.esri.com/en-us/what-is-gis/overview">https://www.esri.com/en-us/what-is-gis/overview</a></li> </ul>

4	<b>Journals</b>	<ul style="list-style-type: none"> <li>• Current Science, ISSN No. 0011-3891</li> <li>• Down to Earth</li> <li>• Journal of Earth System Science, ISSN No .2253-4126</li> <li>• Journal of Biosciences, ISSN No. 0250-5991</li> </ul>
5	<b>Supplementary Reading</b>	<ul style="list-style-type: none"> <li>• Down to Earth</li> </ul>
6	<b>Practical Components</b>	<ul style="list-style-type: none"> <li>• Geo Referencing</li> <li>• Practical Based on Paper ( Practical III &amp; IV)</li> </ul>

**SEMESTER – IV**

<b>Semester</b>	<b>IV</b>	<b>Total Credit</b>	<b>4</b>
<b>Course Code</b>	<b>CC -401</b>	<b>Credit Pattern</b>	<b>L-45, T-8, P-7</b>
<b>Course Title</b>	<b>LAND AND WATER MANAGEMENT</b>		
<b>Course Objectives</b>			
1.	To understand problems and solutions related with land resources.		
2.	To study various aspects of water management.		
<b>Course Outcomes: After studying this course the students will able to</b>			
1	Identify the concept of optimal land use planning based on capabilities to prevent further degradation and relate these to appropriate methodologies of sustainable land management.		
2	Describe challenges and give suggestions to manage accelerated soil erosion, ground water recharging and water logging conditions, with the emphasis on prevention, control and reclamation of saline-alkali soils		
3	Develop understanding of the hydrology of streams and lake systems and concept of water shed management, and describing the processes of and importance of groundwater flow and aquifer systems.		
4	Perceive the challenges of maintaining surface and ground water quality, apply their knowledge base and research skills to current issues pertaining to water resource management, and remediation, with emphasis on related economic, social, and public policy dimensions.		

**Syllabus:**

<b>Unit Number</b>	<b>Contents</b>	<b>Number of Sessions</b>	
<b>1</b>	<b>Soil Pollution:</b> Importance of Soil resources, Physical, Chemical and Biological Properties of soil. Definition, causes/ sources of soil pollution: agro-chemicals, heavy metals, disposal of city refuse, waste water, soil salinity and water logging. Methods of Soil sampling, Effect of Soil pollution on Flora and Fauna. Control of Soil Pollution: Prevention & Elimination, Soil pollution management.	<b>L=11</b>	
		<b>T= 2</b>	<b>P= 2</b>
<b>2.</b>	<b>Land Management</b> Land classification on the basis of topography, climate, and utilization; Land use patterns in India, Need of Land Management. Spheres of Land Management, Land Productivity, Capability and Capacity, Land Capability Classification as a Guide for Soil Conservation. Desertification with special reference to India, Degradation of Land: causes, effects & control, Acid Soil management, Saline & Alkali Soil Management. Soil Erosion, Methods of Soil Conservation, and Wetlands & Water Logged areas.	<b>L= 12</b>	
		<b>T= 2</b>	<b>P= 1</b>
<b>3.</b>	<b>Water Resources</b> Classification and sources of surface and groundwater; Exploration and exploitation of water resources; Quality of Irrigation Water; Consequences of unskilled irrigation practices, Impact of dam construction on ecosystem and society, Utilization of water resources for energy production, sanitation, drinking, navigation, industries	<b>L= 11</b>	
		<b>T= 2</b>	<b>P=2</b>



	and agriculture; National Water Policy.		
4.	<b>Watershed Management :</b> Water management strategies and problems, Watershed- concept and Classification; Watershed characteristics, concept of Contour Watershed Management structures, Multi-disciplinary water management.	<b>L=11</b>	
		<b>T=</b> <b>2</b>	<b>P=</b> <b>2</b>

Learning Resources		
1	<b>Text Books</b>	<ul style="list-style-type: none"> <li>• Text Book Of Soil Science by PAL, CBS publishers, 2018</li> <li>• Textbook Of Environmental Science And Technology by REDDY, BSP publishers, 2019</li> <li>• A Textbook Of Environmental Studies, Dr D K Asthana, S. Chand Publishers, 2018</li> <li>• A Text Book Of Environmental Studies by Vijay Tiwari, Himalaya Publishers, 2017</li> <li>• A Text Book Environmental Studies, Chatawal &amp; Sharma, HPH</li> <li>• A Text Book Environmental Science, Joshi &amp; Joshi, APH</li> <li>• A Text Book of Environmatal Studies, Nambiar, STP</li> </ul>
1	<b>Reference books</b>	<ul style="list-style-type: none"> <li>• Managing Natural Resources: Focus on Land and Water. Misra H.N, 2014</li> <li>• Land and Water Management Engineering. Madan K. Jha V.V.N. Murty, 2013.</li> <li>• Land &amp; Water Management Principles. R Suresh, 2008.</li> <li>• Hydrological Measurements for Watershed Research by Wasi Ullah, SK Gupta and SS Dalal.</li> <li>• Watershed Management by JVS Murthy, New age International (P) Ltd, New Delhi.</li> <li>• Ground water Hydrology by Todd,D.K. Willy India Pvt. Ltd, New Delhi,2011.</li> <li>• Ground water hydrology by Todd, David Keith, 2010.</li> <li>• Principle and Practice of Water Management by S.C.Panda Agrobos (India).</li> <li>• Conservation of Water Resources Problems &amp; Prospects, 2008.</li> <li>• Resource Values &amp; Development, 1999 by Amarthysen, Oxford Uni. Press New Delhi.</li> <li>• Soil Geology, Kolay. A. K ., Atlantic Publisher.</li> <li>• Soil Pollution, 2009, Mishra S. C. , APH Publications New Delhi.</li> <li>• Text Book of Soil Science, 2005, Daji J.A. Media Promotors &amp; Publisher , New Delhi.</li> <li>• Introduction to Soil &amp; Water Conservation Engineering, 2002, Mal..B.C. Kalyani Publisher, Ludhiyana.</li> <li>• Land Utilization : Theory &amp; Practice, Mandal R. B. , Concept Publishing.</li> <li>• Environmental Geography Science landuse &amp; Earth, Marsh Willium. M. Jhon Willy &amp; Sons, New York.</li> <li>• Geochemistry, Groundwater &amp; Pollution, 2005, Appcco C.A.S., A.A. Balkema Publishers.</li> <li>• Land Degradation &amp; Desertification, Jha V. C., Rawat Publications, Jaipur.</li> <li>• Hand Book of Ground Water Remediation &amp; Treatment Technology, Cheremisinoff N.P., Crest Publishinh hours, New Delhi.</li> </ul>

		<ul style="list-style-type: none"> <li>• Land Reforms In India- Performance &amp; Challenges in Gujarat &amp; Maharashtra, Shah Ghanshyam, Sage Publications, New Delhi.</li> </ul>
3	<b>Websites</b>	<ul style="list-style-type: none"> <li>• <a href="https://www.sciencedaily.com/terms/sustainable_land_management.htm">https://www.sciencedaily.com/terms/sustainable_land_management.htm</a></li> <li>• <a href="http://www.yourarticlelibrary.com/geography/soil-conservation-4-methods-that-must-be-adopted-for-conserving-soil/13910">http://www.yourarticlelibrary.com/geography/soil-conservation-4-methods-that-must-be-adopted-for-conserving-soil/13910</a></li> <li>• <a href="https://www.conserve-energy-future.com/methods-of-soil-conservation.php">https://www.conserve-energy-future.com/methods-of-soil-conservation.php</a></li> <li>• <a href="https://sciencing.com/types-water-resources-5127497.html">https://sciencing.com/types-water-resources-5127497.html</a></li> <li>• <a href="https://www.un.org/waterforlifedecade/water_and_sustainable_development.shtml">https://www.un.org/waterforlifedecade/water_and_sustainable_development.shtml</a></li> </ul>
4	<b>Journals</b>	<ul style="list-style-type: none"> <li>• Current Science, ISSN No. 0011-3891</li> <li>• Down to Earth</li> <li>• Every Thing About Water</li> <li>• International Journal of Environmental Engineering Science, ISSN No .2229-3094</li> <li>• Resonance, ISSN No. 0971-8044</li> <li>• Journal of Earth System Science, ISSN No .2253-4126</li> </ul>
5	<b>Supplementary reading</b>	<ul style="list-style-type: none"> <li>• Soil Quality Survey</li> <li>• Water Quality Reports of State Government</li> </ul>
6	<b>Practical Component</b>	Practicals based on this paper will be conducted under Paper No. CC 203 (Practical-III)

<b>Semester</b>	<b>IV</b>	<b>Total Credit</b>	<b>4</b>
<b>Course Code</b>	<b>CC 402</b>	<b>Credit Pattern</b>	<b>L-45, T-8, P-7</b>
<b>Course Title</b>	<b>MANAGEMENT OF INDUSTRIAL AND CIVIC WASTES</b>		

### Course Objectives

1. Illustrate the procedures and practices for Solid Waste Management.
2. Interpret the methods of collection, transportation and disposal of Municipal Solid Waste.

### Course Outcomes: The students will able to;

1. Estimate the suitable methods for Solid Waste Management.
2. Compare between the various categories of Solid Waste as per the regulations.
3. Prioritize the appropriate plan for handling and disposal of Hazardous Waste.

### Syllabus:

<b>Unit Number</b>	<b>Contents</b>	<b>Number of Sessions</b>	
<b>1</b>	<b>Solid Waste Management:</b> Need of solid waste management; Types of solid waste: biodegradable, Industrial solid waste: pulp and paper, sugar, thermal power station, food processing, textile, urban and agricultural. Solid waste treatment: Compaction, dewatering, briquetting, size reduction, separation of organic and inorganic i.e. removal of metals like iron.	<b>L=11</b>	
		<b>T= 2</b>	<b>P= 2</b>
<b>2.</b>	Solid waste disposal methods – Solid waste reuse: Recycling and recovery Solid waste energy recovering, incineration, pyrolysis, biogas generation Solid waste as a source of raw material i.e. light weight bricks from fly ash, composting, etc. Urban Solid Waste: Changing scenario with development, collection, transport & disposal; Separation of waste at source of generation for recovery of plastic, paper & metal, etc.	<b>L= 12</b>	
		<b>T= 2</b>	<b>P= 1</b>
<b>3.</b>	<b>Operation and Maintenance of Effluent Treatment Plant:</b> Operation and monitoring of waste treatment units including primary, secondary and tertiary for industries viz., sugar, pulp and paper, dairy, textile and distillery, Concept of common effluent Treatment Plant (CEPT) Sludge Management. Sewage sludge, industrial sludge, primary and secondary sludge dewatering of sludge, conditioning, Compressible and non-compressible sludge, filtration, filtration aids, Dewatering aids, thickening, centrifugation & drying.	<b>L= 12</b>	
		<b>T= 2</b>	<b>P=1</b>
<b>4.</b>	<b>Hazards and Toxic Waste Management:</b> Sources, characteristics, handling and disposal methods safe to environment Radioactive and Medical waste management. Management of toxic industrial chemicals: Insecticides, cyanide, caustic soda, chlorine, etc. for industries viz. insecticides, caustic soda, chlorine plants, etc.	<b>L=11</b>	
		<b>T= 2</b>	<b>P= 2</b>

### Learning Resources

<b>1</b>	<b>Text Books</b>	<ul style="list-style-type: none"> <li>• Vogel's Textbook of Quantitative Chemical Analysis, 5<sup>th</sup> edition, J H Basset, J. Nendham and Denny, R.C.</li> <li>• Textbook Of Environmental Science And Technology by REDDY, BSP publishers, 2019</li> <li>• A Text Book Of Environmental Studies by Vijay Tiwari, Himalaya Publishers, 2017</li> <li>• Textbook On Biotechnology by H D Kumar, Affiliated East-West Press Pvt Ltd, 2003</li> </ul>
----------	-------------------	--

		<ul style="list-style-type: none"> <li>• A Text Book of Environmental Chemistry &amp; Pollution Control, Dara, Chand</li> <li>• A Text Book of Green Chemistry, Ahluwalia, Narosa</li> <li>• A Text Book of Engineering Chemistry, Dara, Chand</li> </ul>
1	<b>Reference books</b>	<ul style="list-style-type: none"> <li>• Integrated Solid Waste Management – Engineering Principles &amp; Management By: Issues by George Tchobanoglous, Hilary Theisen &amp; Samuel A Vigil. McGraw-Hill International Editions, New York (1993).</li> <li>• Solid Waste Management in Developing Countries By: AD Bhide &amp; BB Sunderesan. Indian National Scientific Documentation Centre, New Delhi (1983).</li> <li>• Solid Waste Engineering By: PA Vesilind, William Worrell &amp; R. Thomas Brooks/Cole, Australia (2002).</li> <li>• Infectious Waste Management By: Frank L Cross Jr, Howard E Hesketh, P Kay Rykowski. Technomic Publishing Co Inc. Lancaster, Basel (1990).</li> <li>• Hazardous Waste Chemistry, Toxicology &amp; Treatment By: S.E Manahan, Lewis Publishers, USA (1990).</li> <li>• Basics of Solid and Hazardous Waste Management Technology By: K.L Shah. Prentice Hall, Ohio (2000).</li> <li>• Industrial and Hazardous Wastes – Health Impacts &amp; Management Plans By: Rajiv K Sinha &amp; Sunil Heart. Pointer Publishers, Jaipur (2004).</li> <li>• Hazardous Waste Management By: MD LaGrega, PL Buckingham, JC Evans &amp; Environmental Resources Management, McGraw-Hill International Edn. Boston (2001).</li> <li>• Matter Hazardous (Laws explained) By: AK Mhaskar. Media Enviro, Pune.</li> </ul>
3	<b>Websites</b>	<ul style="list-style-type: none"> <li>• <a href="http://mpcb.gov.in/images/pdf/part.pdf">http://mpcb.gov.in/images/pdf/part.pdf</a></li> <li>• <a href="https://www.britannica.com/technology/solid-waste-management">https://www.britannica.com/technology/solid-waste-management</a></li> <li>• <a href="https://nptel.ac.in/courses/120108005/module9/lecture9.pdf">https://nptel.ac.in/courses/120108005/module9/lecture9.pdf</a></li> <li>• <a href="https://iwa-network.org/groups/sludge-management/">https://iwa-network.org/groups/sludge-management/</a></li> <li>• <a href="http://mimoza.marmara.edu.tr/~orhan.gokyay/enve425/ch1.pdf">http://mimoza.marmara.edu.tr/~orhan.gokyay/enve425/ch1.pdf</a></li> </ul>
4	<b>Journals</b>	<ul style="list-style-type: none"> <li>• Current Science, ISSN No. 0011-3891</li> <li>• Every Thing About Water</li> <li>• Industrial Safety Chronicle</li> <li>• International Journal of Environmental Engineering Science, ISSN No .2229-3094</li> <li>• International Journal of Environmental Pollution Control &amp; Management , ISSN No .0975-3842</li> </ul>
5	<b>Supplementary Reading</b>	<ul style="list-style-type: none"> <li>• Manual of handling of hazardous waste</li> <li>• Case studies of waste management</li> </ul>
6	<b>Practical Component</b>	Practicals based on this paper will be conducted under Paper No. CC 203 (Practical- III)

<b>Semester</b>	<b>III</b>	<b>Total Credit</b>	<b>4</b>
<b>Course Code</b>	<b>CC 403</b>	<b>Credit Pattern</b>	<b>L-45, T-8, P-7</b>
<b>Course Title</b>	<b>STRATEGIC MANAGEMENT</b>		

<b>Course Objectives</b>	
1	To familiarize students with strategic management process in detail
2	To analyze organizations for strategy formulation and implementation.
3	To design various types of strategies for a given industry.
4	To evaluate an industry using various tools and techniques for strategic choice.
5	To be able to evaluate strategies implemented.
<b>Course Outcomes</b> Students should be able to:	
1	Discuss various concepts and theories in the field of strategic management.
2	Formulate various types of strategies for a given industry.
3	E Evaluate an industry using various tools and techniques for strategic choice.
4	Critique strategies implemented.
5	Devise strategic approaches to managing a business successfully in a global context

<b>Unit Number</b>	<b>Contents</b>	<b>Number of Sessions</b>	
<b>1</b>	<b>Introduction to Strategic Management &amp; Environment (15)</b> Introduction to Concept of Strategy and Strategic management; Importance of Strategy, Levels of Strategy, Strategic Management Process – Different Phases; Strategic Intent - Mission, Vision, Objectives. Formulation of strategic intent, methods of Goal Setting – MBO, Balance scorecard approach, Critical success Factors and Key Performance Indicators. Concept and Characteristics of environment, Components of external environment/ External Analysis, PESTEL Framework,	<b>L=11</b>	
		<b>T=2</b>	<b>P=2</b>
<b>2</b>	<b>Internal Analysis &amp; Corporate Strategies (15)</b> Industry Analysis – Porter’s Five Forces Model, Internal Analysis – Resource Based view VIRO analysis, Approaches to internal analysis – SWOT Analysis, Value Chain Analysis, Financial Analysis Corporate strategies - stability strategy, expansion strategy, retrenchment strategy, combination strategy. Mergers and Acquisitions, Strategic alliances & Joint ventures – concept, reasons, Entry strategies for global market	<b>L=12</b>	
		<b>T=2</b>	<b>P=1</b>

3	<b>Business Strategies &amp; strategic Analysis (15)</b> Business level strategy - cost leadership, Focus strategy Differentiation – Types – Advantages and Disadvantages – +`Blue, Red & Purple Ocean Strategy. Strategic choice process, corporate portfolio analysis, BCG Matrix, TOWS Matrix, GE nine cell , strategic choice at business level – Industry analysis, Competitor analysis. Strategic CSR.	L=11	
		T=2	P=2
4	<b>Strategic Issues, (15)</b> Strategic implementation issues - McKinsey's 7s framework approaches to resource allocation, structural issues – functional, product/ divisional, SBU structure, matrix, network, free form , behavioural issues- Strategic leadership, Corporate strategic communication. Strategic evaluation-importance, participant's barriers and requirements. Types of strategic control-operational control-Strategic process of Evaluation, techniques of strategic evaluation and control. Sustainability & strategic management- concept of TBL, Environmental & Social Impacts on Society Contemporary issues in strategic management.	L=11	
		T=2	P=2

**Note:**

1. Case Studies on Each of the Aspects Mentioned in the Syllabus need to be discussed.
2. Video cases and Documentary Films relating to the syllabus to be exhibited in the class

Learning Resources		
1	<b>Text Books</b>	1. Azahar Kazmi, "Strategic Management & Business Policy"- Fourth Edition, The Mc-graw Hill Edition. 2. P.Subba Roa, "Business Policy & Strategic Management", Himalaya Publication
2	<b>Reference books</b>	1. Hoskisson, Hitt, Ireland & Manikutty, "Strategic Management"- A south Asian Perspective Cengage Learning, 9 <sup>th</sup> Edition. 2. Thomas wheelen, J David Hunger, Alan N Hofman & Charles E Banford, "Concepts in Strategic Management and Business Policy" Pearson Publication , 2018 3. Pradip Kumar Sinha, "Mergers, Acquisitions and Corporate Restructuring," Himalaya Publishing House, 2019. 4. R M Shrivasta, "Management Policy and Strategic Management" Himalaya Publishing House,2014. 5. Fred R David & Forest R David, Strategic Management ",Pearson Publication , 16 <sup>th</sup> Edition, 2017
3	<b>Websites</b>	<a href="http://www.mckinsey.com/in">www.mckinsey.com/in</a>
4	<b>Journals</b>	1. The Indian Journal of Indian Management & strategy 2. IUP Journal of Business strategy.
5	<b>Supplementary reading</b>	Business Standard : The Strategist supplement Economic Times
6	<b>Practical component</b>	Case studies and assignments on real life situations

<b>Semester</b>	<b>IV</b>	<b>Total Credit</b>	<b>4</b>
<b>Course Code</b>	<b>CC 404</b>	<b>Credit Pattern</b>	<b>L-44, T-8, P-8</b>
<b>Course Title</b>	<b>BUSINESS ETHICS AND CORPORATE GOVERNANCE</b>		
<b>Course Outcomes:</b> At the end of the course Students will be able to			
1	Describe ethical decision-making framework.		
2	Analyze ethical and moral issues in life and in Business.		
3	Examine the evolution of Corporate Governance in India.		
4.	Generalize Principles of Good corporate governance.		
<b>Unit Number</b>	<b>Contents</b>		<b>Number of Sessions</b>
<b>1</b>	<b>Unit 1: Introduction to Business Ethics</b> Concept of Ethics, Nature and Characteristics of Business Ethics, Doctrine of Karma, Causes of Unethical Behaviour , Work Ethics, Code of conduct for business, Ethical decision making frameworks, Ethical theories: Rights Theories, Justice Theories, Utilitarianism, The Virtue Approach, The Common Good Approach.		<b>L=11</b>
			<b>T=2</b> <b>P=2</b>
<b>2</b>	<b>Unit 2: Ethical issues : Identification and Solutions</b> Ethical Dilemma, Resolution of ethical dilemma, Fostering ethics, Whistle blowing concept and policy, Corruption, Bribery. Ethical issues in Global Business, Concept of sustainability reporting, Ethics in various functional areas- Marketing, Advertising, HRM, Accounting, Ethics in environment protection.		<b>L=11</b>
			<b>T=2</b> <b>P=2</b>
<b>3</b>	<b>Unit 3 : Introduction to Corporate Governance</b> Corporate Governance – Concept, Objectives, History ,Issues in Corporate Governance, Elements of good Corporate Governance, OCED Principles of Corporate Governance, Corporate citizenship, Corporate Social Responsibility and Stakeholders Role, Triple Bottom line and Carroll's model of CSR.		<b>L=11</b>
			<b>T=2</b> <b>P=2</b>
<b>4</b>	<b>Unit 4 : Corporate Governance in India.</b> Naresh Chandra Committee Recommendations, Narayan Murthy Committee Recommendations, The Cadbury Committee, Recommendations in Companies Act 2013, Amendments by Indian regulators pertaining to Corporate Governance. Recent Developments in India- Corporate Governance Score card, Corporate Governance Awards. Role of Board of Directors, Types of Directors and their Functions, Independent Directors- Functions and Role, Ethics committee.		<b>L=11</b>
			<b>T=2</b> <b>P=2</b>

Note:

1. Case Studies on Each of the Aspects Mentioned in the Syllabus need to be discussed.
2. Video cases and Documentary Films relating to the syllabus to be exhibited in the class.

<b>Learning Resources</b>		
1	<b>Text Books</b>	1. Business Ethics and Corporate Governance , B.N.Ghosh, Tata Mcgraw Hill
2	<b>Reference books</b>	<ol style="list-style-type: none"> <li>1. Fernando A.C. , Corporate Governance, Principles, Policies and Practices, Pearson Education</li> <li>2. Business Ethics and Corporate Governance , B.N.Ghosh, Tata Mcgraw Hill</li> <li>3. Business and Government , Francis Cherunilam , Himalaya Publishing House</li> <li>4. Joffy George, The Art of Corporate Governance</li> <li>5. SEBI Regulations 2015</li> <li>6. Shaw W.H, Business ethics, Thomson</li> <li>7. Ferrel O.C., Farell Linda, Business Ethics, Ethical decision making and cases, Biztantra</li> </ol>
3	<b>Websites</b>	<a href="http://www.onlineethics.org">www.onlineethics.org</a> <a href="http://www.oecd.org">www.oecd.org</a>
4	<b>Journals</b>	<ol style="list-style-type: none"> <li>1. Business Express</li> <li>2. Bloomberg Business Week</li> <li>3. Business India</li> </ol>
5	<b>Supplementary Reading</b>	1. The Economics Times
6	<b>Practical Component</b>	<ol style="list-style-type: none"> <li>1. Studying Governance system of any company and classifying it into different types of systems which are studied and justifying why such system is chosen by that organization.</li> <li>2. Preparing the code of conduct of any five business organization.</li> <li>3. Class debate on ethical dilemma.</li> <li>4. Identify three ethical business organizations and list their ethical norms.</li> <li>5. Library Exercise on Corporate Governance activities undertaken by any of two company</li> </ol>



**ANY ONE PAPER**

<b>Semester</b>	<b>IV</b>	<b>Total Credit</b>	<b>4</b>
<b>Course Code</b>	<b>CC- Spl-I-405-A (F-III)</b>	<b>Credit Pattern</b>	<b>L-45, T-6, P-9</b>
<b>Course Title</b>	<b>MANAGEMENT ACCOUNTING AND CONTROL SYSTEM- F-III</b>		

**Course Objectives**

1	To acquaint students with adequate knowledge of management accounting and control system.
2	To present and compile management accounting information.

**Course Outcomes**

	<b>The students will able to learn:</b>
1	Apply concept of marginal costing for decision making.
2	Analyze various operating and financial leverages to design capital structure.
3	Evaluate various types of budgets for managerial decision making.

**Syllabus:**

<b>Unit Number</b>	<b>Contents</b>	<b>Number of Sessions</b>	
<b>1</b>	<b>Introduction to Management Accounting:</b> Meaning and Scope of Management Accounting In the Context of Changing Business Environment, Human Resource Accounting and Inflation Accounting. Strategic Management Accounting, Introduction of Accounting Information for Transfer Pricing. Methods of Transfer Pricing .	<b>L= 11</b>	
		<b>T= 2</b>	<b>P= 2</b>
<b>2</b>	<b>Marginal Costing :</b> Meaning and scope, uses and advantages, Terminologies in Marginal Costing- Contribution, Margin of Safety, CVP analysis, BEP and Relevant Cost and Decision-Making.	<b>L= 12</b>	
		<b>T= 1</b>	<b>P= 2</b>
<b>3</b>	<b>Leverage Analysis:</b> Meaning & importance of leverage, Types of leverages, Use of leverage in decision making, Measures of Operating and Financial Leverage, Effects of Leverage on Shareholders' Returns.	<b>L= 11</b>	
		<b>T= 2</b>	<b>P= 3</b>
<b>4</b>	<b>Budget and Budgetary Control:</b> Concept of Budget, Budgeting and Budgetary Control, Organization for Budgetary control- Budget Centers, Budget Committee, Budget Manual, Budget period, Principal Budget, Advantages and limitations of Budgetary Control System. Types of budget.	<b>L= 11</b>	
		<b>T= 1</b>	<b>P= 2</b>

**Note:**

1. Case studies on cash budget and flexible budget.
2. Case Studies on Each of the Aspects Mentioned in the Syllabus need to be discussed.
3. Video cases and Documentary Films relating to the syllabus to be exhibited in the class.

**Learning Resources**

<b>1.</b>	<b>Text Books</b>	<ul style="list-style-type: none"> <li>• Kapil Sheeba, "Financial Management" Pearson Publication House.</li> <li>• Jonathan Berk, Peter, "Financial Management" Pearson Publication House.</li> <li>• Sharan Vyuptakesh, "Fundamentals of Financial Management" Pearson Publication.</li> <li>• James C Van harne, "Financial Management &amp; Policy" Pearson Publication House</li> </ul>
-----------	-------------------	--

		<ul style="list-style-type: none"> <li>• ICSI : Handbook on Mergers Amalgamations and takeovers.</li> </ul>
2.	<b>Reference Books</b>	<ul style="list-style-type: none"> <li>• V.K. Saxena And C.D. Vashisth: “Advanced Cost And Management Accounting”, Sultan Chand And Sons, 6<sup>th</sup> Edition</li> <li>• M.Y. Khan And P.K. Jain, “Cost Accounting”, Tata McGraw Hill, Edition 2000</li> <li>• Dr. M.K. Kole, “Human Resource Accounting, Institute Of Cost And Works, Accountants Of India”, Edition 2000</li> <li>• N.K. Prasad, “Cost Accounting”</li> <li>• R.P.Rustagi, “Financial Management”, PHI,10<sup>th</sup> edition.</li> <li>• Garrison, Managerial Accounting, Tata McGraw</li> <li>• Maheshwari, Financial Accounting, Vikas Publishing</li> <li>• Khan and Jain, Management Accounting, Tata McGraw</li> <li>• Ramchandran, Financial Accounting for Management, Tata McGraw</li> <li>• JawaharLal, Accounting For Management, Himalaya Publishing</li> <li>• J.Madegowda, Accounting For Managers, Himalaya Publishing</li> <li>• M.N.Arora, “Cost and Management Accounting”, Himalaya Publishing</li> </ul>
3.	<b>Websites</b>	<ul style="list-style-type: none"> <li>• <u>INFLIBNET</u> <a href="http://nlist.inflibnet.ac.in">http://nlist.inflibnet.ac.in</a></li> <li>• <u>J-GATE</u> <a href="http://jgateplus.com">http://jgateplus.com</a></li> <li>• <u>EBSCO</u> <a href="http://search.ebscohost.com">http://search.ebscohost.com</a></li> <li>• Library online Opac Address: <a href="http://192.168.1.111:8080/opac">http://192.168.1.111:8080/opac</a> *For INFLIBNET individual usernames and passwords are already given. Use the same</li> </ul>
4.	<b>Journals</b>	<ul style="list-style-type: none"> <li>• Prabhandan: Indian Journal of Management</li> <li>• IUP Journals</li> <li>• ICSI Journals</li> <li>• Finance India</li> <li>• Indian Journal of Finance (New Sub.)</li> <li>• Journal of Accounting &amp; Finance etc.</li> </ul>
5.	<b>Supplementary Reading</b>	<ul style="list-style-type: none"> <li>• Financial Express</li> <li>• Economics Times</li> <li>• Business Standard</li> <li>• Times of India</li> <li>• Indian Express.</li> </ul>
6.	<b>Practical Component</b>	<ul style="list-style-type: none"> <li>• Practical Problems on marginal costing and decision making</li> <li>• Practical Problems on leverages</li> <li>• Practical Problems on flexible budget and functional budgets</li> <li>• Financial statement analysis using Proves-IQ</li> <li>• Companies Financial Reports &amp; Corporate case studies.</li> </ul>

<b>Semester</b>	<b>IV</b>	<b>Total Credit</b>	<b>4</b>
<b>Course Code</b>	<b>CC-Spl-I-405-(B)</b>	<b>Credit Pattern</b>	<b>L-45, T-6, P-9</b>
<b>Course Title</b>	<b>PERFORMANCE AND COMPENSATION MANAGEMENT</b>		
<b>Course Outcomes: Students will be able to;</b>			
1.	Gain insights of various conceptual aspects of Compensation, Performance Management and competencies and related law to achieve organizational goals.		
2.	Determine the performance/competency based compensation system for business excellence and solve various cases.		
3	Designing the compensation strategies for attraction, motivation and retaining high quality workforce		

**Syllabus:**

<b>Unit Number</b>	<b>Contents</b>	<b>Number of Session</b>	
1	Performance Management: Managing and addressing Employee Performance Problems, Performance Management Strategic Planning. Performance Management and Employee Development: Employee Assessment system, Potential Appraisal System:- Development and Retention of high potentials, Role of HR Professionals in Performance management.	L= 11	
		T= 4	P= 0
2	Competency Model, Competency Model Pyramid, Application of competency model into various HRM functions, benefits of using competency mapping model in organizations, Benefits of using competency based performance appraisal system, Taking interviews to gather information, Behavioural Event Interview, process for writing competencies.	L= 11	
		T= 4	P= 0
3	Compensation Management: Wage and Salary Administration: Calculation of Wage, Salary, Prerequisites, Compensation Packages, Cost of Living Index and Dearness Allowance, Designing and operating incentives, fringe and non- financial Benefits,. Job Evaluation:- Major Decisions in Job Evaluation, Job Evaluation Methods, Laws related to wages and salaries:- Minimum Wages, Payment of Wages, Payment of Bonus.	L	
4	Employee Contributions: Pay For Performance (PFP): Competency Based Pay, Skill based Pay, Team based pay, Gain and Profit sharing Designing PFP Plans, Merit Pay/Variable Pay, Compensation Strategies for Special Groups. Executive compensation, cafeteria compensation,		

**Note:**

1. Case Studies on Each of the Aspects Mentioned in the Syllabus need to be discussed.
2. Video cases and Documentary Films relating to the syllabus to be exhibited in the class

Learning Resources		
1	Text Books	<ul style="list-style-type: none"> <li>• Strategic Compensation, Joseph J. Martocchio, 3rd Edition, Prentice Hall, 2004.</li> <li>• Compensation Management in Knowledge based world, Richard I. Anderson, 10th edition, Pearson Education.</li> <li>• Compensation Management, ErSoniShyam Singh, Excel Books.</li> </ul>
2	Reference books	<ul style="list-style-type: none"> <li>• Compensation &amp; Reward Management, BD Singh, 2nd edition, Excel books, 2012.</li> <li>• Compensation, Milkovich &amp; Newman, 9th edition, 2017, Irwin/McGraw-Hill.</li> <li>• Compensation and Benefit Design, Bashker D. Biswas, FT Press, 2012.</li> <li>• An Introduction to Executive Compensation, Steven Balsam, Academic Press, 2002.</li> <li>• Industrial Relations and Labour Laws, Srivastava S.C., Vikas Publishing House Pvt. Ltd.,</li> </ul>
3	Websites	<ol style="list-style-type: none"> <li>1. <a href="http://www.ILO.org">www.ILO.org</a></li> <li>2. <a href="http://www.labour.nic.in">www.labour.nic.in</a></li> <li>3. <a href="http://www.labourstat.org">www.labourstat.org</a></li> </ol>
4	Journals	IOSR <i>Journal of Humanities And Social Science</i> Indian Labour Journal
5	Supplementary Reading	<a href="https://www.toolbox.com/hr/performance-management/articles/what-is-performance-management/">https://www.toolbox.com/hr/performance-management/articles/what-is-performance-management/</a> <a href="https://www.hibob.com/hr-glossary/compensation-management-planning/">https://www.hibob.com/hr-glossary/compensation-management-planning/</a> <a href="https://www.namanhr.com/services/competency-mapping/">https://www.namanhr.com/services/competency-mapping/</a>
6	Practical Component	<ul style="list-style-type: none"> <li>• Students must prepare a comprehensive compensation plan to be offered to Executives.</li> <li>• Students to collect information from different organization regarding the Cost To Company of an employee.</li> <li>• Students have to prepare questionnaire for conducting wage survey and carry out wage survey for any selected sector and prepare a report for the same.</li> <li>• Students to calculate the bonus amount eligible to an employee working as a HR Executive</li> </ul>

<b>Semester</b>	<b>IV</b>	<b>Total Credit</b>	<b>4</b>
<b>Course Code</b>	<b>CC-Spl-I-405-C</b>	<b>Credit Pattern</b>	<b>L-45, T-8, P-7</b>
<b>Course Title</b>	<b>SALES &amp; DISTRIBUTION MANAGEMENT PAPER-IV</b>		
<b>Course Objectives</b>			
1	Students will conceptually understand concepts related to sales and distribution.		
2	Students will learn strategies required for selling and distribution		
3	Students will become aware of financial aspects of marketing.		
<b>Course Outcomes: Students will be able to;</b>			
1	Evaluate concepts related to sales & distribution.		
2	Apply selling & distribution concepts & strategies for marketing.		
3	Apply financial aspects of marketing.		

**Syllabus:**

<b>Unit Number</b>	<b>Contents</b>	<b>Number of Sessions</b>	
<b>1</b>	<b>Unit I</b> <b>Sales management</b> - Meaning, Evaluation, Importance, Personal Selling, Qualities and responsibilities of sales manager. Types of sales organizations. Sales force management, recruitment, selection & training, structure, size, productivity. Motivation & compensation of salespeople	<b>L=11</b>	
		<b>T=2</b>	<b>P=2</b>
<b>2</b>	<b>Unit II</b> <b>Selling Process and Strategies</b> -Overview of selling process. Selling and buying Styles, selling skills, situations, selling process, sales presentation, Handling customer objections, Follow-u action. Sales territory, meaning, size, designing, sales quota, procedure for sales quota. Types of sales quota, Methods of setting quota.	<b>L=12</b>	
		<b>T=2</b>	<b>P=1</b>
<b>3</b>	<b>Unit III-</b> <b>Distribution Management</b> - Introduction-Concept of channel flows, Managing a channel design, Basics of warehouse/inventory/ transportation planning, Intermediaries: Channel Formats, Managing channel partner, channel conflict, Channel information systems, International Trends in Sales and Distribution, Distribution as a function of marketing. Strategies. Mass, selective, exclusive distribution. Push v/s pull approaches. Channel design mix decisions.	<b>L=11</b>	
		<b>T=2</b>	<b>P=2</b>
<b>4</b>	<b>Unit IV</b> <b>Marketing Finance</b> Performance of Salesforce, work load method, forecasting, and product line accounting, Life cycle costing, Dropping product line, Return On Promotion, Selection of media, Launching, Profitability & Variance.	<b>L=11</b>	
		<b>T=2</b>	<b>P=2</b>

Learning Resources		
1	<b>Text Books</b>	1. <b>Cherunallium &amp; Francis</b> - <i>Industrial Marketing</i> 2. <b>Chunwalla S.A</b> - Sales & Distribution Management
2	<b>Reference books</b>	1. <b>Keskar &amp; Abhayankar</b> - Sales Management & personal selling 2. <b>Aaker David A</b> – Building Strong Brands – The Free Press, New York 3. <b>Keller K.</b> - Strategic Brand Management- Prentice - Hall India Kapferer Jean Noel – Strategic Brand Management – KoganPage London 4. <b>Keller, Parameswaran, Jacod</b> - Strategic Brand Managemnt- Pearson 5. <b>Chunawalla and Sethia</b> – Foundation of Advertising Theory and Practice- HP Publication 6. <b>Clow Baack</b> - Integrated Advertising, Promotion and Marketing Communication –Pearson Education 7. <b>Still and Cundiff</b> - Sales Management – 8. S A Chunawalla -Sales and distribution Management –Himalaya Publication 9. <b>Charles Futrell</b> - ABC ‘s of Selling 10. <b>Ramaswam and Namakumari</b> - Marketing Management – Macmillan Publication 11. <b>Services &amp; Sales Marketing</b> - Zha S.M., Himalaya Publishing House 12. <b>Strategic Retail Management</b> - Indian Text Edition-Srini R.Srinivasan 13. <b>“Retail Marketing Management”</b> – Person Education Ltd. – Ist Reprint India- David Gilbert 14. <b>Retailing Management</b> -Text and Cases-Swapna Pradhan The McGraw Hill Companies
5	<b>Supplementary Reading</b>	1. The Economic Times 2. Business Standard 3. Business TIMES
6	<b>Practical Component</b>	<ul style="list-style-type: none"> <li>• Group Activity based on all the units</li> <li>• Take business Games &amp; other subject related activities</li> <li>• Discussion on Cases related to all units</li> <li>• Library assignment on all the units</li> </ul>

<b>Semester</b>	<b>IV</b>	<b>Total Credit</b>	<b>4</b>
<b>Course Code</b>	<b>CC- Spl-I-405- D (P-III)</b>	<b>Credit Pattern</b>	<b>L-44, T-8, P-8</b>
<b>Course Title</b>	<b>MODERN APPROACHES TO QUALITY MANAGEMENT- P-III</b>		

**Course Objectives:**

1	To make students understand fundamental concepts and principles of quality management, including the basic concept and functions of service quality management.
2	To make students knowledgeable about theoretical aspects and practical application of statistical quality control techniques.
3	To introduce students to various quality management awards & its framework.

**Course Outcomes:** Students will be able to;

1	Describe different concepts related to Quality Management.
2	Apply relevant practices of Quality Management in the organization.
3	Analyze issues involved in Quality Management.
4	Evaluate the recent developments in Quality Management.

<b>Unit Number</b>	<b>Contents</b>	
1	<b>INTRODUCTION TO QUALITY MANAGEMENT</b> Definitions of Quality, Dimensions of Quality, Meaning of Quality Management, Evolution of Quality Management, Quality Assurance, Quality of Design, Quality of Conformance, Cost of Quality: Cost of Poor Quality, Cost of Internal & External Failure, Appraisal Cost, Prevention Cost. Quality Function Deployment.	<b>L 11</b> <b>T 2</b> <b>P 2</b>
2	<b>STATISTICAL QUALITY CONTROL</b> Meaning And Significance of Statistical Quality Control, Need of Accepting Sampling, Types of Sampling Plans, OC Curve, Introduction To Statistical Process Control & Control Charts, Control Charts for Variable, Control Charts for Attribute. (Numerical Treatment on Control Charts).	<b>L 11</b> <b>T 2</b> <b>P 2</b>

3	<p><b>TOTAL QUALITY MANAGEMENT &amp; SIX SIGMA</b></p> <p>Total Quality Management: Concept of TQM, Evolution of TQM, Principles of TQM, TQM Model, Implementation of TQM (PDCA Cycle), Training for Quality Management. Six Sigma: Introduction to Six Sigma, Evolution of Six Sigma, DMAIC Model for Implementing Six Sigma, Six Sigma Impact Measurement. Quality Circles.</p>	<p><b>L 11</b></p> <p><b>T 2</b></p> <p><b>P 2</b></p>
4	<p><b>SERVICE QUALITY MANAGEMENT &amp; QUALITY MANAGEMENT AWARDS</b></p> <p>Introduction to Service Quality, The Service Quality GAP Model, Measuring &amp; Improving Service Quality, Quality System Standards, Bureau of Indian Standards, International Organization of Standardization, ISO 9000-2000, Deming Prize, Malcolm Baldrige National Quality Award, Rajiv Gandhi National Quality Award, The Golden Peacock National Quality Award.</p>	<p><b>L 11</b></p> <p><b>T 2</b></p> <p><b>P 2</b></p>

**Note:**

1. Case studies on each of the aspects mentioned in the syllabus need to be discussed.
2. Video cases and documentary films relating to the syllabus to be exhibited in the class.

Learning Resources		
1	<b>Text Books</b>	<ul style="list-style-type: none"> <li>• Amitva Mitra, Fundamentals of Quality Control and Improvement, Wiley</li> <li>• R. Panneerselvam &amp; P. Sivasankaran, Quality Management, Prentice Hall India Learning Private Limited</li> <li>• Shridhara Bhat K, Total Quality Management – Text and Cases, Himalaya Publishing House, First Edition</li> <li>• M. Mahajan, Statistical Quality Control, Dhanpat Rai &amp; Co.</li> </ul>
2	<b>Reference books</b>	<ul style="list-style-type: none"> <li>• Kanishka Bwdi, “Quality Management”, Oxford University Press</li> <li>• David Hoyle, Quality Management Essentials, Butterworth-Heinemann</li> </ul>
3	<b>Websites</b>	<ul style="list-style-type: none"> <li>• <a href="https://www.managementstudyguide.com/total-quality-management-articles.htm">https://www.managementstudyguide.com/total-quality-management-articles.htm</a></li> <li>• <a href="https://www.managementstudyguide.com/six-sigma-articles.htm">https://www.managementstudyguide.com/six-sigma-articles.htm</a></li> </ul>
4	<b>Journals</b>	<ul style="list-style-type: none"> <li>• International Journal of Productivity and Quality Management (IJPQM)</li> <li>• Journal of Quality Management   ScienceDirect.com</li> <li>• Quality Management Journal – Scimago</li> <li>• The TQM Journal information – Emerald</li> </ul>
5	<b>Supplementary Reading</b>	<ul style="list-style-type: none"> <li>• Dale H. Besterfield et al, Total Quality Management, Third edition, Pearson Education</li> <li>• Evans &amp; Lindsay, An Introduction to Six Sigma &amp; Process Improvement, Cengage learning</li> </ul>
6	<b>Practical Component</b>	<ul style="list-style-type: none"> <li>• To meet quality control manager of any local manufacturing organization to understand application of Quality Control Tools.</li> <li>• Identifying and visiting local ISO Certified organization to understand</li> </ul>



		<p>criteria for getting ISO Certification.</p> <ul style="list-style-type: none"><li>• Visiting any local service sector business to study its Quality Management Framework.</li><li>• Library Exercise on any one of the Quality Management Awards studied and any one award winning company of your choice.</li></ul>
--	--	---

<b>Semester</b>	<b>IV</b>	<b>Total Credit</b>	<b>4</b>
<b>Course Code</b>	<b>CC- Spl-I-405-E (AB-III)</b>	<b>Credit Pattern</b>	<b>L-44, T-8, P-8</b>
<b>Course Title</b>	<b>AGRI PRODUCTION AND SUPPLY CHAIN MANAGEMENT- AB-III</b>		

<b>Course Objectives</b>	
1	To explain the basic issues and theories of optimizing farm production.
2	To introduce with various farm technology practices.
3	To introduce the students to the concepts and processes of agricultural supply chain management.
<b>Course Out Comes: Students will be able to</b>	
1	Analyze the factors influencing agricultural production and their supply chain.
2	Adapt traditional and modern practices of farm management.
3	Develop skills for agricultural supply-chain and logistics infrastructure management.

**Syllabus:**

<b>Unit Number</b>	<b>Contents</b>	<b>Number of Sessions</b>	
<b>1</b>	<b>Fundamentals and Theories of Farm Management:</b> Scope Of Modern Agriculture, Special Features Of Agricultural And Industrial Production. Difference between Farm and Non-Farm Business Management; Farm system Theory, Theory of Farm Management by Objectives, Practices of Farm Management, Making Small farm more effective.	<b>L= 11</b>	
		<b>T= 2</b>	<b>P= 2</b>
<b>2</b>	<b>Farm Production Systems And Management Functions:</b> Peasants, Proprietorship, Cooperative Farming, Capital Farming, Corporate Farming, Land Tenure Systems And Agricultural Production Management, Farm Management Tools.	<b>L= 11</b>	
		<b>T= 2</b>	<b>P= 2</b>
<b>3</b>	<b>Farm Technology and Issues in Farm Management:</b> effects of New Technology, Management And Technology Change, Gains From Technological Improvements to Producers And Consumers, Mechanization And Automation, Green Houses; Size-Productivity Debate, Measurement Of Farm Efficiency, Irrigation Management, Production Planning-Specialization And Diversification.	<b>L= 11</b>	
		<b>T= 2</b>	<b>P= 2</b>
<b>4</b>	<b>Introduction to Supply Chain and Logistics Management in Agri Business::</b> changing Business environment, SCM; Present need In agriculture, Conceptual model of SCM and Evolution of SCM, Approaches of SCM: Traditional and Modern, Elements in SCM, <b>Logistics Management:</b> History and Evolution of Logistics, elements of logistics: management, distribution management, distribution strategies, pool distribution; transport management, fleet management, service innovation, warehousing, packaging for logistics, third – party logistics(TPL/3PL), GPS technology.	<b>L= 11</b>	
		<b>T= 2</b>	<b>P= 2</b>

**Note:**

1. Case Studies on Each of the Aspects Mentioned in the Syllabus need to be discussed.
2. Video cases and Documentary Films relating to the syllabus to be exhibited in the class.

Learning Resources		
1	Text Books	<ul style="list-style-type: none"> <li>Robertson C.A. – An Introduction To Agricultural Production Economics And Farm Management – Tata Mcgraw Hill</li> <li>Heady, Earl. O And Jensen Herald R. – Farm Management Economics – Prentice Hall</li> <li>Barnard C.S. And Nix J.S. – Fam Planning And Control</li> <li>Altekar RV, 2006, Supply Chain Management: concepts and cases, Prentice Hall of India</li> </ul>
2	Reference books	<ul style="list-style-type: none"> <li>Blake C.D. – Fundamentals Of Modern Agriculture</li> <li>Sadhu And Singh – Fundamentals Of Agriculture</li> <li>Agrawal A.N. – Indian Agriculture</li> <li>Sharma A.N. And Sharma V.K. – Elements Of Farm Management</li> <li>Reji D Nair – “Farm Management: Theory and Practice” – Concept Publishing Company Pvt. Ltd.,</li> <li>Warren G. F. – “Farm Management” – Arise Publishers and Distributors</li> <li>Kahlan A. S. and Karan Singh – “Farm Management in India: Theory and Practice” – allied Publishers Pvt. Ltd.,</li> <li>Dhaka J.M. – “Economics of Agri Production and Farm Management” – Avishakar Publishers and Distributors</li> </ul>
3	Websites	<p> <a href="http://www.agriculture.gov.in/">www.agriculture.gov.in/</a>  <a href="http://www.manage.gov.in">www.manage.gov.in</a>  <a href="http://www.ica.coop/">www.ica.coop/</a>  <a href="http://www.apeda.gov.in">www.apeda.gov.in</a>  <a href="http://www.fao.org/home/en/">www.fao.org/home/en/</a>  <a href="http://www.worldbank.org">www.worldbank.org</a>  <a href="http://indiagovernance.gov.in/docsearch.php?search=Agriculture&amp;from_map=1&amp;type=theme">http://indiagovernance.gov.in/docsearch.php?search=Agriculture&amp;from_map=1&amp;type=theme</a> </p>
4	Journals	<p>           Indian Journal of Agricultural Economics            Indian Journal of Agricultural Marketing            Journal of Agribusiness            Rural Marketing         </p>
5	Supplementary Reading	<p> <a href="http://www.nwccindia.com/agriculture-logistics/agriculture%20and%20production%20management">http://www.nwccindia.com/agriculture-logistics/agriculture and production management: Union Budget</a> </p>
6	Practical Component	<ul style="list-style-type: none"> <li>Make a field visit of a greenhouse farm to understand modern management activities on farm</li> <li>Identify one successful/progressive farmer and conduct an interview to know various decisions taken by him/her to make successful farming</li> <li>Visit various farm input selling centers and find out latest equipment and their benefits</li> <li>Interact with various agro based and consumer goods producing companies and prepare report on their logistics issues while reaching rural urban markets</li> </ul>

<b>Semester</b>	<b>IV</b>	<b>Total Credit</b>	<b>4</b>
<b>Course Code</b>	<b>CC- Spl-I-405-F (S-III)</b>	<b>Credit Pattern</b>	<b>L-45, T-8, P-7</b>
<b>Course Title</b>	<b>APPLIED DATA SCIENCE AND BUSINESS ANALYTICS USING R – S-III</b>		
<b>Course Objectives</b>			
1	To understand and adopt the skills of big data analytics and Business Intelligence to varied aspects of managerial decision making		
2	To enable a student to use analytics to solve business problems		
3	To make use of a language R for applied data science.		
4	To Apply BI tools for problem-solving		
<b>Course Outcoms: Student will able to</b>			
1	Identify and describe complex business problems in terms of analytical models.		
2	Apply appropriate analytical methods to find solutions to business problems that achieve stated objectives.		
3	Examine data from files and other sources and perform various data manipulation tasks on them.		
4	Apply the knowledge of R gained to data Analytics for real-life applications		

<b>Unit Number</b>	<b>Contents</b>	<b>Number of Sessions</b>	
1	Introduction to Data Science – Data to Data science, Data Science Process, Concept of Big Data, Facets of data, Business Intelligence, Concept of Data mining, , uses of data mining, Concept of data warehousing, OLAP, OLTP, A Process Model for Data Mining, Analytics for managers, Modules and Model Building, hard coding and soft coding in excel, Analyzing sequential decision	<b>L=11</b>	
		<b>T=2</b>	<b>P=2</b>
2	Introduction to Business Analytics, Applications of analytics, Types of Digital Data The basic element of decision, decision situations, ETL Process, Role of statistics in Analytics, Emerging Analytics, Introduction to R and its environments, Installing R, Installing R Studio, Working with R, R Packages, Basic R	<b>L=12</b>	
		<b>T=2</b>	<b>P=1</b>
3	Predictive Analytics-, Introduction, Important Aspects of Effective implementation of predictive analytics, Applications and limitations of predictive analytics, The intrinsic Value of data- Transactional Data, Profile Data, Behavioral Data, The cost of data, Data frames in R, For Loop, While loop, Conditional branching, R Packages, Single Model Data Structure in R, Multi-Model Data structure in R .	<b>L=11</b>	
		<b>T=2</b>	<b>P=2</b>
4	Visual Analytics using R - Principle of analytics graphics, Plotting systems, Data Import/Export, Plot Function, Plot Types, Basic charts using R, ggplot2 package for graphics, method of treat missing values, outlier detection, impact of outlier in the data set, ,Data manipulation and Transformation using R, Package Building	<b>L=11</b>	
		<b>T=2</b>	<b>P=2</b>

**Note:**

1. Students Will Have To Complete All Practical Assignments Based On R.
2. Students will have to complete all tutorials, assignments and lab session for internal credits.

<b>Learning Resources</b>		
1	<b>Text Book</b>	<ul style="list-style-type: none"> <li>• Business Analytics Principles, Concepts, and Applications - Marc J. Schniederjans Dara G. Schniederjans Christopher M. Starkey.</li> <li>• Data mining for Business Intelligence: Concept, Techniques, and Application in Microsoft Office Excel with XLMiner - Galit Shmueli (, Nitin R. Patel , Peter C. Bruce</li> </ul>
1	<b>Reference books</b>	<ul style="list-style-type: none"> <li>• Business Analytics A Practitioner's Guides: Saxena, Rahul, Srinivasan, Anand</li> <li>• Management Science and Decision Technology – Camm, Evans</li> <li>• R for everyone Advanced analytics and graphics – Lander</li> <li>• Data Mining and Business Analytics with R Book by Johannes Ledolter</li> <li>• Data Mining with R: Learning with Case studies – Luis Torgo</li> <li>• Business Intelligence tools for Excel Analysts – Michael Alexandere, Jared Decker, Bernard Wehbe.</li> <li>• Data Mining In Excel: Galit Shmueli Nitin R. Patel Peter C. Bruce</li> <li>• R for Data Science by Hadley Wickham &amp; Garrett Golemud (SPD)</li> </ul>
3	<b>Website</b>	<ul style="list-style-type: none"> <li>• <a href="https://applied-data.science">https://applied-data.science</a></li> <li>• <a href="https://cran.r-project.org">https://cran.r-project.org</a></li> <li>• <a href="https://www.rstudio.com/products">https://www.rstudio.com/products</a></li> <li>• <a href="https://www.analyticsvidhya.com">https://www.analyticsvidhya.com</a></li> </ul>
4	<b>Journals</b>	<ul style="list-style-type: none"> <li>• Journal on Business Analytics</li> <li>• International Journal of Computer Science &amp; Information Technology</li> </ul>
5	<b>Supplementary Reading</b>	<ul style="list-style-type: none"> <li>• The Indian Express</li> <li>• The Times of India</li> </ul>
6	<b>Practical Components</b>	<ul style="list-style-type: none"> <li>• Library Assignment based on unit number 3</li> <li>• Lab assignment on R language</li> <li>• Mini project on R</li> </ul>

**ANY ONE ELECTIVE PAPER**

<b>Semester</b>	<b>IV</b>	<b>Total Credit</b>	<b>4</b>
<b>Course Code</b>	<b>DSE-Spl-II- 401-A (F-IV)</b>	<b>Credit Pattern</b>	<b>L-45, T-6, P-9</b>
<b>Course Title</b>	<b>INVESTMENT AND PORTFOLIO MANAGEMENT- F-IV</b>		
<b>Course Objectives</b>			
1	To have understanding on investment and avenues of investment.		
2	To have exposure on analysis techniques of capital market .		
3	To understand various theories of portfolio management.		
<b>Course Outcomes:</b> The students will able to learn;			
1	Analyze the relationship between security analysis and market portfolio.		
2	Evaluate the performance of portfolios.		
3	Design various investment avenues as a small and corporate investor.		

**Syllabus:**

<b>Unit Number</b>	<b>Contents</b>	<b>Number of Sessions</b>	
<b>1</b>	<b>Introduction to Investment:</b> Investment – Basics of Investment – Investment, Speculation and Gambling – Investment Categories – Investment avenues – Non marketable Financial Assets – Money Market Instruments – Bond/Debentures – Equity Shares – Schemes of LIC – Mutual Funds (History and Types)– Financial Derivatives(Derivative Market, Instruments in derivative market, Calculation of pay offs from options) – Real Assets – Real Estate – Art – antiques and others. <b>Introduction to Stock Market:</b> Primary and secondary market, regulation of Stock Market- Companies Act, SEBI, Securities contract regulation Act.	<b>L= 11</b>	
		<b>T= 2</b>	<b>P= 1</b>
<b>2</b>	<b>Fundamental Security Analysis:</b> EIC And CIE Approach. Technical Analysis – Technical Tools - The Dow Theory – Primary Trend – The secondary Trend – Minor Trends –Charts. Efficient Market Theory – Basic Concepts – Random-Walk Theory – Weak Form of EMH – Semi-strong Form – Strong Form – The Essence of the Theory – Market Inefficiencies.	<b>L= 11</b>	
		<b>T= 1</b>	<b>P= 3</b>
<b>3</b>	<b>Portfolio Management:</b> Meaning of Portfolio, Steps of Portfolio Management. Code of Conduct for portfolio Manager. Portfolio Analysis – Portfolio and Single asset Returns and Risk – Mean Variance Criterion – covariance – Beta (simple problems) – Portfolio Markowitz Model – simple Diversification – Risk and Return with Different correlation. Portfolio Risk and return.	<b>L= 12</b>	
		<b>T= 2</b>	<b>P= 3</b>
<b>4</b>	<b>Portfolio Evaluation:</b> Asset Pricing Model Portfolio Evaluation – Capital Asset Pricing Model (CAPM) – Security Market Line – Assumptions – Arbitrage Pricing Model (APT) – Portfolio Performance Models – Sharpe’s Performance Index – Treynor’s Performance Index – Jensen’s Performance Index. Bond, terminologies used in Bond, Valuation and Immunization of Bond.	<b>L= 11</b>	
		<b>T= 1</b>	<b>P= 2</b>

**Note:**

1. Portfolio Risk and return with two and three securities.
2. Bond Valuation, Duration and Immunization.
3. Mutual fund rankings with Sharpe and treynor.
4. Problems of Pay off on option (Derivative)

Learning Resources		
1.	Text Books	<ul style="list-style-type: none"> <li>• Kapil Sheeba, "Financial Management" Pearson Publication House.</li> <li>• Jonathan Berk, Peter, "Financial Management" Pearson Publication House.</li> <li>• Sharan Vyuptakesh, "Fundamentals of Financial Management" Pearson Publication.</li> <li>• James C Van harne, "Financial Management &amp; Policy" Pearson Publication House.</li> <li>• ICSI: Handbook on Mergers Amalgamations and takeovers.</li> </ul>
2.	Reference Books	<ul style="list-style-type: none"> <li>• <b>Punithavathy Pandian</b>, Security Analysis And Portfolio Management, Vikas Publications Pvt. Ltd, New Delhi. 2001.</li> <li>• <b>Kevin .S</b>, Security Analysis And Portfolio Management, Phi, Delhi, 2011</li> <li>• <b>Yogesh Maheswari</b>, Investment Management, Phi, Delhi, 2011</li> <li>• <b>Bhalla V K</b>, Investment Management: Security Analysis And Portfolio Management, S Chand, New Delhi, 2009</li> <li>• <b>Prasanna Chandra</b>, Portfolio Managemet, Tata Mcgraw Hill, New Delhi, 2008.</li> </ul>
3.	Websites	<p><u>INFLIBNET</u> <a href="http://nlist.inflibnet.ac.in">http://nlist.inflibnet.ac.in</a>  <u>J-GATE</u> <a href="http://jgateplus.com">http://jgateplus.com</a>  <u>EBSCO</u> <a href="http://search.ebscohost.com">http://search.ebscohost.com</a>            Library online Opac Address: <a href="http://192.168.1.111:8080/opac">http://192.168.1.111:8080/opac</a>  <b>*For INFLIBNET individual usernames and passwords are already given.            Use the same</b></p>
4.	Journals	<ul style="list-style-type: none"> <li>• Prabhandan: Indian Journal of Management</li> <li>• IUP Journals</li> <li>• ICSI Journals</li> <li>• Finance India</li> <li>• Indian Journal of Finance (New Sub.)</li> <li>• Journal of Accounting &amp; Finance etc.</li> </ul>
5.	Supplementary Reading	<ul style="list-style-type: none"> <li>• Financial Express</li> <li>• Economics Times</li> <li>• Business Standard</li> <li>• Times of India</li> <li>• Indian Express.</li> </ul>
6.	Practical Component	<ul style="list-style-type: none"> <li>• Practical Problems on Portfolio Risk and return with two and three securities</li> <li>• Practical Problems on Bond Valuation, Duration and Immunization</li> <li>• Practical Problems on Mutual fund rankings with Sharpe and treynor</li> <li>• Practical Problems on Problems of Pay off on option (Derivative)</li> <li>• Financial statement analysis using Proves-IQ</li> <li>• Companies Financial Reports &amp; Corporate case studies.</li> </ul>

<b>Semester</b>	<b>IV</b>	<b>Total Credit</b>	<b>4</b>
<b>Course Code</b>	<b>DSE-Spl-II- 401-B (HR-IV)</b>	<b>Credit Pattern</b>	<b>L-45, T-8, P-7</b>
<b>Course Title</b>	<b>TALENT AND HUMAN CAPITAL MANAGEMENT-HR-IV</b>		

<b>Course Objectives</b>	
1	To develop understanding of contemporary issues in Human Capital Management.
2	To increase awareness about Talent and Human Capital Management and ability to work both independently and collaboratively.
3	To enable students to critique human resource management issues across levels and recommend managerial interventions to solve organizational problems.
<b>Course Outcomes :- Students will be able to:</b>	
1	Describe the concept of Talent and Human Capital Management.
2	Apply different concepts of Human Capital Management.
3	Summarize Cafeteria Approach in Compensation.
4	Critically evaluate emerging trends in Talent and Human Capital Management.

<b>Unit Number</b>	<b>Contents</b>	<b>Number of Sessions</b>
<b>1</b>	Talent Management: Acquiring talent, Retaining talent, Nurturing talent, Developing and Recognizing talent.	<b>L= 12</b>
	Competency Management: Iceberg Model of Competencies, Types of competencies, Objectives of Competency Mapping, Benefits of Competency approach, Competency Mapping Methodology. Employee Engagement: Means to promote Employee Engagement, Relationship with Talent Management.	<b>T=2 P= 1</b>
<b>2</b>	Concept of Human Capital Management, HRD Audit: Characteristics, Scope, Process, Methodology, Documents and outcomes. HR Accounting: Objectives, Methods, Advantages and Limitations. Human Resource Information System: Issues while adopting HRIS, Sub-systems of HRIS, Steps in designing HRIS, Advantages of using HRIS.	<b>L= 11 T=2 P= 2</b>
<b>3</b>	Cafeteria Approach in Compensation. Concept of HR Balanced Scorecard. Employee empowerment- concept, objectives, Pre-requisites, types, Process, benefits, limitations. Flexi-time as a retention tool, Moonlighting: causes and HR interventions, Succession Management, Workforce Diversity, Green HRM, Employer and Employee Branding.	<b>L= 11 T=2 P= 2</b>
<b>4</b>	Learning Organization- Concept, Learning culture, HRD in Learning Organization, Role of HRM in Learning organization. Quality circle- constitution and process. Quality of Worklife- objectives, importance, determinants of QWL.	<b>L= 11 T=2 P= 2</b>



**Note:**

1. Case Studies on Each of the Aspects Mentioned in the Syllabus need to be discussed.

<b>Learning Resources</b>		
<b>1</b>	<b>Text Books</b>	<ul style="list-style-type: none"> <li>• Uday Kumar Haldar and Juthika Sarkar, Human Resource Management ,Oxford Higher Education.</li> <li>• K.Aswathappa , Human Resource Management , Himalaya Publishing House.</li> </ul>
<b>2</b>	<b>Reference books</b>	<ul style="list-style-type: none"> <li>• Lyle M. Spencer, Signe M. Spencer, Competence at work – JohnWiley 1993</li> <li>• Naik G.P, Competency mapping, Assessment and Growth - IIHRM,2010.</li> <li>• Herman Aguinis, Performance Management - Pearson Education,2007.</li> <li>• Lance A. Berger &amp;DorothyR. Berger, The Talent Management Hand Book - Tata McGraw Hill.</li> <li>• Michael J. Kavanagh,Mohan Thite,Human Resource Information System, Sage South Asia Edition.</li> </ul>
<b>3</b>	<b>Websites</b>	<ul style="list-style-type: none"> <li>• <a href="http://www.humancapital.com">www.humancapital.com</a></li> <li>• <a href="http://www.iupindia.in">www.iupindia.in</a></li> <li>• <a href="http://www.istd.co.in">www.istd.co.in</a></li> <li>• <a href="http://www.forbes.com">www.forbes.com</a></li> <li>• <a href="http://www.mbaskool.com">www.mbaskool.com</a></li> <li>• <a href="http://searchhrsoftware.techtarget.com">searchhrsoftware.techtarget.com</a></li> </ul>
<b>4</b>	<b>Journals</b>	<ul style="list-style-type: none"> <li>• South Asian Journal of Human Resource Management</li> <li>• Havard Business Review</li> <li>• Human Capital</li> <li>• Indian Journal of Training an Development</li> <li>• South Asian Journal of Business and Management Education</li> </ul>
<b>5</b>	<b>Supplementary Reading</b>	<ul style="list-style-type: none"> <li>• Education World, The Human Development Magazine</li> <li>• Human Capital Magazine- Realizing Business Strategy through People.</li> <li>• Business India, The Magazine of Corporate World.</li> <li>• South Asian Journal of Practical Research</li> </ul>
<b>6</b>	<b>Practical Component</b>	<ul style="list-style-type: none"> <li>• Students are expected to conduct a study on how talent is acquired and retained – in various industries – and various strategies followed by the respective companies.</li> <li>• Students will collect data about the position of principal, director, and other teachers in your college and prepare a competency dictionary for the said positions.</li> <li>• Students will collect data in your college or any other organization using Q 12 instrument and analyze it to find out the engagement level of employees.</li> <li>• Students will identify the important positions in your college or any other organization and ascertain the measures if any taken to develop second line of leadership.</li> </ul>

<b>Semester</b>	<b>IV</b>	<b>Total Credit</b>	<b>4</b>
<b>Course Code</b>	<b>DSE -Spl-II-401-C</b>	<b>Credit Pattern</b>	<b>L-45, T-8, P-7</b>
<b>Course Title</b>	<b>INTEGRATED MARKETING COMMUNICATION</b>		<b>PAPER-IV</b>
<b>Course Objectives</b>			
<b>1</b>	Students will become familiar with concepts, theories of IMC.		
<b>2</b>	Students will understand techniques in IMC.		
<b>3</b>	Students will be able to utilize various tools for IMC strategies.		
<b>Course Outcomes: Students will be able to;</b>			
<b>1</b>	Explain various integrated marketing communication tools & techniques processes		
<b>2</b>	Design marketing communication plans		
<b>3</b>	Evaluate cost elements of marketing communication		
<b>4</b>	Apply social media for marketing communication		

**Syllabus:**

<b>Unit Number</b>	<b>Contents</b>	<b>Number of Sessions</b>	
<b>1</b>	<b>Unit I</b> <b>IMC &amp; Brand Management</b> – Conceptual overview of IMC, Introduction to IMC tools – Advertising, sales promotion, publicity, public relations, and event sponsorship; Brand Management-Meaning and Definition – Brand Identity System – Types of Branding - Branding Decisions - Brand Extension – Multi- Brand Portfolios - Branding and Positioning– Concept of Brand Equity. Measuring Brand Equity.	<b>L=11</b>	
		<b>T=2</b>	<b>P=2</b>
<b>2</b>	<b>Unit II</b> <b>Media Management-</b> Elements of the Communications Mix - Media Mix - Types of Media- Media Selection- Planning and Buying –Scheduling media objectives, Media channel strategy, audience research, tactics and the media schedule, Source, Message and channel factors, Communication response hierarchy- AIDA model, Hierarchy of effect model, Innovation adoption model, information processing model, The standard learning Hierarchy, Attribution Hierarchy, The Elaboration Likelihood (ELM) model, The Foote, Cone and Belding (FCB) Model Strategy - Cost and Ability – Matching Media and Market - Media Ad. Effectiveness.	<b>L=12</b>	
		<b>T=2</b>	<b>P=1</b>
<b>3</b>	<b>Unit III</b> <b>Advertising Management-</b> Meaning and Definition – The Five of Advertising Advertising's role in the promotional mix, Theories of advertising effects, Advertising campaign planning, Function of	<b>L=11</b>	

	Advertising Agencies – Advertising effectiveness - DAGMAR Approach in Advertising Push vs pull strategy, advertising budgets- Measuring advertising effectiveness(Pre-testing, Copy testing,), Tracking, Advertising return on investment (ROI), Careers, Advertising for special markets or products,	<b>T=2</b>	<b>P=2</b>
<b>4</b>	<b>Unit IV</b>	<b>L=11</b>	
	<b>Digital Media &amp; Advertising:</b> Digital Media, Evolution of Technology, Convergence of Digital Media, E- Commerce and Digital Media, Advertising on Digital Media, Social Media, Mobile Advertising, Electronic-PR, Advertising Laws & Ethics:, Intellectual Property Rights,.	<b>T=2</b>	<b>P=2</b>

Learning Resources		
1	<b>Text Books</b>	1.Kotler, Kelller, – Marketing Management: A South Asian Perspective – Pearson Pentice Hall
2	<b>Reference books</b>	1.Aaker David A – Building Strong Brands – The Free Press, New York 2.Keller K. - Strategic Brand Management- Prentice - Hall India 3. <b>Kapferer Jean Noel</b> – Strategic Brand Management – Kogan Page London 4. <b>Keller, Parameswaran, Jacod- Strategic Brand Managemnt- Pearson</b> 4. <b>Chunawalla and Sethia</b> – Foundation of Advertising Theory and Practice- HP Publication 5. <b>Clow Baack</b> - Integrated Advertising, Promotion and Marketing Communication –Pearson Education 6. <b>Kenneth E.C. , Donald Baack</b> - Integrated Advertising, Promotion and Marketing Communications 7. <b>George Belch and Michel Belch</b> - Advertising and Promotion- Tata McGraw-Hill edition 8. <b>Bly the Jim</b> – Marketing Communication – Prentice Hall 9. <b>U C Mathur</b> - Advertising Management- - New Age International 10. <b>Arunkumar, M Meenakshi-</b> Marketing Management-Vikas Publication
4	<b>Journals</b>	1.Indian Journal of Marketing 2.IUP Journal of Business Strategy 3.Current Contents In Management Marketing
5	<b>Supplementary Reading</b>	The Economic Times Business Standard

6	<b>Practical Components</b>	<ol style="list-style-type: none"><li>1. Conduct Group activity based on all units</li><li>2. Case discussion on subject related contents</li><li>3. Take different situational activities e.g. - Business Games to the students.</li><li>4. Library assignments based on all units</li></ol>
---	-----------------------------	---

<b>Semester</b>	<b>IV</b>	<b>Total Credit</b>	<b>4</b>
<b>Course Code</b>	<b>DSE-Spl-II- 401-D (P-IV)</b>	<b>Credit Pattern</b>	<b>L-44, T-8, P-8</b>
<b>Course Title</b>	<b>PROJECT MANAGEMENT</b>		

<b>Course Objectives:</b>	
1	To make students understand fundamental concepts and characteristics of project, including the basic roles, responsibilities and functions of project manager.
2	To Familiarize the Students with various Techniques of project financing and capital budgeting.
3	To introduce students to project evaluation and termination.

<b>Course Outcomes: Students will be able to;</b>	
1	Describe the concepts of Project and Project Management.
2	Apply Project Management practices to start new project.
3	Evaluate Project Management Techniques.
4	Design Project Management Plan for the undertaken project.

<b>Unit Number</b>	<b>Contents</b>	
1	<b>OVERVIEW OF PROJECT MANAGEMENT &amp; SELECTION</b> Concept & Definition of Project, Characteristics of Project, Project Identification, Sources of Project Ideas, Types of Project, Project Life Cycle, Concept & Importance of Project Management, Project Management Principles, Roles And Responsibilities of Project Manager, Project Team Development, Project Management Information System (PMIS).	<b>L 11 T 2, P 2</b>
2	<b>PROJECT APPRAISAL &amp; RISK MANAGEMENT.</b> Concept of Project Appraisal, Technical Appraisal, Commercial Appraisal, Economic Appraisal, Financial Appraisal, Management Appraisal, Social Cost-Benefit Analysis, Introduction to Risk Management, Role of Risk Management in Project Management, Steps in Risk Management, Risk Identification, Risk Analysis, Reducing Risks.	<b>L 11 T 2, P 2</b>
3	<b>PROJECT FINANCING &amp; CAPITAL BUDGETING TECHNIQUES</b> Estimating Cost of Project, Components of Cost of Project, Sources of Project Financing, Capital Budgeting Techniques: TVM, PB, ARR, NPV, IRR. Sensitivity Analysis, Importance of Cash Flows & Cost of Capital in Project Selection. Project Audit: Meaning, Objectives, Phases of Project Audit.	<b>L 11 T 2,P 2</b>
4	<b>PROJECT PLANNING &amp; EVALUATION</b> Concept of Project Planning, Monitoring & Controlling a Project, Work Breakdown Structure, Development of Project Network, Time Estimation, Developing The Project Network Using CPM/PERT, Crashing The Network, Project Evaluation: Concept, Purpose, Advantages. Project Termination: Meaning, Types, Factors Considered in Project Termination, Process. Project Review, Final Project Report (Numerical Treatment on CPM/PERT).	<b>L 11 T 2,P 2</b>

**Note:**

1. Case studies on Each of the Aspects Mentioned in the Syllabus need to be discussed.
2. Video Cases and Documentary Films relating to the syllabus to be exhibited in the class.

<b>Learning Resources</b>		
<b>1</b>	<b>Text Books</b>	<ul style="list-style-type: none"> <li>• Clifford F. Gray, Project Management: The Managerial Process, Sixth Edition, McGraw Hill Education</li> <li>• K. Nagrajan “Project Management”, New age international publication.</li> <li>• Ramakrishna &amp; Kamaraju, Essentials of Project Management, Prentice Hall India Learning Private Limited</li> </ul>
<b>2</b>	<b>Reference books</b>	<ul style="list-style-type: none"> <li>• Jack Meredith, Samuel J. Mantel Jr. “Project Management- A Managerial Approach” John Wiley and Sons</li> <li>• Clifford F Gray, Erik W Larson, “Project Management-The Managerial Process” Tata Mcgraw-Hill Publishing Co Ltd</li> <li>• Robert K Wyzoubi &amp; Rudd Acgary, “Effective Project management”, Wiley India Pvt.Ltd.</li> </ul>
<b>3</b>	<b>Websites</b>	<ul style="list-style-type: none"> <li>• <a href="https://www.project-management-knowhow.com/">https://www.project-management-knowhow.com/</a></li> <li>• <a href="https://www.tutorialspoint.com/pmp-exams/index.htm">https://www.tutorialspoint.com/pmp-exams/index.htm</a></li> <li>• <a href="https://www.managementstudyguide.com/project-management-articles.htm">https://www.managementstudyguide.com/project-management-articles.htm</a></li> <li>• <a href="https://www.projectengineer.net/">https://www.projectengineer.net/</a></li> </ul>
<b>4</b>	<b>Journals</b>	<ul style="list-style-type: none"> <li>• International Journal of Project Management – Elsevier</li> <li>• Project Management Journal   PMI</li> <li>• Project Management Journal - Wiley Online Library</li> <li>• International Journal of Project Management   ScienceDirect.com</li> </ul>
<b>5</b>	<b>Supplementary Reading</b>	<ul style="list-style-type: none"> <li>• John M Nicholas “Project Management For Business And Technology” Prentice Hall Of India Pvt Ltd</li> <li>• James P Lewis “Project Planning, Scheduling And Control” Tata Mcgraw-Hill Publishing Co Ltd</li> </ul>
<b>6</b>	<b>Practical Component</b>	<ul style="list-style-type: none"> <li>• Role play to understand roles &amp; responsibilities of project manager.</li> <li>• To identify and visit ongoing projects undertaken by any local business to study project appraisal techniques and risk management.</li> <li>• To meet project finance personnel from any financial institution to understand project financing and capital budgeting techniques.</li> <li>• Library Exercise on Project Report Preparation by studying project reports prepared by any one company of your choice.</li> </ul>

<b>Semester</b>	<b>IV</b>	<b>Specialization</b>	<b>Agribusiness Management</b>
<b>Course Code</b>	<b>DSE-Spl-II- 401-E (AB-IV)</b>	<b>Type</b>	<b>Discipline Specific Elective (DSE)</b>
<b>Credit Pattern</b>	<b>C – 44, P = 2 T = 2</b>		
<b>Course Title</b>	<b>AGRI COMMODITY MARKETS AND AGRI-BUSINESS-AB-IV</b>		

<b>Course Objectives</b>	
1	To introduce the meaning and working of commodity markets.
2	To highlight the risk in buying and selling of commodities.
3	To update students with the regulatory framework for commodity markets in India.
<b>Course Out Comes: Students will be able to</b>	
1	Discuss commodity markets for various agricultural produce
2	Analyze commodity trading practices in India and other countries.
3	Appraise the Agri-commodities Markets and Agribusiness.

### Syllabus:

<b>Unit Number</b>	<b>Contents</b>	<b>Number of Sessions</b>	
1	<b>Commodity Markets and Commodity Risk: An Overview:</b> Introduction Commodity markets, marketing of agricultural commodities, physical market operations, Understanding risk, managing risk, evolution of commodity derivatives, evolution of commodity derivatives in India.	L= 11	
		T= 2	P= 2
2	<b>Commodity Derivatives:</b> Meaning, Types and classification, pricing derivatives, derivative markets and its participants, economic importance.	L= 11	
		T= 2	P= 2
3	<b>Commodity Exchanges:</b> Introduction, commodity exchanges around the world and in India, Electronic Spot exchange, regulation of commodity markets.	L= 11	
		T= 2	P= 2
4	<b>Variety in commodity Markets:</b> designing commodity controls, weather derivatives, freight derivatives, electricity derivatives, catastrophe derivatives, carbon derivatives, currency derivatives and property derivatives .	L= 11	
		T= 2	P= 2

### Note:

1. Case Studies on Each of the Aspects Mentioned in the Syllabus need to be discussed.
2. Video cases and Documentary Films relating to the syllabus to be exhibited in the class.

<b>Learning Resources</b>		
<b>1</b>	<b>Text Books</b>	<ul style="list-style-type: none"> <li>• Purcell WD, 1991, Agricultural Futures and Options: Principles and Strategies, Macmillan Publications</li> </ul>
<b>2</b>	<b>Reference books</b>	<ul style="list-style-type: none"> <li>• Kaufman PJ, 1986, The Concise Handbook of Futures Markets, John Willy and Sons,</li> <li>• Wasendorf RR and Mc Cafferty, 1993, All About Commodities from the Inside Out, Mc Grow hill</li> </ul>
<b>3</b>	<b>Websites</b>	<p><a href="http://www.indiabudget.nic.in">www.indiabudget.nic.in</a></p> <p><a href="http://www.commodityonline.com">www.commodityonline.com</a></p>
<b>4</b>	<b>Journals</b>	<p>Indian Journal of Agricultural Economics</p> <p>Indian Journal of Agricultural Marketing</p> <p>Journal of Agribusiness</p> <p>Indian Journal of Finance</p> <p>Rural Marketing</p> <p>Vikalpa</p>
<b>5</b>	<b>Supplementary Reading</b>	<p>e-NAM website</p> <p><a href="http://www.mcxindia.com">www.mcxindia.com</a></p>
<b>5</b>	<b>Practical Component</b>	<ul style="list-style-type: none"> <li>• Identify the various countries standards of commodity trading and prepare a report</li> <li>• Collect commodity data and analyze product wise trend and forecaste</li> <li>• Visit nearby commodity trading agency and conduct an interview with trading executive and submit report</li> </ul>



<b>Semester</b>	<b>IV</b>	<b>Total Credit</b>	<b>4</b>
<b>Course Code</b>	<b>DSE-Spl-II- 401-F (S-IV)</b>	<b>Credit Pattern</b>	<b>L-45, T-8, P-7</b>
<b>Course Title</b>	<b>Software Engineering and I.T. Project Management-S-IV</b>		

<b>Course Objectives</b>	
--------------------------	--

1	To understand the nature of software development and software life cycle process models, agile software development, SCRUM and other agile practices.
2	To develop the skill of software design and user-centric approach and principles of effective user interfaces.
3	To infer need of project management and project management life cycle.

<b>Course Outcoms: Student will able to</b>	
---	--

1	Explain needs for software specifications also they can classify different types of software requirements and their gathering techniques.
2	Justify role of SDLC in Software Project Development and they can evaluate importance of Software Engineering in PLC.
3	Familiar with the different methods and techniques used for project management.
4	Discuss the parameters of software projects success and failures.
5	Develop the Project Scheduling, tracking, Risk analysis, Quality management and Project Cost estimation using different techniques.

<b>Unit Number</b>	<b>Contents</b>	<b>Number of Sessions</b>	
1	Concept Of Software, Program V/S Software, Software Characteristics, Software Myths, Software Development Life Cycles. – Waterfall Model, Prototyping Model, Spiral Model, V- Model, Coding guidelines, Structured Approach To System Design - : Principles of software design, DFD, Data Dictionary, Decision Tree, Decision Table & Structured English, E-R Diagrams	<b>L=11</b>	
		<b>T=2</b>	<b>P=2</b>
2	Software Requirement and Specification, Characteristics of Good User Interface Design, Concept of white box testing and black box testing. Introduction: Software Project Management, I.T. Stakeholders, Understanding the project, Project Initiation, Product Life Cycle, Skills and Qualities of Software Project Manager	<b>L=12</b>	
		<b>T=2</b>	<b>P=1</b>
3	Project Planning - Work Break Down Structure, CASE Tools, Types of Software maintenance ,Defining The Project – Deliverables, Objects And Scope, Project Scheduling, Estimating the project – Period Vs Effort, Contingency, Type of costs, Preparing the Project Budget, Defining And Managing The Risk, Managing Information systems Project Time and Resources	<b>L=11</b>	
		<b>T=2</b>	<b>P=2</b>
4	Implementation Activities – Forming a Project Team, Managing People And Organizing Teams, Managing Client Expectations, Configuration Management, Identifying Information Systems Project Risks, Evaluating Success- Software Quality Factors, Causes of Failure, Project Success, Measure of end user satisfaction, Closing the project	<b>L=11</b>	
		<b>T=2</b>	<b>P=2</b>

**Note:** Students will have to complete all tutorials, assignments and lab session for internal credits.

<b>Learning Resources</b>		
1	<b>Text Books</b>	<ul style="list-style-type: none"> <li>• Fundamentals Of Software Engineering – Roger Pressman</li> <li>• Information Technology Project Management – Jack Marchewka – Wiley India Edition</li> </ul>
2	<b>Reference books</b>	<ul style="list-style-type: none"> <li>• Fundamentals Of Software Engineering - Rajib Mall Ghezzi, Jazayeri Stephen H. Khan</li> <li>• Software Requirements And Estimation - Fenton, Ptleeger McGraw Hill</li> <li>• Project Management For Software Development - Jaico</li> <li>• IT Project Estimation – Paul Coombs. – Cambridge</li> <li>• Information System Project Management - John McManus, Trevor Wood-Happer – Pearson.</li> <li>• Software Project Management – Bob Hughs , Mike Cotterell – Tata McGrawhill</li> </ul>
3	<b>Websites</b>	<ul style="list-style-type: none"> <li>• <a href="http://www.tutorialspoint.com">www.tutorialspoint.com</a></li> <li>• <a href="http://www.guru99.com">www.guru99.com</a></li> <li>• <a href="http://www.examupdates.in">www.examupdates.in</a></li> </ul>
4	<b>Journals</b>	<ul style="list-style-type: none"> <li>• International Journal of Scientific Computing</li> <li>• International Journal of Statistics &amp; Management Systems</li> <li>• Chartered Secretary</li> </ul>
5	<b>Supplementary Reading</b>	<ul style="list-style-type: none"> <li>• Business Line</li> <li>• Current affairs in news papers</li> <li>• Information system Audit Reports from computer consultancies</li> </ul>
6	<b>Practical Component</b>	<ul style="list-style-type: none"> <li>• Visit any computer consultant firms and discuss and understand about Software engineering process</li> <li>• Case study about Information system Project Planning</li> </ul>

<b>Semester</b>	<b>IV</b>	<b>Total Credit</b>	<b>2</b>
<b>Course Code</b>	<b>AECC-401</b>	<b>Credit Pattern</b>	<b>L-22, T-8</b>
<b>Course Title</b>	<b>Employability Skills</b>		
<b>Course Objectives</b>			
1	Develop effective communication skills		
3	Develop broad career plans		
<b>Course Outcomes</b>			
After completion of this course the student will be able to:			
1	Match the job requirements and skill sets.		
3	Evaluate the employment market.		
<b>Unit Number</b>	<b>Contents</b>		
1	<p><b>Personality, Interpersonal and employability skills and Emotional Intelligence: (15)</b>  Basic Interaction Skills –Within family, Society. Interpersonal and intrapersonal skills.  Types of skills; Decision Making, Articulation Skills, Emotional Intelligence  Human relations examples through role – play and cases</p>		
2	<p><b>Leadership Skills, Team work, Conflict Management ,Interview Skills, Time Management and Stress Management: (15)</b>  <b>Leadership skills</b> – Leadership in groups, coaching, strategic management  <b>Team work &amp; Team building</b> - Characteristics of an effective team, Essentials of an effective team, Evolution Team. Activities – Team trust, team shape up.  <b>Conflict Management</b> – Types of conflicts, how to cope with them  Small cases including role – plays will be used as teaching methodology.  <b>Interview skills</b> –  Preparation pre-during and post interview  Resume writing, self grooming for the interviews. Introduction, Types of interviews, process of interview, Preparation of the candidate, preparation of the interviewer, common interview questions.  <b>Time Management</b> – Importance, Prioritizing tasks, Personal Goal Setting – SMART goals, delegation, Time management in meetings, barriers to time management, identifying and handling time consuming tasks. Activity – Games, role-play, case studies.  <b>Stress Management</b> – Understanding stress, Types of stress, symptoms, causes of stress. Managing stress, Techniques of managing stress. Activity – questionnaire to find out the level of stress.</p>		

## Learning Resources

1	Reference Books	<p>Business Communication – Urmila Rai &amp; S M. Rai, 12/e, Himalaya Publishing House, 2010.</p> <p>Enhancing Soft Skills – Prof. Dipali Biswas, 1/e, Shroff Publishers &amp; Distributors Pvt. Ltd., 2009.</p> <p>The ACE of Soft Skills – Gopaldaswamy Ramesh &amp; Mahadevan Ramesh, 3/e, Pearson Education, 2012. Successful Career, Soft Skills and Business English –</p> <p>Varanasi Bhaskara Rao &amp; Y. Kameswari, 1/e, BS Publications, 2010.</p> <p>Personality Development and Soft Skills - Barun K. Mitra</p> <p>Emotional Intelligence by Daniel Goleman</p>
---	-----------------	---