

# **Curriculum Book**

## **Assessment and Evaluation Scheme**

based on

## **Outcome Based Education (OBE)**

and

## **Choice – Based Credit System (CBCS)**

in

## **Master of Business Administration in Agri Business Management**

## **2 Year Degree Program**

Revised as on 01 August 2023

Applicable w.e.f. Academic Session 2023-24



**AKS University**

Satna 485001, Madhya Pradesh, India

**Faculty of Management Studies  
Department of Management**



# AKS University

Department of Agri Business Management

Faculty of Management Studies

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## **AKS University**

Department of Agri Business Management  
Faculty of Management Studies

### **Forwarding**

*I am delighted to observe the updated curriculum of the Department of Business Administration for MBA in Agribusiness Management Program, which seamlessly integrates the most recent trends and corporate affairs in the field of business management and adheres to the guide lines set forth by AICTE, UGC. And ICAR The revised curriculum also thoughtfully incorporates the directives of NEP-2020.*

*The alignment of course outcomes (COs), Programme Outcome (POs) and Programme specific outcomes (PSOs) has been intricately executed, aligning perfectly with the requisites of NEP-2020 and NAAC standards. I hold the belief that this revised syllabus will significantly enhance the skills and employability of our students.*

*With immense satisfaction, I hereby present the revised curriculum for the MBA program for implementation in the upcoming session.*

01 August 2023

Er. Anant Soni  
Pro Chancellor & Chairman  
AKS University, Satna



## AKS University

Department of Agri Business Management  
Faculty of Management Studies

### ***From the Desk of the Vice-Chancellor***



*AKS University is currently undergoing a process to revamp its curriculum into an outcome based approach, with the aim of enhancing the teaching and learning process. The foundation of quality of quality education lies in the implementation of a curriculum that aligns with both societal and industrial needs, focusing on relevant outcomes. This entails dedicated and inspire Faculty members, as well as impactful industry internships.*

*Hence, it is of utmost importance to begin this endeavor by crafting an outcome-based curriculum in collaboration with academia and industry experts. This curriculum design should be informed by the latest technological advancements, market demands, the guidelines outlined in the National Education Policy (NEP) of 2020, and sustainable goals.*

*I'm delighted to learn that the revised curriculum has been meticulously crafted by the Department of Business Administration, in consultation with an array of experts from the industry, research institutes, and academia. This curriculum effectively integrates the principles outlined in the NEP-2020 guidelines, as well as sustainable goals. It also adeptly incorporates the latest advancements in the field of business management.*

*Furthermore, the curriculum takes into account the specific needs of the Indian Industries, focusing on the creation of effective and efficient managers as well as entrepreneurs. This curriculum will not only import's knowledge but also encourages students' independent thinking for potential enhancements in the area of business management.*

*The curriculum goes beyond theoretical learning and embraces practical applications. To enhance students' skills, the curriculum integrates industrial visits, and On-Job Training experiences, research projects. This well-rounded approach ensures that students receive a comprehensive education, fostering their skill development and preparing them for success in the field of Business Management.*

*I am confident that the updated curriculum for Department of Business Administration will not only enhance students' managerial skills but also contribute significantly to their employability. During the process of revising the curriculum, I am pleased to observe that the Department of Business Administration has diligently adhered to the guidelines provided by the AICTE and UGC. Additionally, they have maintained a total credit requirement of 102 for the MBA program.*

*It's worth noting that curriculum revision is an ongoing and dynamic process, designed to address the continuous evolution of managerial and technological advancements and both local and global concerns. This ensures that the curriculum remains responsive and attuned to the changing landscape of education and industry.*

*AKS University warmly invites input and suggestions from industry experts and technocrats and Alumni students to enhance the curriculum and make it more student-centric. Your valuable insights will greatly contribute to shaping an education that best serves the needs and aspirations of our students.*

01August2023

**Professor B.A. Chopade**  
**Vice-Chancellor**  
**AKS University, Satna**





## **AKS University Satna**

Department of Agri Business Management  
Faculty of Management Studies

### ***Preface***

As part of our commitment to ongoing enhancement, the Department of Business Administration consistently reviews and updates its MBA program curriculum every three years. Through this process, we ensure that the curriculum remains aligned with the latest managerial developments, as well as local and global industrial and social demands.

During this procedure, the existing curriculum for the MBA Program undergoes evaluation by a panel of industry specialists, and academicians. Following meticulous scrutiny, the revised curriculum has been formulated and is set to be implemented starting from August 01, 2023. This implementation is contingent upon the endorsement of the curriculum by the University's Board of Studies and Governing Body.

This curriculum closely adheres to the AICTE model syllabus distributed in May 2023. It seamlessly integrates the guidelines set forth by the Ministry of Higher Education, Government of India, through NEP- 2020, as well as the principles of Sustainable Development Goals. In order to foster the holistic skill development of students, a range of practical activities, including Industrial Visits, Project planning and execution, Report Writing, Seminars, and Industrial On-Job Training, have been incorporated. Furthermore, in alignment with AICTE's directives, the total credit allocation for the MBA program is capped at 102 credits.

This curriculum is enriched with course components in alignment with AICTE guidelines, encompassing various disciplines such as Basic Science Course: 5 credits, Computer Science Courses: 7 credits, Management Core Courses: 38 credits, Finance Courses: 9 credits, Management Elective Courses: 24 credits, Economics Course: 4 Credits, Marketing Course: 4 Credits, Human Resources Courses: 8 Credits, Project and Practical Training: 16 credits.

To ensure a comprehensive learning experience, detailed evaluation schemes and rubrics have also been meticulously provided.

For each course, a thorough mapping of Course Outcomes, Program Outcomes, and Program Specific Outcomes has been undertaken. As the course syllabus is being meticulously developed, various elements such as session outcomes, laboratory instruction, classroom instruction, self-learning activities, assignments, and mini projects are meticulously outlined.

We hold the belief that this dynamic curriculum will undoubtedly enhance independent thinking, skills, and overall employability of the students.

01August2023

**Professor (Dr.) Harshwardhan Shrivastava**  
Dean,  
Faculty of Management Studies  
AKS University, Satna



## **Introduction –**

Department of Agricultural Economics is establishment under the faculty of Agriculture science and technology, since from year 2012 starts of faculty of Agriculture science and technology in the University. All UG courses with allied stream where run agricultural economics curriculums, PG and PhD curriculums of Agricultural Economics are teach in department of Agricultural Economics. However, Agricultural mathematics and Agricultural Statistics, Computer application, Economics and Intellectual property rights curriculums in undergraduate of Agriculture science have also run in this department. PG discipline in Agricultural Economics, MBA (Agribusiness Management) programme have also run under this department.

## **Faculty Scenario**

- |                                   |   |
|-----------------------------------|---|
| 1. Dr. Virendra Kumar Vishwakarma | Associate Professor & Head – Department of Agricultural Economics |
| 2. Dr. B.B. Beohar                | Director planning & Senior Professor Agricultural Economics       |
| 3. Dr. Ashutosh Singh             | Associate Professor Agricultural Economics                        |
| 4. Dr. Yogesh Tiwari              | Assistant Professor Agricultural Economics                        |
| 5. Shri Navneet Raj Rathor        | Teaching Associate (Agricultural Statistics)                      |
| 5. Shri Deepnarayan Mishra        | Teaching Associate  |
| 6. Shri Rajeev Rav Suryvanshi     | Lab Attendance  |

## **Vision –**

Conduct the **Agricultural Economics & MBA in Agribusiness Management** programs and activities under specific manner that promotes in the education, research and innovation in agriculture science and filed of agribusiness. With the purpose of is agriculture make a profitable enterprise and improves the farmer incomes.



## **Mission**

**M-1:** Achieve the academic excellence in Agricultural Economics through an innovative teaching and learning process.

**M-2:** Application of improved research in marketing and financial management practices and banking management, farm management

**M-3:** Inculcate innovative approach with collective discipline in students to improve the farming enterprises, higher education and farming and societal needs.

**M-4:** Establish focus research in leading area of agriculture and agribusiness for improve the farmers income and encourage the new startup of agribusiness.

## **PROGRAMME SCENARIO**

### **Running curriculum of Agricultural Economics under B. Sc. Ag. Programs are**

1. Fundamentals of Agricultural Economics
2. Agricultural Finance and Cooperation
3. Agricultural Marketing, Trade and Prices
4. Farm Management, Production and Resources Economics
5. Agri-business Management- Elective course

### **Running curriculum of Allied courses Agricultural under B. Sc. Ag. Programs are**

1. Agricultural Mathematics
2. Agricultural Statistics
3. Informatics
4. Intellectual property rights

### **Running program under master degree & PhD of Agricultural Economics & MBA in Agribusiness Management**

1. M.Sc Ag. Agricultural Economics
2. MBA in Agribusiness Management.
3. PhD Agricultural Economics



## **Introduction**

This program is introduced in year of 2018 in AKS University Satna. This was first introduced as M B A (Agri business management) under faculty of management studies and operate in the faculty of Agriculture science and technology. Now it is being introduce as new program as M B A in Agri Business Management under the faculty of Agriculture science and technology. It is a two-year full time residential post-graduate degree programme to be run in the Department of Agricultural Economics, Faculty of Agriculture Science and Technology AKS University. This grooms young men and women into professional managers for core areas of agribusiness and allied sectors.

## **POE (Program Education Outcomes)**

### **PEO-1**

To develop R&D temperament among the students for development, innovation and sustainable business management and strategies in development and new startup in Agribusiness

### **PEO-2**

To develop ethical principles among the students and commitment to fulfilling international, national and local needs and social responsibilities with his/her professional excellence

### **PEO-3**

Ability to understand the impact of professional manager solutions in societal and economics and demonstrate knowledge and need for sustainable development of agriculture

### **PEO-4**

Identify issues related to ethics, society, safety and environment in context of development of agribusiness and their application.

## **PO (Program outcomes)**

### **PO-1**

#### **Managerial knowledge:**

Apply the managerial knowledge in the functioning of agribusinesses, identifying potential agribusiness opportunities, involvement of business enterprises and exploring the entrepreneurial opportunities in agribusiness.



## **PO-2**

### **Problem analysis:**

Identify, formulate, review research literature, and analyze complex marketing, financial and managerial problems reaching substantiated conclusions using principle and operation producer of Agribusiness management.

## **PO 3:**

### **Modern tool usage:**

Create, select, and apply appropriate techniques, resources, and modern management and tools including prediction and modeling to complex managerial decision activities with an understanding of the limitations in Agribusiness management

## **PO-4:**

### **Ethics:**

Apply ethical principles and commit to professional ethics and responsibilities and norms of the Agribusiness management and organization.

## **PO-5:**

### **Individual and team work:**

Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings in Agribusiness management.

## **PO-6:**

### **Communication:**

Communicate effectively on complex managerial activities with the business community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

## **PO-7:**

### **Project management and finance:**

Demonstrate knowledge and understanding of the business and organizational management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in agro based and agriculture development project.



**PO-8:**

**Business decision making:**

Pursue the ability and competencies in critical thinking for business decision making, capabilities and skills to analyze and solve agribusiness problems across functional areas and more so by coming out with innovative solutions.

**PO 09:**

**Life-long learning:**

Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change in Agribusiness management.

**PO 10:**

**Environment and sustainability:**

Understand the impact of the professional expert solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development in Agribusiness management.

**PO 11:**

**Entrepreneurial opportunities:**

Identify entrepreneurial opportunities and leverage managerial & leadership skills for founding, leading & managing startups as well as professionalizing and growing family businesses.

**PO 12:**

**Global outlook:**

Demonstrate a global outlook with the ability to identify aspects of the global business and Cross Cultural understanding in Agribusiness management.

**PSO (Program specific outcomes)**

**PSO-1:**

The ability to apply managerial and business skilled for development of business growth with the available resources

**PSO-2:**

Ability to understand the day to day business operational problems and startup development of agribusiness and provide economical solution to enhance the decide goal without compromising ethical value.



**PSO-3:**

To inculcate proactive thinking to ensure effective performance in the dynamic socio-economic and business ecosystem entrepreneurial approach and skill sets aligned with the national priorities.

**PSO-4:**

Ability to use the research based innovative knowledge for sustainable development in agribusiness growth and develops

**Consistency/Mapping of PEOs with Mission of the Department**

PEO	M1	M2	M3	M4
PEO-1	3	2	3	2
PEO-2	2	2	2	3
PEO-3	2	3	2	1
PEO-4	2	2	3	3

*1: Slight (Low), 2: Moderate (Medium), 3: Substantial (High) “-”: No correlation*



## GENERAL COURSE STRUCTURE & THEME

### 1. Definition of Credit

1 Hr. Lecture (L) per week	1 Credit
1 Hr. Tutorial (T) per week	1 Credit
2 Hours Practical (P) per week	1 Credit

### 1. Range of Credits:

In the light of the fact that a typical Model Four-year Under Graduate degree program in Engineering has about 160 credits, the total number of credits proposed for the four-year B. Tech. in Cement Technology is kept as 169 considering NEP-20 and NAAC guidelines.

#### Structure of UG Program in Cement Technology:

- The structure of UG program in Cement Technology shall have essentially the following categories of courses with the breakup of credits as given:

### Components of the Curriculum

(Program curriculum grouping based on course components)

Sl No	Course Component	Total Credits	Percentage of total credits in the Program
1	Program Core (PCC)	28	37.83
2	Supporting Courses (PSC)	6	8.10
3	Research Project(s) (PRC)	30	40.54
4	Industrial Training/Internships (ISC)	00	0.00
5	Seminar( SC)	01	1.35
	<b>Total Credit</b>		
6	<b>Any other ( PI Specify ) Non Credit ( NC)</b>	<b>05</b>	<b>6.75</b>
7	Entrepreneurship (EC)	04	5.40
	<b>Total Non Credit</b>	<b>74</b>	<b>100</b>





## General Course Structure and Credit Distribution Curriculum of MBA in Agribusiness Management

Semester -I		Semester -II	
Course Title	Credit	Course Title	Credit
Major Courses		Major Courses	
1. Principles of Management and Organizational Behaviour	3+0+0 = 03	1. Human Resource Management for Agricultural Organization	2+0+0 = 02
2. Managerial Accounting and Control	3+0+0 = 03	2. Production and Operation Research Management	2+0+0 = 02
3. Applied Agribusiness Economics	2+0+0 = 02	3. Agricultural and Food Marketing Management- II	1+1+0 = 02
4. Agricultural and Food Marketing Management- I	1+1+0 = 02	4. Agri. Supply Chain Management	2+0= 2
Minor Courses		Minor Courses	
5. Research Methodology for Agribusiness management	2+1+0 = 03	5. Financial Management in Agri. Business	1+1+0 = 02
Supporting Courses		Supporting Courses	
6. Computer Application for Agri Business	2+1+ 0 = 03	6. Business Analytics for Agriculture	1+1+0 = 02
Non-Credit Compulsory Courses		Non-Credit Compulsory Courses	
7. Library and information services	0+1+0 = 01	7. Intellectual property and its management in agriculture	1+0+0 = 01
8. Technical writing and communications skills	0+1+0 = 01	8.Basic concepts in laboratory techniques	1+0+0 = 01
Total Credit	18	9.Summer Training/ Industrial Attachment	4+0+0 = 04
		Total Credit	18
Semester -III		Semester -IV	
Course Title	Credit	Course Title	Credit
Major Courses		Research Project	0+20=20
International Trade for Agricultural Products	2+0=2		
Minor Courses			
Project Management and Agri Business Entrepreneurship	2+1=3		
Supporting Courses			
Agri. Extension Management	1+0=1		
Research			
Project work	0+10=10		
Master’s Seminar	0+1=1		
Non-Credit Compulsory Courses			
Agricultural Research, Research Ethics and Rural Development Programmes	1+0=1		
Total Credit	18	Total Credit	20



1. Program Core (PCC)
2. Supporting Courses (PSC)
3. Research Project(s) (PRC)
4. Industrial Training/Internships (ISC)
5. Seminar (SC)
6. Any other ( PI Specify ) Non Credit ( NC)
7. Entrepreneurship (EC)

**Total Credit: 74**

### **Course code and definition:**

**L = Lecture**

**T = Tutorial**

**P = Practical**

**C = Credit**

### **Course level coding scheme:**

1. **Professional core courses = PCC**
2. **Professional elective = PEC**
3. **Supporting Courses =PSC**
4. **Research Project(s) =PRC**
5. **Industrial Training/Internships =ISC**
6. **Seminar =SC**
7. **Any other ( PI Specify ) Non Credit = NC**
8. **Entrepreneurship =EC**

Three-digit number used as suffix with the Course Code for identifying the level of the course. Digit at five hundred's place signifies the year in which course is offered. e.g. 501,502 etc. for course code.



## Category-wise Courses

### PROFESSIONAL CORE COURSES [PCC] / Major Course (Total 20)

Sl.	Code No.	Subject	Semester	Credits
1	AMB 501	Principles of Management and Organizational Behaviour	I	3(3+0)
2	ABM 502	Managerial Accounting and Control	I	3(3+0)
3	ABM503	Applied Agribusiness Economics	I	2(2+0)
4	ABM 504	Human Resource Management for Agricultural Organization	II	2(2+0)
5	ABM 505	Production and Operation Research Management	II	2(2+0)
6	ABM 506	Agricultural and Food Marketing Management- I	II	2(1+1)
7	ABM 507	Agricultural and Food Marketing Management- II	III	2(1+1)
8	ABM 508	Agri. Supply Chain Management	III	2(2+0)
9	ABM 509	International Trade for Agricultural Products	III	2(2+0)
		<b>Total Credit</b>		<b>20</b>

### PROFESSIONAL ELECTIVE =PEC/ Minor course (Total 08)

Sl.	Code No.	Subject	Semester	Credits
1	ABM 510	Food Technology and Processing Management		3+0
2	ABM 511	Rural Marketing		3+0
3	ABM 512	Fertilizers Technology and Management		3+0
4	ABM 513	Management of Agrochemical Industry		3+0
5	ABM 514	Seed Production Technology Management		3+0
6	ABM 515	Technology management for Live stock Products		3+0
7	ABM 516	Fruit Production & Post Harvest Management		3+0
8	ABM 517	Farm Power & Machinery Management		2+0
9	ABM 518	Food Retail Management		2+0
10	ABM 519	Management of Agricultural Input Marketing		2+0
11	ABM 520	Feed Business Management		2+0
12	ABM 521	Management of Veterinary Hospitals		2+0
13	ABM 522	Poultry And Hatchery Management		2+0
14	ABM 523	Management Of Floriculture And Landscaping		2+0
15	ABM 524	Risk Management In Agri. Business		2+0
16	ABM 525	Management Of Agri. -Business Co-Operatives		2+0
17	ABM 526	Business Analytics for Agriculture		2+0
18	ABM 527	Dairy Business Management		1+0
19	ABM 528	Agri. Extension Management		1+0
20	ABM 529	Renewable Energy Sources Management		1+0
21	ABM 530	Quality Management for Agri Business		1+0
22	ABM 531	Advertising And Brand Management		1+0
23	ABM 532	Agri. Infrastructure and Warehousing Management		1+0
24	ABM 533	Contract Farming		1+0
25	ABM 534	Human Resource Competence And Capacity Building Systems		1+0



<b>26</b>	ABM 535	Agri. Commodity Markets And Futures Trading		1+0
<b>27</b>	ABM 536	Strategic Management for Agri. Business Enterprises		2+0
<b>28</b>	ABM 537	Operations Research	II	2+0
<b>29</b>	ABM 538	Financial Management in Agri. Business	II	2+0
<b>30</b>	ABM 539	Communication for Management and Agri business	I	3+0
<b>31</b>	ABM 540	Research Methodology for Agribusiness management	I	3+0
<b>32</b>	ABM 541	Computer Application for Agribusiness		3+0
<b>33</b>	ABM 542	Project Management and Agribusiness Entrepreneurship	III	3+0
<b>34</b>	ABM 543	Agribusiness Environment and Policy		2+0
<b>35</b>	ABM 544	Agri Business Law and Ethics	III	2+0
		<b>Total Credit</b>		<b>15</b>

**SUPPORTING COURSES = PSC (Total 06)**

Sl.	Code No.	Subject	Semester	Credits
<b>1</b>	ABM 541	Computer Application for Agri Business	I	3(2+1)
<b>2</b>	ABM 526	Business Analytics for Agriculture	II	2(1+1)
<b>3</b>	ABM 528	Agri. Extension Management	III	1(1+0)
		<b>Total Credit</b>		<b>06</b>

**RESEARCH PROJECT(S) =PRC (Total 30)**

Sl.	Code No.	Subject	Semester	Credits
01		Project work	III	10(0+10)
02	ABM-595	Research Project	IV	20(0+20)
		<b>Total Credit</b>		<b>30</b>

**INDUSTRIAL TRAINING/INTERNSHIPS =ISC (Total 04)**

Sl.	Code No.	Subject	Semester	Credits
01	ABM 595	Summer Training/ Industrial Attachment	II	4(4+0)
		<b>Total Credit</b>		<b>04</b>

**SEMINAR =SC(Total 01)**

Sl.	Code No.	Subject	Semester	Credits
01	ABM 591	Master's Seminar	IV	1(0+1)
				<b>01</b>



**ANY OTHER (PL SPECIFY) NON CREDIT =NC (Total 05)**

<b>Sl.</b>	<b>Code No.</b>	<b>Subject</b>	<b>Semester</b>	<b>Credits</b>
01	PGS 501	Library and information services	<b>I</b>	1(0+1)
02	PGS 502	Technical writing and communications skills	<b>I</b>	1(0+1)
03	PGS-503	Intellectual property and its management in agriculture	<b>II</b>	1(1+0)
04	PGS 504	Basic concepts in laboratory techniques	<b>II</b>	1(0+1)
05	PGS 505	Agricultural Research, Research Ethics and Rural Development programmes	<b>III</b>	1(1+0)
		<b>Total Credit</b>		<b>05</b>

**ENTREPRENEURSHIP =EC (Total 03)**

<b>Sl.</b>	<b>Code No.</b>	<b>Subject</b>	<b>Semester</b>	<b>Credits</b>
01	ABM 542	Project Management and Agri Business Entrepreneurship	<b>III</b>	<b>3(2+1)</b>
		<b>Total Credit</b>		<b>03</b>



## **Induction Program**

Induction program for students to be offered right at the start of the first year. It is mandatory. AKS University has designed an induction program for 1st year student, details are below:

- i Physical activity
- ii Creative Arts
- iii Universal Human Values
- iv Literary
- v Proficiency Modules
- vi Lectures by Eminent People
- vii Visits to local Areas
- viii Familiarization to Dept./Branch & Innovations

**Mandatory Visits/ Workshop/Expert Lectures:**

- I. It is mandatory to arrange one industrial visit every semester for the students.
- II. It is mandatory to conduct a One-week workshop during the winter break after fifth semester on professional/ industry/ entrepreneurial orientation.
- III. It is mandatory to organize at least one expert lecture per semester for each branch by inviting resource persons from industry.

**Evaluation Scheme:**

### **1. For Theory Courses:**

**I. The Weightage of Internal assessment is 50% and**

**II. End Semester Exam is 50%**

The student has to obtain at least 40% marks individually both in internal assessment and end semester exams to pass.

### **2.- For Practical Courses:**

**I. The Weightage of Internal assessment is 50% and**

**II. End Semester Exam is 50%**

The student has to obtain at least 40% marks individually both in internal assessment and end semester exams to pass.



### **3. For Summer Internship / Projects / Seminar etc.**

Evaluation is based on work done, quality of report, performance in viva-voce, presentation et

## **Semester wise Course Structure**

### **Semester wise Brief of total Credits and Teaching Hours**

<b>Semester</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>Total Hour</b>	<b>Total Credit</b>
<b>Semester -I</b>	14	00	04	18	18
<b>Semester -II</b>	11	04	07	22	18
<b>Semester -III</b>	<b>07</b>	01	11	19	18
<b>Semester -IV</b>	00	00	20	20	20
<b>Total</b>	<b>32</b>	<b>05</b>	<b>42</b>	<b>79</b>	<b>74</b>



## SEMESTER-1

S.N.	Category	Code	Course Title	L	T	P	Total H	Credits
<b>Major Courses</b>								
1	PCC	AMB 501	Principles of Management and Organizational Behaviour	3	0	0	3	3(3+0)
2	PCC	ABM 502	Managerial Accounting and Control	3	0	0	3	3(3+0)
3	PCC	ABM503	Applied Agribusiness Economics	2	0	0	2	2(2+0)
4	*PCC	ABM 506	Agricultural and Food Marketing Management- I	2	0	0	2	2(2+0)
			<b>Total</b>				<b>10</b>	<b>10(10+0)</b>
<b>Minor Courses</b>								
5	PCC	ABM 540	Research Methodology for Agribusiness management	2	0	2	4	3(2+1)
			<b>Total</b>				<b>4</b>	<b>3 (2+1)</b>
<b>Supporting Courses</b>								
6	PSC	ABM 541	Computer Application for Agri Business	2	0	2	2	3(2+1)
			<b>Total</b>				<b>2</b>	<b>3(2+1)</b>
<b>Non-Credit Compulsory Courses</b>								
7	NC	PGS 501	Library and information services	0	0	2	2	1(0+1)
8	NC	PGS 502	Technical writing and communications skills	0		2	2	1(0+1)
			<b>Total</b>				<b>4</b>	<b>2(0+2)</b>
			<b>Grand Total</b>	14	00	08	<b>20</b>	<b>18(14+4)</b>





## SEMESTER-II

S.N.	Category	Code	Course Title	L	T	P	Total H	Credits
<b>Major Courses</b>								
1	PCC	ABM 504	Human Resource Management for Agricultural Organization	2	0	0	2	2(2+0)
2	PCC	ABM 505	Production and Operation Research Management	2	0	0	2	2(2+0)
3	*PCC	ABM 507	Agricultural and Food Marketing Management- II	2	0	0	2	2(2+0)
4	*PCC	ABM 508	Agri. Supply Chain Management	2	0	0	2	2(2+0)
			<b>Total</b>				<b>8</b>	<b>8(8+0)</b>
<b>Minor Courses</b>								
5	PCC	ABM 538	Financial Management in Agri. Business	1	0	2	3	2(2+0)
			<b>Total</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>2(2+0)</b>
<b>Supporting Courses</b>								
6	PSC	ABM 526	Business Analytics for Agriculture	1	0	2	3	2(1+1)
			<b>Total</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>3</b>	<b>2(1+1)</b>
<b>Non-Credit Compulsory Courses</b>								
7	NC	PGS-503	Intellectual property and its management in agriculture	0	0	1	2	1(0+1)
8	NC	PGS 504	Basic concepts in laboratory techniques	0	0	1	2	1(0+1)
			<b>Total</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>4</b>	<b>2(0+2)</b>
<b>Summer Training/ Industrial Attachment</b>								
9	EC	ABM 595	Summer Training/ Industrial Attachment	0	4	4	4	4(0+4)
			<b>Total</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>4</b>	<b>4(0+4)</b>
			<b>Grand Total</b>	<b>10</b>	<b>04</b>	<b>10</b>	<b>22</b>	<b>18 (11+7)</b>

### SEMESTER-III

S.N.	Category	Code	Course Title	L	T	P	Total H	Credits
<b>Major Courses</b>								
1	PCC	ABM 509	International Trade for Agricultural Products	2	0	0	2	2(2+0)
			<b>Total</b>	<b>02</b>	<b>0</b>	<b>0</b>	<b>02</b>	<b>2(2+0)</b>
<b>Minor Courses</b>								
2	PCC	ABM 542	Project Management and Agri Business Entrepreneurship	3	0	0	3	3(3+0)
			<b>Total</b>	<b>03</b>	<b>0</b>	<b>0</b>	<b>03</b>	<b>3(3+0)</b>
<b>Supporting Courses</b>								
3	PSC	ABM 528	Agri. Extension Management	1		0	1	1(1+0)
			<b>Total</b>	<b>01</b>			<b>01</b>	<b>1(1+0)</b>
<b>Research /Project work / Seminar</b>								
4	PRC	-	Project work	0	00	<b>10</b>	10	10(0+10)
5	SC	ABM 591	Master's Seminar	0	01	01	01	1(0+1)
			<b>Total</b>			<b>11</b>	<b>34</b>	<b>11(0+11)</b>
<b>Non-Credit Compulsory Courses</b>								
6	NC	PGS 505	Agricultural Research, Research Ethics and Rural Development Programmes	1	0	0	1	1(1+0)
			<b>Total</b>	<b>01</b>			<b>1</b>	<b>1(1+0)</b>
			<b>Grand Total</b>	<b>07</b>	<b>01</b>	<b>11</b>	<b>35</b>	<b>18 (7+11)</b>

### SEMESTER-IV

S.N.	Category	Code	Course Title	L	T	P	Total H	Credits
1	PRC	ABM-595	Research Project	0	00	20	20	0+20
			<b>Total</b>	<b>00</b>	<b>00</b>	<b>20</b>	<b>20</b>	<b>20 (00+20)</b>
			<b>Grand Total</b>					<b>74 (32+42)</b>



**Course Code:-**ABM501

**Course Title:-**Principles of Management and Organizational Behaviour

**Pre requisite:** -Student should have basic knowledge of management principle, economic analysis, general accounting and with new business start-up.

**Rationale:** -A principle of Management and Organizational Behaviour in Agribusiness management degree is the express through the concept and procurers with provide the information to managers, analyst and professionals in accurate manners. Professional or ABM holder should skill the principle of management to apply for achieves the fixed goal and desire. Also the organizational behaviours is help for understands of judging the achieve targets is appropriate for consumer or customers' needs.

**Course Outcomes:**

**ABM501 CO-1** Identify the basic concepts of management and organizational behaviour.

**ABM501 CO-2** Demonstrate the overall view of various management functions, managerial skills and approaches.

**ABM 501 CO-3** Apply the fundamental of individual and group behaviour in the organizational setting.

**ABM 501 CO-4** Analyze the group decision making, team building and developing collaboration and leadership styles.

**ABM 501 CO-5** Evaluate the ability understanding and managing organizational culture, power and political behaviour

**Scheme of studies**

Board of Study	Course Code	Course Title	Scheme of studies (Hours/Week)					Total Credits (C)
			CI	LI	SW	SL	Total Study Hours (CI+LI+SW+SL)	
Program Core (PCC)	ABM 501	Principles of Management and Organizational Behaviour	03	00	02	01	06	03



**Legend:** **CI:** Classroom Instruction (Includes different instructional strategies i.e. Lecture (L) and Tutorial (T) and others),

**LI:** Laboratory Instruction (Includes Practical performances in laboratory workshop, field or other locations using different instructional strategies)

**SW:** Sessional Work (includes assignment, seminar, mini project etc.),

**SL:** Self Learning,

**C:** Credits.

**Note:** SW & SL have to be planned and performed under the continuous guidance and feedback of teacher to ensure outcome of Learning.

**Scheme of Assessment:**

Board of Study	Course Code	Course Title	Scheme of Assessment (Marks)							
			Progressive Assessment (PRA)						End Semester Assessment (ESA)	Total Marks (PRA + ESA)
			Class/ Home Assignment 2 marks each (CA)	Class Test 2 (2 best out of 3) 20 marks each (CT)	Seminar one (SA)	Class Activity any one (CAT)	Class Attendance (AT)	Total Marks (CA + CT + SA + CAT + AT)		
(PCC)	ABM 501	Principles of Management and Organizational Behaviour	10	40	00	00	00	50	50	100

**Course-Curriculum Detailing:**

This course syllabus illustrates the expected learning achievements, both at the course and session levels, which students are anticipated to accomplish through various modes of instruction including Classroom Instruction (CI), Laboratory Instruction (LI), Sessional Work (SW), and Self Learning (SL). As the course progresses, students should showcase their mastery of Session Outcomes (SOs), culminating in the overall achievement of Course Outcomes (COs) upon the course's conclusion.



**ABM501 CO-1 Identify the basic concepts of management and organizational behaviour**  
**Approximate Hours**

Item	AppX Hrs
CI	9
LI	0
SW	2
SL	1
Total	12

Session Outcomes (SOs)	Laboratory Instruction (LI)	Class room Instruction (CI)	Self Learning (SL)
<b>SO1.1-</b> Introduce about the meaning and definition of management <b>SO1.2-</b> Brief the basic concept of management <b>SO1.3-</b> Discuss about the Nature, Scope and Significance of Management, <b>SO1.4-</b> Describes the Evolution of Management Thought, Approaches to Management <b>SO1.5</b> Apply the lecture on functions and skills of a manager		<b>Unit-1.0 Introduction to Management: Nature, Scope and Significance of Management, Evolution of Management Thought, Approaches to Management, functions and skills of a manager</b> <b>1.1-</b> Introduction <b>1.2-</b> Meaning <b>1.3-</b> Definition <b>1.4-</b> Nature and scope <b>1.5-</b> Significance <b>1.6-</b> Evaluation of management thought <b>1.7-</b> Approaches to management function <b>1.8</b> Approaches to skills of a manager <b>1.9-</b> Professional managers	<b>1.1-</b> Prepare the assignment on management function evaluation thought

**SW-1 Suggested Sessional Work (SW):**

- Assignments:** Prepare the assignment on management function evaluation thought
- Mini Project:-**
- Other Activities (Specify):-**



**ABM501CO-2: Demonstrate the overall view of various management functions, managerial skills and approaches**

**Approximate Hours**

Item	AppX Hrs
CI	10
LI	00
SW	01
SL	02
Total	13

Session Outcomes (SOs)	Laboratory Instruction (LI)	Class room Instruction (CI)	Self Learning (SL)
<b>SO2.1</b> –Introduce to the management function <b>SO2.2</b> –Describe the type of management function with use important <b>SO2.3</b> - Discuss the planning and plan with their type and step. <b>SO2.4</b> - Apply the objective and organizing in details <b>SO2.5</b> –Discuss to the staffing, Direction and controlling.		<b>Unit-2.0 - Management functions: Planning– Types, Steps, Objective, Process, Strategies, Policies, MBO, Organizing – Structure &amp; Process, Line, Staff, Authority &amp; Responsibility, Staffing – Recruitment and Selection, Directing– Training, Communication &amp; Motivation, Controlling- Significance, Process, Techniques, Standards &amp; Benchmarks, Management Audit</b>  2.1- Introduction to management function 2.2- Planning, Type and Step of planning 2.3- Objective Process and Strategies 2.4- Policies, MOB	<b>2.1</b> – Prepare assignment on project report of different function of management used in any case study



		<b>2.5-</b> organizing introduction Structure & Process <b>2.6-</b> Line, Staff, Authority & Responsibility <b>2.7</b> Staffing – Recruitment and Selection <b>2.8-</b> Directing – Training, Communication & Motivation <b>2.9-</b> Controlling- Significance, Process, Techniques, Standards <b>2.10-</b> Benchmarks, Management Audit	
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**SW-1 Suggested Sessional Work (SW):**

**a. Assignments:** Prepare assignment on project report of different function of management used in any case study

**b. Mini Project:**

**c. Other Activities (Specify):**

**ABM501CO-3: Apply the fundamentals of individual and group behavior in the organizational setting**

**Approximate Hours**

Item	AppX Hrs
CI	11
LI	0
SW	2
SL	1
Total	13

Session Outcomes (SOs)	Laboratory Instruction (LI)	Class room Instruction (CI)	Self Learning (SL)
<b>SO3.1</b> –Identify to the organizational behaviour <b>SO3.2</b> –Discuss to the		<b>Unit-3.0 Nature, Scope and Significance of Organizational</b>	<b>3.1</b> Prepare the assignment



<p>fundamental of individual behaviour</p> <p><b>SO3.3-</b>Apply the Learning and individual decision making</p> <p><b>SO3.4-</b>Discuss to motivation with type theory and practice</p> <p><b>SO3.5-</b>Describe the managing of stress and work life balance</p>		<p><b>Behavior; Foundations of Individual behaviour – Emotions, Personality, Values, Attitudes, Perception, Learning and individual decision making, Motivation-Types of motivation, theories of motivation, motivational practices at workplace, managing stress and work life balance.</b></p> <p><b>3.1-</b> Nature, Scope and Significance of Organizational Behavior</p> <p><b>3.2-</b> Foundations of Individual behaviour</p> <p><b>3.3-</b> Emotions and Personality.</p> <p><b>3.4-</b> Values and Attitudes,</p> <p><b>3.5-</b> Perception and Learning</p> <p><b>3.6-</b> Individual decision making</p> <p><b>3.7 -</b> Motivation-Types of motivation</p> <p><b>3.8-</b> Theories of motivation</p> <p><b>3.9-</b> Motivational practices at workplace</p> <p><b>3.10-</b> Managing stress</p> <p><b>3.11-</b> Work life balance</p>	
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**SW-1 Suggested Seasonal Work (SW):**

**a. Assignments:** Prepare the assignment on individual or organizational behaviours

**b. Mini Project:**

**c. Other Activities (Specify):**

**ABM501 CO-4: Analyze the group decision making, team building and developing collaboration leadership styles.**

**Approximate Hours**

Item	AppX Hrs
CI	09
LI	00
SW	02
SL	01
Total	12

Session Outcomes (SOs)	Laboratory Instruction (LI)	Class room Instruction (CI)	Self Learning (SL)
<b>SO1.1</b> –Identify the group dynamics, type of groups and groups formation. <b>SO1.2</b> -Apply the Group decision making <b>SO1.3</b> -Apply the team building and developing collaboration <b>SO1.4</b> -Describes the leadership styles and influence process; <b>SO1.5</b> –Apply the leadership theories, leadership styles and effective leader		<b>Unit-4.0 Group dynamics- types of groups, group formation, Group decision making, team building and developing collaboration, leadership styles and influence process; leadership theories, leadership styles and effective leader</b> <b>4.1</b> -Group dynamics and types of groups <b>4.2</b> -group formation <b>4.3</b> -Group decision making <b>4.4</b> -Team building <b>4.5</b> -Developing collaboration <b>4.6</b> -Leadership styles <b>4.7</b> -Influence	<b>1.1-</b> :Prepare the assignment on Group decision making, team building and developing collaboration



		process <b>4.8-Leadership theories</b> <b>4.9-Leadership styles and effective leader</b>	
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**SW-1 Suggested Seasonal Work (SW):**

**.Assignments:** Prepare the assignment on Group decision making, team building and developing collaboration

**b. Mini Project:**

**c. Other Activities (Specify):**

**ABM 501 CO-5: Student will evaluate the ability understanding and managing organizational culture, power and political behaviour**

**Approximate Hours**

Item	AppX Hrs
CI	06
LI	00
SW	02
SL	02
Total	10

Session Outcomes (SOs)	Laboratory Instruction (LI)	Class room Instruction (CI)	Self Learning (SL)
<b>SO1.1</b> –Identify Understanding and managing organizational culture, <b>SO1.2-</b> Discuss the power and political behavior in organizations <b>SO1.3-</b> Describe the ,conflict Management, negotiation and managing organizational change <b>SO1.4-</b> Analysis the concept of organizational		<b>Unit-5.0 Understanding and managing organizational culture, power and political behavior in organizations, conflict Management, negotiation, managing organizational change, concept of organizational development.</b> <b>5.1-</b> Organizational culture	<b>1.1</b> -Prepare the assignment on individual or organizational behaviors t



development		<b>5.2-</b> power and political behavior <b>5.3-</b> conflict Management <b>5.4-</b> negotiation <b>5.5-</b> managing organizational change <b>5.6-</b> organizational development	
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**SW-1 Suggested Seasonal Work (SW):**

**a. Assignments:** Prepare the assignment on individual or organizational behaviours

**b. Mini Project:**

**c. Other Activities (Specify)**

**Brief of Hours suggested for the Course Outcome**

Course Outcomes	Class Lecture (C I)	Laboratory Lecture (LI)	Seasonal Work (SW)	Self Learning (S I)	Total hour (C I + LI + SW + S I)
ABM-501.01: Identify the basic concepts of management and organizational behavior.	09	00	02	01	12
ABM-501.02: Demonstrate the overall view of various management functions, managerial skills and approaches.	10	00	01	02	13
ABM-501.03: Apply the fundamentals of individual and group behavior in the organizational setting.	11	00	02	01	14
ABM-501.04: Analyze the group decision making, team building and developing collaboration and leadership styles.	09	00	02	01	12
ABM-501.05: Evaluate the ability understanding and managing organizational culture, power and political behavior	06	00	02	02	10
<b>Total Hours</b>	<b>45</b>	<b>00</b>	<b>09</b>	<b>07</b>	<b>61</b>



### Suggested Specification Table (For ESA)

CO	Unit title	Marks Distribution			Total Marks
		R	U	A	
CO-1	<b>Unit-1.0</b> Introduction to Management: Nature, Scope and Significance of Management, Evolution of Management Thought, Approaches to Management, functions and skills of a manager	02	03	00	05
CO-2	<b>Unit-2.0</b> - Management functions: Planning – Types, Steps, Objective, Process, Strategies, Policies, MBO, Organizing – Structure & Process, Line, Staff, Authority & Responsibility, Staffing – Recruitment and Selection, Directing – Training, Communication & Motivation, Controlling- Significance, Process, Techniques, Standards & Benchmarks, Management Audit	02	05	03	10
CO-3	<b>Unit-3.0</b> Nature, Scope and Significance of Organizational Behavior; Foundations of Individual behavior – Emotions, Personality, Values, Attitudes, Perception, Learning and individual decision making, Motivation- Types of motivation, theories of motivation, motivational practices at workplace, managing stress and work life balance.	00	08	07	15
CO-4	<b>Unit-4.0</b> Group dynamics- types of groups, group formation, Group decision making, team building and developing collaboration, leadership styles and influence process; leadership theories, leadership styles and	02	05	08	15



	effective leader				
CO-5	<b>Unit-5.0</b> Understanding and managing organizational culture, power and political behavior in organizations, conflict Management, negotiation, managing organizational change, concept of organizational development.	00	03	02	05
	<b>Total</b>	06	24	20	50

**Legend: R: Remember, U: Understand, A: Apply**

The end of semester assessment for Introduction to Portland cement will be held with written examination of 50 marks

**Note.** Detailed Assessment rubric needs to be prepared by the course wise teachers for above tasks. Teachers can also design different tasks as per requirement, for end semester assessment.

**Suggested Instructional/Implementation Strategies:**

1. Improved Lecture
2. Tutorial
3. Case Method
4. Group Discussion
5. Role Play
6. Visit to Industry
7. Demonstration
8. ICT Based Teaching Learning (Video Demonstration/Tutorials CBT, Blog, Facebook, Twitter, Whatsapp, Mobile, Online sources)
9. Brainstorming



**Suggested Learning Resources:**

S. No.	Title	Author	Publisher	Edition & Year
01	Management.	Robbins SP, Coulter Mand Vohra N	Pearson Edu	2010.
02	Principles of Agribusiness Management.	Beierlein JG, Schneeberger KC, Osburn DD.	Waveland Press	2014. Fifth edition.
03	PRINCIPLES AND PRACTICE OF MANAGEMENT	LM Prasad	SULTAN CHAND & SON ISBN: 9789351611813 <b>WEBSITES</b> <b>WW</b> .slideshare.net <a href="https://www.managementstudyguide.com/management_functions.htm">https://www.managementstudyguide.com/management_functions.htm</a>	10TH EDITION 2021

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**Cos, POs and PSOs Mapping Course**

**Code:-ABM 501**

**Course Title:-Principles of Management and Organizational Behaviour**

Course Outcomes	Program Outcomes												Program Specific Outcome			
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4
	Managerial knowledge	Problem analysis	Modern tool usage	Ethics	Individual and team work	Communication	Project management and finance	Business decision making	Life-long learning	Environment and sustainability	Entrepreneurial opportunities	Global outlook	Ability to apply managerial and business skilled for development of business growth with the available resources	Ability to understand the day to day business operational problems and startup development of agribusiness and provide economic solution to enhance the decision goal without	Inculcate proactive thinking to ensure effective performance in the dynamic socio-economic and business ecosystem entrepreneurial approach and skill sets aligned	Ability to use the research based innovative knowledge for sustainable development in agribusiness growth and development



														compromising ethical value	with the national priorities	
<b>CO-1:</b> Identify the basic concepts of management and organizational behavior.	3	1	1	2	1	1	1	2	3	2	1	3	3	1	2	1
<b>CO-2:</b> Demonstrate the overall view of various management functions, managerial skills and approaches.	3	2	1	2	2	2	1	3	2	1	2	3	3	2	2	3
<b>CO-3:</b> Apply the fundamentals of individual and group behavior in	3	2	1	2	2	2	3	2	1	2	3	3	2	3	3	3





the organizational setting.																
<b>CO-4:</b> Analyze the group decision making, team building and developing collaboration and leadership styles.	2	2	3	1	2	2	3	2	1	2	1	1	3	3	2	2
<b>CO-5:</b> Evaluate the ability understanding and managing organizational culture, power and political behavior	2	3	3	1	3	2	2	2	2	1	1	2	2	2	2	2

**Legend: 1–Low, 2–Medium, 3–High**



### Course Curriculum Map: Principles of Management and Organizational Behaviour

POs&PSOs No.	COs No.&Titles	SOs No.	Laboratory Instruction (LI)	Classroom Instruction (CI)	Self Learning (SL)
PO1,2,3,4,5,6 7,8,9,10,11,12  PSO1,2,3,4,5	<b>Unit-1.0</b> Introduction to Management: Nature, Scope and Significance of Management, Evolution of Management Thought, Approaches to Management, functions and skills of a manager	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-1.0</b> Introduction to Management: Nature, Scope and Significance of Management, Evolution of Management Thought, Approaches to Management, functions and skills of a manager 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 1.9.	As mentioned in page number .....
PO1,2,3,4,5,6 7,8,9,10,11,12  PSO1,2,3,4,5	<b>CO-2:</b> Demonstrate the overall view of various management functions, managerial skills and approaches.	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-2.0–</b> Management functions: Planning – Types, Steps, Objective, Process, Strategies, Policies, MBO, Organizing – Structure & Process, Line, Staff, Authority & Responsibility, Staffing – Recruitment and Selection, Directing – Training, Communication & Motivation, Controlling – Significance, Process, Techniques, Standards & Benchmarks, Management Audit. 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10.	As mentioned in page number .....
PO1,2,3,4,5,6 7,8,9,10,11,12  PSO1,2,3,4,	<b>CO-3:</b> Apply the fundamentals of individual and group behavior in the	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b>		<b>Unit-3.0</b> Nature, Scope and Significance of Organizational Behavior; Foundations of Individual behaviour – Emotions, Personality,	As mentioned in page number .....



5	organizational setting.	<b>SO1.5</b>		Values, Attitudes, Perception, Learning and individual decision making, Motivation-Types of motivation, theories of motivation, motivational practices at workplace, managing stress and work life balance. 3.1,3.2,3.3,3.4,3.5,3.6,3.7,3.8,3.9,3.10,3.11.	
PO1,2,3,4,5,6 7,8,9,10,11,12  PSO1,2,3,4,5	<b>CO-4:</b> Analyze the group decision making, team building and developing collaboration and leadership styles.	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-4.0</b> Group dynamics-types of groups, group formation, Group decision making, team building and developing collaboration, leadership styles and influence process; leadership theories, leadership styles and effective leader 4.1,4.2,4.3,4.4,4.5,4.6,4.7,4.8,4.9.	As mentioned in page number .....
PO1,2,3,4,5,6 7,8,9,10,11,12  PSO1,2,3,4,5	<b>CO-5:</b> Evaluate the ability understanding and managing organizational culture, power and political behavior	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-5.0</b> Understanding and managing organizational culture, power and political behavior in organizations, conflict Management, negotiation, managing organizational change, concept of organizational development. 5.1,5.2,5.3,5.4,5.5,5.6.	As mentioned in page number .....



**Course Code: ABM502**

**Course Title: Managerial Accounting and Control**

**Pre requisite:** -Students should have advance knowledge of Managerial Accounting and Control, for developed the ability of Managerial Accounting and Control

**Rationale:** - Managerial Accounting and Control is the express through the concept and provide the information to Agricultural Economist and professionals in accurate manners. Agricultural Economist or scientist should develop skill in the enterprise analysis and farm business with apply the principle of Managerial Accounting and Control

**Course Outcomes:**

**ABM502CO-1** Identify the concepts of financial and managerial accounting.

**ABM502CO-2.** Discriminate the expertise in accounting and application of accounting in company accounting

**ABM 502 CO-3.** Practice the basics of cost accounting through various tools and techniques available.

**ABM 502 CO-4** Estimate the analysis of cost accounting and their application in agribusiness accounting

**ABM502CO-5** Assess the budget and budgetary control methods and application of its knowledge in preparation of budget

**Scheme of Studies:**

Board of Study	Course Code	Course Title	Scheme of studies (Hours/Week)					Total Credits (C)
			CI	LI	SW	SL	Total Study Hours CI+LI+SW+SL	
Program Core (PCC)	ABM 502	Managerial Accounting and Control	3	0	2	1	06	03

**Legend:**

**CI:** Classroom Instruction (Includes different instructional strategies i.e. Lecture (L) and Tutorial (T) and others),

**LI:** Laboratory Instruction (Includes Practical performances in laboratory workshop, field or other locations using different instructional strategies)

**SW:** Sessional Work (includes assignment, seminar, mini project etc.),

**SL:** Self Learning,

**C:** Credits.

**Note:** SW & SL has to be planned and performed under the continuous guidance and feedback of teacher to ensure outcome of Learning.



**Scheme of Assessment:**

Board of Study	Course Code	Course Title	Scheme of Assessment (Marks)							
			Progressive Assessment (PRA)						End Semester Assessment (ESA)	Total Marks (PRA+ESA)
			Class/Home Assignment 5 number 3 marks each (CA)	Class Test 2 (2 best out of 3) 10 marks each (CT)	Seminar one (SA)	Class Activity anyone (CAT)	Class Attendance (AT)	Total Marks (CA+CT+SA+CAT+AT)		
PC C	ABM 502	Managerial Accounting and Control	15	30	00	00	5	50	50	100

**Course-Curriculum Detailing:**

This course syllabus illustrates the expected learning achievements, both at the course and session levels, which students are anticipated to accomplish through various modes of instruction including Classroom Instruction (CI), Laboratory Instruction (LI), Sessional Work (SW), and Self Learning (SL). As the course progresses, students should showcase their mastery of Session Outcomes (SOs), culminating in the overall achievement of Course Outcomes (COs) upon the course's conclusion.



**ABM502CO-1: Identify the concepts of financial and managerial accounting.**

**Approximate Hours**

Item	Approximate Hours
CI	9
LI	0
SW	2
SL	1
Total	12

Session Outcomes (SOs)	Laboratory Instruction (LI)	Classroom Instruction (CI)	Self Learning (SL)
<b>SO1.1:</b> Financial Accounting-Meaning, Need.  <b>SO1.2:</b> Accounting principles.  <b>SO1.3:</b> Accounting Concepts and Conventions.  <b>SO1.4:</b> Branches of Accounting, Users of Accounting information, Advantages and Limitations  <b>SO1.5:</b> Financial Accounting, Accounting Standards.		<b>Unit I:</b> <b>Financial Accounting-Meaning, Need, Accounting principles: Accounting Concepts and Conventions; Branches of Accounting, Users of Accounting information, Advantages and Limitations of Financial Accounting, Accounting Standards</b> <b>1.1-</b> Financial Accounting-Meaning, Need. <b>1.2-</b> Accounting principles. <b>1.3-</b> Accounting Concepts and Conventions. <b>1.4-</b> Branches of Accounting, <b>1.5-</b> Users of Accounting information, <b>1.6-</b> Advantages of Accounting <b>1.7-</b> Limitations. of Accounting <b>1.8-</b> Financial Accounting <b>1.9-</b> Accounting Standards.	<b>1.1-</b> Prepare the assignment on Meaning and definition of Financial Accounting-Meaning, Need, Accounting principles: Accounting Concepts and Conventions

**SW-1 Suggested Sessional Work (SW):**

**a. Assignments:** Prepare the assignment on Meaning and definition of Financial Accounting-Meaning, Need, Accounting principles: Accounting Concepts and Conventions

**b. Mini Project:**

**c. Other Activities (Specify):**



**ABM 502 CO-2: Discriminate the expertise in accounting and application of accounting in company accounting**

**Approximate Hours**

Item	ApprXHours
CI	9
LI	0
SW	2
SL	1
<b>Total</b>	<b>12</b>

Session Outcomes (SOs)	Laboratory Instruction (LI)	Classroom Instruction (CI)	Self Learning (SL)
SO1.1: The Double Entry System- Its Meaning and Scope,  SO1.2: The Journal, Cash Book, Ledger, Trial Balance,  SO1.3: Trading Account Profit and Loss Account,  SO1.4: Balance Sheet, entries and adjustments of different heads in different Books and Accounts,  SO1.5: Introduction of Company Accounts, Use of Accounting Software.		<b>Unit 2- The Double Entry System- Its Meaning and Scope, The Journal, Cash Book, Ledger, Trial Balance, Trading Account Profit and Loss Account, Balance Sheet, entries and adjustments of different heads in different Books and Accounts, Introduction of Company Accounts, Use of Accounting Software.</b> The Double Entry System- Its Meaning and Scope. The Journal. -The Cash Book, <b>2.4-</b> The Ledger <b>2.5-</b> The Trial Balance, <b>2.6-</b> Trading Account Profit and Loss Account, Balance Sheet, entries and adjustments of different heads in different Books and Accounts, - Introduction of Company Accounts, - Use of Accounting Software	- Prepare the assignment on Meaning and definition of The Double Entry System- Its Meaning and Scope, The Journal, Cash Book, Ledger, Trial Balance,

**SW-2 Suggested Sessional Work (SW):**

- Assignments:** Prepare the assignment on Meaning and definition of The Double Entry System- Its Meaning and Scope, The Journal, Cash Book, Ledger, Trial Balance
- Mini Project:**
- Other Activities (Specif**



**ABM502CO-3: Practice the basics of cost accounting through various tools and techniques available**

**Approximate Hours**

Item	Approx Hours
CI	9
LI	0
SW	2
SL	1
Total	12

Session Outcomes (SOs)	Laboratory Instruction (LI)	Classroom Instruction (CI)	Self Learning (SL)
<p><b>SO1.1:</b> Management Accounting-Meaning, Functions, Scope, Utility.</p> <p><b>SO1.2:</b> Limitations and Tools of Management Accounting, Analysis of Financial Statements.</p> <p><b>SO1.3:</b> Ratio, time series, common size and Du pont Analysis.</p> <p><b>SO1.4:</b> Comparative and Common Size Statements.</p> <p><b>SO1.5:</b> Cash Flow and Fund Flow Analysis.</p>		<p><b>Unit-3</b> <b>Management Accounting-Meaning, Functions, Scope, Utility, Limitations and Tools of Management Accounting, Analysis of Financial Statements-Ratio, time series, common size and Dupont Analysis, Comparative and Common Size Statements, Cash Flow and Fund Flow Analysis.</b></p> <p>Management Accounting-Meaning and Functions.</p> <p>- Management Accounting – Scope, Utility and Limitations</p> <p><b>3.3-</b> Tools of Management Accounting,</p> <p><b>3.4-</b> Analysis of Financial Statements. Ratio and time series,</p> <p><b>3.5-</b> Analysis of Financial Statements common size and Du pont Analysis.</p> <p><b>3.6-</b> Comparative Size Statements of Analysis of Financial.</p> <p><b>3.7-</b> Common Size Statements of Analysis of Financial.</p> <p><b>3.8-</b> Cash Flow</p> <p><b>3.9-</b> Fund Flow Analysis.</p>	<p><b>3.1-</b> Prepare the assignment on Meaning and definition of Management Accounting-Meaning, Functions, Scope, Utility, Limitations and Tools of Management Accounting, Analysis of Financial Statements</p>

**SW-3 Suggested Sessional Works (SW):**





- a. Assignments:** Prepare the assignment on Meaning and definition of Management Accounting- Meaning, Functions, Scope, Utility, Limitations and Tools of Management Accounting, Analysis of Financial Statements
- b. MiniProject:**
- c. OtherActivities(Specify):**

**ABM502CO-4:Estimate the analysis of cost accounting and their application in agribusiness accounting**  
**ApproximateHours**

Item	ApproXHours
CI	10
LI	0
SW	2
SL	1
Total	13

SessionOutcomes(SOs)	Laboratory Instruction(LI)	Class roomInstruction (CI)	SelfLearning(SL)
SO1.1:Cost Accounting– Nature, Course, Significance of Cost Accounting. SO1.2: Classification of Cost, Costing for Material; Labour and overheads. SO1.3: Marginal Costing and cost volume profit Analysis Its Significance, Uses and Limitations; Standard Costing. SO1.4: Meaning, Uses and Limitations, Determination of Standard Cost, Variance Analysis. SO1.5: Material, Labour and Overhead.		<b>Unit4- CostAccounting–Nature, Course,Significanceof Cost Accounting; Classification of Cost, Costing for Material; Labourandoverheads; Marginal Costing and cost volume profit AnalysisItsSignificance, Uses and Limitations; StandardCosting–Its Meaning, Uses and Limitations, Determination of StandardCost,Variance Analysis-Material, Labour and Overhead.</b> <b>4.1-</b> CostAccounting– Nature, Course. <b>4.2-</b> SignificanceofCost Accounting. <b>4.3-</b> ClassificationofCost. <b>4.4-</b> Costing for Material; Labour and overheads. <b>4.5-</b> MarginalCosting <b>4.6-</b> Costvolumeprofit Analysis <b>4.7-</b> Significance,Uses <b>4.8-</b> Limitationsof	<b>4.1-</b> Prepare the assignmenton Meaning and definition of Cost Accounting– Nature, Course, Significance ofCost Accounting; Classification.



		Marginal Costing - Standard Costing. Meaning, Uses and Limitations, Determination of Standard Cost, Variance Analysis. - Material, Labour and Overhead.	
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**SW-4 Suggested Sessional Work (SW):**

**a. Assignments:** Prepare the assignment on Meaning and definition of Cost Accounting–Nature, Course, Significance of Cost Accounting; Classification

**b. Mini Project:**

**c. Other Activities (Specify):**

**ABM 502 CO- 5: Asses the budget and budgetary control methods and application of its knowledge in preparation of budget.**

**Approximate Hours**

Item	Approx Hours
CI	8
LI	0
SW	2
SL	1
Total	11

Session Outcomes (SOs)	Laboratory Instruction (LI)	Classroom Instruction (CI)	Self Learning (SL)
<b>SO1.1:</b> Budget and Budgetary Control- Meaning, Uses and Limitations. <b>SO1.2:</b> Budgeting and Profit planning, Different Types of Budgets and their Preparations: Sales. <b>SO1.3:</b> Budget, Purchase Budget, Production Budget, Cash Budget, Flexible Budget, Master Budget, Zero. <b>SO1.4:</b> Based Budgeting. Mergers and Acquisition. <b>SO1.5:</b> Tax System-GST.		<b>Unit 5-</b> <b>Budget and Budgetary Control- Meaning, Uses and Limitations, Budgeting and Profit planning, Different Types of Budgets and their Preparations: Sales Budget, Purchase Budget, Production Budget, Cash Budget, Flexible Budget, Master Budget, Zero Based Budgeting. Mergers and Acquisition, Tax System- GST.</b> <b>5.1-</b> Budget and Budgetary Control- Meaning, Uses and	<b>5.1-</b> Prepare the assignment on Meaning and definition of Agricultural Cooperation in India.



		Limitations. <b>5.2-</b> Budgeting and Profit planning, <b>5.3-</b> Different Types of Budgets and their Preparations: <b>5.4 -</b> Sales. Budget, Purchase Budget, <b>5.5-</b> Production Budget, Cash and Budget <b>5.6-</b> Flexible Budget and Master Budget <b>5.7-</b> Zero .Based Budgeting. <b>5.8-</b> Mergers and Acquisition, Tax System- GST.	
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**SW-5 Suggested Seasonal Work (SW):**

- a. Assignments:** Prepare the assignment on Meaning and definition of Agricultural Cooperation in India
- b. Mini Project:**
- c. Other Activities (Specify):**

**Brief of Hours suggested for the Course Outcome**

Course Outcomes	Class Lecture (Cl)	Laboratory Instruction (LI)	Seasonal Work (SW)	Self Learning (Sl)	Total hour (Cl+SW+Sl)
ABM502CO1. Identify the concepts of financial and managerial accounting.	9	0	2	1	12
ABM502CO2. Discriminate the expertise in accounting and application of accounting in company accounting	9	0	2	1	12
ABM502CO3. Practice the basics of cost accounting through various tools and	9	0	2	1	12



techniques available.					
ABM502CO4. Estimate the analysis of cost accounting and their application in agribusiness accounting	10	0	2	1	13
ABM502CO5. Assess the budget and budgetary control methods and application of its knowledge in preparation of budget.	8	0	2	1	11
<b>Total</b>	<b>45</b>	<b>00</b>	<b>10</b>	<b>05</b>	<b>60</b>

**Suggestion for End Semester Assessment**  
**Suggested Specification Table (For ESA)**

CO	Unit Titles	Marks Distribution			Total Marks
		R	U	A	
<b>CO1</b>	<b>Unit I:</b> Financial Accounting-Meaning, Need, Accounting principles: Accounting Concepts and Conventions; Branches of Accounting, Users of Accounting information, Advantages and Limitations of Financial Accounting, Accounting Standards	02	03	00	05
<b>CO2</b>	<b>Unit 2-</b> The Double Entry System-Its Meaning and Scope, The Journal, Cash Book, Ledger, Trial Balance, Trading Account Profit and Loss Account, Balance Sheet, entries and adjustments of different heads in different Books and Accounts, Introduction of Company Accounts, Use of Accounting Software.	02	05	03	10
<b>CO3</b>	<b>Unit- 3</b> Management Accounting-Meaning, Functions, Scope, Utility, Limitations and Tools of Management Accounting, Analysis of Financial Statements- Ratio, time series, common size and Dupont Analysis, Comparative and Common Size Statements, Cash Flow and Fund Flow Analysis..	00	08	07	15
<b>CO4</b>	<b>Unit 4 -</b> Cost Accounting-Nature, Course, Significance of Cost Accounting; Classification of Cost, Costing for Material; Labour and overheads; Marginal Costing and cost volume	02	05	08	15



	profit Analysis Its Significance, Uses and Limitations; Standard Costing – Its Meaning, Uses and Limitations, Determination of Standard Cost, Variance Analysis-Material, Labour and Overhead.				
<b>CO5</b>	<b>Unit 5-</b> Budget and Budgetary Control-Meaning, Uses and Limitations, Budgeting and Profit planning, Different Types of Budgets and their Preparations: Sales Budget, Purchase Budget, Production Budget, Cash Budget, Flexible Budget, Master Budget, Zero Based Budgeting. Mergers and Acquisition, Tax System- GST.	00	03	02	05
		06	24	20	50

**Legend: R: Remember, U: Understand, A: Apply**

The end of semester assessment for Managerial Accounting and Control will be held with written examination of 50 marks

**Note.** Detailed Assessment rubric need to be prepared by the course wise teachers for above tasks. Teachers can also design different tasks as per requirement, for end semester assessment.

Suggested Instructional/Implementation Strategies:

1. Improved Lecture
2. Tutorial
3. Case Method
4. Group Discussion
5. Role Play
6. Visit to cement plant
7. Demonstration
8. ICT Based Teaching Learning (Video Demonstration/Tutorials CBT, Blog, Facebook, Twitter, Whatsapp, Mobile, Online sources)
9. Brainstorming

**Suggested Learning Resources:**

S. No.	Title	Author	Publisher	Edition & Year
1	Corporate Finance,	Ross, Westerfield and Jaffe and Kakani (RWJK)	Tata McGraw Hill,	2009.
2	Corporate Finance	1. Michael C Ehrhardt and Eugene F Brigham	A Focused Approach, Cengage Learning, 2011	2011.
3	Financial Management,	2. Rajiv Srivastava and Anil Misra,	Oxford University Press,	2011
4	Financial Management	M. Pandey	10th edition), Vikas Publishing	2011.
5	Accounting:	Anthony, Hawkins and Merchant	Text & Cases.	2011



**Curriculum Development Team:**

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**Cos, POs and PSOs Mapping Course**

**Code:-ABM 502**

**Course Title:-Managerial Accounting and Control**

Course Outcomes	Program Outcomes												Program Specific Outcome			
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4
	Managerial knowledge	Problem analysis	Modern tool usage	Ethics	Individual and team work	Communication	Project management and finance	Business decision making	Life-long learning	Environment and sustainability	Entrepreneurial opportunities	Global outlook	Ability to apply managerial and business skilled for development of business growth with the available resources	Ability to understand the day to day business operational problems and startup development of agribusiness and business provide economical solution to	Inculcate proactive thinking to ensure effective performance in the dynamic socio-economic and business ecosystem entrepreneurship	Ability to use the research based innovative knowledge for sustainable development in agribusiness growth



														enhance the decision goal without compromising ethical value	curricular approach and skill sets aligned with the national priorities	and develops
<b>CO1.</b> Identify the concepts of financial and managerial accounting.	3	1	1	2	1	1	1	2	3	2	1	3	3	1	2	1
<b>CO2.</b> Discriminate the expertise in accounting and application of accounting in company accounting	3	2	1	2	2	2	1	3	2	1	2	3	3	2	2	3
<b>CO3.</b> Practice the basics of cost accounting through various tools and techniques available.	3	2	1	2	2	2	3	2	1	2	3	3	2	3	3	3





<b>CO4.</b> Estimate the analysis of cost accounting and their application in agribusiness accounting	2	2	3	1	2	2	3	2	1	2	1	1	3	3	2	2
<b>CO5.</b> Assess the budget and budgetary control methods and application of its knowledge in preparation of budget.	2	3	3	1	3	2	2	2	2	1	1	2	2	2	2	2

**Legend: 1–Low, 2–Medium, 3–High**

### Course Curriculum Map: Managerial Accounting and Control

POs & PSOs No.	COs No. & Titles	SOs No.	Laboratory Instruction (LI)	Classroom Instruction (CI)	Self Learning (SL)
PO1,2,3,4,5,6 7,8,9,10,11,12  PSO1,2,3,4,5	<b>CO1.</b> Identify the concepts of financial and managerial accounting.	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit I:</b> Financial Accounting- Meaning, Need, Accounting principles: Accounting Concepts and Conventions; Branches of Accounting, Users of Accounting information, Advantages and Limitations of Financial Accounting, Accounting Standards 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 1.9.	As mentioned in page number .....
PO1,2,3,4,5,6 7,8,9,10,11,12	<b>CO2.</b> Discriminate the expertise in accounting and	<b>SO1.1</b> <b>SO1.2</b>		<b>Unit 2-</b> The Double Entry System- Its Meaning	As mentioned in page number .....



PSO1,2,3,4,5	application of accounting in company accounting	SO1.3 SO1.4 SO1.5		and Scope, The Journal, Cash Book, Ledger, Trial Balance, Trading Account Profit and Loss Account, Balance Sheet, entries and adjustments of different heads in different Books and Accounts, Introduction of Company Accounts, Use of Accounting Software. 2.1,2.2,2.3,2.4,2.5,2.6,2.7,2.8,2.9.	
PO1,2,3,4,5,6 7,8,9,10,11,12  PSO1,2,3,4,5	CO3. Practice the basics of cost accounting through various tools and techniques available.	SO1.1 SO1.2 SO1.3 SO1.4 SO1.5		<b>Unit-3.0</b> Management Accounting-Meaning, Functions, Scope, Utility, Limitations and Tools of Management Accounting, Analysis of Financial Statements-Ratio, time series, common size and Dupont Analysis, Comparative and Common Size Statements, Cash Flow and Fund Flow Analysis 3.1,3.2,3.3,3.4,3.5,3.6,3.7,3.8,3.9.	As mentioned in page number .....
PO1,2,3,4,5,6 7,8,9,10,11,12  PSO1,2,3,4,5	CO4. Estimate the analysis of cost accounting and their application in agribusiness accounting	SO1.1 SO1.2 SO1.3 SO1.4 SO1.5		<b>Unit-4.0</b> Cost Accounting-Nature, Course, Significance of Cost Accounting; Classification of Cost, Costing for Material; Labour and overheads; Marginal Costing and cost volume profit Analysis Its Significance, Uses and Limitations; Standard Costing – Its Meaning, Uses and Limitations, Determination of Standard Cost, Variance Analysis-Material, Labour and Overhead. 4.1,4.2,4.3,4.4,4.5,4.6,4.7,4.8,4.9,4.10.	As mentioned in page number .....



PO1,2,3,4,5,6 7,8,9,10,11,12  PSO1,2,3,4, 5	<b>CO5.</b> Asses the budget and budgetary control methods and application of its knowledge in preparation of budget.	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-5.0</b> Budget and Budgetary Control- Meaning, Uses and Limitations, Budgeting and Profit planning, Different Types of Budgets and their Preparations: Sales Budget, Purchase Budget, Production Budget, Cash Budget, Flexible Budget, Master Budget, Zero Based Budgeting. Mergers and Acquisition, Tax System- GST. 5.1,5.2,5.3,5.4,5.5,5.6,5.7,5.8.	As mentioned in page number .....
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**Course Code:-**ABM503

**Course Title:-**Applied Agribusiness Economics

**Prerequisite:-**Students should have basic knowledge of basic concepts of economics.

**Rationale:-**Applied Agribusiness Economics in Agribusiness management degree is the express through at analyzing the decision-making processes of farmers and consumers in front of new sets of options coming from new technological solutions. It also develops analytical methods to study resource allocation problems in agriculture and natural resources. Degree holders receive hands-on experience in price analysis, operations research, economic development, and economic research. Students are well-grounded in economic theory and conduct economic analysis.

**Course Outcomes:**

**ABM 503 CO-1** Recognize the concepts of managerial economics and its implications on the agri business environment.

**ABM 503 CO -2.** Describe clear overview on the macroeconomic environment that exists for a agri business enterprise to understand and adapt for optimizing the output.

**ABM503CO-3** Initiate the familiar with issues related to the agricultural sector, natural resource policies, and rural communities. .

**ABM503CO-4** Analyze the pricing and pricing policy and developed the expertise in price and its researchers and developed as professionals.

**ABM503CO-5** Judge for analyze to macroeconomics and developed the expertise in macroeconomics and developed as professionals.

**Scheme of studies**

Board of Study	Course Code	Course Title	Scheme of studies (Hours/Week)					Total Credits (C)
			CI	LI	SW	SL	Total Study Hours (CI+LI+SW+SL)	
Program Core (PCC)	ABM 503	Applied Agribusiness Economics	02	00	02	01	05	02

**Legend: CI:** Classroom Instruction (Includes different instructional strategies i.e. Lecture (L) and Tutorial (T) and others),

**LI:** Laboratory Instruction (Includes Practical performances in laboratory workshop, field or other locations using different instructional strategies)

**SW:** Sessional Work (includes assignment, seminar, mini project etc.),



**SL:** Self Learning,

**C: Credits.**

**Note:** SW & SL has to be planned and performed under the continuous guidance and feedback of teacher to ensure outcome of Learning.

**Scheme of Assessment:**

Board of Study	Course Code	Course Title	Scheme of Assessment (Marks)							
			Progressive Assessment (PRA)						End Semester Assessment (ESA)	Total Marks (PRA + ESA)
			Class/ Home Assignment 2 number 5 marks each (CA)	Class Test 2 (2 best out of 3) 20 marks each (CT)	Seminar one (SA)	Class Activity any one (CAT)	Class Attendance (AT)	Total Marks (CA+CT+SA+CAT+AT)		
(PCC)	ABM 503	Applied Agribusiness Economics	10	40	0	0	0	50	50	100

**Course-Curriculum Detailing:**

This course syllabus illustrates the expected learning achievements, both at the course and session levels, which students are anticipated to accomplish through various modes of instruction including Classroom Instruction (CI), Laboratory Instruction (LI), Sessional Work (SW), and Self Learning (SL). As the course progresses, students should showcase their mastery of Session Outcomes (SOs), culminating in the overall achievement of Course Outcomes (COs) upon the course's conclusion.



**ABM 503 CO -1 Recognize the concepts of managerial economics and its implications on the agri business environment.**

**Approximate Hours**

Item	Appxhrs
CI	8
LI	0
SW	2
SL	1
Total	11

Session Outcomes (SOs)	Laboratory Instruction (LI)	Classroom Instruction (CI)	Self Learning (SL)
<b>SO1.1</b> -Introduce about the managerial economics <b>SO1.2</b> -Define the basic concept of firms <b>SO1.3</b> -Describe the concept of behavioral economics <b>SO1.4</b> - Discuss the use of managerial economics <b>SO1.5</b> -Apply the lecture on the different basic economic principles		<b>Unit-1.0</b> <b>Scope of managerial economics, objective of the firm and basic economic principles; mathematical concepts used in managerial economics.</b> <b>Introduction to behavioral economics.</b> 1.1-Introduction 1.2-Scope 1.3-Objective of the firm 1.4-Basics of economic principles 1.5-Concepts of economics principles 1.6-Uses of economic principles 1.7-Manual economics 1.8-Behavioral economics	1.1-Prepare the assignment on basics of economic principles and Concepts of economics principles

**SW-1 Suggested Seasonal Work (SW):**

**a. Assignments:** 1.1-Prepare the assignment on basics of economic principles and Concepts of economics principles

**b. Mini Project:-**

**c. Other Activities (Specify):-**



**ABM 503 CO-2: Describe clear overview on the macroeconomic environment that exists for a agri business enterprise to understand and adapt for optimizing the output.**

**Approximate Hours**

Item	AppX Hrs
CI	06
LI	00
SW	02
SL	01
<b>Total</b>	<b>09</b>

Session Outcomes (SOs)	Laboratory Instruction (LI)	Class room Instruction (CI)	Self Learning (SL)
<b>SO2.1.</b> –Introduce to indifference curve <b>SO2.2.</b> – Learned about the type of demand <b>SO2.3.</b> –Describe the elasticity of demand. <b>SO2.4.</b> – Discuss the determinants of demand <b>SO2.5.</b> –Apply about the demand forecasting		<b>Unit-2.0</b> - Indifference curves and budget sets - Demand analysis - meaning, types and determinants of demand; demand function; demand elasticity; demand forecasting-need and techniques. <b>2.1</b> - Introduction of indifference curve <b>2.2</b> - Find out the demand analysis <b>2.3</b> -Types of demand <b>2.4</b> - Elasticity of demand <b>2.5</b> - Determinants of the demand <b>2.6</b> -Forecasting of the demand	<b>2.1</b> – Prepare the assignment and demand, Types of demand, Elasticity of demand and determinants of the demand

**SW-1 Suggested Seasonal Work (SW):**

**a. Assignments:** Prepare the assignment on demand, Types of demand, Elasticity of demand and determinants of the demand



**b. Mini Project:**

**c. Other Activities (Specify):**

**ABM 503 CO-3: Initiate the familiar with issues related to the agricultural sector, natural resource policies, and rural communities**

**Approximate Hours**

Item	AppX Hrs
CI	06
LI	00
SW	2
SL	1
Total	09

Session Outcomes (SOs)	Laboratory Instruction (LI)	Classroom Instruction (CI)	Self Learning (SL)
<b>SO3.1</b> –Determine the production cost <b>SO3.2</b> –Analyze to the supply function <b>SO3.3</b> -Apply the different production function <b>SO3.4</b> -Estimate the least cost combination <b>SO3.5</b> –Apply the return to scale		<b>Unit-3.0</b> <b>Production, cost and supply analysis- production function, Multi period production and cost least-cost input combination, factor productivities and returns to scale, cost concepts, cost-output relationship, and short and long-run supply functions.</b> <b>3.1</b> -Identification of cost of production <b>3.2</b> -define the supply function <b>3.3</b> -define the least cost combination <b>3.4</b> -Return to scale <b>3.5</b> -Cost concepts <b>3.6</b> - Different types of Production function	<b>3.1</b> -Prepare the assignment on Production, cost and supply analysis





**SW-1 Suggested Seasonal Work (SW):**

**a. Assignments:** Prepare the assignment on Production, cost and supply analysis

**b. Mini Project**

**c. Other Activities (Specify):**

**ABM503 CO-4: Analyze the group decision making, team building and developing collaboration leadership styles.**

**Approximate Hours**

Item	AppX Hrs
CI	06
LI	00
SW	02
SL	01
Total	09

Session Outcomes (SOs)	Laboratory Instruction (LI)	Classroom Instruction (CI)	Self Learning (SL)
<b>SO4.1</b> –Identify the price determination. <b>SO4.2</b> –Discuss the pricing under different market structure <b>SO4.3</b> –Apply the pricing methods <b>SO4.4</b> –Describe the govt policies and pricing <b>SO4.5</b> –Analyze the price discrimination		<b>Unit-4.0</b> <b>Pricing-determinants of price - pricing under different market structures, pricing of joint products, pricing methods in practice, government policies and pricing. Price discrimination</b> <b>4.1-</b> Determinants of price <b>4.2-</b> Pricing under different market structure <b>4.3-</b> Price determination for joint products <b>4.4-</b> Different pricing methods <b>4.5-</b> Govt. price policies <b>4.6-</b> Price discrimination	<b>1.1-</b> Prepare the assignment on Pricing-determinants of price-pricing under different market structures.



**SW-1 Suggested Seasonal Work (SW):**

**a. Assignments:** Prepare the assignment on Pricing-determinants of price-pricing under different market structures

**b. Mini Project:**

**c. Other Activities (Specify):**

**ABM503 CO-5: Judge for analyzing macroeconomics and developed the expertise in macroeconomics and developed as professionals**

**Approximate Hours**

Item	AppX Hrs
CI	06
LI	00
SW	02
SL	02
Total	10

Session Outcomes (SOs)	Laboratory Instruction (LI)	Class room Instruction (CI)	Self Learning (SL)
<b>SO5.1</b> –Identify the national income <b>SO5.2</b> –Describe the consumption and investment <b>SO 5.3</b> –Discuss the factors of inflation <b>SO5.4</b> –Assess Factors influencing demand for money <b>SO5.5</b> – Apply the concept of business decisions		<b>Unit-5.0</b> <b>The national income; circular flow of income: consumption, investment and saving; money-functions, factors influencing demand for money &amp; supply of money; inflation; economic growth; business cycles and business policies; business decisions under certain and uncertain situations.</b> <b>5.1</b> - Calculation of National income <b>5.2</b> - Consumption, investment and saving functions	<b>5.1</b> -Prepare the assignment on The national income; circular flow of income: consumption, investment and saving: money



		<b>5.3-</b> Factors influencing demand and supply for money <b>5.4-</b> Types of Inflation <b>5.5-</b> Business cycles and business policies <b>5.6-</b> Decision taken under business situation	
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**SW-1 Suggested Seasonal Work (SW):**

**a. Assignments:** Prepare the assignment on The national income; circular flow of income: consumption, investment and saving; money

**b. Mini Project:**

**c. Other Activities (Specify)**

**Brief of Hours suggested for the Course Outcome**

Course Outcomes	Class Lecture (C I)	Laboratory Lecture (L I)	Sessional Work (SW)	Self Learning (S I)	Total hour (C I + L I + SW + S I)
ABM-503 CO -01: Recognize the concepts of managerial economics and its implications on the agribusiness environment.	08	00	02	01	11
ABM-503 CO -02: Describe clear overview on the macroeconomic environment that exists for an agribusiness enterprise to understand and adapt for optimizing the output.	06	00	01	02	09
ABM-503 CO -03: Initiate the familiar with issues related to the agricultural sector, natural resource policies, and rural communities.	06	00	02	01	09
ABM-503 CO-04: Analyze the group decision making,	06	00	02	01	09



teambuilding and developing collaboration leadership styles.					
ABM-503 CO -05: Judge for analyze to macroeconomics and developed the expertise in macroeconomics and developed as professionals	06	00	02	02	10
<b>Total Hours</b>	<b>32</b>	<b>00</b>	<b>09</b>	<b>07</b>	<b>48</b>

**Suggestion for End Semester Assessment**

**Suggested Specification Table (For ESA)**

CO	Unit Titles	Marks Distribution			Total Marks
		R	U	A	
<b>CO1</b>	<b>Unit-1.0</b> Scope of managerial economics, objective of the firm and basic economic principles; mathematical concepts used in managerial economics. Introduction to behavioraleconomics.	02	03	00	05
<b>CO2</b>	<b>Unit-2.0</b> - Indifference curves and budget sets - Demand analysis - meaning, types and determinants of demand; demand function; demand elasticity; demand forecasting-need and techniques.	02	05	03	10
<b>CO3</b>	<b>Unit-3.0</b> Production, cost and supply analysis- production function, Multi period production and cost least-cost input combination, factor productivities and returns to scale, cost concepts, cost-output relationship, and short and long-run supply functions.	00	08	07	15
<b>CO4</b>	<b>Unit-4.0</b> Pricing-determinants of price - pricing under different market structures, pricing of joint products, pricing methods in practice, government policies and pricing. Price discrimination	02	05	08	15



<b>CO5</b>	<b>Unit-5.0</b> The national income; circular flow of income: consumption, investment and saving; money-functions, factors influencing demand for money & supply of money; inflation; economic growth; business cycles and business policies; business decisions under certain and uncertain situations.	00	03	02	05
		06	24	20	50

**Legend: R: Remember, U: Understand, A: Apply**

**Legend: R: Remember, U: Understand, A: Apply**

The end of semester assessment for Introduction to Portland Cement will be held with written examination of 50 marks

**Note.** Detailed Assessment rubric need to be prepared by the course wise teachers for above tasks.

Teachers can also design different tasks as per requirement, for end semester assessment.

**Suggested Instructional/Implementation Strategies:**

1. Improved Lecture
2. Tutorial
3. Case Method
4. Group Discussion
5. Role Play
6. Demonstration
7. ICT Based Teaching Learning (Video Demonstration/Tutorials CBT, Blog, Facebook, Twitter, Whatsapp, Mobile, Online sources)
8. Brainstorming



### **Suggested Learning Resources:**

<b>S..No.</b>	<b>Title</b>	<b>Author</b>	<b>Publisher</b>	<b>Edition &amp; Year</b>
01	Managerial Economics	Suma Damodaran	Oxford and IBH Publishing CO. Pvt. LTD	2010 10 <sup>th</sup> edition
02	Managerial Economics	Savatore D. Srivastav R.	Oxford University Press	7 <sup>th</sup> Edition 2012
03	Managerial Economics	Dwivedi DN	Vikash Publishing	8 <sup>th</sup> Edition 2015
04	Principles of Agribusiness Management.	Beierlein JG, Schneeberger KC, Osburn DD.	Waveland Press	2014 5 <sup>th</sup> edition
05	Principles and Practice of Management	L M Prasad	SULTAN CHAND & SON	10 <sup>th</sup> Edition 2021

### **Curriculum Development Team:**

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**Cos, POs and PSOs Mapping Course**  
**Code:-ABM 503**  
**Course Title:-Applied Agribusiness Economics**

Course Outcomes	Program Outcomes												Program Specific Outcome			
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4
	Managerial knowledge	Problem analysis	Modern tool usage	Ethics	Individual and team work	Communication	Project management and finance	Business decision making	Life-long learning	Environment and sustainability	Entrepreneurial opportunities	Global outlook	Ability to apply managerial and business skilled for development of business growth with the available resources	Ability to understand the day to day business operational problems and startup development of agribusiness and provide economical solution to enhance the decision goal without compromising ethical value	Inculcate proactive thinking to ensure effective performance in the dynamic socio-economic and business ecosystem entrepreneurial approach and skill sets aligned with the national priorities	Ability to use the research based innovative knowledge for sustainable development in agribusiness growth and developments



CO-1 Identify the basic concepts of managerial economics and its implications.	3	1	1	2	1	1	1	2	3	2	1	3	3	1	2	1
CO-2 Overall view of macroeconomic environment.	3	2	1	2	2	2	1	3	2	1	2	3	3	2	2	3
CO-3 Apply the fundamentals of natural resource policies and rural communities.	3	2	1	2	2	2	3	2	1	2	3	3	2	3	3	3
CO-4 Apply the fundamentals of decision making, team building and developing collaboration leadership styles.	2	2	3	1	2	2	3	2	1	2	1	1	3	3	2	2





CO-5 Judge for analyze to macroeconomics and developed the expertise in macroeconomics and developed as professionals	2	3	3	1	3	2	2	2	2	2	1	1	2	2	2	2	2
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**Legend: 1–Low, 2–Medium, 3–High**

**Course Curriculum Map: Managerial Accounting and Control**

<b>POs&amp;PSOs No.</b>	<b>COs No.&amp;Titles</b>	<b>SOsNo.</b>	<b>Laboratory Instruction(LI)</b>	<b>Classroom Instruction(CI)</b>	<b>Self Learning(SL)</b>
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO1,2, 3, 4, 5	CO-1 Identify the basic concepts of managerial economics and its implications.	SO1.1 SO1.2 SO1.3 SO1.4 SO1.5		<b>Unit I:</b> Scope of managerial economics, objective of the firm and basic economic principles; mathematical concepts used in managerial economics. Introduction to behavioral economics 1.1,1.2,1.3,1.4,1.5,1.6,1.7,1.8.	As mentioned in page number.....
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO1,2, 3, 4, 5	CO-2 <b>Overall</b> view of macroeconomic environment.	SO1.1 SO1.2 SO1.3 SO1.4		<b>Unit 2-</b> Indifference curves and budget sets-Demand analysis-meaning, types and determinants of demand; demand function; demand elasticity;	As mentioned in page number.....



		<b>SO1.5</b>		demand forecasting-need and techniques 2.1,2.2,2.3,2.4,2.5,2.6.	
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO1,2, 3, 4, 5	CO-3 Apply the fundamentals of natural resource policies and rural communities.	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-3.0</b> Production, cost and supply analysis- production function, Multi period production and cost least-cost input combination, factor productivities and return to scale, cost concepts, cost-output relationship, and short and long-run supply functions. 3.1,3.2,3.3,3.4,3.5,3.6.	As mentioned in page number.....
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO1,2, 3, 4, 5	CO-4 Apply the fundamentals of decision making, team building and developing collaboration leadership styles.	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-4.0</b> Pricing-determinants of price-pricing under different market structures, pricing of joint products, pricing methods in practice, government policies and pricing. Price discrimination. 4.1,4.2,4.3,4.4,4.5,4.6.	As mentioned in page number.....



**Course Code:-ABM 506**

**Course Title:-Agricultural and Food Marketing Management-I**

**Pre requisite:-** Student should have basic knowledge of Food Marketing Management. Marketing policies, marketing management and marketing channels

**Rationale:** - The students studying Agricultural and Food Marketing Management- I should possess understanding about food marketing and employed in Agriculture marketing. This encompasses familiarity with the invention and evolution of food marketing. Additionally, students ought to acquire fundamental insights into various marketing, their applications. Agricultural food marketing I is useful for understanding for marketing activity and market research.

**Course Outcomes:**

**ABM 506 CO-1** Identify the basics of marketing with specific emphasis on managing the product details.

**ABM 506 CO-2** Discriminate the pricing techniques and managing the demand and supply relationship profitably

**ABM 506 CO-3** Demonstrate the marketing channels and intermediaries involved in food marketing

**ABM 506 CO-4** Apply the promotional strategies and communication development tools and methods

**ABM 506 CO-5** Estimate the marketing cost analysis and application of different cost analysis method of food product

**Scheme of studies**

Board of Study	Course Code	Course Title	Scheme of studies (Hours/Week)					Total Credits (C)
			CI	LI	SW	SL	Total Study Hours (CI+LI+SW+SL)	
Professional Core course (PCC)	<b>ABM 506</b>	Agricultural and Food Marketing Management-I	2	0	2	1	05	02

**Legend:** **CI:** Classroom Instruction (Includes different instructional strategies i.e. Lecture (L) and Tutorial (T) and others),

**LI:** Laboratory Instruction (Includes Practical performances in laboratory workshop, field or other locations using different instructional strategies)

**SW:** Sessional Work (includes assignment, seminar, mini project etc.),



**SL:** Self Learning,

**C: Credits.**

**Note:** SW & SL has to be planned and performed under the continuous guidance and feedback of teacher to ensure outcome of Learning.

**Scheme of Assessment:**

Board of Study	Course Code	Course Title	Scheme of Assessment (Marks)							
			Progressive Assessment (PRA)						End Semester Assessment (ESA)	Total Marks (PRA+ESA)
			Class/ Home Assignment number 2 Marks 5 each (CA)	Class Test 2 (2 best out of 3) 20 marks each (CT)	Seminar one (SA)	Class Activity any one (CAT)	Class Attendance (AT)	Total Marks (CA+CT+SA+CAT+AT)		
(PCC)	<b>ABM 506</b>	Agricultural and Food Marketing Management -I	10	40	00	00	00	50	50	100

**Course-Curriculum Detailing:**

This course syllabus illustrates the expected learning achievements, both at the course and session levels, which students are anticipated to accomplish through various modes of instruction including Classroom Instruction (CI), Laboratory Instruction (LI), Sessional Work (SW), and Self Learning (SL). As the course progresses, students should showcase their mastery of Session Outcomes (SOs), culminating in the overall achievement of Course Outcomes (COs) upon the course's conclusion.

**ABM 506 CO-1 Identify the basics of marketing with specific emphasis on managing the product details.**

**Approximate Hours**

Item	AppX Hrs
CI	4
LI	1
SW	2
SL	1
Total	08



<b>Session Outcomes (SOs)</b>	<b>Laboratory Instruction (LI)</b>	<b>Class room Instruction (CI)</b>	<b>Self Learning (SL)</b>
<p><b>SO1.1-</b> Introduce the Introduction and Concept/philosophies of Marketing Management</p> <p><b>SO1.2 -</b> Brief the Product Management: The product, The product mix, Product line extensions, and Product line deletions.</p> <p><b>SO1.3 –</b> Discuss the Branding products, The advantages and disadvantages of branding, Branding decisions Brand loyalty models</p> <p><b>SO1.4-</b> Describes Branding decisions Brand loyalty models, Homogenous first-order mark ov models, Higher-order mark ov models Packaging</p> <p><b>SO1.5</b> Discuss the functions of packaging, Packaging technology, Recent developments in packaging</p> <p><b>SO1.6</b> Laboratory and field work</p>	<p><b>LI1.1-</b></p>	<p><b>Unit I:</b> <b>Introduction and Concept/philosophies of Marketing Management;</b> <b>Product Management:</b> <b>The product, The product mix, Product line extensions, Product line deletions, Branding products, The advantages and disadvantages of branding, Branding decisions Brand loyalty models, Homogenous first-order mark ov models, Higher-order markov models</b> <b>Packaging, The functions of packaging, Packaging technology, Recent developments in packaging</b></p> <p>1.1- Introduction and Concept / philosophies of Marketing Management.</p> <p>1.2-Product Management: The product, The product mix,</p> <p><b>1.3.</b> Product line extensions, Product line deletions,</p> <p><b>1.4-</b> Branding products, The advantages and disadvantages of branding, Branding decisions Brand loyalty models, Homogenous first-order mark ov models</p> <p><b>1.5-</b> Higher-order mark ov models Packaging, The functions of packaging, <b>1.6-</b> Packaging technology, Recent developments in packaging</p>	<p><b>1.1-</b> Prepare the assignment on Branding products, The advantages and disadvantages of branding.</p>



**SW-1 Suggested Sessional Work (SW):**

- a. Assignments:** Prepare the assignment on Branding products, the advantages and disadvantages of branding
- b. Mini Project:-**
- c. Other Activities (Specify):-**

**ABM 506 CO-2: Discriminate the pricing techniques and managing the demand and supply relationship profitably**

**Approximate Hours**

Item	AppX Hrs
CI	2
LI	1
SW	2
SL	1
Total	06

Session Outcomes (SOs)	Laboratory Instruction (LI)	Classroom Instruction (CI)	Self Learning (SL)
<p><b>SO2.1</b> – Introduce to the Pricing objectives, The laws of supply and demand</p> <p><b>SO2.2</b> – learned about Elasticity of demand Cross-price elasticity of demand,</p> <p><b>SO2.3-</b> Apply to the Practical problems of price theory, Cost - revenue - supply relationships,</p> <p><b>SO2.4-</b> Briefing the meaning of price to consumers, Price as an indicator of quality, Pricing strategies,</p> <p><b>SO 2.5</b>– Discuss to the Cost-plus methods of price determination, Breakeven analysis, Market-oriented pricing, Psychological pricing, Geographical pricing, Administered pricing.</p>	<b>LI-2.1</b>	<p><b>Unit II:</b> <b>Pricing objectives, The laws of supply and demand, Elasticity of demand Cross-price elasticity of demand, Practical problems of price theory, Cost - revenue - supply relationships, The meaning of price to consumers, Price as an indicator of quality, Pricing strategies, Cost-plus methods of price determination, Breakeven analysis, Market-oriented pricing, Psychological pricing, Geographical pricing, Administered pricing.</b></p> <p>– Pricing objectives, The laws of supply and demand, Elasticity of demand Cross-price elasticity of demand, - Practical problems of price theory, Cost-revenue-supply</p>	<p>– Prepare the assignment on Pricing strategies, Cost-plus methods of price determination</p>



		relationships 2.3 - The meaning of price to consumers, Price as an indicator of quality, 2.4- Pricing strategies, Cost-plus methods of price determination, 2.5- Breakeven analysis, 2.6 - Market-oriented pricing, Psychological pricing, Geographical pricing, Administered pricing.	
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**SW-1 Suggested Sessional Work (SW):**

**a. Assignments:** Prepare the assignment on Pricing strategies, Cost-plus methods of price determination

**b. Mini Project:**

**c. Other Activities (Specify):**

**ABM506 CO-3: Demonstrate the marketing channels and intermediaries involved in food marketing**

**Approximate Hours**

Item	AppX Hrs
CI	4
LI	1
SW	2
SL	1
Total	08

Session Outcomes (SOs)	Laboratory Instruction (LI)	Class room Instruction (CI)	Self Learning (SL)
<b>SO3.1</b> – Introduction to Channel decisions in relation to marketing strategy <b>SO3.2</b> – Discuss to the value of middlemen, Key decisions in channel management, Types of distribution system <b>SO3.3</b> - Apply the Marketing to middlemen, Power and conflict in distribution channels, Physical distribution Customer service levels, Developing a customer	<b>LI1.1</b>	<b>Unit III:</b> <b>Channel decisions in relation to marketing strategy, The value of middlemen, Key decisions in channel management, Types of distribution system, Marketing to middlemen, Power and conflict in distribution channels, Physical distribution, Customer service levels, Developing a customer service policy, The total distribution concept, Warehouse</b>	<b>3.1</b> Prepare the assignment on Key decisions in channel management, Types of distribution system, Marketing to middlemen, Power and conflict in distribution channels



<p>service policy.</p> <p><b>SO3.4</b>–Discuss to The total distribution concept, Warehouse management, Inventory management, Calculating the economic order quantity, Transport management, Technological advances in physical distribution.</p> <p><b>SO3.5</b>–Describe the Vehicle scheduling and routing, Fixed and variable routing systems, Vehicle scheduling tools, Vehicle scheduling models, Computer-based vehicle scheduling</p>		<p>management, Inventory management, Calculating the economic order quantity, Transport management, Technological advances in physical distribution, Vehicle scheduling and routing, Fixed and variable routing systems, Vehicle scheduling tools, Vehicle scheduling models, Computer-based vehicle scheduling</p> <p><b>3.1</b>- Channel decisions in relation to marketing strategy, The value of middlemen,</p> <p><b>3.2</b>. - Key decisions in channel management, Types of distribution system,</p> <p><b>3.3</b>- Marketing to middlemen, Power and conflict in distribution channels,</p> <p><b>3.4</b>- Physical distribution, Customer service levels, Developing a customer service policy,</p> <p><b>3.5</b> - The total distribution concept, Warehouse management, Inventory management, Calculating the economic order quantity, Transport management, Technological advances in physical distribution</p> <p><b>3.6</b> - Vehicle scheduling and routing, Fixed and variable routing systems, Vehicle scheduling tools, Vehicle scheduling models,</p> <p>Computer-based vehicle scheduling</p>	
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**SW-1 Suggested Sessional Work (SW):**





**a. Assignments:** Prepare the assignment on Key decisions in channel management, Types of distribution system, marketing to middlemen, Power and conflict in distribution channels

**b. Mini Project:**

**c. Other Activities (Specify):**

**ABM506CO-4: Apply the promotional strategies and communication development tools and methods**

**Approximate Hours**

Item	AppX Hrs
CI	2
LI	1
SW	2
SL	1
Total	06

Session Outcomes (SOs)	Laboratory Instruction (LI)	Classroom Instruction (CI)	Self Learning (SL)
<p><b>SO1.1</b> –Identify the nature of marketing communications, Setting marketing communication objectives,</p> <p><b>SO1.2</b> - Apply the Factors influencing the communications mix, The marketing communications mix.</p> <p><b>SO1.3-</b> Apply the Advertising, Sales promotion, Public relations, Personal selling</p> <p><b>SO1.4-</b> Describes the Digital Marketing, Mobile Marketing, Social Marketing and Social Media Marketing</p> <p><b>SO1.5–</b> Brief the Training the sales force, Change agents, Selecting the media, Establishing the promotional budget, Monitoring the</p>		<p><b>Unit-IV</b> <b>The nature of marketing communications, Setting marketing communication objectives, Factors influencing the communications mix, The marketing communications mix, Advertising, Sales promotion, Public relations, Personal selling, Digital Marketing, Mobile Marketing, Social Marketing and Social Media Marketing, Training the sales force, Change agents, Selecting the media, Establishing the promotional budget, Monitoring the effectiveness of marketing communications.</b></p> <p><b>4.1-</b> The nature of marketing communications, Setting marketing communication objectives,</p> <p><b>4.2. -</b> Factors influencing the communications mix, The</p>	<p><b>4.1-</b> Prepare the assignment on Digital Marketing, Mobile Marketing, Social Marketing and Social Media Marketing</p>



effectiveness of marketing communications  <b>SO1.6</b> –Laboratory and field works		marketing communications mix,  4.3- Advertising, Sales promotion, Public relations, Personal selling.  4.4- Digital Marketing, Mobile Marketing, Social Marketing and Social Media Marketing,  4.5- Training the sales force, Change agents, Selecting the media,  4.6- Establishing the promotional budget, Monitoring the effectiveness of marketing communications.	
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**SW-1 Suggested Sessional Work (SW)**

**a. Assignments:** Prepare the assignment on Digital Marketing, Mobile Marketing, Social Marketing and Social Media Marketing

**b. Mini Project:**

**c. Other Activities (Specify)**

**ABM 506 CO-5: Estimate the marketing cost analysis and application of different cost analysis method of food product**

**Approximate Hours**

Item	AppX Hrs
CI	2
LI	1
SW	2
SL	1
Total	10

Session Outcomes (SOs)	Laboratory Instruction (LI)	Classroom Instruction (CI)	Self Learning (SL)
<b>SO1.1</b> –Identify the Marketing Costs and Margins: Assessing the performance of a marketing system, <b>SO1.2-</b> Identify the Marketing efficiency and effectiveness Operational	<b>LE1.</b>	<b>Unit-5.0 Marketing Costs and Margins: Assessing the performance of a marketing system, Marketing efficiency and effectiveness, Operational efficiency, Pricing efficiency,</b>	<b>1.1</b> - Prepare the assignment on Identifying marketing costs and margins, The reference products concept.



<p>efficiency, Pricing efficiency, <b>SO1.3-</b> Identifying marketing costs and margins</p> <p><b>SO1.4-</b> Analyze the Handling costs, Packaging costs, Transport costs</p> <p><b>SO1.5-</b> Calculate the Storage costs, Processing costs, Capital costs</p>		<p><b>Identifying marketing costs and margins, The reference products concept, Handling costs, Packaging costs, Transport costs, Storage costs, Processing costs, Capital costs</b></p> <p><b>5.1-</b> Marketing Costs and Margins:</p> <p>5.2.- Assessing the performance of a marketing system,</p> <p>5.3- Marketing efficiency and effectiveness, Operational efficiency, <b>5.4-</b> Pricing efficiency, Identifying marketing costs and margins</p> <p><b>5.5</b> - The reference products concept, Handling costs,</p> <p><b>5.6-</b> Packaging costs, Transport costs, Storage costs, Processing costs, Capital costs</p>	
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**SW-1 Suggested Sessional Work (SW):**

**a. Assignments:** Prepare the assignment on Ethical issues in HRM

**b. Mini Project:**

**c. Other Activities (Specify):**

**Brief of Hours suggested for the Course Outcome**

Course Outcomes	Class Lecture (C I)	Laboratory Lecture (LI)	Sessional Work (SW)	Self Learning (S I)	Total hour (CI+LI+SW +SI)
ABM 506 CO-1 Identify the basics of marketing with specific emphasis on managing the product details.	4	1	2	1	<b>08</b>
ABM 504 CO-2: Discriminate the pricing techniques and managing the demand and supply relationship profitably	2	1	2	1	<b>06</b>



ABM 506 CO-3: Demonstrate the marketing channels and intermediaries involved in food marketing	4	1	2	1	<b>08</b>
ABM 506 CO-4: Apply the promotional strategies and communication development tools and methods	2	1	2	1	<b>06</b>
ABM 506 CO-5: Estimate the marketing cost analysis and application of different cost analysis method of food product	3	1	2	1	<b>07</b>
<b>Total Hours</b>	<b>15</b>	<b>05</b>	<b>10</b>	<b>05</b>	<b>35</b>

**Suggestion for End Semester Assessment**  
**Suggested Specification Table (For ESA)**

CO	Unit title	Marks Distribution			Total Marks
		R	U	A	
CO-1	<b>Unit I:</b> Introduction and Concept/ philosophies of Marketing Management; Product Management: The product, The product mix, Product line extensions, Product line deletions, Branding products, The advantages and disadvantages of branding, Branding decisions Brand loyalty models, Homogenous first-order mark ov models, Higher-order mark ov models Packaging, The functions of packaging, Packaging technology, Recent developments in packaging	02	03	00	05
CO-2	<b>Unit II:</b> Pricing objectives, The laws of supply and demand, Elasticity of demand Cross-price elasticity of demand, Practical problems of price theory, Cost -revenue - supply relationships, The meaning of price to consumers, Price as an indicator of quality, Pricing strategies, Cost-plus methods of price determination, Breakeven analysis, Market-oriented pricing, Psychological pricing, Geographical pricing, Administered pricing.	02	05	03	10
CO-3	<b>Unit III:</b> Channel decisions in relation to marketing strategy, The value of middlemen, Key decisions in channel management, Types of distribution system, Marketing to middlemen, Power and conflict in distribution channels, Physical distribution, Customer service levels,	00	08	07	15



	Developing a customer service policy, The total distribution concept, Warehouse management, Inventory management, Calculating the economic order quantity, Transport management, Technological advances in physical distribution, Vehicle scheduling and routing, Fixed and variable routing systems, Vehicle scheduling tools, Vehicle scheduling models, Computer-based vehicle scheduling				
CO-4	<b>Unit-IV</b> The nature of marketing communications, Setting marketing communication objectives, Factors influencing the communications mix, The marketing communications mix, Advertising, Sales promotion, Public relations, Personal selling, Digital Marketing, Mobile Marketing, Social Marketing and Social Media Marketing, Training the sales force, Change agents, Selecting the media, Establishing the promotional budget, Monitoring the effectiveness of marketing communications.	02	05	08	15
CO-5	<b>Unit-5.0</b> Marketing Costs and Margins: Assessing the performance of a marketing system, Marketing efficiency and effectiveness, Operational efficiency, Pricing efficiency, Identifying marketing costs and margins, The reference products concept, Handling costs, Packaging costs, Transport costs, Storage costs, Processing costs, Capital costs	00	03	02	05
	Total	06	24	20	<b>50</b>

**Legend: R: Remember, U: Understand, A: Apply**

The end of semester assessment for Introduction to Portland Cement will be held with written examination of 50 marks

**Note.** Detailed Assessment rubric need to be prepared by the course wise teachers for above tasks. Teachers can also design different tasks as per requirement, for end semester assessment.

**Suggested Instructional/Implementation Strategies:**

1. Improved Lecture
2. Tutorial
3. Case Method
4. Group Discussion
5. Role Play
6. Visit to Industry



7. Demonstration
8. ICT Based Teaching Learning (Video Demonstration/Tutorials CBT, Blog, Facebook, Twitter, Whatsapp, Mobile, Online sources)
9. Brainstorming

**Suggested Learning Resources:**

S. No.	Title	Author	Publisher	Edition & Year
01	Marketing Management – Analysis, Planning, Implementation and Control	Kotler P, Keller K, Koshy A and Jha M.	Pearson Education	2013
02	Marketing Management: A Strategic Decision Making Approach	Ramaswamy V.S.	McGraw Hill Education	2017.
03	Marketing Management	Saxena R	Tata McGraw Hill	2009 4th Edition
04	Basic Marketing: A Global Marketing Approach	William Perreault Jr., McCarthy E. Jerome.,	Tata McGraw Hill	2006
05	Online Marketing	Gay R, Charlesworth A, Esen R.	Oxford University Press	2014
06	Internet Marketing – Building Advantage in a networked economy	Mohammed, Fisher, Jaworski and Cahill	Tata McGraw-Hill	

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**Cos, POs and PSOs Mapping Course**

**Code:-ABM 506**

**Course Title:- Agricultural and Food Marketing Management-I**

Course Outcomes	Program Outcomes												Program Specific Outcome			
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4
	Managerial knowledge	Problem analysis	Modern tool usage	Ethics	Individual and teamwork	Communication	Project management and finance	Business decision making	Life-long learning	Environment and sustainability	Entrepreneurial opportunities	Global outlook	Ability to apply managerial land business skilled for development of business growth with the available resources	Ability to understand the day today business operational problems and startup development of agribusiness and provide economic solution to enhance the decide	Inculcate proactive thinking to ensure effective performance in the dynamic socio-economic and business ecosystem entrepreneurial approach	Ability to use the research based innovative knowledge for sustainable development in agribusiness growth and development



														goal without compromising ethical value	skillsets aligned with the national priorities	
ABM 506 CO-1: Identify the basics of marketing with specific emphasis on managing the product details.	3	1	1	2	1	1	1	2	3	2	1	3	3	1	2	1
ABM 504 CO-2: Discriminate the pricing techniques and managing the demand and supply relationship profitably	3	2	1	2	2	2	1	3	2	1	2	3	3	2	2	3
ABM 506 CO-3: Demonstrate the marketing	3	2	1	2	2	2	3	2	1	2	3	3	2	3	3	3





channels and intermediaries involved in food marketing																
ABM 506 CO-4: Apply the promotional strategies and communication development tools and methods	2	2	3	1	2	2	3	2	1	2	1	1	3	3	2	2
ABM 506 CO-5: Estimate the marketing cost analysis and application of different cost analysis method of food product	2	3	3	1	3	2	2	2	2	1	1	2	2	2	2	2

**Legend: 1–Low, 2–Medium, 3–High**



**Course Curriculum Map: Agricultural and Food Marketing Management-I**

<b>POs&amp;PSOs No.</b>	<b>COs No.&amp;Titles</b>	<b>SOs No.</b>	<b>Laboratory Instruction (LI)</b>	<b>Classroom Instruction (CI)</b>	<b>Self Learning (SL)</b>
PO1,2,3,4,5,6 7,8,9,10,11,12  PSO1,2,3,4,5	ABM 506 CO-1 Identify the basics of marketing with specific emphasis on managing the product details.	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-1.0</b> Introduction and Concept / philosophies of Marketing Management; Product Management: The product, The product mix, Product line extensions, Product line deletions, Branding products, The advantages and disadvantages of branding, Branding decisions Brand loyalty models, Homogenous first-order markov models, Higher-order markov models Packaging, The functions of packaging, Packaging technology, Recent developments in packaging 1.1, 1.2, 1.3, 1.4.	As mentioned in page number .....
PO1,2,3,4,5,6 7,8,9,10,11,12  PSO1,2,3,4,5	ABM 504 CO-2: Discriminate the pricing techniques and managing the demand and supply relationship profitably	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-2.0-</b> Pricing objectives, The laws of supply and demand, Elasticity of demand Cross-price elasticity of demand, Practical problems of price theory, Cost - revenue - supply relationships, The meaning of price to consumers, Price as an indicator of quality, Pricing strategies, Cost-plus method of price determination, Break-even analysis, Market-oriented pricing, Psychological pricing, Geographical pricing, Administered pricing.	As mentioned in page number .....



				2.1,2.2.	
PO1,2,3,4,5,6 7,8,9,10,11,12  PSO1,2,3,4, 5	ABM 506 CO-3: Demonstrate the marketing channels and intermediaries involved in food marketing	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-3.0</b> Channel decisions in relation to marketing strategy, The value of middlemen, Key decisions in channel management, Types of distributionsystem,Marketingtomiddlemen, Powerandconflictindistributionchannels, Physical distribution, Customer service levels,Developingacustomerservicepolicy, Thetotaldistributionconcept,Warehouse management, Inventory management, Calculatingtheeconomicorderquantity, Transport management, Technological advancesinphysicaldistribution,Vehicle schedulingandrouting,Fixedandvariable routingsystems,Vehicleschedulingtools, Vehicleschedulingmodels,Computer-based vehiclescheduling 3.1,3.2,3.3,3.4.	
PO1,2,3,4,5,6 7,8,9,10,11,12  PSO1,2,3,4, 5	ABM 506 CO-4: Apply the promotional strategies and communication development tools and methods	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-4.0</b> The nature of marketing communications, Setting marketing communication objectives, Factors influencing the communications mix, The marketing communications mix, Advertising,Salespromotion,Public relations,Personalselling,DigitalMarketing, MobileMarketing,SocialMarketingand SocialMediaMarketing,Trainingthesales force,Changeagents,Selectingthemedias,	



				Establishing the promotional budget, Monitoring the effectiveness of marketing communications. 4.1,4.2	
PO1,2,3,4,5,6 7,8,9,10,11,12  PSO1,2,3,4, 5	ABM506 CO-5: Estimate the marketing cost analysis and application of different cost analysis method of food product	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-5.0</b> Marketing Costs and Margins: Assessing the performance of a marketing system, Marketing efficiency and effectiveness, Operational efficiency, Pricing efficiency, Identifying marketing costs and margins, The reference products concept, Handling costs, Packaging costs, Transport costs, Storage costs, Processing costs, Capital costs 5.1,5.2.5.3.	



**Course Code:- ABM540**

**Course Title:- Research Methodology for Agribusiness management**

**Prerequisite:-** Students should have basic knowledge of research, survey, statistical analysis, and computer application knowledge.

**Rationale:-** A research methodology for agribusiness management degree is expressed through the concept and procedures which provide the information to researchers, analysts and professionals in accurate manners. Professional or ABM holder should skill the research methodology to apply for achieving the fixed goal and desire. Also the research methodology is helpful for understanding of judging the new knowledge and research problems is appropriate for researchers and business research' needs.

**Course Outcomes:**

**ABM540CO-1** Recognize the research scale measurement technique and their application in business research

**ABM 540 CO-2** Apply the statistical analysis tools and techniques for better research outcomes.

**ABM 540 CO-3** Apply the fundamentals of individual and group behaviour in the organizational setting

**ABM540CO-4** Analyze the higher statistical analysis and forecasting technique in business research

**ABM540CO-5** Evaluate the concept of and usage of data science, big data analysis for agriculture.

**Scheme of studies:**

Board of Study	Course Code	Course Title	Scheme of studies (Hours/Week)					Total Credits (C)
			CI	LI	SW	SL	Total Study Hours (CI+LI+SW+SL)	
Professional Core course (PCC)	ABM 540	Research Methodology for Agribusiness management	2	2	1	1	06	03

**Legend: CI:** Classroom Instruction (Includes different instructional strategies i.e. Lecture (L) and Tutorial (T) and others),

**LI:** Laboratory Instruction (Includes Practical performances in laboratory workshop, field or other locations using different instructional strategies)

**SW:** Sessional Work (includes assignment, seminar, mini project etc.),

**SL:** Self Learning,



### C: Credits.

**Note:** SW&SL has to be planned and performed under the continuous guidance and feedback of teacher to ensure outcome of Learning.

### Scheme of Assessment:

Board of Study	Course Code	Course Title	Scheme of Assessment (Marks)							
			Progressive Assessment (PRA)						End Semester Assessment (ESA)	Total Marks (PRA+ESA)
			Class/ Home Assignment 3 Marks each (CA)	Class Test 2 (2 best out of 3) 15 marks each (CT)	Seminar one (SA)	Class Activity any one (CAT)	Class Attendance (AT)	Total Marks (CA+CT+SA+CAT+AT)		
(PCC)	ABM 540	Research Methodology for Agribusiness management	15	30	00	00	05	50	50	100

### Course-Curriculum Detailing:

This course syllabus illustrates the expected learning achievements, both at the course and session levels, which students are anticipated to accomplish through various modes of instruction including Classroom Instruction (CI), Laboratory Instruction (LI), Sessional Work (SW), and Self Learning (SL). As the course progresses, students should showcase their mastery of Session Outcomes (SOs), culminating in the overall achievement of Course Outcomes (COs) upon the course's conclusion.

**ABM540CO-1 Recognize the research methodology concepts along with its application in marketing research.**



**Approximate Hours**

Item	AppXHrs
C 1	6
LI	2
SW	2
SL	1
<b>Total</b>	<b>11</b>

Session Outcomes (SOs)	Laboratory Instruction (LI)	Class room Instruction (CI)	Self Learning (SL)
<b>SO1.1-</b> Introduce the meaning and definition of research <b>SO1.2 -</b> Brief the Course Objective, types, and process of research <b>SO1.3 –</b> Discuss the research methodology in management-exploratory, descriptive, experimental, and diagnostic. <b>SO1.4-</b> Describe the Problem formulation, setting of Course Objective <b>SO1.5</b> Discuss the formulation of hypotheses, models, types of models, process of modeling. <b>SO1.6-</b> Laboratory work	<b>LE 1.1-</b> To study the problem identification and problem formulation. <b>LE1.2-</b> To prepare the Project proposal or research synopsis.	<b>Unit I: Meaning, Course Objective, types, and process of research; research methodology in management-exploratory, descriptive, experimental, diagnostic, Problem formulation, setting of Course Objective, formulation of hypotheses, models, types of models, process of modeling.</b> <b>1.1-</b> Introduction Meaning and definitions <b>1.2-</b> Course objective and type of research <b>1.3-</b> Process of research and methodology in management <b>1.4-</b> Exploratory, Descriptive, Experimental, Diagnostic research <b>1.5-</b> Problem formulation, setting of Course Objective <b>1.6-</b> formulation of	<b>1.1-</b> Prepare the assignment on hypotheses, models, types of models, process of modeling



		hypotheses, models, types of models, process of modeling	
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**SW-1 Suggested Seasonal Work (SW):**

**a. Assignments:** Prepare the assignment on hypotheses, models, types of models, process of modelling

**b. Mini Project:-**

**c. Other Activities (Specify):-**

**ABM540CO-2:** Apply the statistical analysis tools and techniques for better research outcomes.

**Approximate Hours**

Item	AppX Hrs
C 1	6
LI	2
SW	2
SL	1
Total	11

Session Outcomes (SOs)	Laboratory Instruction (LI)	Classroom Instruction (CI)	Self Learning (SL)
<b>SO2.1</b> –introduce to the scales of measurement <b>SO2.2</b> – learned about the ordinal, interval and ratio scales of measurement <b>SO2.3</b> - Apply to the Likert scale and other scales of measurement <b>SO2.4</b> - Briefing the primary and secondary data, sources of data, Questionnaire Designing, instruments of data collection, <b>SO 2.5</b> –Discuss to the data editing, classification, coding, validation, tabulation, presentation, analysis, development process of scale, identification of variables, variable	<b>LE2.1</b> - To Assessments of Data needs (Sources of data, method of data collection) <b>LE2.2</b> - Exercise on coding, editing, tabulation and validation of data.	<b>Unit II:</b> <b>Scales of measurement - nominal, ordinal, interval, ratio, Likert scale and other scales; Primary and secondary data, sources of data, Questionnaire Designing, instruments of data collection, data editing, classification, coding, validation, tabulation, presentation, analysis, development process of scale, identification of variables, variable measurement,</b>	<b>2.1</b> – Prepare the assignment on scales of measurement





measurement, variable standardization and dummy variables.		<b>variable standardization and dummy variables.</b> <b>2.1</b> - Scales of measurement <b>2.2-</b> Nominal, ordinal, interval and ratio scales. <b>2.3-</b> Likert scale and other scales. <b>2.4-</b> Primary and secondary data, sources of data, Questionnaire Designing, instruments of data collection. <b>2.5-</b> Data editing, classification, coding, validation, tabulation, presentation, analysis <b>2.6-</b> Development process of scale, identification of variables, variable measurement, variable standardization and dummy variables	
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**SW-1 Suggested Seasonal Work (SW):**

**a. Assignments:** Prepare the Assignment on given topics.

**b. Mini Project:** Prepare a project report of different function of management used in any case study

**c. Other Activities (Specify):**



**ABM540CO-3: Apply the fundamentals of individual and group behaviour in the organizational setting**

**Approximate Hours**

Item	AppX Hrs
C 1	6
LI	2
SW	2
SL	1
Total	11

Session Outcomes (SOs)	Laboratory Instruction (LI)	Class room Instruction (CI)	Self Learning (SL)
<b>SO3.1</b> –Introduction to multivariate statistical analysis techniques <b>SO3.2</b> – Discuss to the Multivariate linear regression models principal component analysis. <b>SO3.3</b> –Apply the linear discriminate analysis, <b>SO3.4</b> –Discuss to motivation with type theory and practice <b>SO3.5</b> –Describe the managing of stress and work life balance	<b>LE 1.</b> To study the assessment of method of sampling, criteria to choose discussion on sampling under different situation.  <b>LE 2.</b> To study the simple correlation & multiple correlation analysis  <b>LE-3.</b> To study the simple regression & multiple regression analysis of multivariate technique	<b>Unit III:</b> <b>Introduction to multivariate statistical analysis techniques, Multivariate linear regression models, principal component analysis, linear discriminate analysis, factor analysis, evaluation matrices and model diagnostics for regression models.</b> <b>3.1</b> –Multivariate statistical analysis techniques <b>3.2</b> –Multivariate linear regression models <b>3.3</b> – Principal component analysis of Multivariate linear regression models <b>3.4</b> – linear discriminate analysis and factor analysis. <b>3.5</b> –Evaluation matrices for regression models <b>3.6</b> –Model diagnostics for regression models	<b>3.1</b> Prepare the assignment on , linear discriminate analysis.

**SW-1 Suggested Seasonal Work (SW):**

- Assignments:** Prepare the assignment on individual or organizational behaviours
- Mini Project:** Prepare a project report of different function of management used in any case study
- Other Activities (Specify):**



**ABM 540 CO-4: Analyze the higher statistical analysis and forecasting technique in business research.**

**Approximate Hours**

Item	App XHrs
CI	6
LI	2
SW	2
SL	1
Total	11

Session Outcomes (SOs)	Laboratory Instruction (LI)	Classroom Instruction (CI)	Self Learning (SL)
<b>SO1.1</b> –Identify the logistic regression and decision trees. <b>SO1.2</b> -Apply the cluster analysis and random forest <b>SO1.3</b> -Apply GARCH, CART models <b>SO1.4</b> -Describes the support vector machines and Forecasting techniques; (AR and MA) <b>SO1.5</b> –Brief the forecasting techniques, (ARMA and ARIMA models)	<b>LE1.1</b> - To study the discriminate analysis, factor analysis & cluster analysis of multi variates techniques <b>LE1.2</b> -To study the of time series analysis. <b>LE1.3</b> -To study the of index number analysis	<b>Unit-4</b> <b>Logistic regression, decision trees, cluster analysis, random forest, GARCH, CART models, support vector machines, Forecasting techniques (AR, MA, ARMA and ARIMA models)</b> <b>4.1</b> - Logistic regression <b>4.2</b> - Decision trees and cluster analysis, <b>4.3</b> - Random forest, GARCH and CART models <b>4.4</b> - Support vector machines <b>4.5</b> - Forecasting techniques (AR and MA, models) <b>4.6</b> - Forecasting techniques (ARMA and ARIMA) model	<b>4.1</b> - Prepare the assignment on Logistic regression, decision trees, cluster analysis,

**SW-1 Suggested Seasonal Work (SW)**

**a. Assignments:** Prepare the assignment on Group decision making, team building and developing collaboration

**b. Mini Project:** Prepare a project report on leadership styles and influence process; leadership theories, leadership styles and effective leader

**c. Other Activities (Specify)**



**ABM 540CO-5: Evaluate the concept of and usage of data science, big data analysis for agriculture**

**Approximate Hours**

Item	AppX Hrs
CI	6
LI	2
SW	2
SL	1
Total	11

Session Outcomes (SOs)	Laboratory Instruction (LI)	Classroom Instruction (CI)	Self Learning (SL)
<p><b>SO1.1</b> – Identify to definition, scope and importance of machine learning,</p> <p><b>SO1.2</b>– Identify the types of machine learning, linear and nonlinear models in machine learning</p> <p><b>SO1.3</b>– Introduction to deep learning, basic differences in machine learning and deep learning</p> <p><b>SO1.4</b>– Brief the basic differences in machine learning and deep learning.</p> <p><b>SO1.5</b>– Apply to the concept of cloud machine learning, Big data analysis</p>	<p><b>LE1.1</b> - To study the forecast technique (AR, MA, ARMA, ARIMA)</p> <p><b>LE 2.</b> To study the Logistic regression analysis.</p> <p><b>LE 3.</b> To Exercise on prepare the format for thesis / project Report writing and preparation of their results</p>	<p><b>Unit-5.0</b> <b>Definition, scope and importance, machine learning, types of machine learning, linear and nonlinear models in machine learning, introduction to deep learning, basic differences in machine learning and deep learning, concept of cloud machine learning, Big data analysis.</b></p> <p><b>5.1-</b> Definition and scope of machine learning</p> <p><b>5.2-</b> Importance and types of machine learning</p> <p><b>5.3-</b> Linear and nonlinear models in machine learning.</p> <p><b>5.4-</b> Introduction to deep learning.</p> <p><b>5.5-</b> Basic differences in machine learning and deep learning.</p>	<p><b>1.1</b> - Prepare the assignment on machine learning, types of machine learning, linear and nonlinear models in machine learning</p>



		<b>5.6-</b> Concept of cloud machine learning, Big data analysis	
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**SW-1 Suggested Seasonal Work (SW):**

- a. Assignments:** Prepare the assignment on individual or organizational behaviours
- b. Mini Project:** Prepare a project report of different function of management used in any case study
- c. Other Activities (Specify):**

**Brief of Hours suggested for the Course Outcome**

Course Outcomes	Class Lecture (C I)	Laboratory Lecture (L I)	Seasonal Work (SW)	Self Learning (S I)	Total hour (C I + L I + SW + S I)
ABM540CO-1 Recognize the research methodology concepts along with its application in marketing research	06	02	02	01	11
ABM540CO-2: Apply the statistical analysis tools and techniques for better research outcomes.	06	02	02	01	11
ABM540CO-3: Apply the fundamentals of individual and group behavior in the organizational setting	06	02	02	01	11
ABM540CO-4: Analyze the higher statistical analysis and forecasting technique in business research.	06	02	02	01	11
ABM540CO-5: Evaluate the concept of and usage of data science, big data analysis for agriculture	06	02	02	01	11
<b>Total Hours</b>	<b>30</b>	<b>10</b>	<b>10</b>	<b>05</b>	<b>55</b>



## Suggestion for End Semester Assessment

### Suggested Specification Table (For ESA)

CO	Unit title	Marks Distribution			Total Marks
		R	U	A	
CO-1	<b>Unit I:</b> Meaning, Course Objective, types, and process of research; research methodology in management- exploratory, descriptive, experimental, diagnostic, Problem formulation, setting of Course Objective, formulation of hypotheses, models, types of models, process of modeling.	02	03	00	05
CO-2	<b>Unit II:</b> Scales of measurement - nominal, ordinal, interval, ratio, Likert scale and other scales; Primary and secondary data, sources of data, Questionnaire Designing, instruments of data collection, data editing, classification, coding, validation, tabulation, presentation, analysis, development process of scale, identification of variables, variable measurement, variable standardization and dummy variables.	02	05	03	10
CO-3	<b>Unit III:</b> Introduction to multivariate statistical analysis techniques, Multivariate linear regression models, principal component analysis, linear discriminate analysis, factor analysis, evaluation matrices and model diagnostics for regression models.	00	08	07	15
CO-4	<b>Unit-4</b> Logistic regression, decision trees, cluster analysis, random forest, GARCH, CART models, support vector machines, Forecasting techniques (AR, MA, ARMA and ARIMA models)	02	05	08	15



CO-5	<b>Unit-5.0</b> Definition, scope and importance, machine learning, types of machine learning, linear and nonlinear models in machine learning, introduction to deep learning, basic differences in machine learning and deep learning, concept of cloud machine learning, Big data analysis.	00	03	02	05
	Total	06	24	20	<b>50</b>
<b>Laboratory work</b>	Description of Marks				
1	Lab works Assignment	-	-	-	35
2	Viva-voce	-	-	-	10
3	Attendance	-	-	-	05
	Total				<b>50</b>

**Legend: R: Remember, U: Understand, A: Apply**

The end of semester assessment for Introduction to Portland cement will be held with written examination of 50 marks

**Note.** Detailed Assessment rubric need to be prepared by the course wise teachers for above tasks.

Teachers can also design different tasks as per requirement, for end semester assessment.

**Suggested Instructional/Implementation Strategies:**

1. Improved Lecture
2. Tutorial
3. Case Method
4. Group Discussion
5. Role Play
6. Visit to Industry
7. Demonstration
8. ICT Based Teaching Learning (Video Demonstration/Tutorials CBT, Blog, Facebook, Twitter, Whatsapp, Mobile, Online sources)
9. Brainstorming



**Suggested Learning Resources:**

S. No.	Title	Author	Publisher	Edition & Year
01	Marketing Research Concepts and Cases	Cooper DR and Schindler PS	TMH	2006..
02	Research Methodology	Kumar R.	Sage publications	2014 4th Edition.
03	Handbook of Research Methods	Glenn JC	OXFORD	2010
04	Research Methodology- Methods and Techniques	Kothari CR.	New Age International Publishers	2018 Fourth edition

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**Cos, POs and PSOs Mapping Course**  
**Code:-ABM 540**

**Course Title:-Research Methodology for Agribusiness management**

Course Outcomes	Program Outcomes												Program Specific Outcome			
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4
	Managerial knowledge	Problem analysis	Modern tool usage	Ethics	Individual and team work	Communication	Project management and finance	Business decision making	Life-long learning	Environment and sustainability	Entrepreneurial opportunities	Global outlook	Ability to apply managerial and business skilled for development of business growth with the available resources	Ability to understand the day to day business operational problems and startup development of agribusiness and provide economical solution to enhance the decision goal without compromising ethical value	Inculcate proactive thinking to ensure effective performance in the dynamic socio-economic and business ecosystem entrepreneurial approach and skill sets aligned with the national priorities	Ability to use the research based innovative knowledge for sustainable development in agribusiness growth and developments
ABM 540 CO-1 Recognize the research	3	1	1	2	1	1	1	2	3	2	1	3	3	1	2	1



methodology concepts along with its application in marketing research																
ABM 540 CO-2: Apply the statistical analysis tools and techniques for better research outcomes.	3	2	1	2	2	2	1	3	2	1	2	3	3	2	2	3
ABM 540 CO-3: Apply the fundamentals of individual and group behavior in the organizational setting	3	2	1	2	2	2	3	2	1	2	3	3	2	3	3	3
ABM 540 CO-4: Analyze the higher statistical	2	2	3	1	2	2	3	2	1	2	1	1	3	3	2	2



analysis and forecasting technique in business research.																
ABM 540 CO-5: Evaluate the concept of and usage of data science, big data analysis for agriculture	2	3	3	1	3	2	2	2	2	1	1	2	2	2	2	2

**Legend: 1–Low, 2–Medium, 3– High**



### Course Curriculum Map: Research Methodology for Agribusiness management

POs&PSOs No.	COs No.&Titles	SOsNo.	Laboratory Instruction(LI)	Classroom Instruction(CI)	Self Learning(SL)
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO1,2, 3, 4, 5	ABM540CO-1 Recognize the research methodology concepts along with its application in marketing research	SO1.1 SO1.2 SO1.3 SO1.4 SO1.5	LE1.1- To study the problem identification and problem formulation. LE 1.2- To prepare the Project proposal or research synopsis.	<b>Unit1:</b> Meaning, Course Objective, types, and process of research; research methodology in management- exploratory, descriptive, experimental, diagnostic, Problem formulation, setting of Course Objective, formulation of hypotheses, models, types of models, process of modeling. 1.1, 1.2, 1.3, 1.4, 1.5, 1.6.	As mentioned in page number .....
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO1,2, 3, 4, 5	ABM540CO-2: Apply the statistical analysis tools and techniques for better research outcomes. .	SO1.1 SO1.2 SO1.3 SO1.4 SO1.5	LE2.1- To Assessment of Data needs (Sources of data, method of data collection) LE2.2- Exercise on coding, editing, tabulation and validation of data.	<b>Unit2-</b> Scales of measurement -nominal, ordinal, interval, ratio, Likert scale and other scales; Primary and secondary data, sources of data, Questionnaire Designing, instruments of data collection, data editing, classification, coding, validation, tabulation, presentation, analysis, development process of scale, identification of variables, variable measurement, variable standardization and dummy variables. 2.1, 2.2, 2.3, 2.4, 2.5, 2.6.	As mentioned in page number .....
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO1,2, 3, 4, 5	ABM540CO-3: Apply the fundamentals of individual and group behavior in the organizational setting	SO1.1 SO1.2 SO1.3 SO1.4 SO1.5	LE3.1- To study about the scaling technique and measurement of scale	<b>Unit-3.0</b> Introduction to multivariate statistical analysis techniques, Multivariate linear regression models, principal component analysis, linear discriminate analysis, factor analysis, evaluation matrices and model diagnostics for regression models.	As mentioned in page number .....



				3.1,3.2,3.3,3.4,3.5,3.6.	
PO 1,2,3,4,5,6 7,8,9,10,11,12 PSO1,2, 3, 4, 5	ABM540CO-4: Analyze the higher statistical analysis and forecasting technique in business research.	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-4.0</b> Logistic regression, decision trees, cluster analysis, random forest, GARCH, CART models, support vector machines, Forecasting techniques (AR, MA, ARMA and ARIMA models) 4.1,4.2,4.3,4.4,4.5,4.6.	As mentioned in page number .....
PO 1,2,3,4,5,6 7,8,9,10,11,12 PSO1,2, 3, 4, 5	ABM540CO-5: Evaluate the concept of and usage of data science, big data analysis for agriculture	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-5.0</b> Definition, scope and importance, machine learning, types of machine learning, linear and nonlinear models in machine learning, introduction to deep learning, basic differences in machine learning and deep learning, concept of cloud machine learning, Big data analysis. 5.1,5.2,5.3,5.4,5.5,5.6.	As mentioned in page number .....



**Course Code:-ABM541**

**Course Title:-Computer Application for Agri Business**

**Pre-requisite:-** Student should have basic knowledge of computer application and application of Information technology for Agri business.

**Rationale:-** The students studying subject of computer application for Agri Business should possess understanding about various software applications assists farmers in managing their operations efficiently. These programs help with tasks like crop planning, inventory management, financial tracking, and equipment maintenance scheduling. Computers enable farmers to employ precision agriculture techniques.

**Course Outcomes:**

**ABM 541 CO -01:** Recognize the fundamentals concept of computers and application in agri business.

**ABM 541 CO-02:** Express the application of Information technology in agribusiness management.

**ABM 541 CO-03:** Practice of internet and web design and their application for developing of business..

**ABM 541 CO-04:** Develop the understanding of artificial intelligence and MIS for improved decision making in management

**ABM 541 CO-05:** Assess the understanding of E-business/E-commerce models and their application in business management

**Scheme of Studies:**

Categories of course	Course Code	Course Title	Scheme of studies (Hours/Week)					Total Credits (C)
			CI	LI	SW	SL	Total Study Hours (CI+LI+SW+SL)	
PCC	ABM 541	Computer Application for Agri Business	2	1	2	1	6	3

**Legend: CI:** Classroom Instruction (Includes different instructional strategies i.e. Lecture (L) and Tutorial (T) and others),

**LI:** Laboratory Instruction (Includes Practical performances in laboratory workshop, field or other locations using different instructional strategies)

**SW:** Sessional Work (includes assignment, seminar, mini project etc.),

**SL:** Self Learning,

**C:** Credits.

**Note:** SW & SL has to be planned and performed under the continuous guidance and feedback of teacher to ensure outcome of Learning.

**Scheme of Assessment:**

**Theory**



Cate gori es of cour se	Couse Code	Course Title	Scheme of Assessment (Marks)							
			Progressive Assessment (PRA)						End Semest er Assess ment  (ESA)	Total Marks  (PRA+ ESA)
			Class/H ome Assign ment 3 marks 5 each (CA)	Clas s Test 2 (2 best out of 3) 15 mar ks each (CT)	Se mi na r on e  (SA)	Clas s Act ivity any one (CAT)	Clas s Atte ndance (AT)	Total Marks (CA+CT +SA+CAT+AT)		
PC C	ABM5 41	Computer Application for Agri Business	15	30	0	0	5	50	50	100

#### Course-Curriculum Detailing:

This course syllabus illustrates the expected learning achievements, both at the course and session levels, which students are anticipated to accomplish through various modes of instruction including Classroom Instruction (CI), Laboratory Instruction (LI), Sessional Work (SW), and Self-Learning (SL). As the course progresses, students should showcase their mastery of Session Outcomes (SOs), culminating in the overall achievement of Course Outcomes (COs) upon the course's conclusion.

**ABM 541 CO -1: Recognize the fundamentals concept of computers and application in agri busine**

#### Approximate Hours

Item	Appx Hrs.
CI	6
LI	3
SW	2
SL	1
Total	12

Session Outcomes (SOs)	Laboratory Instruction (LI)	Classroom Instruction (CI)	Self-Learning (SL)
<b>SO1.1</b> Understanding basic concept of computer Brief History of Computers	<b>1.1</b> -Create a user account in windows operating system. Creating, renaming	<b>Unit-1. Concept of Computers- Brief History of Computers,</b>	1.1 Preparation of Assignment on describes input and



<p><b>SO1.2-</b> Discuss the generation and Its Evolution.</p> <p><b>SO1.3-</b> Describe the Characteristics of Computers and main Areas of Computers and their Applications.</p> <p><b>SO1.4</b> Brief the Classification of Computers.</p> <p><b>SO1.5-</b> Assess the Input-Output Devices, Memory Types (Cache, RAM, ROM), Memory Units.</p> <p><b>SO1.6</b> Library and Information Services</p>	<p>and deleting a Files &amp; Folders.</p> <p><b>1.2.-</b> Use of MS-WORD, creating, editing and saving a Document. Mail merge, create and run a Macro.</p>	<p><b>Generation and Its Evolution, Characteristics of Computers, Main Areas of Computers and their Applications; Classification of Computers, Input-Output Devices, Memory Types (Cache, RAM, ROM), Memory Units.</b></p> <p>Describe the introduction, definition and components of computer, Brief History of Computers</p> <p>Describe the Input and output devices, generation and Its Evolution, Characteristics of Computers, Define main Areas of Computers and their Applications</p> <p>Classification of Computers, Input-Output Devices</p> <p>Define in Memory Types (Cache, RAM, ROM), Memory Units.</p>	<p>output devices.</p>
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**SW-1 Suggested Sessional Work (SW):**

- Assignments:** Preparation of Assignment on describes input and output devices.
- Mini Project:**
- Other Activities (Specify):**





**ABM541 CO.2: Express the application of Information technology in agribusiness management.**

**Approximate Hours**

Item	Appx Hrs.
CI	6
LI	4
SW	2
SL	1
Total	13

Session Outcomes (Sos)	Laboratory Instruction (LI)	Classroom Instruction (CI)	Self-Learning (SL)
<b>SO1.1</b> Define the system Software and Application Software  <b>SO1.2</b> Explain in Opensourcesoftware.  <b>SO1.3</b> Discuss the introduction to computer languages  <b>SO1.4</b> Introduction to Operating Systems Functions, Features and Types., MS Windows and LINUX  <b>SO1.5</b> -Data Base Management System, Introduction to MS Office  <b>SO1.6</b> - Library and Information Services	MS-EXCEL - Creating a spreadsheet, use of statistical tools, creating graphs.  Mathematical calculation in Excel	<b>Unit-2</b> <b>System Software and Application Software, Open source software, introduction to computer languages, Introduction to Operating Systems – Functions, Features and Types., MS Windows and LINUX. Data Base Management System, Introduction to MS Office</b> System Software and Application Opensourcesoftware Introduction to computer & Operating Systems languages Introduction to Operating Systems – Functions, Features and Types, MS Windows and LINUX. Data Base Management System. Introduction to MS Office	Preparation of Assignment on data base management system.

**SW-1 Suggested Sessional Work (SW):**

- Assignments:** Preparation of Assignment on data base management system,
- Mini Project:**
- Other Activities (Specify):**



**ABM541CO.3: Practice of internet and web design and their application for developing of business.**

**Approximate Hours**

Item	Appx Hrs.
CI	6
LI	2
SW	2
SL	1
Total	11

Session Outcomes (SOs)	Laboratory Instruction (LI)	Classroom Instruction (CI)	Self-Learning (SL)
<p><b>SO1.1</b> Introduce The business value of internet, Intranet, extranet and Internet.</p> <p><b>SO1.2</b> Apply the Introduction to Web page design using HTML. Cloud Computing, Security and ethical challenges</p> <p><b>SO1.3</b> Analyze the computer crime – Hacking, cyber theft, unauthorized use at work</p> <p><b>SO1.4</b> Assess the piracy – software and intellectual property.</p> <p><b>SO1.5</b> Assess the health and Social Issues, Ergonomics and cyber terrorism.</p> <p><b>SO1.6</b> Library and Information Services</p>	<p><b>3.1 MS-ACCESS:</b> Creating Database, preparing queries and reports, Form designing.</p> <p><b>3.2. MS-PowerPoint:</b> Presentation of posters, charts, overhead transparencies and slides</p>	<p><b>Unit-3</b> <b>The business value of internet, Intranet, extranet and Internet, Introduction to Web page design using HTML, Cloud Computing, Security and ethical challenges: Computer crime – Hacking, cyber theft, unauthorized use at work. Piracy – software and intellectual property. Health and Social Issues, Ergonomics and cyber terrorism.</b></p> <p>The business value of internet, Intranet, extranet and Internet Introduction to Web page design using HTML. Cloud Computing, Security and ethical challenges. Computer crime – Hacking, cyber theft, unauthorized use at work. Piracy – software and intellectual property. Health and Social Issues, Ergonomics and cyber terrorism</p>	<p>Preparation of Assignment on introduction to Web page design using HTML</p>

**SW-1 Suggested Seasonal Work (SW):**

- Assignments:** Preparation of Assignment on introduction to Web page design using HTML
- Mini Project:**
- Other Activities (Specify):**



**ABM541 CO.04 Develop the understanding of artificial intelligence and MIS for improved decision making in management.**

**Approximate Hours**

Item	Appx Hrs.
CI	6
LI	1
SW	2
SL	1
Total	10

Session Outcomes (SOs)	Laboratory Instruction (LI)	Classroom Instruction (CI)	Self-Learning (SL)
<p><b>SO1.1</b> Introduce The concept of MIS– Definition, importance, Course Objective, prerequisites</p> <p><b>SO1.2</b> Assess the advantages and challenges Of MIS.</p> <p><b>SO1.3</b> Examine the Information Needs of organization, MIS and Decision – Making.</p> <p><b>SO1.4</b> Information System for organizations.</p> <p><b>SO1.5</b> Assess the Introduction to Artificial Intelligence (AI), Neural Networks, Fuzzy logical control systems.</p> <p><b>SO1.6</b> Library and Information Services.</p>	<p><b>4.1-</b> Set the Transition and Animation Effect in Slide</p> <p><b>4.2-</b> Internet applications: Web Browsing, Creation and operation of email account</p>	<p><b>Unit-4</b> <b>The concept of MIS– Definition, importance, Course Objective, prerequisites, advantages and challenges; Information Needs of organization, MIS and Decision – Making.</b> <b>Types/Classification of Information System for organizations;</b> <b>Introduction to Artificial Intelligence (AI), Neural Networks, Fuzzy logical control systems.</b> <b>4.1-</b> The concept of MIS– Definition, importance, Course Objective, <b>4.2</b> -prerequisites Advantages and challenges; of concept of MIS <b>4.3-</b> Information Needs of organization. MIS and Decision – Making <b>4.4-</b> Types/Classification of Information System for organizations <b>4.5-</b> Introduction to</p>	<p><b>4.1-</b> Preparation of Assignment on Fuzzy logical control systems.</p>



		Artificial Intelligence (AI), <b>4.6</b> Neural Networks, Fuzzy logical control systems..	
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**SW-1 Suggested Seasonal Work (SW):**

- Assignments:** Preparation of Assignment on Fuzzy logical control systems.
- Mini Project:**
- Other Activities (Specify):**

**ABM541 CO.5: Assess the understanding of E-business/ E-commerce models and their application in business management**

**Approximate Hours**

Item	Appx Hrs.
CI	6
LI	1
SW	2
SL	1
Total	10

Session Outcomes (SOs)	Laboratory Instruction (LI)	Classroom Instruction (CI)	Self-Learning (SL)
<b>SO1.1</b> Introduce the E-business/ e-commerce: <b>SO1.2</b> Electronic payment systems, e-commerce trends with special reference to agri business <b>SO1.3</b> Applications of MIS in the areas of Human Resource Management <b>SO1.4</b> Applications of MIS in Financial Management, Production/Operations Management <b>SO1.5</b> Applications	<b>5.1-</b> Web page designing using HTML. <b>5.2-</b> Create hyperlink in webpage	<b>Unit-5</b> <b>E-business/ e-commerce: e-business models, e-commerce processes, electronic payment systems, e-commerce trends with special reference to agri business. Applications of MIS in the areas of Human Resource Management, Financial Management, Production / Operations Management, Materials Management, Marketing Management.</b>	5.1- Preparation of Assignment on E-commerce processes, electronic payment systems with special reference to agri business..



of MIS in Materials Management, Marketing Management. <b>SO1.6-</b> Applications of MIS in Library and Information Services.		<b>5.1-</b> E-business/e-commerce: e-business models, e-commerce processes, <b>5.2-</b> electronic payment systems with special reference to agribusiness <b>5.3-</b> E-commerce trends with special reference to agri business. <b>5.4-</b> Applications of MIS in the areas of Human Resource Management, <b>5.5-</b> Applications of MIS in the areas of Financial Management, Production/Operations Management. <b>5.6-</b> Applications of MIS in the areas of Materials Management, Marketing Management.\	
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**SW-1 Suggested Seasonal Work (SW):**

**a. Assignments:** Preparation of Assignment on E-commerce processes, electronic payment systems with special reference to agri business..

**b. Mini Project:**

**c. Other Activities (Specify):**

**Brief of Hours suggested for the Course Outcome**

Course Outcomes	Class Lecture (CL)	Laboratory Instruction (LI)	Sessional Work (SW)	Self Learning (SL)	Total hour (CL+SW+SL)
ABM 541 CO .1: Recognize the fundamentals concept of computers and application in agribusiness.	6	1	2	1	10
ABM 541 CO.2: Express the application of Information technology in agribusiness management	6	1	2	1	10
ABM 541 CO.3: Practice of internet and web design and their application for developing of business.	6	1	2	1	10



ABM 541 CO. 04 Develop the understanding of artificial intelligence and MIS for improved decision making in business management	6	1	2	1	10
ABM 541 CO.5: Asses the understanding of E-business/ E-commerce models and their application in business management	6	1	2	1	10
<b>Total Hour</b>	<b>30</b>	<b>05</b>	<b>10</b>	<b>05</b>	<b>50</b>

**Suggestion for End Semester Assessment**

**Suggested Specification Table (For ESA)**

CO	Unit Titles	Marks Distribution			Total Marks
		R	U	A	
<b>CO-1</b>	<b>Unit-1.</b> Concept of Computers- Brief History of Computers, Generation and Its Evolution, Characteristics of Computers, Main Areas of Computers and their Applications; Classification of Computers, Input-Output Devices, Memory Types (Cache, RAM, ROM), Memory Units.	04	04	00	08
<b>CO-2</b>	<b>Unit-2</b> System Software and Application Software, Open source software, introduction to computer languages, Introduction to Operating Systems – Functions, Features and Types., MS Windows and LINUX. Data Base Management System, Introduction to MS Office	02	02	03	07
<b>CO-3</b>	<b>Unit-3</b> The business value of internet, Intranet, extranet and Internet, Introduction to Web page design using HTML, Cloud Computing, Security and ethical challenges: Computer crime – Hacking, cyber theft, unauthorized use at work. Piracy – software and intellectual property. Health and Social Issues, Ergonomics and cyber terrorism.	02	03	04	09
<b>CO-4</b>	<b>Unit-4</b> The concept of MIS–Definition, importance, Course Objective, prerequisites, advantages and challenges; Information Needs of organization, MIS and Decision – Making. Types/Classification of Information System for organizations; Introduction to Artificial Intelligence (AI), Neural Networks, Fuzzy logical control systems.	03	04	02	09



CO-5	Unit-5E-business/e-commerce:e-business models, e-commerce processes, electronic payments systems, e-commerce trends with special reference to agri business. Applications of MIS in the areas of Human Resource Management, Financial Management, Production / Operations Management, Materials Management, Marketing Management.	06	06	05	17
<b>Total</b>		<b>17</b>	<b>19</b>	<b>14</b>	<b>50</b>
<b>Laboratory work</b>	Description of Marks				
1	Lab works Assignment	-	-	-	35
2	Viva-voce	-	-	-	10
3	Attendance	-	-	-	05
	Total				<b>50</b>

**Legend:**      **R:Remember,**                      **U:Understand,**                      **A:Apply**

The end of first semester assessment for Computer Application in management will be held with written examination of 50 marks **Note.** Detailed Assessment rubric need to be prepared by the course wise teachers for above tasks. Teachers can also design different tasks as per requirement, for end semester assessment.

**Suggested Instructional/Implementation Strategies:**

1. Improved Lecture
2. Tutorial
3. Case Method
4. Group Discussion
5. Brainstorming

**Suggested Learning Resources:**

S. No.	Title	Author	Publisher	Edition & Year
1	Management Information Systems- Managing the digital Firm,	Laudon KC and Laudon JP	Pearson India	2016 14th Edition,
2	Information Technology for Management, Advancing Sustainable, Profitable Business Growth,	Turban, Volonino, Woods. Wali OP. 2015	Wiley	2015
3	Management Information Systems	Jaiswal M and Mittal M.	Oxford	2005



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**Cos, POs and PSOs Mapping Course**  
**Code:- ABM 541**  
**Course Title:- Computer Application for Agri Business**

Course Outcomes	Program Outcomes												Program Specific Outcome			
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4
	Managerial knowledge	Problem analysis	Modern tool usage	Ethics	Individual and teamwork	Communication	Project management and finance	Business decision making	Life-long learning	Environment and sustainability	Entrepreneurial opportunities	Global outlook	Ability to apply managerial and business skills for development of business growth with the available resources	Ability to understand the day to day business operational problems and startup development of agribusiness and provide economical solution to enhance the decided goal without compromising ethical value	Inculcate proactive thinking to ensure effective performance in the dynamic socio-economic and business ecosystem entrepreneurial approach and skill sets aligned with the national priorities	Ability to use the research based innovative knowledge for sustainable development in agribusiness growth and develop
<b>CO-1:</b> Recognize the fundamentals concept of computers and application in agri business.	3	1	1	2	1	1	1	2	3	2	1	3	3	1	2	1
<b>CO-2:</b> Express the application of Information technology in agri business management.	3	2	1	2	2	2	1	3	2	1	2	3	3	2	2	3



<b>CO-3:</b> Practice of internet and web design and their application for developing of business.	3	2	1	2	2	2	3	2	1	2	3	3	2	3	3	3
<b>CO-4:</b> Develop the understanding of artificial intelligence and MIS for improved decision making in business management	2	2	3	1	2	2	3	2	1	2	1	1	3	3	2	2
<b>CO-5:</b> Assess the understanding of E-business/ E-commerce models and their application in business management	2	3	3	1	3	2	2	2	2	1	1	2	2	2	2	2

**Legend: 1–Low, 2–Medium, 3–High**



### Course Curriculum Map: Computer Application for Agri Business

POs&PSOs No.	COs No. & Titles	SOs No.	Laboratory Instruction (LI)	Classroom Instruction (CI)	Self Learning (SL)
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO1,2,3,4,5	<b>CO-1:</b> Recognize the fundamentals concept of computers and application in agri business	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>	<b>1.1-</b> Create a user account in windows operating system. Creating, renaming and deleting a Files & Folders. <b>1.2-</b> Use of MS-WORD, creating, editing and saving a Document. Mail merge, create and run a Macro.	<b>Unit-1.0</b> Concept of Computers- Brief History of Computers, Generation and Its Evolution, Characteristics of Computers, Main Areas of Computers and their Applications; Classification of Computers, Input-Output Devices, Memory Types (Cache, RAM, ROM), Memory Units. 1.1, 1.2, 1.3, 1.4, 1.5, 1.6.	As mentioned in page number .....
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO1,2,3,4,5	<b>CO-2:</b> Express the application of Information technology in agri business management.	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>	MS-EXCEL - Creating a spreadsheet, use of statistical tools, creating graphs. Mathematical calculation in Excel	<b>Unit-2.0-</b> System Software and Application Software, Open source software, introduction to computer languages, Introduction to Operating Systems – Functions, Features and Types., MS Windows and LINUX. Data Base Management System, Introduction to MS Office. 2.1, 2.2, 2.3, 2.4, 2.5, 2.6.	As mentioned in page number .....



PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO1,2,3,4,5	<b>CO-3:</b> Practice of internet and web design and their application for developing of business.	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>	<b>3.1.MS-ACCESS:</b> Creating Database, preparing queries and reports, Form designing. <b>3.2.MS- PowerPoint:</b> Presentation of posters, charts, overhead transparencies and slides	<b>Unit-3.0</b> The business value of internet, Intranet, extranet and Internet, Introduction to Web page design using HTML, Cloud Computing, Security and ethical challenges: Computer crime – Hacking, cyber theft, unauthorized use at work. Piracy – software and intellectual property. Health and Social Issues, Ergonomics and cyber terrorism. 3.1,3.2,3.3,3.4,3.5,3.6,	As mentioned in page number .....
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO1,2,3,4,5	<b>CO-4:</b> Develop the understanding of artificial intelligence and MIS for improved decision making in business management.	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>	<b>4.1-</b> Set the Transition and Animation Effect in Slide <b>4.2-</b> Internet applications: Web Browsing, Creation and operation of email account	<b>Unit-4.0</b> The concept of MIS – Definition, importance, Course Objective, prerequisites, advantages and challenges; Information Needs of organization, MIS and Decision – Making. Types/Classification of Information System for organizations; Introduction to Artificial Intelligence (AI), Neural Networks, Fuzzy logical control systems. 4.1,4.2,4.3,4.4,4.5,4.6, 4.7,4.8,4.9.	As mentioned in page number .....
PO 1,2,3,4,5,6 7,8,9,10,11,12	<b>CO-5:</b> Assess the understanding of E-business/ E-	<b>SO1.1</b> <b>SO1.2</b>	<b>5.1-</b> Web page designing using HTML. <b>5.2-</b> Create hyperlink in	<b>Unit-5.0</b> Understanding and managing organizational culture, power and political behavior in	As mentioned in page number .....



PSO1,2,3, 4,5	commerce models and their application in business management.	<b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>	webpage	organizations, conflict Management, negotiation, managing organizational change, concept of organizational development. 5.1, 5.2, 5.3, 5.4, 5.5, 5.6.	
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**Course Code:-**PGS 501

**Course Title:** Library and Information Services

**Pre-requisite:** Students should have basic knowledge of library because course aims to

familiarize the learners with the basic concept of use of library services.

**Rationale:** To impart to the students an understanding of knowledge classification and the theories of library classification, to develop skills in document classification and content analysis. The course provides the opportunity, ensuring freedom and equal access to information for all members of the community, to educate and enlighten them. To maintain and preserve books, materials and resources with historical, cultural, social, economic and archival value, and other related materials in an organized collection to provide members of the community these materials and enriched their personal and professional lives.

**Course Outcomes:**

**PGS 501CO-01** Able to understand about various concepts of Library, its functions, objective and connect foundational concepts, theories, and principles of information organization and access to professional contexts.

**Scheme of Studies:**

Board of Study	Course Code	Course Title			Scheme of studies (Hours/Week)			Total Credits (C)
			CI	LI	SW	SL	Total Study Hours (CI+LI+SW+SL)	
	PGS 501	Library and Information Services	0	1	1	1	3	1

**Legend:**

**CI:** Classroom Instruction (Includes different instructional strategies. Lecture (L) and Tutorial (T) and others),

**LI:** Laboratory Instruction (Includes Practical performances in laboratory workshop, field or other locations using different instructional strategies)

**SW:** Sessional Work (includes assignment, seminar, mini project etc.),

**SL:** Self Learning,

**C:** Credits.

**Note:** SL has to be planned and performed under the continuous guidance and feedback of teacher to ensure outcome of Learning.



**Scheme of Assessment:**

Board of Study	Course Code	Course Title	Scheme of Assessment (Marks)							
			Progressive Assessment (PRA)						End Semester Assessment	Total Marks
			Class/Home Assignment 5 number 3 marks each (CA)	Class Test 2 (2 best out of 3) 10 marks each (CT)	Seminar one (SA)	Class Activity any one (CAT)	Class Attendance (AT)	Total Marks (CA+CT+SA+CAT+AT)		
	PGS 501	Library and Information Services							100	100

**Course-Curriculum Detailing:**

This course syllabus illustrates the expected learning achievements, both at the course and session levels, which students are anticipated to accomplish through various modes of instruction including Classroom Instruction (CI), Laboratory Instruction (LI), Sessional Work (SW), and Self Learning (SL). As the course progresses, students should showcase their mastery of Session Outcomes (SOs), culminating in the overall achievement of Course Outcomes (COs) upon the course's conclusion.

**PGS 501.1: Able to understand about various concepts of Library, its functions, objective and connect foundational concepts, theories, and principles of information organization and access to professional contexts.**

**Approximate Hours**

Item	Appx Hrs.
CI	0
LI	30
SW	6
SL	3
Total	39



Session Outcomes (SOs)	Laboratory Instruction (LI)	Classroom Instruction (CI)	(SL)
<b>SO1.1</b> Understand the Concept, Definition & Characteristics of Library  <b>SO1.2</b> Understand the Importance & Functions of Library  <b>SO1.3</b> Understand the Role of Library and Information Services	Introduction to library, Types of library, Role of library in society Role of Education sector, Classification scheme, Types of Information sources Abstracting and indexing services, Use of Databases, OPAC Computerized library services Library Services Online Public Access Catalogue Types of Information Centers Library Automation Create a Digital Library Use of e resources		1. How to Accessioning of Books on software  2. How to Books search in Library through the OPAC  3. Difference Between Library and Information Services

### SW-1 Suggested Sessional Work (SW):

#### a. Assignments:

1. Introduction to library and its services;
2. Role of libraries in education, research and technology transfer,
3. Classification systems and organization of library;
4. Sources of information-, Primary Sources, Secondary Sources and Tertiary Sources;
5. Intricacies of abstracting and indexing services (Science Citation Index, Biological Abstracts, Chemical Abstracts, CABI Abstracts, etc.);
6. Tracing information from reference sources;





### Brief of Hours suggested for the Course Outcome

Course Outcomes	Class lecture (CL)	Sessional Work (SW)	Self-Learning (SL)	Total hour (CL+SW+SL)
Able to understand about various concepts of Library, its functions, objective and connect foundational concepts, theories, and principles of information organization and access to professional contexts.	30	6	3	39

### Suggestion for End Semester Assessment

#### Suggested Specification Table (For ESA)

CO	Unit Titles	Marks Distribution			Total Marks
		R	U	A	
<b>CO1</b>	Introduction to library, Types of library, Role of library in society, Role of Education sector, Classification scheme, Types of Information sources, Abstracting and indexing services, Use of Databases, OPAC, Computerized library services, Library Services, Online Public Access Catalogue, Types of Information Centers, Library Automation, Create a Digital Library, Use of e resources	<b>00</b>	<b>30</b>	<b>70</b>	<b>100</b>
<b>Laboratory work</b>	<b>Description of Marks</b>				
<b>1</b>	Labworks Assignment	-	-	-	<b>35</b>
<b>2</b>	Viva-voce	-	-	-	<b>10</b>
<b>3</b>	Attendance	-	-	-	<b>05</b>
	Total				<b>50</b>

**Legend: R: Remember, U: Understand, A: Apply**



The end of semester assessment for Library and Information Services will be held with written examination of 50 marks

Note: Detailed Assessment rubric needs to be prepared by the course wise teachers for above tasks. Teachers can also design different tasks as per requirement, for end semester assessment.

**Suggested Instructional/Implementation Strategies:**

1. Improved Lecture
2. Tutorial
3. Case Method
4. Group Discussion
5. Role Play
6. Demonstration
7. ICT Based Teaching Learning (Video Demonstration/Tutorials CBT, Blog, Facebook, Twitter, Whatsapp, Mobile, Online sources)
8. Brainstorming

**Suggested Learning Resources:**

Sl. No.	Title	Author	Publisher	Edition and Year
01	Management Information System- Managing the digital Firm,	Laudon KC and Laudon JP	Pearson India	2016 14 <sup>th</sup> Edition,
02	Information Technology for Management Advancing Sustainable profitable Business Growth	Turban, Volonino Woods. Wali OP. 2015	Wiley	2015
03	Management Information System	Jaiswal Mand Mittal M.	Oxford	2005

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1. Dr. S. S. Tomar, Dean Faculty of Agriculture science and technology.
2. Professor B. B. Beohar, Director Planning, & Director Extension, A. K. S. University
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Course Outcomes	Programme Outcomes		Programme Specific Outcomes	
	PO 6	PO 7	PSO9	PSO 11
	Student will apply various statistical methods to analyze their master research work.	Student will understand about library techniques, technical writing skill, IPR, laboratory techniques and research ethics in manuscript writing.	Student will apply various information services, technical writings and communication skills in their academics.	Student will apply basic statistical tools during their research work.
PGS 501. Able to understand about various concepts of library, its functions, objective and connect foundational concepts, theories, and principles of information organization and access to professional contexts.	3	3	2	3

**Legend: 1-Low, 2-Medium, 3-High**



**Course Code:-PGS502**

**Course Title:-Technical writing and communication.**

**Pre-requisite:-** Understanding the principles of various technical writing including thesis, reviews, abstracts and developing communication skills through the proper use of language.

**Rationale:-** The basic purpose of technical writing is to convey complex information in a simple manner. It explains a topic in detail using proper abstract and citations having communication skills being accessible to a general audience.

**Course Outcomes:**

**PGS502 CO-01:** Learning the various forms of scientific writing and implementing skills for Formulation of research based documents.

**PGS 502 CO-02:** Acquisition of technical communication skill and articulate in English (verbal as writing)

**Scheme of Studies:**

Board of Study	Course Code	Course Title	Scheme of studies (Hours/Week)					Total Credits (C)
			CI	LI	SW	SL	Total Study Hours CI+LI+SW+SL	
Program Core (PCC)	PGS 502	Technical writing and communication.	0	15	2	4	21	0+1

**Legend:**

**CI:** Classroom Instruction (Includes different instructional strategies i.e. Lecture (L) and Tutorial (T) and others),

**LI:** Laboratory Instruction (Includes Practical performances in laboratory workshop, field or other locations using different instructional strategies)

**SW:** Sessional Work (includes assignment, seminar, mini project etc.),

**SL:** Self Learning,

**C:** Credits.

**Note:** SW & SL has to be planned and performed under the continuous guidance and feedback of teacher to ensure outcome of Learning.

## ANNEX-II

Proposed examination scheme (Marking) as per the recommendation of PG re-structuring ' Committee of Agricultural Education Division, Indian Council of Agricultural Research for M. Sc. Horticulture in Vegetables science 2021-22 onwards



S. No.	Category of Course/Subject	Component of Marks				Total
		Semester End Examination (External)	Mid Term exam (Internal)	Assignment (Internal)	Practical Exam (Internal)	
1	Only Theory Subject Course	50	40(20+20)	10	-	100
2	Subject/Course with theory and Practical	50	30(15+15)	5 (Practical Based)	15	100
3	Subject/Course only Practical	-	-	-	100	100

### Course-Curriculum Detailing:

This course syllabus illustrates the expected learning achievements, both at the course and session levels, which students are anticipated to accomplish through various modes of instruction including Classroom Instruction (CI), Laboratory Instruction (LI), Sessional Work (SW), and Self Learning (SL). As the course progresses, students should showcase their mastery of Session Outcomes (SOs), culminating in the overall achievement of Course Outcomes (COs) upon the course's conclusion.

### **PGS502.1: Learning the various forms of scientific writing and implementing skills for Formulation of research based documents.**

Approximate Hours	
Item	Approximate Hours
CI	00
LI	08
SW	01
SL	02
<b>Total</b>	<b>11</b>



Session Outcomes (SOs)	Laboratory Instruction (LI)	Class room Instruction (CI)	Self Learning (SL)
<p>SO1.1. To understand about various form writing research documents.</p> <p>SO1.2. To understand about various technical writing approaches for scientific strengthening of research documents.</p> <p>SO1.3. To understand about editing and press reading method to avoid plagiarism.</p>	<p>Technical writing Various form of scientific writing – thesis, technical papers, reviews, manuals etc.</p> <p>Various part of thesis and research communication Title page Authorship content page Preface Introduction Review of literature Material and methods Experimental result Discussion citation etc.</p> <p>Commonly used abbreviations in the thesis and research communication . Illustrations, photography and drawing with suitable captions pagination numbering of tables and illustrations. Writing of numbers and dates in scientific write ups. Editing and press reading . Writing of review articles.</p>		<p>Enlisting and writing description of research communication contents.</p>



**SW-1 Suggested Seasonal Work (SW):**

**a. Assignments:**

- Various part of the thesis and research communications.
- Writing of abstract, summaries, précis, citations.
- Commonly used abbreviations in the thesis and research communication.
- Write down the principal of editing and press reading.

**b. Mini Project:**

**c. Other Activities (Specify):**

**PGS502.2: Acquisition of technical communications skill and articulate in English (verbal as writing )**

**Approximate Hours**

Item	Approximate Hours
CI	00
LI	07
SW	01
SL	02
<b>Total</b>	<b>10</b>

Session Outcomes (SOs)	Laboratory Instruction (LI)	Class room Instruction (CI)	Self Learning (SL)
SO 2.1. To understand the types, forms, tenses clauses and their uses. SO 2.2. To understand common errors, punctuation in the sentences. SO 2.3. To understand part of speech or word class and their uses. SO 2.4. To understand discussion in groups and interviews.	Communications skill- .1 Grammar (Tenses, part of speech, clauses, punctuation marks) .2 Error analysis (common error), concord, collocation, phonetic, symbols and transcription. .3 Accentual pattern: weak forms in connected speech. .4 Participation in group discussion .5 Facing of interview. .6 Presentation of scientific paper.		Enlisting and write the description of communication using proper language skills.



**SW-2 Suggested Seasonal Work (SW):**

**a. Assignments:**

- 1 Writing types of clauses.
- 2 Writing the sentences using correct punctuation.
- 3 Writing the types and forms of tenses.

**b. Mini Project:**

**c. Other Activities (Specify):**

**Brief of Hour suggested for the Course Outcome**

Course Outcomes	Class Lecture (CI)	Seasonal Work (SW)	Self Learning (SI)	Total hour (CI+SW+SI)
<b>PGS 502.1:</b> Learning the various form of scientific writing and implementing skills for Formulation of research based documents.	0	2	1	3
<b>PGS 502.2:</b> Acquisition of technical communications skill and articulate in English (verbal as writing)	0	2	1	3

**Suggestion for End Semester Assessment**

**Suggested Specification Table (For ESA)**

CO	Unit Titles	Marks Distribution			Total Marks
		R	U	A	
CO1	<b>Technical writing</b>	<b>00</b>	<b>05</b>	<b>05</b>	<b>10</b>
	<b>1.1 Various form of scientific writing –thesis, technical papers, reviews, manuals etc.</b>	<b>03</b>	<b>03</b>	<b>04</b>	<b>10</b>
	<b>Various part of thesis and research communication</b>				
	- Title page				
	- Authorship content page				
	- Preface				
	- Introduction	<b>00</b>	<b>05</b>	<b>05</b>	<b>10</b>
	- Review of literature				
	- Material and methods	<b>03</b>	<b>02</b>	<b>05</b>	<b>10</b>
	- Experimental result				
	- Discussion	<b>00</b>	<b>00</b>	<b>10</b>	<b>10</b>
	<b>1.3 citation etc.</b>				





	<b>1.4 Commonly used abbreviations in the thesis and research communication.</b> <b>1.5 Illustrations, photography and drawing with suitable captions</b> <b>1.6 Writing of numbers and dates in scientific writeups.</b> <b>1.7 Editing and proofreading</b> <b>1.8 Writing of review articles.</b>	00 04 03	05 02 02	05 04 05	10 10 10
<b>CO2</b>	<b>Communications skill-</b> <b>Grammar (Tenses, part of speech, clauses, punctuation marks)</b> <b>Error analysis (common error), concord, collocation, phonetic, symbols and transcription.</b> <b>Accentual pattern: weak forms in connected speech.</b> <b>Participating in group discussion</b> <b>Facing of interview.</b> <b>Presentation of scientific paper.</b>	03 02 04 05 00 00	02 03 04 02 05 05	05 05 00 00 05 05	10 10 08 07 10 10
<b>Laboratory work</b>	<b>Description of Marks</b>				
<b>1</b>	<b>Lab works Assignment</b>	-	-	-	<b>35</b>
<b>2</b>	<b>Viva-voce</b>	-	-	-	<b>10</b>
<b>3</b>	<b>Attendance</b>	-	-	-	<b>05</b>
	<b>Total</b>				<b>50</b>

**Legend: R: Remember, U: Understand, A: Apply**

Improved Lecture The end of semester assessment for **Technical writing and communication** will be held with written examination of 50 marks

Note. Detailed Assessment rubric need to be prepared by the course wise teachers for above tasks. Teachers can also design different tasks as per requirement, for end semester assessment.



**Suggested Instructional/Implementation Strategies:**

1. Tutorial
2. Case Method
3. Group Discussion
4. Role Play
5. Demonstration
6. ICT Based Teaching Learning (Video Demonstration/Tutorials CBT, Blog, Facebook, Twitter, Whatsapp, Mobile, Online sources)
7. Brainstorming

**Suggested Learning Resources:**

**(a) Books:**

S. No.	Title	Author	Publisher	Edition & Year
1	Spoken English	Barnes and Noble. Robert C. (Ed.).	Flourish Your Language	2005
2	Technical communication	Mikemarkel Stular A. Selber	Bedford/St. Martins, 12 <sup>th</sup> edition	2017
3	The Essentials of Technical communication	Elizabeth tebeaux sam dragga.	Oxford university press, 4 <sup>th</sup> edition	2017
4	Technical writing process	Kieranmorganandsanja spajic	Better on paper publications, 1 <sup>th</sup> edition	2015
5	Developing quality technical information	Moiramcfaddenlanyi, Deirdrelongo	IBM press 3 <sup>th</sup> edition	2014

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Course Outcomes	Programme Outcomes		Programme Specific Outcomes	
	PO 6	PO 7	POS-9	PSO11
	Student will apply various statistical methods to analyze their master research work.	Student will understand about library techniques, technical writing skill, IPR, laboratory techniques and research ethics in manuscript writing.	Student will apply various information services, technical writings and communication skills in their academics	Student will apply basic statistical tools during their research work.
PGS 502.1: Learning the various form of scientific writing and implementing skills for Formulation of research based documents.				
PGS 502.2: Acquisition of technical communication skill and articulate in English (verbal as writing )				



**Course Code:- ABM 504**

**Course Title:** - Human Resource Management for Agricultural Organizations

**Pre requisite:** -Student should have basic knowledge of human resources management, policies of resources welfare, and management of human resources.

**Rationale:** -A Human Resource Management for Agricultural Organizations curriculum is the express through the concept and procurers with provide the information to employers, employees and professionals in accurate manners. Professional or ABM holder should skill the principle of HRM to apply for achieves the fixed goal and desire. Also the HRM is help for understands of judging the increase the working efficiency and employment security.

**Course Outcomes:**

**ABM 504 CO -1** Express the basic concept of HRM and SHRM for agricultural business organization.

**ABM 504 CO -2** Employ the important of human resource management functions like as Job Analysis, recruitment, selection etc.

**ABM 504 CO-3** Analyze the performance appraisal, training, development and compensation management with major reference to the agri based organizations

**ABM 504 CO 4** Evaluate about the status of employee – employer relationship in Indian agri enterprises and global agri based organizations

**ABM 504 CO 5** Setup the ethical and recent trends in managing human resource effectively

**Scheme of studies**

Board of Study	Course Code	Course Title	Scheme of studies (Hours/Week)					Total Credits (C)
			CI	LI	SW	SL	Total Study Hours (CI+LI+SW+SL)	
Professional Core course (PCC)	ABM 504	Human Resource Management for Agricultural Organizations	2	0	2	1	05	02

**Legend: CI:** Classroom Instruction (Includes different instructional strategies i.e. Lecture (L) and Tutorial (T) and others),

**LI:** Laboratory Instruction (Includes Practical performances in laboratory workshop, field or other locations using different instructional strategies)



**SW:** Sessional Work (includes assignment, seminar, mini project etc.),

**SL:** Self Learning,

**C: Credits.**

**Note:** SW & SL has to be planned and performed under the continuous guidance and feedback of teacher to ensure outcome of Learning.

**Scheme of Assessment:**

Board of Study	Course Code	Course Title	Scheme of Assessment ( Marks )							
			Progressive Assessment ( PRA )						End Semester Assessment (ESA)	Total Marks (PRA+ESA)
			Class/ Home Assignment 5 number 3 marks each ( CA)	Class Test 2 (2 best out of 3) 10 marks each (CT)	Seminar one ( SA)	Class Activity any one (CAT)	Class Attendance (AT)	Total Marks (CA+CT+SA+CA+T+AT)		
(PCC)	ABM 540	Human Resource Management for Agricultural Organizations	15	30	00	00	05	50	50	100

**Course-Curriculum Detailing:**

This course syllabus illustrates the expected learning achievements, both at the course and session levels, which students are anticipated to accomplish through various modes of instruction including Classroom Instruction (CI), Laboratory Instruction (LI), Sessional Work (SW), and Self Learning (SL). As the course progresses, students should showcase their mastery of Session Outcomes (SOs), culminating in the overall achievement of Course Outcomes (COs) upon the course's conclusion.



**ABM 504 CO-1 Express the basic concept of HRM and SHRM for agricultural business organization**

**Approximate Hours**

Item	AppX Hrs
C I	6
LI	0
SW	2
SL	1
Total	09

Session Outcomes (SOs)	Laboratory Instruction (LI)	Class room Instruction (CI)	Self Learning (SL)
<b>SO1.1-</b> Introduce the strategic Human Resource Management <b>SO1.2 -</b> Brief the Human Resource Planning-Nature and Significance <b>SO1.3 –</b> Discuss the Job Analysis and talent management process <b>SO1.4-</b> Describes Job Description and job Specification, <b>SO1.5</b> Discuss the Job enlargement, Job enrichment and Job rotation		<b>Unit I:</b> <b>Strategic Human Resource Management, Human Resource Planning-Nature and Significance, Job Analysis and talent management process, Job Description, job Specification, Job enlargement, Job enrichment, Job rotation</b> <b>1.1-</b> Introduction to Strategic Human Resource Management <b>1.2-</b> Human Resource Planning <b>1.3-</b> Significance of HRM <b>1.4-</b> Job Analysis and talent management process <b>1.5-</b> Job Description, job Specification	<b>1.1-</b> Prepare the assignment on Human Resource Planning-Nature and Significance, Job Analysis and talent management process



		<b>1.6-Job enlargement, Job enrichment, Job rotation</b>	
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**SW-1 Suggested Sessional Work (SW):**

- a. Assignments:** Prepare the assignment on Human Resource Planning-Nature and Significance, Job Analysis and talent management process
- b. Mini Project: -**
- c. Other Activities (Specify):-**

**ABM 504 CO-2: Employ the important of human resource management functions like as Job Analysis, recruitment, selection etc**

**Approximate Hours**

Item	AppX Hrs
C 1	6
LI	0
SW	2
SL	1
Total	9

Session Outcomes (SOs)	Laboratory Instruction (LI)	Class room Instruction (CI)	Self Learning (SL)
<p><b>SO2.1</b> – introduce to the recruitment and Selection Process, Induction, Training and Human Resource Development-Nature</p> <p><b>SO2.2</b> – learned about the Significance, Process and Techniques, e-recruitment</p> <p><b>SO2.3-</b> Apply to the use of Big Data for recruitment, use of Artificial Intelligence and machine learning tools in recruitment</p> <p><b>SO2.4-</b> Briefing the practices Career planning and</p>		<p><b>Unit II:</b></p> <p><b>Recruitment and Selection Process, Induction, Training and Human Resource Development-Nature, Significance, Process and Techniques, e-recruitment, use of Big Data for recruitment, use of Artificial Intelligence and machine learning tools in recruitment practices Career planning and Development</b></p>	<p><b>2.1</b> – Prepare the assignment on recruitment and Selection Process, Induction, Training and Human Resource Development-Nature</p>



Development Internal mobility including Transfers <b>SO 2.5</b> –Discuss to the Promotions, employee separation		<b>Internal mobility including Transfers, Promotions, employee separation.</b> <b>2.1</b> – Discuss the recruitment and Selection Process <b>2.2-</b> Discuss to Induction, Training and Human Resource Development-Nature <b>2.3-</b> Introduce to significance, Process and Techniques, e-recruitment. <b>2.4-</b> Use of Artificial Intelligence and machine learning tools in recruitment practices. <b>2.5-</b> Discuss to Career planning and Development Internal mobility including Transfers <b>2.6-</b> Discuss to promotions, employee separation	
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**SW-1 Suggested Seasonal Work (SW):**

**a. Assignments:** Prepare the assignment on recruitment and Selection Process, Induction, Training and Human Resource Development-Nature

**b. Mini Project: c. Other Activities (Specify):**

**ABM 540 CO-3: Analyze the performance appraisal, training, development and compensation management with major reference to the Agri based organizations**

**Approximate Hours**

Item	AppX Hrs
C 1	6
LI	0
SW	2
SL	1
Total	09





Session Outcomes (SOs)	Laboratory Instruction(LI)	Class room Instruction(CI)	Self Learning (SL)
<p><b>SO3.1</b> – Introduction to performance Appraisal– Significance and methods, Compensation management</p> <p><b>SO3.2</b> – Discuss to the strategic pay plans, Job Evaluation, Wage and Salary Administration.</p> <p><b>SO3.3-</b> Apply the wage Fixation,</p> <p><b>SO3.4-</b> Discuss to Fringe Benefits and Incentive Payment of wage fixation.</p> <p><b>SO3.5–</b> Describe the bonus, and Profit Sharing of wage fixation</p>		<p><b>Unit : 03</b> <b>Performance Appraisal–Significance and methods, Compensation management, Strategic pay plans, Job Evaluation, Wage and Salary Administration; Wage Fixation; Fringe Benefits, Incentive Payment, bonus, and Profit Sharing</b></p> <p><b>3.1-</b> Introduce the performance appraisal <b>3.2-</b> Discuss the Significance and methods, Compensation management. <b>3.3-</b> Strategic pay plans, and Job Evaluation, <b>3.4-</b> Wage and Salary Administration. <b>3.5-</b> Wage Fixation; Fringe Benefits and Incentive Payment <b>3.6-</b> Wage Fixation; bonus, and Profit Sharing</p>	<p><b>3.1</b> Prepare the assignment on wage Fixation; Fringe Benefits, Incentive Payment, bonus, and Profit Sharing</p>

**SW-1 Suggested Seasonal Work (SW):**

- a. Assignments:** Prepare the assignment on wage Fixation; Fringe Benefits, Incentive Payment, bonus, and Profit Sharing
- b. Mini Project:**
- c. Other Activities (Specify):**



**ABM 504 CO-4: Evaluate about the status of employee – employer relationship in Indian agri enterprises and global agri based organizations**

**Approximate Hours**

Item	App X Hrs
CI	6
LI	0
SW	2
SL	1
Total	09

Session Outcomes (SOs)	Laboratory Instruction (LI)	Class room Instruction (CI)	Self Learning (SL)
<b>SO1.1</b> –Identify the role and status of Trade Unions; Collective Bargaining; Worker’s Participation in Management. <b>SO1.2</b> - Apply the employee retention. Quality of work life, employee welfare measure. <b>SO1.3</b> - Apply work life balance, Disputes and Grievance Handling <b>SO1.4</b> - Describes the Procedures; Arbitration and Adjudication <b>SO1.5</b> – Brief the procedures; Health and Safety of Human Resources.		<b>Unit-4</b> <b>Role and Status of Trade Unions; Collective Bargaining; Worker’s Participation in Management, employee retention. Quality of work life, employee welfare measure, work life balance, Disputes and Grievance Handling Procedures; Arbitration and Adjudication; Health and Safety of Human Resources</b>  <b>4.1</b> - Role and Status of Trade Unions  <b>4.2</b> - Collective Bargaining; Worker’s Participation in Management,  <b>4.3</b> - employee retention. Quality of work life  <b>4.4</b> - employee welfare measure, work life balance  <b>4.5</b> - Procedures; Arbitration and Adjudication	<b>4.1</b> - Prepare the assignment on employee retention. Quality of work life, employee welfare measure, work life balance, Disputes and Grievance Handling



		<b>4.6- Procedures Health and Safety of Human Resources</b>	
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**SW-1 Suggested Seasonal Work (SW)**

**a. Assignments:** Prepare the assignment on employee retention. Quality of work life, employee welfare measure, work life balance, Disputes and Grievance Handling

**b. Mini Project:**

**c. Other Activities (Specify):**

**ABM 504 CO-5: Setup the ethical and recent trends in managing human resource effectively.**

**Approximate Hours**

Item	AppX Hrs
CI	6
LI	0
SW	2
SL	1
Total	09

Session Outcomes (SOs)	Laboratory Instruction (LI)	Class room Instruction (CI)	Self Learning (SL)
<b>SO1.1</b> –Identify to definition, scope and importance of machine learning, <b>SO1.2-</b> Identify the types of machine learning, linear and nonlinear models in machine learning <b>SO1.3-</b> Introduction to deep learning, basic differences in machine learning and deep learning <b>SO1.4-</b> Briefs the basic differences in machine learning and deep learning. <b>SO1.5-</b> Apply to the concept of cloud machine learning, Big data analysis	<b>LE1.</b>	<b>Unit-5.0</b> <b>Ethical issues in HRM, Managing Global Human Resources, Managing Human Resources in Small and Entrepreneurial firms, Human Resources accounting, Human Resources outsourcing. HR Information System, Human Resource Metrics and Workforce Analytics, Future trends in workforce technologies.</b>  <b>5.1-</b> Ethical issues in HRM and Managing	<b>1.1</b> - Prepare the assignment on Ethical issues in HRM



		<p>Global Human Resources</p> <p><b>5.2-</b> Managing Human Resources in Small and Entrepreneurial firms.</p> <p><b>5.3-</b> Human Resources accounting</p> <p><b>5.4-</b> Human Resources outsourcing.</p> <p><b>5.5-</b> HR Information System, Human Resource Metrics</p> <p><b>5.6-</b> Workforce Analytics, Future trends in workforce technologies</p>	
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**SW-1 Suggested Seasonal Work (SW):**

- a. Assignments:** Prepare the assignment on Ethical issues in HRM
- b. Mini Project:**
- c. Other Activities (Specify):**

**Brief of Hours suggested for the Course Outcome**

Course Outcomes	Class Lecture (C I)	Laboratory Lecture (L I)	Sessional Work (SW)	Self Learning (S I)	Total hour (C I + LI+ SW +S I)
ABM 504 CO-1 Express the basic concept of HRM and SHRM for agricultural business organization	06	00	02	01	09
ABM 504 CO-2: Employ the important of human resource management functions like as Job Analysis, recruitment, selection etc.	06	00	02	01	09



ABM 504 CO-3: Analyze the performance appraisal, training, development and compensation management with major reference to the agri based organizations	06	00	02	01	09
ABM 504 CO-4: Evaluate about the status of employee – employer relationship in Indian agri enterprises and global agri based organizations	06	00	02	01	09
ABM 504 CO-5: Setup the ethical and recent trends in managing human resource effectively.	06	00	02	01	09
<b>Total Hours</b>	<b>30</b>	<b>00</b>	<b>10</b>	<b>05</b>	<b>45</b>

**Suggestion for End Semester Assessment**  
**Suggested Specification Table (For ESA)**

CO	Unit title	Marks Distribution			Total Marks
		R	U	A	
CO-1	<b>Unit I:</b> Strategic Human Resource Management, Human Resource Planning-Nature and Significance, Job Analysis and talent management process, Job Description, job Specification, Job enlargement, Job enrichment, Job rotation	02	03	00	05
CO-2	<b>Unit II:</b> Recruitment and Selection Process, Induction, Training and Human Resource Development-Nature, Significance, Process and Techniques, e- recruitment, use of Big Data for recruitment, use of Artificial Intelligence and machine learning tools in recruitment practices Career planning and Development Internal mobility including Transfers, Promotions, employee	02	05	03	10



	separation.				
CO-3	<b>Unit : 03</b> Performance Appraisal– Significance and methods, Compensation management, Strategic pay plans, Job Evaluation, Wage and Salary Administration; Wage Fixation; Fringe Benefits, Incentive Payment, bonus, and Profit Sharing	00	08	07	15
CO-4	<b>Unit-4</b> Role and Status of Trade Unions; Collective Bargaining; Worker's Participation in Management, employee retention. Quality of work life, employee welfare measure, work life balance, Disputes and Grievance Handling Procedures; Arbitration and Adjudication; Health and Safety of Human Resources	02	05	08	15
CO-5	<b>Unit-5.0</b> Ethical issues in HRM, Managing Global Human Resources, Managing Human Resources in Small and Entrepreneurial firms, Human Resources accounting, Human Resources outsourcing. HR Information System, Human Resource Metrics and Workforce Analytics, Future trends in workforce technologies.	00	03	02	05
	<b>Total</b>	<b>06</b>	<b>24</b>	<b>20</b>	<b>50</b>

**Legend: R: Remember, U: Understand, A: Apply**

The end of semester assessment for Introduction to Portland cement will be held with written examination of 50 marks

**Note.** Detailed Assessment rubric need to be prepared by the course wise teachers for above tasks. Teachers can also design different tasks as per requirement, for end semester assessment.



**Suggested Instructional/Implementation Strategies:**

1. Improved Lecture
2. Tutorial
3. Case Method
4. Group Discussion
5. Role Play
6. Visit to Industry
7. Demonstration
8. ICT Based Teaching Learning (Video Demonstration/Tutorials CBT, Blog, Face book, Twitter, Whatsapp, Mobile, Online sources)
9. Brainstorming

**Suggested Learning Resources:**

S. No.	Title	Author	Publisher	Edition & Year
01	Human Resource Management	Gary Dessler & Biju Varkkey	XIV Edition	Pearson India
02	Human Resource Management Text and Cases	VSP Rao	Excel Books	2010 3rd Edition.
03	Human Resource Management, Text and Cases	Ashwathapa K	Tata McGraw Hill	2016
04	Human Resource Information Systems,	Michael J. Kavanagh, Mohan Thite & Richard D. Johnson	Sage Publications	2016
05	Essentials of Human Resource Management and Industrial Relations	Subba Rao P	Himalaya Publ. House	2004

**Curriculum Development Team:**

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**Cos, POs and PSOs Mapping**

**Course Code:-ABM 504**

**Course Title: - Human Resource Management for Agricultural Organizations**

Course Outcomes	Program Outcomes												Program Specific Outcome			
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
	Managerial knowledge	Problem analysis	Modern tool usage	Ethics	Individual and teamwork	Communication	Project management and finance	Business decision making	Life-long learning	Environment and sustainability	Entrepreneurial opportunities	Global outlook	Ability to apply managerial and business skilled for development of business growth with the available resources	Ability to understand the day to day business operational problems and startup development of agribusiness and provide economic solution to enhance the decide	Inculcate proactive thinking to ensure effective performance in the dynamic socio-economic and business ecosystem entrepreneurial approach and	Ability to use the research based innovative knowledge for sustainable development in agribusiness growth and developments





														goal without compromising ethical value	skill sets aligned with the national priorities	
ABM 504 CO-1 Express the basic concept of HRM and SHRM for agricultural business organization	3	1	1	2	1	1	1	2	3	2	1	3	3	1	2	1
ABM 504 CO-2: Employ the important of human resource management functions like as Job Analysis, recruitment, selection etc.	3	2	1	2	2	2	1	3	2	1	2	3	3	2	2	3
ABM 504 CO-3:	3	2	1	2	2	2	3	2	1	2	3	3	2	3	3	3



Analyze the performance appraisal, training, development and compensation management with major reference to the agri based organizations																
ABM 504 CO-4: Evaluate about the status of employee – employer relationship in Indian agri enterprises and global agri based organizations	2	2	3	1	2	2	3	2	1	2	1	1	3	3	2	2
ABM 504 CO-5: Setup the ethical and recent trends in managing	2	3	3	1	3	2	2	2	2	1	1	2	2	2	2	2



human resource effectively.																
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**Legend: 1 – Low, 2 – Medium, 3 – High**

### Course Curriculum Map: Human Resource Management for Agricultural Organizations

POs & PSOs No.	COs No.& Titles	SOs No.	Laboratory Instruction(LI)	Classroom Instruction (CI)	Self Learning (SL)
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO 1,2, 3, 4, 5	ABM 504 CO-1 Express the basic concept of HRM and SHRM for agricultural business organization	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-1.0</b> Strategic Human Resource Management, Human Resource Planning-Nature and Significance, Job Analysis and talent management process, Job Description, job Specification, Job enlargement, Job enrichment, Job rotation 1.1, 1.2, 1.3, 1.4, 1.5, 1.6.	As mentioned in page number .....
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO 1,2, 3, 4, 5	ABM 504 CO-2: Employ the important of human resource management functions like as Job Analysis, recruitment, selection etc.	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-2.0 –</b> Recruitment and Selection Process, Induction, Training and Human Resource Development-Nature, Significance, Process and Techniques, e-recruitment, use of Big Data for recruitment, use of Artificial Intelligence and machine learning tools in recruitment practices Career planning and Development Internal mobility including Transfers, Promotions, employee separation. 2.1, 2.2, 2.3, 2.4, 2.5, 2.6.	As mentioned in page number .....
PO 1,2,3,4,5,6 7,8,9,10,11,12	ABM 504 CO-3: Analyze the	<b>SO1.1</b> <b>SO1.2</b>		<b>Unit-3.0</b> Recruitment and Selection Process,	As mentioned in page number .....



PSO 1,2, 3, 4, 5	performance appraisal, training, development and compensation management with major reference to the agri based organizations	<b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		Induction, Training and Human Resource Development-Nature, Significance, Process and Techniques, e- recruitment, use of Big Data for recruitment, use of Artificial Intelligence and machine learning tools in recruitment practices Career planning and Development Internal mobility including Transfers, Promotions, employee separation. 3.1, 3.2, 3.3, 3.4, 3.5, 3.6.	
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO 1,2, 3, 4, 5	ABM 504 CO-4: Evaluate about the status of employee – employer relationship in Indian agri enterprises and global agri based organizations	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-4.0</b> Role and Status of Trade Unions; Collective Bargaining; Worker's Participation in Management, employee retention. Quality of work life, employee welfare measure, work life balance, Disputes and Grievance Handling Procedures; Arbitration and Adjudication; Health and Safety of Human Resources 4.1, 4.2, 4.3, 4.4, 4.5, 4.6.	As mentioned in page number .....
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO 1,2, 3, 4, 5	ABM 504 CO-5: Setup the ethical and recent trends in managing human resource effectively.	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-5.0</b> Ethical issues in HRM, Managing Global Human Resources, Managing Human Resources in Small and Entrepreneurial firms, Human Resources accounting, Human Resources outsourcing. HR Information System, Human Resource Metrics and Workforce Analytics, Future trends in workforce technologies. 5.1, 5.2, 5.3, 5.4, 5.5, 5.6.	As mentioned in page number .....



**Course Code: - ABM 505**

**Course Title: -** Production and Operations Management

**Pre requisite: -**Student should have basic knowledge of production and operations management has used for developed the future plan business and predict to the financial requirement.

**Rationale: -**A production and operations management curriculum is the express through the concept and procurers with provide the information to assess the future plan business, predict to the financial and requirement in accurate manners. Professional or ABM holder should skill the principle of production and operations management to apply for planning and prediction. Also the production and operations management is help for understands of judging the feature of business assess.

**Course Outcomes:**

**ABM 505CO-1** Describe the basic concepts of production and operations management

**ABM 505 CO-2** Apply the basic Operations Strategy and developed the operation strategies

**ABM 505 CO-3** Calculate the productivity variables, and their measurement along with product design and development

**ABM 505 CO-4** Draw the fundamentals of inventory management, safety management, and quality assurance practices

**ABM 505 CO-5** Arrange the quality assurance practices and techniques with major emphasis on agri and foodbased industries

**Scheme of studies**

Board of Study	Course Code	Course Title	Scheme of studies (Hours/Week)					Total Credits (C)
			CI	LI	SW	SL	Total Study Hours (CI+LI+SW+SL)	
Professional Core course (PCC)	ABM 504	Production and Operations Management	2	0	2	1	05	02

**Legend: CI:** Classroom Instruction (Includes different instructional strategies i.e. Lecture (L) and Tutorial (T) and others),

**LI:** Laboratory Instruction (Includes Practical performances in laboratory workshop, field or other locations using different instructional strategies)

**SW:** Sessional Work (includes assignment, seminar, mini project etc.),

**SL:** Self Learning,



### C: Credits.

**Note:** SW & SL has to be planned and performed under the continuous guidance and feedback of teacher to ensure outcome of Learning.

### Scheme of Assessment:

Board of Study	Course Code	Course Title	Scheme of Assessment ( Marks )							
			Progressive Assessment ( PRA )						End Semester Assessment (ESA)	Total Marks (PRA+ESA)
			Class/ Home Assignment 5 number 3 marks each ( CA)	Class Test 2 (2 best out of 3) 10 marks each (CT)	Seminar one ( SA)	Class Activity any one (CAT)	Class Attendance (AT)	Total Marks (CA+CT+SA+CA+T+AT )		
(PCC)	ABM 540	Production and Operations Management	15	30	00	00	05	50	50	100

### Course-Curriculum Detailing:

This course syllabus illustrates the expected learning achievements, both at the course and session levels, which students are anticipated to accomplish through various modes of instruction including Classroom Instruction (CI), Laboratory Instruction (LI), Sessional Work (SW), and Self Learning (SL). As the course progresses, students should showcase their mastery of Session Outcomes (SOs), culminating in the overall achievement of Course Outcomes (COs) upon the course's conclusion.

### ABM 505 CO-1 Describe the basic concepts of production and operations management

#### Approximate Hours

Item	AppX Hrs
C I	6
LI	0
SW	2
SL	1
<b>Total</b>	<b>09</b>



Session Outcomes (SOs)	Laboratory Instruction (LI)	Class room Instruction (CI)	Self Learning(SL)
<b>SO1.1-</b> Introduce the Nature Concept and Scope of Production and Operations Management <b>SO1.2 -</b> Brief the Factors Affecting System; Facility location <b>SO1.3 –</b> Discuss the Types of Manufacturing Systems and Layouts <b>SO1.4-</b> Describes Process Selection and Facility Layout, <b>SO1.5</b> Discuss the Layout Planning and Analysis, Forecasting		<b>Unit I:</b> <b>Nature Concept and Scope of Production and Operations Management; Factors Affecting System; Facility location, Types of Manufacturing Systems and Layouts, Process Selection and Facility Layout, Layout Planning and Analysis, Forecasting</b> <b>1.1-</b> Nature and Concept of Production and Operations Management <b>1.2-</b> Scope of Production and Operations Management <b>1.3-</b> Factors Affecting System; Facility location and Layouts. <b>1.4-</b> Types of Manufacturing Systems <b>1.5-</b> Process Selection and Facility Layout <b>1.6-</b> Layout Planning and Analysis, Forecasting	<b>1.1-</b> Prepare the assignment on Nature Concept and Scope of Production and Operations Management

**SW-1 Suggested Sessional Work (SW):**

- a. Assignments:** Prepare the assignment on Nature Concept and Scope of Production and Operations Management
- b. Mini Project: -**
- c. Other Activities (Specify):-**



**ABM 505 CO-2: Apply the basic Operations Strategy and developed the operation strategies**

**Approximate Hours**

Item	AppX Hrs
C 1	7
LI	0
SW	2
SL	1
Total	10

Session Outcomes (SOs)	Laboratory Instruction (LI)	Class room Instruction (CI)	Self Learning (SL)
<p><b>SO2.1</b> – Introduce to the Operations Strategy, Competitive Capabilities and Core Competencies</p> <p><b>SO2.2</b> – learned about the Operations Strategy as a Competitive Weapon</p> <p><b>SO2.3-</b> Apply to the Linkage Between Corporate, Business, and Operations Strategy.</p> <p><b>SO2.4-</b> Briefing the Developing Operations Strategy, Elements or Components of Operations Strategy</p> <p><b>SO 2.5</b>–Discuss to the Competitive Priorities, Manufacturing Strategies, Service Strategies, Global Strategies and Role of Operations Strategy</p>		<p><b>Unit II:</b> <b>Operations Strategy: Operations Strategy, Competitive Capabilities and Core Competencies, Operations Strategy as a Competitive Weapon, Linkage Between Corporate, Business, and Operations Strategy, Developing Operations Strategy, Elements or Components of Operations Strategy, Competitive Priorities, Manufacturing Strategies, Service Strategies, Global Strategies and Role of Operations Strategy</b></p> <p><b>2.1</b> – Discuss the Operations Strategy</p> <p><b>2.2-</b> Discuss to Competitive Capabilities and Core Competencies</p> <p><b>2.4-</b>Operations Strategy as a Competitive</p>	<p><b>2.1</b> – Prepare the assignment on Developing Operations Strategy, Elements or Components of Operations Strategy</p>





		<p>Weapon</p> <p><b>2.5- Linkage Between Corporate, Business, and Operations Strategy</b></p> <p><b>2.6- Developing Operations Strategy, Elements or Components of Operations Strategy.</b></p> <p><b>2.7- Competitive Priorities, Manufacturing Strategies, Service Strategies, Global Strategies and Role of Operations Strategy</b></p>	
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**SW-1 Suggested Sessional Work (SW):**

**a. Assignments:** Prepare the assignment on Developing Operations Strategy, Elements or Components of Operations Strategy

**b. Mini Project: c. Other Activities (Specify):**

**ABM 505 CO-3: Apply the basic Operations Strategy and developed the operation strategies**

**Approximate Hours**

Item	AppX Hrs
C 1	5
LI	0
SW	2
SL	1
Total	08

Session Outcomes (SOs)	Laboratory Instruction(LI)	Class room Instruction(CI)	Self Learning (SL)
<p><b>SO3.1</b> – Introduction to Productivity Variables and Productivity Measurement</p> <p><b>SO3.2</b> – Discuss to the Production Planning and Control.</p>		<p><b>Unit III:</b></p> <p><b>Productivity Variables and Productivity Measurement, Production Planning and Control, Mass Production, Batch Production, Job Order Manufacturing, Product Selection,</b></p>	<p><b>3.1</b> Prepare the assignment on Production Planning and Control, Mass Production, Batch Production, Job Order Manufacturing</p>



<p><b>SO3.3-</b> Apply Mass Production Batch, Production and Job Order Manufacturing</p> <p><b>SO3.4-</b> Discuss to Product Selection, Product Design and Development</p> <p><b>SO3.5-</b> Describe the Process Selection, Capacity planning</p>		<p><b>Product Design and Development, Process Selection, Capacity planning</b></p> <p><b>3.1-</b>Productivity Variables and Productivity Measurement</p> <p><b>3.2-</b> Production Planning and Control</p> <p><b>3.3-</b> Mass Production, Batch Production, Job Order Manufacturing,</p> <p><b>3.4-</b> Product Selection, Product Design and Development.</p> <p><b>3.5-</b> Process Selection, Capacity planning</p>	
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**SW-1 Suggested Seasonal Work (SW):**

**a. Assignments:** Prepare the assignment on Production Planning and Control, Mass Production, Batch Production, Job Order Manufacturing

**b. Mini Project:**

**c. Other Activities (Specify):**

**ABM 505 CO-4: Draw the fundamentals of inventory management, safety management, and quality assurance practices**

**Approximate Hours**

Item	App X Hrs
CI	6
LI	0
SW	2
SL	1
Total	09

Session Outcomes (SOs)	Laboratory Instruction (LI)	Class room Instruction (CI)	Self Learning (SL)
<p><b>SO1.1</b> –Identify the An Overview of Inventory Management Fundamentals</p> <p><b>SO1.2</b> - Apply the</p>		<p><b>Unit-4</b></p> <p><b>An Overview of Inventory Management Fundamentals, Determination of Material Requirement, Safety Management</b></p>	<p><b>4.1-</b> Prepare the assignment on An Overview of Inventory Management Fundamentals,</p>



<p>Determination of Material Requirement, Safety Management Scheduling..</p> <p><b>SO1.3-</b>Apply Maintenance Management Concepts, Work Study, Method Study, Work Measurement, Work Sampling, Work Environment</p> <p><b>SO1.4-</b> Describes the Production Planning and Control (PPC) Industrial Safety</p> <p><b>SO1.5-</b> Brief the human- machine interface, types of interface designs. Cloud operations management.</p>		<p><b>Scheduling, Maintenance Management Concepts, Work Study, Method Study, Work Measurement, Work Sampling, Work Environment, Production Planning and Control (PPC) Industrial Safety, human- machine interface, types of interface designs. Cloud operations management</b></p> <p><b>4.1-</b> An Overview of Inventory Management Fundamentals</p> <p><b>4.2-</b> Determination of Material Requirement, Safety Management Scheduling</p> <p><b>4.3-</b>Maintenance Management Concepts</p> <p><b>4.4-</b> Work Study, Method Study, Work Measurement, Work Sampling, Work Environment</p> <p><b>4.5-</b> Production Planning and Control (PPC) Industrial Safety</p> <p><b>4.6-</b> human- machine interface, types of interface designs. Cloud operations management</p>	
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### **SW-1 Suggested Seasonal Work (SW)**

**a. Assignments:** Prepare the assignment on An Overview of Inventory Management Fundamentals

**b. Mini Project:**

**c. Other Activities (Specify):**



**ABM 505 CO-5: Arrange the quality assurance practices and techniques with major emphasis on agri and foodbased industries**

**Approximate Hours**

Item	AppX Hrs
CI	6
LI	2
SW	2
SL	1
Total	11

Session Outcomes (SOs)	Laboratory Instruction (LI)	Class room Instruction (CI)	Self Learning (SL)
<b>SO1.1</b> –Identify to Quality Assurance, Accepting Sampling, Statistical Process Control, <b>SO1.2-</b> Identify the total Quality Management, ISO standards and their Importance, <b>SO1.3-</b> Introduction to re- engineering, value engineering <b>SO1.4-</b> Briefs the check sheets, Pareto charts, Ishikawa charts, JIT Pre-requisites for implementation <b>SO1.5-</b> Apply to the concept of SiX SIGMA, Lean Management, Reliability.		<b>Unit-5.0</b> <b>Quality Assurance, Accepting Sampling, Statistical Process Control, Total Quality Management, ISO standards and their Importance, Introduction to re-engineering, value engineering, check sheets, Pareto charts, Ishikawa charts, JIT Pre-requisites for implementation SiX SIGMA, Lean Management, Reliability</b> <b>5.1-</b> Quality Assurance, Accepting Sampling, Statistical Process Control, <b>5.2-</b> Total Quality Management, ISO standards and their	<b>1.1 -</b> Prepare the assignment on Introduction to re-engineering, value engineering, check sheets, Pareto charts, Ishikawa charts,



		<p>Importance.</p> <p><b>5.3-</b> Introduction to re- engineering and value engineering</p> <p><b>5.4-</b> Check sheets, Pareto charts, Ishikawa charts.</p> <p><b>5.5-</b> JIT Pre-requisites for implementation</p> <p><b>5.6-</b> SiX SIGMA, Lean Management, Reliability</p>	
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**SW-1 Suggested Seasonal Work (SW):**

**a. Assignments:** Prepare the assignment on Introduction to re- engineering, value engineering, check sheets, Pareto charts, Ishikawa charts,

**b. Mini Project:**

**c. Other Activities (Specify):**

**Brief of Hours suggested for the Course Outcome**

Course Outcomes	Class Lecture (C I)	Laboratory Lecture (L I)	Sessional Work (SW)	Self Learning (S I)	Total hour (C I + LI+ SW +S I)
ABM 505 CO-1 Describe the basic concepts of production and operations management	06	00	02	01	<b>09</b>
ABM 505 CO-2: Apply the basic Operations Strategy and developed the operation strategies	07	00	02	01	<b>10</b>
ABM 505 CO-3: Apply the basic Operations Strategy and developed the operation strategies	05	00	02	01	<b>08</b>
ABM 505 CO-4: Draw the fundamentals of inventory management, safety management, and quality	06	00	02	01	<b>09</b>



assurance practice.					
ABM 505 CO-5: Arrange the quality assurance practices and techniques with major emphasis on agri and food based industries	06	00	02	01	<b>09</b>
<b>Total Hours</b>	<b>30</b>	<b>00</b>	<b>10</b>	<b>05</b>	<b>45</b>

**Suggestion for End Semester Assessment**  
**Suggested Specification Table (For ESA)**

CO	Unit title	Marks Distribution			Total Marks
		R	U	A	
CO-1	<b>Unit I:</b> Nature Concept and Scope of Production and Operations Management; Factors Affecting System; Facility location, Types of Manufacturing Systems and Layouts, Process Selection and Facility Layout, Layout Planning and Analysis, Forecasting	02	03	00	05
CO-2	<b>Unit II:</b> Operations Strategy: Operations Strategy, Competitive Capabilities and Core Competencies, Operations Strategy as a Competitive Weapon, Linkage Between Corporate, Business, and Operations Strategy, Developing Operations Strategy, Elements or Components of Operations Strategy, Competitive Priorities, Manufacturing Strategies, Service Strategies, Global Strategies and Role of Operations Strategy	02	05	03	10
CO-3	<b>Unit III:</b> Productivity Variables and Productivity Measurement, Production Planning and Control, Mass Production, Batch Production, Job Order Manufacturing, Product Selection, Product Design and	00	08	07	15



	Development, Process Selection, Capacity planning				
CO-4	<b>Unit-4</b> An Overview of Inventory Management Fundamentals, Determination of Material Requirement, Safety Management Scheduling, Maintenance Management Concepts, Work Study, Method Study, Work Measurement, Work Sampling, Work Environment, Production Planning and Control (PPC) Industrial Safety, human- machine interface, types of interface designs. Cloud operations management	02	05	08	15
CO-5	<b>Unit-5.0</b> Quality Assurance, Accepting Sampling, Statistical Process Control, Total Quality Management, ISO standards and their Importance, Introduction to re- engineering, value engineering, check sheets, Pareto charts, Ishikawa charts, JIT Pre-requisites for implementation SiX SIGMA, Lean Management, Reliability	00	03	02	05
	Total	06	24	20	<b>50</b>

**Legend: R: Remember, U: Understand, A: Apply**

The end of semester assessment for Introduction to Portland cement will be held with written examination of 50 marks

**Note.** Detailed Assessment rubric need to be prepared by the course wise teachers for above tasks. Teachers can also design different tasks as per requirement, for end semester assessment.

**Suggested Instructional/Implementation Strategies:**

1. Improved Lecture
2. Tutorial
3. Case Method
4. Group Discussion
5. Role Play
6. Visit to Industry
7. Demonstration



8. ICT Based Teaching Learning (Video  
CBT, Blog, Face book, Twitter, Whatsapp, Mobile, Online sources)
9. Brainstorming

**Suggested Learning Resources:**

<b>S. No.</b>	<b>Title</b>	<b>Author</b>	<b>Publisher</b>	<b>Edition &amp; Year</b>
01	Operations Management	William J. Stevenson	McGraw-Hill	2014 12th Edition
02	Production and Operations Management	Panneerselvam K.	Prentice Hall India Learning Private Limited	2012 3rd Edition.
03	Production and Operations Management	S. N Chary,	McGraw Hill Education	2017 5 edit

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**Cos, POs and PSOs Mapping**

**Course Code:-ABM 505**

**Course Title: - Production and Operations Management**

Course Outcomes	Program Outcomes												Program Specific Outcome			
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
	Managerial knowledge	Problem analysis	Modern tool usage	Ethics	Individual and team work	Communication	Project management and finance	Business decision making	Life-long learning	Environment and sustainability	Entrepreneurial opportunities	Global outlook	Ability to apply managerial and business skilled for development of business growth with the available resources	Ability to understand the day to day business operational problems and startup development of agribusiness and provide economical solution to enhance the decision goal without compromising ethical value	Inculcate proactive thinking to ensure effective performance in the dynamic socio-economic and business ecosystem entrepreneurial approach and skill sets aligned with the national priorities	Ability to use the research based innovative knowledge for sustainable development in agribusiness growth and develops



ABM 505 CO-1 Describe the basic concepts of production and operations management	3	1	1	2	1	1	1	2	3	2	1	3	3	1	2	1
ABM 505 CO-2: Apply the basic Operations Strategy and developed the operation strategies	3	2	1	2	2	2	1	3	2	1	2	3	3	2	2	3
ABM 505 CO-3: Apply the basic Operations Strategy and developed the operation strategies	3	2	1	2	2	2	3	2	1	2	3	3	2	3	3	3
ABM 505 CO-4: Draw the fundamentals of inventory management, safety management, and quality assurance practice.	2	2	3	1	2	2	3	2	1	2	1	1	3	3	2	2
ABM 505 CO-5: Arrange the	2	3	3	1	3	2	2	2	2	1	1	2	2	2	2	2



quality assurance practices and techniques with major emphasis on agri and food based industries																
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**Legend: 1 – Low, 2 – Medium, 3 – High**

### Course Curriculum Map: Production and Operations Management

POs & PSOs No.	COs No.& Titles	SOs No.	Laboratory Instruction(LI)	Classroom Instruction (CI)	Self Learning (SL)
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO 1,2, 3, 4, 5	ABM 505 CO-1 Describe the basic concepts of production and operations management	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-1.0</b> Nature Concept and Scope of Production and Operations Management; Factors Affecting System; Facility location, Types of Manufacturing Systems and Layouts, Process Selection and Facility Layout, Layout Planning and Analysis, Forecasting 1.1, 1.2, 1.3, 1.4, 1.5, 1.6.	As mentioned in page number .....



PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO 1,2, 3, 4, 5	ABM 505 CO-2: Apply the basic Operations Strategy and developed the operation strategies	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-2.0 –</b> Operations Strategy: Operations Strategy, Competitive Capabilities and Core Competencies, Operations Strategy as a Competitive Weapon, Linkage Between Corporate, Business, and Operations Strategy, Developing Operations Strategy, Elements or Components of Operations Strategy, Competitive Priorities, Manufacturing Strategies, Service Strategies, Global Strategies and Role of Operations Strategy. 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7.	As mentioned in page number .....
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO 1,2, 3, 4, 5	ABM 505 CO-3: Apply the basic Operations Strategy and developed the operation strategies	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-3.0</b> Productivity Variables and Productivity Measurement, Production Planning and Control, Mass Production, Batch Production, Job Order Manufacturing, Product Selection, Product Design and Development, Process Selection, Capacity planning. 3.1, 3.2, 3.3, 3.4, 3.5,	As mentioned in page number .....
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO 1,2, 3, 4, 5	ABM 505 CO-4: Draw the fundamentals of inventory management, safety management, and quality assurance practice.	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-4.0</b> An Overview of Inventory Management Fundamentals, Determination of Material Requirement, Safety Management Scheduling, Maintenance Management Concepts, Work Study, Method Study, Work Measurement, Work Sampling, Work Environment, Production Planning and	As mentioned in page number .....



				Control (PPC) Industrial Safety, human-machine interface, types of interface designs. Cloud operations management 4.1, 4.2, 4.3, 4.4, 4.5, 4.6.	
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO 1,2, 3, 4, 5	ABM 505 CO-5: Arrange the quality assurance practices and techniques with major emphasis on agri and food based industries	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-5.0</b> Quality Assurance, Accepting Sampling, Statistical Process Control, Total Quality Management, ISO standards and their Importance, Introduction to re-engineering, value engineering, check sheets, Pareto charts, Ishikawa charts, JIT Pre-requisites for implementation SiX SIGMA, Lean Management, Reliability 5.1, 5.2, 5.3, 5.4, 5.5, 5.6.	As mentioned in page number .....



**Course Code:- ABM 507**

**Course Title: - Agricultural and Food Marketing Management- II**

**Pre requisite:** -Student should have basic knowledge of, Food marketing concept and system, marketing planning and strategies with application of update national and international marketing practices.

**Rationale:** - The students studying Agricultural and Food Marketing Management- II should possess understanding about application of update national and international marketing practices in Agriculture and food marketing. This encompasses familiarity with the invention and evolution of food marketing. Additionally, students ought to acquire fundamental insights into various marketing, their applications. Agricultural food marketing II is useful for understands for concept and system of food marketing and market research.

**Course Outcomes:**

**ABM 507CO -1** Discuss the agricultural and food marketing concepts and systems

**ABM 507CO-2** Apply the marketing planning and strategies for developing products for meeting the specific needs of the final customers

**ABM 507CO-3** Estimate the Marketing Strategy, Planning and Control with Marketing plan control, Efficiency control.

**ABM 507CO-4** Develop a clear view about the new product development consumer buying decision process, Buyer behavior and market segmentation

**ABM 507CO-5** Asses to the commodity marketing practices in India and in International markets

**Scheme of studies**

Board of Study	Course Code	Course Title	Scheme of studies (Hours/Week)					Total Credits (C)
			CI	LI	SW	SL	Total Study Hours (CI+LI+SW+SL)	
Professional Core course (PCC)	<b>ABM 507</b>	Agricultural and Food Marketing Management-II	1	1	2	1	05	02

**Legend:** **CI:** Classroom Instruction (Includes different instructional strategies i.e. Lecture (L) and Tutorial (T) and others),

**LI:** Laboratory Instruction (Includes Practical performances in laboratory workshop, field or other locations using different instructional strategies)



**SW:** Sessional Work (includes assignment, seminar, mini project etc.),

**SL:** Self Learning,

**C: Credits.**

**Note:** SW & SL has to be planned and performed under the continuous guidance and feedback of teacher to ensure outcome of Learning.

**Scheme of Assessment:**

Board of Study	Course Code	Course Title	Scheme of Assessment ( Marks )							
			Progressive Assessment ( PRA )						End Semester Assessment (ESA)	Total Marks (PRA+ESA)
			Class/ Home Assignment 5 number 3 marks each ( CA)	Class Test 2 (2 best out of 3) 10 marks each (CT)	Seminar one ( SA)	Class Activity any one (CAT)	Class Attendance (AT)	Total Marks (CA+CT+SA+CA+T+AT)		
(PCC)	ABM 507	Agricultural and Food Marketing Management-II	15	30	00	00	05	50	50	100

**Course-Curriculum Detailing:**

This course syllabus illustrates the expected learning achievements, both at the course and session levels, which students are anticipated to accomplish through various modes of instruction including Classroom Instruction (CI), Laboratory Instruction (LI), Sessional Work (SW), and Self Learning (SL). As the course progresses, students should showcase their mastery of Session Outcomes (SOs), culminating in the overall achievement of Course Outcomes (COs) upon the course's conclusion.



**ABM 507 CO-1 Discuss the agricultural and food marketing concepts and systems.**

**Approximate Hours**

Item	AppX Hrs
C 1	4
LI	1
SW	2
SL	1
Total	08

Session Outcomes (SOs)	Laboratory Instruction (LI)	Class room Instruction (CI)	Self Learning(SL)
<p><b>SO1.1-</b> Introduce the importance of agricultural and food marketing to developing countries</p> <p><b>SO1.2 –</b> Interpret the marketing concept and marketing systems, Marketing sub-systems Marketing functions,.</p> <p><b>SO1.3 –</b> Discuss the links between agriculture and the food industry, Agricultural and food marketing enterprises</p> <p><b>SO1.4-</b> Describes the Marketing boards in developing countries, Co- operatives in the agriculture and food sectors, Control and management of secondary co-operatives</p> <p><b>SO1.5</b> Discuss the weaknesses of co-operatives, Selling arrangements between co- operatives and their members</p>	<p><b>LI1.1-</b></p>	<p><b>Unit I:</b> <b>The importance of agricultural and food marketing to developing countries, the marketing concept and marketing systems, Marketing sub-systems Marketing functions, Links between agriculture and the food industry, Agricultural and food marketing enterprises, Marketing boards in developing countries, Co- operatives in the agriculture and food sectors, Control and management of secondary co-operatives, The weaknesses of co-operatives, Selling arrangements between co- operatives and their members</b></p> <p>1.1- The importance of agricultural and food marketing to developing</p>	<p><b>1.1-</b> Prepare the assignment on the marketing concept and marketing systems, Marketing sub-systems Marketing functions, Links between agriculture and the food industry.</p>





<b>SO1.6</b> Laboratory and field work		<p>countries, the marketing concept and marketing systems, Marketing sub-systems Marketing functions</p> <p>1.2- Links between agriculture and the food industry, Agricultural and food marketing enterprises</p> <p>1.3- Marketing boards in developing countries, Co- operatives in the agriculture and food sectors, Control and management of secondary co-operatives</p> <p>1.4- The weaknesses of co-operatives, Selling arrangements between co- operatives and their members</p>	
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**SW-1 Suggested Sessional Work (SW):**

**a. Assignments:** Prepare the assignment on **the** marketing concept and marketing systems, marketing sub-systems Marketing functions, Links between agriculture and the food industry

**b. Mini Project: -**

**c. Other Activities (Specify):-**

**ABM 507 CO-2: Apply the marketing planning and strategies for developing products for meeting the specific needs of the final customers**

**Approximate Hours**

Item	AppX Hrs
C 1	4
LI	1
SW	2
SL	1
Total	08



Session Outcomes (SOs)	Laboratory Instruction (LI)	Class room Instruction (CI)	Self Learning (SL)
<p><b>SO2.1</b> – Introduce to the market Liberalization: Economic structural adjustment programmes, Macro-economic stabilisation, The role of the state in liberalised markets</p> <p><b>SO2.2</b> – learned about strategies for reforming agricultural marketing, obstacles to be overcome in commercialization and privatization of agricultural marketing,</p> <p><b>SO2.3-</b> Apply to the dealing with accumulated deficits, Encouraging private sector involvement in agricultural marketing,</p> <p><b>SO2.4-</b> Briefing the Impediments to private sector participation in agricultural markets,</p> <p><b>SO 2.5</b>–Discuss to the economic environment on private traders, Government action to improve private sector performance</p>	<p><b>LI-2.1</b></p>	<p><b>Unit II:</b> <b>Market Liberalization: Economic structural adjustment programmes, Macro-economic stabilisation, The role of the state in liberalised markets, Strategies for reforming agricultural marketing, Obstacles to be overcome in commercialization and Privatization of agricultural marketing, Dealing with accumulated deficits, Encouraging private sector involvement in agricultural marketing, Impediments to private sector participation in agricultural markets, impact of the macro-economic environment on private traders, Government action to improve private sector performance</b></p> <p><b>2.1</b> – Market Liberalization: Economic structural adjustment programmes, Macro-economic stabilisation, The role of the state in liberalised markets</p> <p><b>2.2-</b> Strategies for reforming agricultural marketing, Obstacles to be overcome in commercialization and Privatization of agricultural</p>	<p><b>2.1</b> – Prepare the assignment on Market Liberalization: Economic structural adjustment programmes</p>



		marketing 2.3- Dealing with accumulated deficits, Encouraging private sector involvement in agricultural marketing, Impediments to private sector participation in agricultural markets 2.4- Impact of the macro-economic environment on private traders, Government action to improve private sector performance.	
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**SW-1 Suggested Sessional Work (SW):**

**a. Assignments:** Prepare the assignment on Market Liberalization: Economic structural adjustment programmes

**b. Mini Project:**

**c. Other Activities (Specify):**

**ABM 507 CO-3: Estimate the Marketing Strategy, Planning and Control with Marketing plan control, Efficiency control**

**Approximate Hours**

Item	AppX Hrs
C 1	3
LI	1
SW	2
SL	1
Total	07

Session Outcomes (SOs)	Laboratory Instruction(LI)	Class room Instruction(CI)	Self Learning (SL)
<b>SO3.1</b> – Introduction to marketing strategy, planning and control: strategy, policy and planning, <b>SO3.2</b> – Discuss to the strategic business units, The need for marketing planning. <b>SO3.3-</b> Apply the process of marketing planning, Contents of the marketing plan.	<b>LI1.1</b>	<b>Unit III:</b> <b>Marketing Strategy, Planning and Control: Strategy, policy and planning, Strategic business units, The need for marketing planning, The process of marketing planning, Contents of the marketing plan, Monitoring, evaluating</b>	<b>3.1</b> Prepare the assignment on the process of marketing planning, Contents of the marketing plan, Monitoring, evaluating and controlling the marketing planning



<p><b>SO3.4-</b> Discuss to monitoring, evaluating and controlling the marketing planning.</p> <p><b>SO3.5-</b> Analyze the marketing controls, marketing plan control, efficiency control,</p>		<p><b>and controlling the marketing planning, Marketing controls, Marketing plan control, Efficiency control</b></p> <p><b>3.1-</b> Marketing Strategy, Planning and Control: Strategy, policy and planning, Strategic business units,</p> <p><b>3.2-</b> The need for marketing planning, The process of marketing planning, Contents of the marketing plan,</p> <p><b>3.3-</b> Monitoring, evaluating and controlling the marketing planning, Marketing controls, Marketing plan control, Efficiency control, Technological advances in physical distribution</p>	
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**SW-1 Suggested Sessional Work (SW):**

**a. Assignments:** Prepare the assignment on the process of marketing planning, Contents of the marketing plan, monitoring, evaluating and controlling the marketing planning

**b. Mini Project:**

**c. Other Activities (Specify):**

**ABM 506 CO-4: Develop a clear view about the new product development consumer buying decision process, Buyer behavior and market segmentation**

**Approximate Hours**

Item	App X Hrs
CI	3
LI	1
SW	2
SL	1
Total	06



Session Outcomes(SOs)	Laboratory Instruction (LI)	Class room Instruction(CI)	Self Learning (SL)
<p><b>SO1.1</b> –Identify the New Product Development: The impetus to innovation, New product development process.</p> <p><b>SO1.2</b> - Apply the adoption process, The effect of products characteristics on the rate of adoption.</p> <p><b>SO1.3-</b> Apply the Buyer behavior: The influences on buyer behaviour, EXogenous influences on buyer behaviour Endogenous influences on buyer behaviour</p> <p><b>SO1.4-</b> Describes the consumer buying decision process, Buyer behaviour and market segmentation</p> <p><b>SO1.5–</b> Brief the organizational markets Industrial markets, Industrial buyer characteristics</p> <p><b>SO1.6–</b> Laboratory and field works</p>		<p><b>Unit-IV</b> <b>New Product Development: The impetus to innovation, New product development process The adoption process, The effect of products characteristics on the rate of adoption, Buyer behavior: The influences on buyer behaviour, EXogenous influences on buyer behaviour Endogenous influences on buyer behaviour, The consumer buying decision process, Buyer behaviour and market segmentation, Lifestyle segmentation, Organisational markets Industrial markets, Industrial buyer characteristics</b></p> <p>4.1- New Product development: The impetus to innovation, New product development process The adoption process, The effect of products characteristics on the rate of adoption,</p> <p>4.2- Buyer behavior: The influences on buyer behavior, EXogenous influences on buyer behavior Endogenous influences on buyer behavior, The consumer buying decision process.</p>	<p><b>4.1-</b> Prepare the assignment on New product development: The impetus to innovation, New product development process.</p>



		4.3-Buyer behavior and market segmentation, Lifestyle segmentation, Organizational markets Industrial markets, Industrial buyer characteristic	
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**SW-1 Suggested Sessional Work (SW)**

**a. Assignments:** Prepare the assignment on new product development: The impetus to innovation, new product development process.

**b. Mini Project:**

**c. Other Activities (Specify):**

**ABM 506 CO-5: Asses to the commodity marketing practices in India and in International markets**

**Approximate Hours**

Item	AppX Hrs
CI	2
LI	1
SW	2
SL	1
Total	10

Session Outcomes (SOs)	Laboratory Instruction (LI)	Class room Instruction (CI)	Self Learning (SL)
<b>SO1.1</b> –Identify the Stages in a commodity marketing system <b>SO1.2-</b> Asses the grain marketing, challenges for grain marketing systems, <b>SO1.3-</b> Asses the challenges for fruits and vegetables, livestock and meat marketing, <b>SO1.4-</b> Asses the challenges for poultry and eggs marketing <b>SO1.5-</b> Asses the challenges for marketing of fresh milk	<b>LE1.</b>	<b>Unit-5.0</b> <b>Stages in a commodity marketing system, Grain marketing, Challenges for grain marketing systems, fruits and vegetables, Livestock and meat marketing, Poultry and eggs marketing, marketing of fresh milk</b> <b>5.1-</b> Stages in a commodity marketing system, Grain marketing, <b>5.2-</b> Challenges for grain marketing systems, fruits and	<b>1.1</b> - Prepare the assignment on challenges for grain marketing systems, fruits and vegetables.



		vegetables, Livestock and meat marketing, Poultry and eggs marketing, marketing of fresh milk	
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**SW-1 Suggested Sessional Work (SW):**

**a. Assignments:** Prepare the assignment on challenges for grain marketing systems, fruits and vegetables.

**b. Mini Project:**

**c. Other Activities (Specify):**

**Brief of Hours suggested for the Course Outcome**

Course Outcomes	Class Lecture (C I)	Laboratory Lecture (L I)	Sessional Work (SW)	Self Learning (S I)	Total hour (C I + LI + SW + S I)
<b>ABM 506 CO-1</b> Discuss the agricultural and food marketing concepts and systems	4	1	2	1	<b>08</b>
<b>ABM 506 CO-2</b> Apply the marketing planning and strategies for developing products for meeting the specific needs of the final customers	4	1	2	1	<b>08</b>
<b>ABM 506 CO-3</b> Estimate the Marketing Strategy, Planning and Control with Marketing plan control, Efficiency control.	3	1	2	1	<b>07</b>
<b>ABM 506 CO-4</b> Develop a clear view about the new product development consumer buying decision process, Buyer behaviour and market segmentation	3	1	2	1	<b>07</b>
<b>ABM 506 CO-5</b> Asses to the commodity marketing practices in India and in International markets.	2	1	2	1	<b>06</b>
<b>Total Hours</b>	<b>16</b>	<b>05</b>	<b>10</b>	<b>05</b>	<b>36</b>



**Suggestion for End Semester Assessment**  
**Suggested Specification Table (For ESA)**

CO	Unit title	Marks Distribution			Total Marks
		R	U	A	
CO-1	<b>Unit I:</b> The importance of agricultural and food marketing to developing countries, the marketing concept and marketing systems, Marketing sub-systems Marketing functions, Links between agriculture and the food industry, Agricultural and food marketing enterprises, Marketing boards in developing countries, Co- operatives in the agriculture and food sectors, Control and management of secondary co-operatives, The weaknesses of co-operatives, Selling arrangements between co- operatives and their members	02	03	00	05
CO-2	<b>Unit II:</b> Market Liberalization: Economic structural adjustment programmer, Macro-economic stabilization, The role of the state in liberalized markets, Strategies for reforming agricultural marketing, Obstacles to be overcome in commercialization and Privatization of agricultural marketing, Dealing with accumulated deficits, Encouraging private sector involvement in agricultural marketing, Impediments to private sector participation in agricultural markets, impact of the macro-economic environment on private traders, Government action to improve private sector performance	02	05	03	10
CO-3	<b>Unit III:</b> Marketing Strategy, Planning and Control: Strategy, policy and planning, Strategic business units, The need for marketing planning, The process of marketing planning, Contents of the marketing plan, Monitoring, evaluating and controlling the marketing planning, Marketing controls, Marketing plan control, Efficiency control	00	08	07	15





CO-4	<b>Unit-IV</b> New Product Development: The impetus to innovation, New product development process The adoption process, The effect of products characteristics on the rate of adoption, Buyer behavior: The influences on buyer behaviour, Exogenous influences on buyer behaviour Endogenous influences on buyer behaviour, The consumer buying decision process, Buyer behaviour and market segmentation, Lifestyle segmentation, Organisational markets Industrial markets, Industrial buyer characteristics	02	05	08	15
CO-5	Unit-5.0 Stages in a commodity marketing system, Grain marketing, Challenges for grain marketing systems, fruits and vegetables, Livestock and meat marketing, Poultry and eggs marketing, marketing of fresh milk	00	03	02	05
	Total	06	24	20	<b>50</b>

**Legend: R: Remember, U: Understand, A: Apply**

The end of semester assessment for Introduction to Portland cement will be held with written examination of 50 marks

**Note.** Detailed Assessment rubric need to be prepared by the course wise teachers for above tasks. Teachers can also design different tasks as per requirement, for end semester assessment.

**Suggested Instructional/Implementation Strategies:**

1. Improved Lecture
2. Tutorial
3. Case Method
4. Group Discussion
5. Role Play
6. Visit to Industry
7. Demonstration
8. ICT Based Teaching Learning (Video Demonstration/Tutorials CBT, Blog, Face book, Twitter, Whatsapp, Mobile, Online sources)
9. Brainstorming



**Suggested Learning Resources:**

<b>S. No.</b>	<b>Title</b>	<b>Author</b>	<b>Publisher</b>	<b>Edition &amp; Year</b>
01	Agricultural Marketing in India	Acharya SS and Agarwal NL.	Oxford and IBH.	2011 4th Ed.
02	Agri-Marketing Strategies in India	Mohan J.	NIPA	-
03	Agri-Marketing Management	Sharma Premjit	Daya Publishing House	2010.

**Curriculum Development Team:**

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**Cos, POs and PSOs Mapping**

**Course Code:-ABM 506**

**Course Title: - Agricultural and Food Marketing Management- I**

Course Outcomes	Program Outcomes												Program Specific Outcome			
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
	Managerial knowledge	Problem analysis	Modern tool usage	Ethics	Individual and team work	Communication	Project management and finance	Business decision making	Life-long learning	Environment and sustainability	Entrepreneurial opportunities	Global outlook	Ability to apply managerial and business skilled for development of business growth with the available resources	Ability to understand the day to day business operational problems and startup development of agribusiness and provide economic solution to enhance the decision goal without compromise	Inculcate proactive thinking to ensure effective performance in the dynamic socio-economic and business ecosystem entrepreneurial approach and skill sets aligned with the	Ability to use the research based innovative knowledge for sustainable development in agribusiness growth and development



														ising ethical value	national prioritie s	
<b>ABM 506 CO-1</b> Discuss the agricultural and food marketing concepts and systems	3	1	1	2	1	1	1	2	3	2	1	3	3	1	2	1
<b>ABM 506 CO-2</b> Apply the marketing planning and strategies for developing products for meeting the specific needs of the final customers	3	2	1	2	2	2	1	3	2	1	2	3	3	2	2	3
<b>ABM 506 CO-3:</b> Demonstrate the marketing channels and intermediaries involved in	3	2	1	2	2	2	3	2	1	2	3	3	2	3	3	3



food marketing																
ABM 506 CO-4: Apply the promotional strategies and communication development tools and methods	2	2	3	1	2	2	3	2	1	2	1	1	3	3	2	2
ABM 506 CO-5: Estimate the marketing cost analysis and application of different cost analysis method of food product	2	3	3	1	3	2	2	2	2	1	1	2	2	2	2	2

**Legend: 1 – Low, 2 – Medium, 3 – High**



**Course Curriculum Map: Agricultural and Food Marketing Management- I**

<b>POs &amp; PSOs No.</b>	<b>COs No.&amp; Titles</b>	<b>SOs No.</b>	<b>Laboratory Instruction(LI)</b>	<b>Classroom Instruction (CI)</b>	<b>Self Learning (SL)</b>
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO 1,2, 3, 4, 5	<b>ABM 506 CO-1</b> Discuss the agricultural and food marketing concepts and systems	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-1.0</b> The importance of agricultural and food marketing to developing countries, the marketing concept and marketing systems, Marketing sub-systems Marketing functions, Links between agriculture and the food industry, Agricultural and food marketing enterprises, Marketing boards in developing countries, Co-operatives in the agriculture and food sectors, Control and management of secondary co-operatives, The weaknesses of co-operatives, Selling arrangements between co-operatives and their members 1.1, 1.2, 1.3, 1.4.	As mentioned in page number .....
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO 1,2, 3, 4, 5	<b>ABM 506 CO-2</b> Apply the marketing planning and strategies for developing products for meeting the specific needs of the final customers	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-2.0 –</b> Market Liberalization: Economic structural adjustment programmes, Macro-economic stabilisation, The role of the state in liberalised markets, Strategies for reforming agricultural marketing, Obstacles to be overcome in commercialization and Privatization of agricultural marketing, Dealing with accumulated deficits, Encouraging	As mentioned in page number .....



				private sector involvement in agricultural marketing, Impediments to private sector participation in agricultural markets, impact of the macro-economic environment on private traders, Government action to improve private sector performance 2.1, 2.2. 2.3. 2.4.	
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO 1,2, 3, 4, 5	<b>ABM 506 CO-3</b> Estimate the Marketing Strategy, Planning and Control with Marketing plan control, Efficiency control.	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-3.0</b> Marketing Strategy, Planning and Control: Strategy, policy and planning, Strategic business units, The need for marketing planning, The process of marketing planning, Contents of the marketing plan, Monitoring, evaluating and controlling the marketing planning, Marketing controls, Marketing plan control, Efficiency control 3.1, 3.2, 3.3.	
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO 1,2, 3, 4, 5	<b>ABM 506 CO-4</b> Develop a clear view about the new product development consumer buying decision process, Buyer behaviour and market segmentation	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-4.0</b> New Product Development: The impetus to innovation, New product development process The adoption process, The effect of products characteristics on the rate of adoption, Buyer behavior: The influences on buyer behavior, Exogenous influences on buyer behavior Endogenous influences on buyer behaviour, The consumer buying	



				decision process, Buyer behaviour and market segmentation, Lifestyle segmentation, Organisational markets Industrial markets, Industrial buyer characteristics .4.1, 4.2,4.3	
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO 1,2, 3, 4, 5	<b>ABM 506 CO-5</b> Asses to the commodity marketing practices in India and in International markets.	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-5.0</b> Stages in a commodity marketing system, Grain marketing, Challenges for grain marketing systems, fruits and vegetables, Livestock and meat marketing, Poultry and eggs marketing, marketing of fresh milk 5.1, 5.2..	





**Course Code: ABM 508**

**Course Title:** Agri Supply Chain Management

**Pre requisite:** -Students should have advance knowledge of Agri Supply Chain Management Governance, for developed the ability of International Trade And Sustainability Governance

**Rationale:** - Agri Supply Chain Management is the express through the concept and provide the information to Agricultural Economist and professionals in accurate manners. Agricultural Economist or scientist should develop skill in the enterprise analysis and farm business with apply the principle of Agri Supply Chain Management

**Course Outcomes:**

**ABM 508 CO - 1** Describes the various elements involved in managing agri supply chain from farm to fork

**ABM 508 CO - 2** Relate well with the issues and challenges involved in managing and forecasting the demand of the products

**ABM 508 CO - 3** Develop insights on the techniques of procurement management and handling inventory

**ABM 508 CO - 4** Assess the importance of managing logistics along with adequate handling and packaging intricacies

**ABM 508 CO - 5** Construct a overall clarity about the use of information technology to make the agri supply chain more efficient and rewarding.

**Scheme of Studies:**

Board of Study	Course Code	Course Title	Scheme of studies(Hours/Week)					Total Credits (C)
			CI	LI	SW	SL	Total Study Hours CI+LI+SW+SL	
Program Core (PCC)	<b>ABM 543</b>	International Trade And Sustainability Governance	2	2	1	1	06	02

**Legend:**

**CI:** Classroom Instruction (Includes different instructional strategies i.e. Lecture (L) and Tutorial (T) and others),

**LI:** Laboratory Instruction (Includes Practical performances in laboratory workshop, field or other locations using different instructional strategies)

**SW:** Sessional Work (includes assignment, seminar, mini project etc.),

**SL:** Self Learning,

**C:** Credits.



**Note:** SW & SL has to be planned and performed under the continuous guidance and feedback of teacher to ensure outcome of Learning.

**Scheme of Assessment:**

Board of Study	Course Code	Course Title	Scheme of Assessment ( Marks )							
	ABM 508	Agri Supply Chain Management	Progressive Assessment (PRA)							End Semester Assessment (ESA)
			Class/H ome Assign ment 5 number 3 marks each (CA)	Class Test 2 (2 best out of 3) 10 marks each (CT)	Semin ar one (SA)	Class Activi ty any one (CAT)	Class Attenda nce (AT)	Total Marks (CA+CT+SA+C AT+AT)		
PCC			15	30	00	00	5	50	50	100

**Course-Curriculum Detailing:**

This course syllabus illustrates the expected learning achievements, both at the course and session levels, which students are anticipated to accomplish through various modes of instruction including Classroom Instruction (CI), Laboratory Instruction (LI), Sessional Work (SW), and Self Learning (SL). As the course progresses, students should showcase their mastery of Session Outcomes (SOs), culminating in the overall achievement of Course Outcomes (COs) upon the course's conclusion.

**ABM 508 CO 1.Describes the various elements involved in managing agri supply chain fromfarm to fork**

**Approximate Hours**

Item	Approximate Hours
CI	06
LI	0
SW	2
SL	1
Total	09



Session Outcomes (SOs)	Laboratory Instruction (LI)	Class room Instruction (CI)	Self Learning (SL)
1. Describes the various elements involved in managing agri 2. . supply chain from farm to fork		<b>Unit I: Supply Chain:</b> Changing Business Environment; SCM: Present Need; Conceptual Model of Supply Chain Management; Evolution of SCM; SCM Approach; Traditional Agri. Supply Chain Management Approach; Modern Supply Chain Management Approach; Elements in SCM. Innovations in Global Agri-SCM <b>Number of Teaching Hours:</b> Supply Chain: Changing Business Environment; SCM: Present Need; Conceptual Model of Supply Chain Management; Evolution of SCM; SCM Approach; Traditional Agri. Supply Chain Management Approach; Modern Supply Chain Management Approach; 1.5 Elements in SCM. 1.6 Innovations in Global Agri-SCM	Prepare the assignment on Meaning and definition of Supply Chain: Changing Business Environment; SCM: Present Need; Conceptual Model of Supply Chain Management;

**SW-1 Suggested Seasonal Work (SW):**

- a. Assignments:
- b. Mini Project:
- c. Other Activities (Specify):

**ABM 508 CO 2 Relate well with the issues and challenges involved in managing and forecasting the demand of the products**

**Approximate Hours**

Item	AppX Hrs
CI	6
LI	0
SW	2
SL	1
<b>Total</b>	<b>09</b>



Session Outcomes (SOs)	Laboratory Instruction (LI)	Class room Instruction (CI)	Self Learning (SL)
1. Relate well with the issues and challenges involved in managing and 2. forecasting the demand of the products		<b>Unit II:</b> Demand Management in Supply Chain: Types of Demand, Demand Planning and Forecasting; Operations Management in Supply Chain, Basic Principles of Manufacturing Management. SCM Metrics/Drivers and Obstacles. <b>Number of Teaching Hours:</b> 2..1Demand Management in Supply Chain: 2.2 Types of Demand, Demand Planning and Forecasting; 2 . 3 Operations Management in Supply Chain, 2 . 4Basic Principles of Manufacturing Management. SCM Metrics. Drivers and Obstacles.	Prepare the assignment on Meaning and definition of Demand Management in Supply Chain: Types of Demand, Demand

**SW-2 Suggested Seasonal Work (SW):**

- a. Assignments:
- b. Mini Project:
- c. Other Activities (Specify):



**ABM 508 CO 3 Develop insights on the techniques of procurement management and handling inventory**

**Approximate Hours**

Item	Approximate Hours
CI	6
LI	0
SW	2
SL	1
<b>Total</b>	<b>09</b>

Session Outcomes (SOs)	Laboratory Instruction (LI)	Class room Instruction (CI)	Self Learning (SL)
1. Develop insights on the techniques of procurement  2. Management and handling inventory		<b>Unit III:</b> Purchasing Cycle, Types of Purchases, Contract/Corporate Farming, Classification of Purchases Goods or Services, Traditional Inventory Management, Material Requirements Planning, Just in Time (JIT), Vendor Managed Inventory (VMI). 3.1 Purchasing Cycle, Types of Purchases, Contract/Corporate Farming, 3.2 Classification of Purchases Goods or Services, 3.3 Traditional Inventory Management, 3.4Material Requirements Planning, 3.5 Just in Time (JIT), 3.6 Vendor Managed Inventory (VMI).	Prepare the assignment on Meaning and definition of Purchasing Cycle, Types of Purchases, Contract/Corporate

**SW-3 Suggested Seasonal Work (SW):**

- a. Assignments:.
- b. Mini Project:
- c. Other Activities (Specify):



**ABM 508 CO 4 Assess the importance of managing logistics along with adequate handling and packaging intricacies**

**Approximate Hours**

Item	
CI	6
LI	0
SW	2
SL	1
<b>Total</b>	<b>9</b>

Session Outcomes (SOs)	Laboratory Instruction (LI)	Class room Instruction (CI)	Self Learning (SL)
1. Assess the importance of managing logistics along with 2. Adequate handling and packaging intricacies		<p><b>Unit IV:</b> History and Evolution of Logistics; Elements of Logistics; Management; Distribution Management, Distribution Strategies; Pool Distribution; Transportation Management; Fleet Management; Service Innovation; Warehousing; Packaging for Logistics, Third-Party Logistics (TPL/3PL); GPS Technology.</p> <p><b>Number of Teaching Hours:</b></p> <p><b>4.1</b> History and Evolution of Logistics;</p> <p><b>4.2</b> Elements of Logistics; Management; Distribution Management,</p> <p><b>4.3</b> Distribution Strategies; Pool</p> <p><b>4.4</b> Distribution; Transportation Management; <b>4.5</b> Fleet Management; Service Innovation; Warehousing;</p>	Prepare the assignment on Meaning and definition of History and Evolution of Logistics; Elements of Logistics; Management;



		Packaging for Logistics, 4.6 Third-Party Logistics (TPL/3PL); GPS Technology	
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**SW-4 Suggested Seasonal Work (SW):**

- Assignments:**
- Mini Project:**
- Other Activities (Specify):**

**ABM 508 CO 5 Construct a overall clarity about the use of information technology to make the agri supply chain more efficient and rewarding**

Item	Approximate Hours
CI	6
LI	2
SW	1
SL	1
Total	10

Session Outcomes (SOs)	Laboratory Instruction (LI)	Class room Instruction (CI)	Self Learning (SL)
1. Construct a overall clarity about the use of information technology to make the Agri supply chain more efficient and rewarding.		<b>Unit V:</b> Concept of Information Technology: IT Application in SCM; Advanced Planning and Scheduling; SCM in Electronic Business; Role of Knowledge in SCM; Performance Measurement and Controls in Agri. Supply Chain Management- Benchmarking: introduction, concept and forms of Benchmarking. Case Studies on the following: (a) Green Supply Chains (b) Global Supply Chains (c) Coordination	Prepare the assignment on Meaning and definition of  Concept of Information Technology: IT Application in SCM; Advanced Planning and Scheduling; SCM



		<p>in a SC. Value of and distortion of information: Bullwhip effect (d) Sourcing and contracts in SC (e) Product availability with uncertain demand (f) Inventory planning with known/ unknown demand (g) Cases from FAO/IFPRI, etc.</p> <p><b>Number of Teaching Hours:</b></p> <p>Concept of Information Technology: IT Application in SCM; Advanced Planning and Scheduling; SCM in Electronic Business; Role of Knowledge in SCM; Performance Measurement and Controls in Agri. Supply Chain Management- Benchmarking: introduction, concept and forms of Benchmarking. Case Studies on the following: (a) Green Supply Chains (b) Global Supply Chains (c) Coordination in a SC. Value of and distortion of information: Bullwhip effect (d) Sourcing and contracts in SC (e) Product availability with uncertain demand (f) Inventory planning with known/ unknown demand (g) Cases from 5.6 FAO/IFPRI, etc.</p>	
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**SW-5 Suggested Seasonal Work (SW):**

- a. **Assignments:**
- b. **Mini Project:**
- c. **Other Activities (Specify):**

**Brief of Hours suggested for the Course Outcome**

Course Outcomes	Class Lecture (Cl)	Sessional Work (SW)	Self Learning (Sl)	Total hour (Cl+SW+Sl)
CO - 01 Describes the various elements involved in managing agri supply chain fromfarm to fork	06	01	01	08
CO - 2. Relate well with the issues and challenges involved in managing and forecasting the demand of the products	05	01	01	07
CO - 3. Develop insights on the techniques of procurement management and handling inventory	06	01	01	08
CO -4. Assess the importance of managing logistics along with adequate handling and packaging intricacies	06	01	01	08
CO - 5. Construct a overall clarity about the use of information technology to make the agri supply chain more efficient and rewarding.	07	01	01	08

**Suggestion for End Semester Assessment**

**Suggested Specification Table (For ESA)**

CO	Unit Titles	Marks Distribution			Total Marks
		R	U	A	
CO 1	Unit I: Supply Chain: Changing Business Environment; SCM: Present Need; Conceptual Model of Supply Chain Management; Evolution of SCM; SCM Approach; Traditional Agri. Supply Chain Management Approach; Modern Supply Chain Management Approach; Elements in SCM. Innovations in Global Agri-SCM	02	03	00	05



<b>CO 2</b>	<b>Unit II:</b> Demand Management in Supply Chain: Types of Demand, Demand Planning and Forecasting; Operations Management in Supply Chain, Basic Principles of Manufacturing Management. SCM Metrics/Drivers and Obstacles.	02	05	03	10
<b>CO 3</b>	<b>Unit III:</b> Purchasing Cycle, Types of Purchases, Contract/Corporate Farming, Classification of Purchases Goods or Services, Traditional Inventory Management, Material Requirements Planning, Just in Time (JIT), Vendor Managed Inventory (VMI).	00	08	07	15
<b>CO 4</b>	<b>Unit IV:</b> History and Evolution of Logistics; Elements of Logistics; Management; Distribution Management, Distribution Strategies; Pool Distribution; Transportation Management; Fleet Management; Service Innovation; Warehousing; Packaging for Logistics, Third-Party Logistics (TPL/3PL); GPS Technology.	02	05	08	15
<b>CO 5</b>	<b>Unit V:</b> Concept of Information Technology: IT Application in SCM; Advanced Planning and Scheduling; SCM in Electronic Business; Role of Knowledge in SCM; Performance Measurement and Controls in Agri. Supply Chain Management- Benchmarking: introduction, concept and forms of Benchmarking. Case Studies on the following: (a) Green Supply Chains (b) Global Supply Chains (c) Coordination in a SC. Value of and distortion of information: Bullwhip effect (d) Sourcing and contracts in SC (e) Product availability with uncertain demand (f) Inventory planning with known/ unknown demand (g) Cases from FAO/IFPRI, etc	00	03	02	05
		<b>06</b>	<b>24</b>	<b>20</b>	<b>50</b>



**Legend: R: Remember, U: Understand, A: Apply**

The end of semester assessment for ..... will be held with written examination of 50 marks

**Note.** Detailed Assessment rubric need to be prepared by the course wise teachers for above tasks. Teachers can also design different tasks as per requirement, for end semester assessment. Suggested Instructional/Implementation Strategies:

1. Improved Lecture
2. Tutorial
3. Case Method
4. Group Discussion
5. Role Play
6. Visit to cement plant
7. Demonstration
8. ICT Based Teaching Learning (Video Demonstration/Tutorials CBT, Blog, Facebook, Twitter, Whatsapp, Mobile, Online sources)
9. Brainstorming

**Suggested Learning Resources:**

S. No.	Title	Author	Publisher	Edition & Year
1	Agricultural marketing in India.	Acharya SS and Agarwal NL.	Oxford and IBH.	2011.
2	Supply chain management:	Altekar RV.	Planning, and Operation, Pearson Education India	2016.
3	Supply Chain Management & other	Mohanty RP.	Indian Case studies in Learning Resources. Oxford.	2010.

**Curriculum Development Team:**

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**Cos, POs and PSOs Mapping**  
**Course Code:- ABM 508**  
**Course Title: - Supply Chain management**

Course Outcomes	Program Outcomes												Program Specific Outcome			
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
	Managerial knowledge	Problem analysis	Modern tool usage	Ethics	Individual and team work	Communication	Project management and finance	Business decision making	Life-long learning	Environment and sustainability	Entrepreneurial opportunities	Global outlook	Ability to apply managerial and business skilled for development of business growth with the available resources	Ability to understand the day to day business operational problems and startup development of agribusiness and provide economical solution to enhance the decide goal without compromising ethical value	Inculcate proactive thinking to ensure effective performance in the dynamic socio-economic and business ecosystem entrepreneurial approach and skill sets aligned with the national priorities	Ability to use the research based innovative knowledge for sustainable development in agribusiness growth and develops
<b>CO-01</b> Describes the various elements involved in managing agri supply chain from farm to fork	3	1	1	2	1	1	1	2	3	2	1	3	3	1	2	1
<b>CO - 2.</b> Relate well with the issues and challenges involved in	3	2	1	2	2	2	1	3	2	1	2	3	3	2	2	3



managing and forecasting the demand of the products																
<b>CO 3.</b> Develop insights on the techniques of procurement management and handling inventory	3	2	1	2	2	2	3	2	1	2	3	3	2	3	3	3
<b>CO - 4.</b> Assess the importance of managing logistics along with adequate handling and packaging intricacies	2	2	3	1	2	2	3	2	1	2	1	1	3	3	2	2
<b>CO - 5.</b> Construct a overall clarity about the use of information technology to make the agri supply chain more efficient and rewarding.	2	3	3	1	3	2	2	2	2	1	1	2	2	2	2	2

**Legend: 1 – Low, 2 – Medium, 3 – High**



**Course Curriculum Map: Supply Chain management**

POs & PSOs No.	COs No.& Titles	SOs No.	Laboratory Instruction(LI)	Classroom Instruction (CI)	Self Learning (SL)
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO 1,2, 3, 4, 5	CO - 01 Describes the various elements involved in managing agri supply chain from farm to fork	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-1.0</b> Introduction to Management: Nature, Scope and Significance of Management, Evolution of Management Thought, Approaches to Management, functions and skills of a manager 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 1.9.	As mentioned in page number .....
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO 1,2, 3, 4, 5	CO - 2. Relate well with the issues and challenges involved in managing and forecasting the demand of the products	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-2.0 –</b> Management functions: Planning – Types, Steps, Objective, Process, Strategies, Policies, MBO, Organizing – Structure & Process, Line, Staff, Authority & Responsibility, Staffing – Recruitment and Selection, Directing – Training, Communication & Motivation, Controlling- Significance, Process, Techniques, Standards & Benchmarks, Management Audit. 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10.	As mentioned in page number .....
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO 1,2, 3, 4, 5	CO - 3. Develop insights on the techniques of procurement management and handling inventory	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-3.0</b> Nature, Scope and Significance of Organizational Behavior; Foundations of Individual behaviour – Emotions, Personality, Values, Attitudes, Perception, Learning and individual decision making, Motivation- Types of motivation, theories of motivation, motivational practices at workplace, managing stress and work life balance.	



				3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8, 3.9, 3.10, 3.11.	
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO 1,2, 3, 4, 5	CO - 4. Assess the importance of managing logistics along with adequate handling and packaging intricacies	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-4.0</b> Group dynamics- types of groups, group formation, Group decision making, teambuilding and developing collaboration, leadership styles and influence process; leadership theories, leadership styles and effective leader 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, 4.9.	
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO 1,2, 3, 4, 5	CO - 5. Construct a overall clarity about the use of information technology to make the agri supply chain more efficient and rewarding.	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-5.0</b> Understanding and managing organizational culture, power and political behavior in organizations, conflict Management, negotiation, managing organizational change, concept of organizational development. 5.1, 5.2, 5.3, 5.4, 5.5, 5.6.	



# AKS University

## Faculty of Agriculture Science and Technology

### Department of Agricultural Economics

**Course Code: - ABM 538**

**Course Title: - Financial Management in Agribusiness**

**Pre requisite:** -Student should have basic knowledge of, Financial and capital, financial system, credit management in Agribusiness.

**Rationale:** - The students studying Financial Management in Agribusiness should possess understanding about Business financing system in India and International financial management. This encompasses familiarity with the estimation and analysis of capital or fund. Additionally, students ought to acquire fundamental insights into various capitals with their applications. Financial Management in Agribusiness is useful for understands for financial activity and capital formation.

**Course Outcomes:**

**ABM 538 CO - 01** Discriminate the basics concept of financial management and concept of risk and return analysis

**ABM 538 CO - 02** Initiate the Business Financing System in India and International financial management.

**ABM 538 CO -03** Conclude the Features, and Techniques of capital budgeting decision. Cost of Capital, Leverage analysis, Capital structure and its policy.

**ABM 538 CO -04** Estimate the management of working capital, Cash budget, Management of collections and disbursement, Investment of Surplus cash.

**ABM 538 CO -05** Develop the micro finance credit lending models:-association model, Community Banking model, Credit union model.

**Scheme of studies:**

Board of Study	Course Code	Course Title	Scheme of studies (Hours/Week)					Total Credits (C)
			C I	LI	S W	S L	Total Study Hours (CI+LI+SW+S L)	
Professional Core course (PCC)	<b>ABM 538</b>	Financial Management in Agribusiness	1	1	2	1	05	02

**Legend: CI:** Classroom Instruction (Includes different instructional strategies i.e. Lecture (L) and Tutorial (T) and others),

**LI:** Laboratory Instruction (Includes Practical performances in laboratory workshop, field or other locations using different instructional strategies)





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**SW:** Sessional Work (includes assignment, seminar, mini project etc.),

**SL:** Self Learning,

**C: Credits.**

**Note:** SW & SL has to be planned and performed under the continuous guidance and feedback of teacher to ensure outcome of Learning.

**Scheme of Assessment:**

Board of Study	Course Code	Course Title	Scheme of Assessment ( Marks )							
			Progressive Assessment ( PRA )						End Semester Assessment (ESA)	Total Marks (PRA+ESA)
			Class/ Home Assignment 5 number 3 marks each ( CA )	Class Test 2 (2 best out of 3) 10 marks each (CT)	Seminar one ( SA )	Class Activity any one (CAT)	Class Attendance (AT)	Total Marks (CA+CT+SA+CAT+AT)		
(PCC)	ABM 540	Human Resource Management for Agricultural Organizations	15	30	00	00	05	50	50	100

**Course-Curriculum Detailing:**

This course syllabus illustrates the expected learning achievements, both at the course and session levels, which students are anticipated to accomplish through various modes of instruction including Classroom Instruction (CI), Laboratory Instruction (LI), Sessional Work (SW), and Self Learning (SL). As the course progresses, students should showcase their mastery of Session Outcomes (SOs), culminating in the overall achievement of Course Outcomes (COs) upon the course's conclusion.



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### Department of Agricultural Economics

**ABM 538 CO-1 Discriminate the basics concept of financial management and concept of risk and return analysis**

#### Approximate Hours

Item	AppX Hrs
C 1	3
LI	1
SW	2
SL	1
<b>Total</b>	<b>06</b>

Session Outcomes (SOs)	Laboratory Instruction (LI)	Class room Instruction (CI)	Self Learning (SL)
<b>SO1.1-</b> Introduce the meaning, importance, nature and scope of financing in India <b>SO1.2</b> - Brief the agribusiness financing in India. <b>SO1.3</b> – Discuss the classification and credit need in changing agriculture scenario. <b>SO1.4-</b> Describes finance functions, investment financing <b>SO1.5</b> Discuss the Risk and return concept & analysis <b>SO1.6</b> Laboratory and field work	<b>LI1.1-</b>	<b>Unit I:</b> <b>Meaning, importance, nature and scope of financing in India, agribusiness financing in India; classification and credit need in changing agriculture scenario; finance functions, investment financing, Risk and return concept &amp; analysis</b> <b>1.1-</b> Meaning, importance, nature and scope of financing in India <b>1.2-</b> Agribusiness financing in India; classification and credit need in changing agriculture scenario <b>1.3-</b> Finance functions, investment financing, Risk and return concept & analysis.	<b>1.1-</b> Prepare the assignment on Agribusiness financing in India; classification and credit need in changing agriculture scenario.



# AKS University

Faculty of Agriculture Science and Technology  
Department of Agricultural Economics

**SW-1 Suggested Sessional Work (SW):**

- a. Assignments:** Prepare the assignment on Agribusiness financing in India; classification and credit need in changing agriculture scenario.
- b. Mini Project: -**
- c. Other Activities (Specify):-**



# AKS University

## Faculty of Agriculture Science and Technology

### Department of Agricultural Economics

**ABM 538 CO-2: Initiate the Business Financing System in India and International financial management.**

#### Approximate Hours

Item	AppX Hrs
C 1	3
LI	1
SW	2
SL	1
<b>Total</b>	<b>06</b>

Session Outcomes (SOs)	Laboratory Instruction (LI)	Class room Instruction (CI)	Self Learning (SL)
<b>SO2.1</b> – Introduce to the Business Financing System in India  <b>SO2.2</b> – learned about Money and Capital Markets, , <b>SO2.3-</b> Apply to the Regional and All -India Financial Institutions <b>SO2.4-</b> Briefing the venture capital financing and its stages, <b>SO 2.5</b> –Discuss to the International financial management, <b>SO 2.6</b> Laboratory and field work	<b>LI-2.1</b>	<b>Unit II:</b> <b>Business Financing System in India, Money and Capital Markets, Regional and All -India Financial Institutions; venture capital financing and its stages, International financial management</b> <b>2.1</b> – Business Financing System in India <b>2.2-</b> Money and Capital Markets, Regional and All -India Financial Institution <b>2.3-</b> venture capital financing and its stages, International financial management	<b>2.1</b> – Prepare the assignment on Business Financing System in India

**SW-1 Suggested Sessional Work (SW):**

- a. Assignments:** Prepare the assignment on Business Financing System in India
- b. Mini Project:**
- c. Other Activities (Specify):**



# AKS University

## Faculty of Agriculture Science and Technology

### Department of Agricultural Economics

**ABM 538 CO-3: Conclude the Features and Techniques of capital budgeting decision. Cost of Capital, Leverage analysis, Capital structure and its policy**

**Approximate Hours**

Item	AppX Hrs
C 1	3
LI	1
SW	2
SL	1
<b>Total</b>	<b>06</b>

Session Outcomes (SOs)	Laboratory Instruction(LI)	Class room Instruction(CI)	Self Learning (SL)
<p><b>SO3.1</b> – Features, types and Techniques of capital budgeting decision</p> <p><b>SO3.2</b> – Discuss to the Cost of Capital,</p> <p><b>SO3.3-</b> Apply the Leverage analysis, Capital structure</p> <p><b>SO3.4-</b> Discuss to The Theory and Policy, Sources of Long and Short term finance.</p> <p><b>SO 3.5–</b> Describe the Dividend Theory, Dividend Policy</p> <p><b>SO 3.6</b> Laboratory and field work</p>	<b>LI1.1</b>	<p><b>Unit III:</b></p> <p><b>Features, types and Techniques of capital budgeting decision. Cost of Capital, Leverage analysis, Capital structure. Theory and Policy, Sources of Long and Short term finance, Dividend Theory, Dividend Policy.</b></p> <p><b>3.1-</b> Features, types and Techniques of capital budgeting decision</p> <p><b>3.2-</b> Cost of Capital, Leverage analysis, Capital structure.</p> <p><b>3.3-</b> Theory and Policy, Sources of Long and Short term finance, Dividend Theory, Dividend Policy.</p>	<p><b>3.1</b> Prepare the assignment on Features, types and Techniques of capital budgeting decision.</p>



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**SW-1 Suggested Seasonal Work (SW):**

- a. Assignments:** Prepare the assignment on Features, types and Techniques of capital budgeting decision.
- b. Mini Project:**
- c. Other Activities (Specify):**



# AKS University

## Faculty of Agriculture Science and Technology

### Department of Agricultural Economics

**ABM 538 CO-4: Estimate the management of working capital, Cash budget, Management of collections and disbursement, Investment of Surplus cash**

#### Approximate Hours

Item	App X Hrs
CI	3
LI	1
SW	2
SL	1
<b>Total</b>	<b>06</b>

Session Outcomes (SOs)	Laboratory Instruction (LI)	Class room Instruction (CI)	Self Learning (SL)
<b>SO1.1</b> –Identify the Management of Working Capital  <b>SO1.2</b> - Apply the Management of Receivables..  <b>SO1.3-</b> Apply the Management of cash; Cash budget,  <b>SO1.4-</b> Describes the Management of collections and disbursement  <b>SO1.5–</b> Brief the Investment of Surplus cash  <b>SO1.6–</b> Laboratory and field works		<b>Unit-4</b> <b>Management of Working Capital, Management of Receivables, Management of cash; Cash budget, Management of collections and disbursement, Investment of Surplus cash</b>  <b>4.1-</b> Management of Working Capital.  <b>4.2-</b> Management of Receivables, Management of cash budget  <b>4.3-</b> Management of collections and disbursement, Investment of Surplus cash.	<b>4.1-</b> Prepare the assignment on Management of collections and disbursement, Investment of Surplus cash.

#### SW-1 Suggested Sessional Work (SW)

- a. Assignments:** Prepare the assignment on Management of collections and disbursement, Investment of Surplus cash.
- b. Mini Project:**
- c. Other Activities (Specify):**



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**Faculty of Agriculture Science and Technology**  
**Department of Agricultural Economics**

**ABM 538 CO-5: Develop the micro finance credit lending models:-association model, Community Banking model, Credit union model**

### Approximate Hours

Item	AppX Hrs
CI	3
LI	1
SW	2
SL	1
<b>Total</b>	<b>06</b>

<b>Session Outcomes (SOs)</b>	<b>Laboratory Instruction (LI)</b>	<b>Class room Instruction (CI)</b>	<b>Self Learning (SL)</b>
<b>SO1.1</b> –Identify the Perspectives and operational aspects of Micro finance <b>SO1.2-</b> Identify the Definition, Scope and importance of Micro Finance, Evolution of Micro Finance in India <b>SO1.3-</b> Identifying Micro Finance credit lending models: - Association model <b>SO1.4-</b> Analyze the Community Banking model, Credit union model <b>SO1.5-</b> Apply the Co-operative model, SHG model, Village Banking model	<b>LE1.</b>	<b>Unit-5.0</b> <b>Perspectives and operational aspects of Micro finance: Definition, Scope and importance of Micro Finance, Evolution of Micro Finance in India, Micro Finance credit lending models: - Association model, Community Banking model, Credit union model, Co-operative model, SHG model, Village Banking model</b> <b>5.1-</b> Perspectives and operational aspects of Micro finance Definition, Scope and importance of Micro Finance <b>5.2-</b> Evolution of Micro Finance in India, Micro Finance	<b>1.1</b> - Prepare the assignment on Definition, Scope and importance of Micro Finance.





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		credit lending models. and Association model	
		5.3- Community Banking model, Credit union model, Co-operative model, SHG model, Village Banking model	

**SW-1 Suggested Seasonal Work (SW):**

- a. Assignments:** - Prepare the assignment on Definition, Scope and importance of Micro Finance.
- b. Mini Project:**
- c. Other Activities (Specify):**



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#### Brief of Hours suggested for the Course Outcome

Course Outcomes	Class Lecture (C I)	Laboratory Lecture (L I)	Seasonal Work (SW)	Self Learning (S I)	Total hour (C I + LI+ SW +S I)
ABM 538 CO-1 Discriminate the basics concept of financial management and concept of risk and return analysis	3	1	2	1	06
ABM 538 CO-2: Initiate the Business Financing System in India and International financial management.	3	1	2	1	06
ABM 538 CO-3: Conclude the features and techniques of capital budgeting decision. Cost of Capital, Leverage analysis, Capital structure and its policy	3	1	2	1	06
ABM 538 CO-4: Estimate the management of working capital, Cash budget, Management of collections and disbursement, Investment of Surplus cash	3	1	2	1	06
ABM 538 CO-5: Develop the micro finance credit lending models:-association model, Community Banking model, Credit union model	3	1	2	1	06
<b>Total Hours</b>	<b>15</b>	<b>05</b>	<b>10</b>	<b>05</b>	<b>30</b>



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#### Suggestion for End Semester Assessment Suggested Specification Table (For ESA)

CO	Unit title	Marks Distribution			Total Marks
		R	U	A	
CO-1	<b>Unit I:</b> Meaning, importance, nature and scope of financing in India, agribusiness financing in India; classification and credit need in changing agriculture scenario; finance functions, investment financing, Risk and return concept & analysis	02	03	00	05
CO-2	<b>Unit II:</b> Business Financing System in India, Money and Capital Markets, Regional and All -India Financial Institutions; venture capital financing and its stages, International financial management	02	05	03	10
CO-3	<b>Unit III:</b> Features, types and Techniques of capital budgeting decision. Cost of Capital, Leverage analysis, Capital structure. Theory and Policy, Sources of Long and Short term finance, Dividend Theory, Dividend Policy.	00	08	07	15
CO-4	<b>Unit- IV</b> Management of Working Capital, Management of Receivables, Management of cash; Cash budget, Management of collections and disbursement, Investment of Surplus cash	02	05	08	15
CO-5	<b>Unit-V</b> Perspectives and operational aspects of Micro finance: Definition, Scope and importance of Micro Finance, Evolution of Micro Finance in India, Micro Finance credit lending models: - Association model, Community Banking model, Credit union model, Co-operative model, SHG model, Village Banking model	00	03	02	05
<b>Total</b>		06	24	20	<b>50</b>

**Legend: R: Remember, U: Understand, A: Apply**



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The end of semester assessment for Introduction to Portland cement will be held with written examination of 50 marks

**Note.** Detailed Assessment rubric need to be prepared by the course wise teachers for above tasks. Teachers can also design different tasks as per requirement, for end semester assessment.

**Suggested Instructional/Implementation Strategies:**

1. Improved Lecture
2. Tutorial
3. Case Method
4. Group Discussion
5. Role Play
6. Visit to Industry
7. Demonstration
8. ICT Based Teaching Learning (Video Demonstration/Tutorials CBT, Blog, Face book, Twitter, Whatsapp, Mobile, Online sources)
9. Brainstorming



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## Suggested Learning Resources:

S. No.	Title	Author	Publisher	Edition & Year
01	Agricultural Finance	Nelson AG & Murrey WG.	Kalyani Publ	1988
02	Financial Markets and Services	Gordon and Natarajan.	Himalaya Publishing House;	2016 Tenth Edition
03	Indian Financial System	Machiraju HR.	Vikas Publishing House	2010
04	Essentials of Financial Management	Pandey IM.	Vikas Publishing House	2015
05	Financial Management.	Khan and Jain.	McGraw Higher Education	2014
06	Financial Management,	Srivastav and Misra.	Oxford University Press;	2010 Second edition
07	Financial Management	Reddy GS.	Himalaya Publishing House	2010

## Curriculum Development Team:

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**Cos, POs and PSOs Mapping**

**Course Code:-ABM 538**

**Course Title: - Financial Management in Agribusiness**

Course Outcomes	Program Outcomes												Program Specific Outcome			
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
	Managerial knowledge	Problem analysis	Modern tool usage	Ethics	Individual and team work	Communication	Project management and finance	Business decision making	Lifelong learning	Environment and sustainability	Entrepreneurial opportunities	Global outlook	Ability to apply managerial and business skilled for development of business growth with the available resources	Ability to understand the day to day business operational problems and startup development of agribusiness and provide economic solution	Inculcate proactive thinking to ensure effective performance in the dynamic socio-economic and business ecosystem	Ability to use the research based innovative knowledge for sustainable development in agribusiness growth and develop



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														to enhance the decide goal without compromising ethical value	entrepreneurial approach and skill sets aligned with the national priorities	s
ABM 538 CO-1 Discriminate the basics concept of financial management and concept of risk and return analysis	3	1	1	2	1	1	1	2	3	2	1	3	3	1	2	1
ABM 538 CO-2: Initiate the Business Financing System in India and International	3	2	1	2	2	2	1	3	2	1	2	3	3	2	2	3



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financial management.																
ABM 538 CO-3: Conclude the features and techniques of capital budgeting decision. Cost of Capital, Leverage analysis, Capital structure and its policy	3	2	1	2	2	2	3	2	1	2	3	3	2	3	3	3
ABM 538 CO-4: Estimate the management of working capital, Cash budget, Management of collections and disbursement, Investment of Surplus cash	2	2	3	1	2	2	3	2	1	2	1	1	3	3	2	2





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ABM 538 CO-5: Develop the micro finance credit lending models:- association model, Community Banking model, Credit union model	2	3	3	1	3	2	2	2	2	1	1	2	2	2	2	2
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**Legend: 1 – Low, 2 – Medium, 3 – High**



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## Course Curriculum Map: Financial Management in Agribusiness

POs & PSOs No.	COs No.& Titles	SOs No.	Laboratory Instruction(LI)	Classroom Instruction (CI)	Self Learning (SL)
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO 1,2, 3, 4, 5	ABM 538 CO-1 Discriminate the basics concept of financial management and concept of risk and return analysis	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-1.0</b> Introduction to Management: Nature, Scope and Significance of Management, Evolution of Management Thought, Approaches to Management, functions and skills of a manager 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 1.9.	As mentioned in page number .....
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO 1,2, 3, 4, 5	ABM 538 CO-2: Initiate the Business Financing System in India and International financial management.	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-2.0 –</b> Management functions: Planning – Types, Steps, Objective, Process, Strategies, Policies, MBO, Organizing – Structure & Process, Line, Staff, Authority & Responsibility, Staffing – Recruitment and Selection, Directing – Training, Communication & Motivation, Controlling- Significance, Process, Techniques, Standards & Benchmarks, Management Audit. 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10.	As mentioned in page number .....
PO 1,2,3,4,5,6 7,8,9,10,11,12	ABM 538 CO-3: Conclude the features and techniques of capital	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b>		<b>Unit-3.0</b> Nature, Scope and Significance of Organizational Behavior; Foundations of	



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PSO 1,2, 3, 4, 5	budgeting decision. Cost of Capital, Leverage analysis, Capital structure and its policy	<b>SO1.4</b> <b>SO1.5</b>		Individual behaviour – Emotions, Personality, Values, Attitudes, Perception, Learning and individual decision making, Motivation- Types of motivation, theories of motivation, motivational practices at workplace, managing stress and work life balance. 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8, 3.9, 3.10, 3.11.	
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO 1,2, 3, 4, 5	ABM 538 CO-4: Estimate the management of working capital, Cash budget, Management of collections and disbursement, Investment of Surplus cash	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-4.0</b> Group dynamics- types of groups, group formation, Group decision making, teambuilding and developing collaboration, leadership styles and influence process; leadership theories, leadership styles and effective leader 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, 4.9.	
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO 1,2, 3, 4, 5	ABM 538 CO-5: Develop the micro finance credit lending models:-association model, Community Banking model, Credit union model	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-5.0</b> Understanding and managing organizational culture, power and political behavior in organizations, conflict Management, negotiation, managing organizational change, concept of organizational development. 5.1, 5.2, 5.3, 5.4, 5.5, 5.6.	



# **AKS University**

**Faculty of Agriculture Science and Technology**  
**Department of Agricultural Economics**



**Course Code:- ABM 526**

**Course Title: - Business Analytics for Agriculture**

**Pre requisite:** -Student should have basic knowledge of, business analytics, business prediction and business planning in Agribusiness.

**Rationale:** - The students studying Business Analytics for Agriculture should possess understanding about Business analysis and prediction of future business plan. This encompasses familiarity with the estimation and analysis of prediction in business and analysis. Additionally, students ought to acquire fundamental insights into various capitals with their applications. Financial Management in Agribusiness is useful for understands for financial activity and capital formation.

**Course Outcomes:**

**ABM 526 CO-1** Describe the equip of agribusiness with knowledge, skills and attitude for using data science tools and techniques

**ABM 526 CO-2** Operate the using of statistical analytical tools for analysis of research problems.

**ABM 526 CO-3** Determine to supervised machine learning and basic frame work of application of regression analysis

**ABM 526 CO-4** Asses to supervised machine learning and deep learning and basic frame work of application of linear discriminate analysis

**ABM 526 CO-5** Construct the competent professionals who can strategically and successfully implement data science applications.

**Scheme of studies:**

Board of Study	Course Code	Course Title	Scheme of studies (Hours/Week)					Total Credits (C)
			C I	LI	SW	SL	Total Study Hours (CI+LI+SW+SL)	
Professional Core course (PCC)	<b>ABM 526</b>	Business Analytics for Agriculture	1	1	2	1	05	02

**Legend: CI:** Classroom Instruction (Includes different instructional strategies i.e. Lecture (L) and Tutorial (T) and others),

**LI:** Laboratory Instruction (Includes Practical performances in laboratory workshop, field or other locations using different instructional strategies)

**SW:** Sessional Work (includes assignment, seminar, mini project etc.),

**SL:** Self Learning,

**C: Credits.**

**Note:** SW & SL has to be planned and performed under the continuous guidance and feedback of teacher to ensure outcome of Learning.



**Scheme of Assessment:**

Board of Study	Course Code	Course Title	Scheme of Assessment ( Marks )							
			Progressive Assessment ( PRA )						End Semester Assessment (ESA)	Total Marks (PRA + ESA)
			Class/ Home Assignment 5 number 3 marks each ( CA )	Class Test 2 (2 best out of 3) 10 marks each (CT)	Seminar one ( SA )	Class Activity any one (CAT )	Class Attendance (AT)	Total Marks (CA+CT +SA+C AT+AT)		
(PCC)	ABM 526	Business Analytics for Agriculture	15	30	00	00	05	50	50	100

**Course-Curriculum Detailing:**

This course syllabus illustrates the expected learning achievements, both at the course and session levels, which students are anticipated to accomplish through various modes of instruction including Classroom Instruction (CI), Laboratory Instruction (LI), Sessional Work (SW), and Self Learning (SL). As the course progresses, students should showcase their mastery of Session Outcomes (SOs), culminating in the overall achievement of Course Outcomes (COs) upon the course's conclusion.

**ABM 526 CO-1 Describe the equip of agribusiness with knowledge, skills and attitude for using data science tools and techniques**

**Approximate Hours**

Item	AppX Hrs
C 1	3
LI	1
SW	2
SL	2
Total	08

Session Outcomes (SOs)	Laboratory Instruction (LI)	Class room Instruction (CI)	Self Learning (SL)
<b>SO1.1-</b> Introduction to data science, evolution of data science, work profile of a data	<b>LI1.1-</b> Study the introduction and application of data science in	<b>Unit I:</b> <b>Introduction to data science, evolution of data science, work</b>	<b>1.1-</b> Prepare the assignment on Introduction to data science, evolution



<p>scientist and career in data science</p> <p><b>SO1.2</b> - Brief the nature of data science, typical working day of a data scientist, importance of data science in agribusiness.</p> <p><b>SO1.3</b> – Discuss the defining algorithm, big data, business analytics, statistical learning.</p> <p><b>SO1.4-</b> Describes defining machine learning, defining artificial intelligence, data mining</p> <p><b>SO1.5</b> Discuss the difference between analysis and analytics, business intelligence and business analytics, typical process of business analytics cycle.</p> <p><b>SO1.6</b> Laboratory and field work</p>	<p>agribusiness management</p>	<p><b>profile of a data scientist, career in data science, nature of data science, typical working day of a data scientist, importance of data science in agribusiness; defining algorithm, big data, business analytics, statistical learning, defining machine learning, defining artificial intelligence, data mining; difference between analysis and analytics, business intelligence and business analytics, typical process of business analytics cycle.</b></p> <p><b>1.1-</b> Introduction to data science, evolution of data science, work profile of a data scientist, career in data science, nature of data science, typical working day of a data scientist, importance of data science in agribusiness</p> <p><b>1.2-</b> defining algorithm, big data, business analytics, statistical learning, defining machine learning, defining artificial intelligence</p> <p><b>1.3-</b> Data mining; difference between analysis and analytics, business intelligence and business analytics, typical process of business analytics cycle.</p>	<p>of data science, work profile of a data scientist, career in data science, nature of data science, typical working day of a data scientist, importance of data science in agribusiness</p>
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**SW-1 Suggested Seasonal Work (SW):**

**a. Assignments:** Prepare the assignment on Introduction to data science, evolution of data science, work profile of a data scientist, career in data science, nature of data science, typical working day of a data scientist, importance of data science in agribusiness.

**b. Mini Project: -**

**c. Other Activities (Specify):-**

**ABM 526 CO-2: Operate the using of statistical analytical tools for analysis of research problems**

**Approximate Hours**

Item	AppX Hrs
C 1	3
LI	1
SW	2
SL	2
Total	08

Session Outcomes (SOs)	Laboratory Instruction (LI)	Class room Instruction (CI)	Self Learning (SL)
<p><b>SO2.1</b> – Introduce to the Fundamental of Research Fundamentals of R and R Studio, fundamentals of packages of R Studio, data manipulations, data transformations, normalization, standardization, missing values imputation, dummy variables, data visualization (2D and 3D)</p> <p><b>SO2.2</b> – learned about basic architecture of machine learning analytical cycle, descriptive analytics-case study covering data manipulation</p> <p><b>SO2.3-</b> Apply to the measures of central tendency, measures</p>	<p><b>LI-2.1</b> - To develop a program in R using any four statistical functions.</p> <p><b>LI-2.2</b> - To develop a program in R to implement the user defined function.</p> <p><b>LI-2.3</b> - To develop a script to create data frame.</p> <p><b>LI-2.4</b> - To develop a module in R to create mathematical series</p> <p><b>LI-2.5</b> - To study the IDE for R language.</p> <p><b>LI-2.6</b> – To study of measures of central tendency.</p> <p><b>LI-2.7</b> - To study of measures of</p>	<p><b>Unit II:</b> <b>Fundamental of Research Fundamentals of R and R Studio, fundamentals of packages of R Studio, data manipulations, data transformations, normalization, standardization, missing values imputation, dummy variables, data visualization (2D and 3D), basic architecture of machine learning analytical cycle, descriptive analytics-case study covering data manipulation, measures of central tendency, measures of dispersion,</b></p>	<p><b>2.1</b> – Prepare the assignment on Fundamental of Research Fundamentals of R and R Studio, fundamentals of packages of R Studio, data manipulations, data transformations, normalization, and standardization.</p>





<p>of dispersion, measures of distribution</p> <p><b>SO2.4-</b> Briefing the measures of associations, t-test, f-test,</p> <p><b>SO 2.5-</b>Discuss to the ANOVA, Chi-square test, basic statistical modeling framework</p> <p><b>SO 2.6</b> Laboratory and field work</p>	<p>dispersion.</p> <p><b>LI-2.8</b> - To study of measures of distribution.</p> <p><b>LI-2.9</b> - To study of measures of associations.</p> <p><b>LI-2.10</b> - To study of t-test, f-test.</p> <p><b>LI-2.11</b> - To study of ANOVA analysis</p> <p><b>LI-2.12</b> - To study of Chi-square test analysis.</p> <p><b>LI-2.13</b> - To study of basic statistical modeling framework.</p>	<p>measures of distribution, measures of associations, t-test, f-test, ANOVA, Chi-square test, basic statistical modeling framework.</p> <p><b>2.1</b> – Fundamental of Research Fundamentals of R and R Studio, fundamentals of packages of R Studio, data manipulations, data transformations, normalization, standardization, missing values imputation, dummy variables, data visualization (2D and 3D),</p> <p><b>2.2-</b> Measures of central tendency, measures of dispersion, measures of distribution, measures of associations, t-test, f-test.</p> <p><b>2.3-</b> ANOVA, Chi-square test, basic statistical modeling framework</p>	
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**SW-1 Suggested Seasonal Work (SW):**

**a. Assignments:** Prepare the assignment on Fundamental of Research Fundamentals of R and R Studio, fundamentals of packages of R Studio, data manipulations, data transformations, normalization, and standardization.

**b. Mini Project:**

**c. Other Activities (Specify):**



**ABM 526 CO-3: Determine to supervised machine learning and basic frame work of application of regression analysis**  
**Approximate Hours**

Item	AppX Hrs
C 1	3
LI	1
SW	2
SL	2
Total	08

Session Outcomes (SOs)	Laboratory Instruction(LI)	Class room Instruction(CI)	Self Learning (SL)
<b>SO3.1</b> – Introduce the Supervised machine learning: Basic framework, regression models and classification models <b>SO3.2</b> – Discuss to the Linear regression, nonlinear regression and multiple regression <b>SO3.3-</b> Apply the polynomial regression, lasso regression <b>SO 3.4-</b> Discuss to The ridge regression, stepwise regression,. <b>SO 3.5–</b> Describe the quintile regression, logistic regression <b>SO 3.6</b> Laboratory and field work	<b>LI1.3.1</b> To study the IDE for R language. <b>LI1.3.2</b> To develop a script to demonstrate exploratory data analysis (EDA) <b>LI1.3.3</b> - To study the Linear regression and nonlinear regression. <b>LI1.3.4-</b> To study the multiple regression and polynomial regression, <b>LI1.3.5-</b> To study the logistic regression	<b>Unit III: Supervised machine learning: Basic framework, regression models and classification models. Linear regression, nonlinear regression, multiple regression, polynomial regression, lasso regression, ridge regression, stepwise regression, quintile regression, logistic regression</b> <b>3.1-</b> Supervised machine learning: Basic framework, regression models and classification models. <b>3.2-</b> Linear regression, nonlinear regression, multiple regression, polynomial regression and lasso regression <b>3.3-</b> Ridge regression, stepwise regression, quintile regression and logistic regression	<b>3.1</b> Prepare the assignment on - supervised machine learning: Basic framework and regression models.

**SW-1 Suggested Seasonal Work (SW):**

- Assignments:** Prepare the assignment on - supervised machine learning: Basic framework and regression models
- Mini Project:**
- Other Activities (Specify):**



**ABM 526 CO-4: Asses to supervised machine learning and deep learning and basic frame work of application of linear discriminate analysis**

**Approximate Hours**

Item	App X Hrs
CI	3
LI	1
SW	2
SL	2
Total	08

Session Outcomes (SOs)	Laboratory Instruction (LI)	Class room Instruction (CI)	Self Learning (SL)
<p><b>SO4.1</b> – Introduce the Supervised machine learning: Linear discriminate analysis, principal component analysis, factor analysis.</p> <p><b>SO4.2</b> – Discuss to the support vector machines, naïve Byes, nearest neighbors, decision trees, random forest, ensemble methods</p> <p><b>SO4.3-</b> Apply the <i>k</i>-fold cross validation, X gradient boosting</p> <p><b>SO4.4-</b> Discuss to The Unsupervised machine learning—basic framework, concept of clustering.</p> <p><b>SO4.5–</b> Describe the hidden mark ov models, forecasting models (AR, MA, ARMA and ARIMA).</p> <p><b>SO 3.6</b> Laboratory and field work</p>	<p><b>LI1.4.1-</b> To study the forecasting models (AR, and MA,).</p> <p><b>LI1.4.2</b> -To study the forecasting models (ARMA and ARIMA).</p>	<p><b>Unit-4</b> <b>Supervised machine learning: Linear discriminate analysis, principal component analysis, factor analysis, support vector machines, naïve Bayes, nearest neighbors, decision trees, random forest, ensemble methods, <i>k</i>-fold cross validation, X gradient boosting.</b> <b>Unsupervised machine learning—basic framework, concept of clustering, k-means, c-means, hierarchical clustering, hidden mark ov models, forecasting models (AR, MA, ARMA and ARIMA).</b></p> <p><b>4.1-</b> Supervised machine learning: Linear discriminate analysis, principal component analysis, factor analysis, support vector machines.</p> <p><b>4.2-</b> Naïve Bayes, nearest neighbors, decision trees, random forest, ensemble</p>	<p><b>4.1</b> Prepare the assignment on - Supervised machine learning: Linear discriminate analysis, principal component analysis, factor analysis, support vector machines.</p>



		<p>methods, <math>k</math>-fold cross validation, X gradient boosting.</p> <p><b>4.3-</b> Unsupervised machine learning—basic framework, concept of clustering, <math>k</math>-means, <math>c</math>-means, hierarchical clustering, hidden mark or models, forecasting models (AR, MA, ARMA and ARIMA),</p>	
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**SW-1 Suggested Seasonal Work (SW)**

- a. Assignments:** Prepare the assignment on Management of collections and disbursement, Investment of Surplus cash.
- b. Mini Project:**
- c. Other Activities (Specify):**

**ABM 526 CO-5: Develop the micro finance credit lending models:-association model, Community Banking model, Credit union model**

**Approximate Hours**

Item	AppX Hrs
CI	3
LI	1
SW	2
SL	2
<b>Total</b>	<b>08</b>

Session Outcomes (SOs)	Laboratory Instruction (LI)	Class room Instruction (CI)	Self Learning (SL)
<p><b>SO1.1</b> –Identify the deep learning: Basic framework of neural nets, types of neural nets, computer vision, object detection and localization</p> <p><b>SO1.2-</b> Identify the gradient descent optimization for loss function, regularization L1 and L2,</p>	<p><b>LE1. 5.1</b> To study and implement data visualization tools.</p> <p><b>LE1. 5.2</b> To study the significance of data visualization in the context of data science</p> <p><b>LE1. 5.3</b> To</p>	<p><b>Unit-5.0</b></p> <p><b>Deep learning: Basic framework of neural nets, types of neural nets, computer vision, object detection and localization, gradient descent optimization for loss function, regularization</b></p> <p><b>L1 and L2, feed forward neural nets, back propagation,</b></p>	<p><b>1.1</b> - Prepare the assignment on Definition, Scope and importance of Micro Finance.</p>



<p><b>SO1.3-</b> Identifying Micro Finance credit lending models: - Association model</p> <p><b>SO1.4-</b> Analyze the feed forward neural nets, back propagation, recurrent neural nets, convolution neural nets, reinforcement neural net, concurrent net.</p> <p><b>SO1.5-</b> Apply the introduction to IoT. All the illustrations used in the syllabus of Data Science in Agribusiness will be primarily from agribusiness domains and R Studio will be used for practical purposes</p>	<p>develop a script to demonstrate exploratory data analysis (EDA)</p> <p><b>LE1. 5.4</b> To develop a program to visualize time series data.</p> <p><b>LE1. 5.5</b> To study and implement data visualization tools.</p>	<p><b>recurrent neural nets, convolution neural nets, reinforcement neural net, concurrent net, introduction to I o T. All the illustrations used in the syllabus of Data Science in Agribusiness will be primarily from agribusiness domains and R Studio will be used for practical purposes</b></p> <p><b>5.1-</b> Deep learning: Basic framework of neural nets, types of neural nets, computer vision, object detection and localization, gradient descent optimization for loss function,</p> <p><b>5.2-</b> Regularization L1 and L2, feed forward neural nets, back propagation, recurrent neural nets, convolution neural nets, reinforcement neural net, concurrent net, introduction to I o T</p> <p><b>5.3-</b> All the illustrations used in the syllabus of Data Science in Agribusiness will be primarily from agribusiness domains and R Studio will be used for practical purposes</p>	
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**SW-1 Suggested Seasonal Work (SW):**

- a. Assignments:** - Prepare the assignment on Definition, Scope and importance of Micro Finance.
- b. Mini Project:**
- c. Other Activities (Specify):**



**Brief of Hours suggested for the Course Outcome**

<b>Course Outcomes</b>	<b>Class Lecture (C I)</b>	<b>Laboratory Lecture (L I)</b>	<b>Seasonal Work (SW)</b>	<b>Self Learning (S I)</b>	<b>Total hour (C I + LI+ SW +S I)</b>
ABM 526 CO-1 Describe the equip of agribusiness with knowledge, skills and attitude for using data science tools and techniques	3	1	2	2	08
ABM 526 CO-2: Operate the using of statistical analytical tools for analysis of research problems	3	1	2	2	08
ABM 526 CO-3: Determine to supervise machine learning and basic frame work of application of regression analysis.	3	1	2	2	08
ABM 526 CO-4: Asses to supervised machine learning and deep learning and basic frame work of application of linear discriminate analysis	3	1	2	2	08
ABM 526 CO-5: Develop the micro finance credit lending models:-association model, Community Banking model, Credit union model	3	1	2	2	08
<b>Total Hours</b>	<b>15</b>	<b>05</b>	<b>10</b>	<b>10</b>	<b>40</b>

**Suggestion for End Semester Assessment**  
**Suggested Specification Table (For ESA)**

<b>CO</b>	<b>Unit title</b>	<b>Marks Distribution</b>			<b>Total Marks</b>
		<b>R</b>	<b>U</b>	<b>A</b>	
CO-1	<b>Unit I:</b> Introduction to data science, evolution of data science, work profile of a data scientist, career in data science, nature of data science, typical working day of a data scientist, importance of data science in agribusiness; defining algorithm, big data, business analytics, statistical learning, defining machine learning, defining	02	03	00	05



	artificial intelligence, data mining; difference between analysis and analytics, business intelligence and business analytics, typical process of business analytics cycle.				
CO-2	<b>Unit II:</b> Fundamental of Research Fundamentals of R and R Studio, fundamentals of packages of R Studio, data manipulations, data transformations, normalization, standardization, missing values imputation, dummy variables, data visualization (2D and 3D), basic architecture of machine learning analytical cycle, descriptive analytics-case study covering data manipulation, measures of central tendency, measures of dispersion, measures of distribution, measures of associations, t-test, f-test, ANOVA, Chi-square test, basic statistical modeling framework.	02	05	03	10
CO-3	<b>Unit III:</b> Supervised machine learning: Basic framework, regression models and classification models. Linear regression, nonlinear regression, multiple regression, polynomial regression, lasso regression, ridge regression, stepwise regression, quintile regression, logistic regression	00	08	07	15
CO-4	<b>Unit-4</b> Supervised machine learning: Linear discriminate analysis, principal component analysis, factor analysis, support vector machines, naïve Bayes, nearest neighbors, decision trees, random forest, ensemble methods, <i>k</i> -fold cross validation, X gradient boosting. Unsupervised machine learning—basic framework, concept of clustering, k-means, c-means, hierarchical clustering, hidden mark ov models, forecasting models (AR, MA,	02	05	08	15



	ARMA and ARIMA).				
CO-5	<b>Unit-5.0</b> Deep learning: Basic framework of neural nets, types of neural nets, computer vision, object detection and localization, gradient descent optimization for loss function, regularization	00	03	02	05
	<b>Total</b>	06	24	20	<b>50</b>
<b>Laboratory work</b>	<b>Description of Marks</b>				
<b>1</b>	Lab works Assignment	-	-	-	<b>35</b>
<b>2</b>	Viva-voce	-	-	-	<b>10</b>
<b>3</b>	Attendance	-	-	-	<b>05</b>
	<b>Total</b>				<b>50</b>

**Legend: R: Remember, U: Understand, A: Apply**

The end of semester assessment for Introduction to Portland cement will be held with written examination of 50 marks

**Note.** Detailed Assessment rubric need to be prepared by the course wise teachers for above tasks. Teachers can also design different tasks as per requirement, for end semester assessment.

**Suggested Instructional/Implementation Strategies:**

1. Improved Lecture
2. Tutorial
3. Case Method
4. Group Discussion
5. Role Play
6. Visit to Industry
7. Demonstration
8. ICT Based Teaching Learning (Video Demonstration/Tutorials CBT, Blog, Face book, Twitter, Whatsapp, Mobile, Online sources)
9. Brainstorming





**Suggested Learning Resources:**

S. No.	Title	Author	Publisher	Edition & Year
01	Manning Early Access Program. Version 1	<i>Deep Learning with R</i> . MEAP Edition	Manning Publication	2017
02	An Introduction to Statistical Learning with Application.	James RG, Witten D, Hastie T and Tibshirani R. 2017	Springer Publication	. 2017 Tenth Edition
03	Machine Learning With Tensor flow: A Deeper Look At Machine Learning With Tensor Flow	Millstein F. 2018.	Frank Millstein	2018
04	Introduction to Data Science	Stanton J.	SAGE Publications, Inc.	2012

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**Cos, POs and PSOs Mapping**  
**Course Code:-ABM 526**  
**Course Title: - Business Analytics for Agriculture**

Course Outcomes	Program Outcomes												Program Specific Outcome			
	PO1	PO2	PO3	PO 4	PO5	PO6	PO7	PO8	PO9	PO1 0	PO1 1	PO1 2	PSO 1	PSO 2	PSO 3	PSO 4
	Man ageri al know ledge	Pro ble m anal ysis	Mod ern tool usag e	Ethi cs	Indivi dual and team work	Com muni catio n	Proj ect man age ment and finan ce	Busi ness decis ion maki ng	Life- long learn ing	Envi ron ment and susta inabi lity	Entr epre neur ial oppo rtuni ties	Glob al outlo ok	Ability to apply managerial and business skilled for developme nt of business growth with the available resources	Ability to understand the day to day business operationa l problems and startup developm ent of agribusine ss and provide economic al solution to enhance the decide goal without	Inculcate proactive thinking to ensure effective performa nce in the dynamic socio-economi c and business ecosyste m entrepren eurial approach and skill sets aligned	Ability to use the research based innovati ve knowled ge for sustaina ble develop ment in agribusi ness growth and develop s



														compromising ethical value	with the national priorities	
ABM 526 CO-1 Describe the equip of agribusiness with knowledge, skills and attitude for using data science tools and techniques	3	1	1	2	1	1	1	2	3	2	1	3	3	1	2	1
ABM 526 CO-2: Operate the using of statistical analytical tools for analysis of research problems	3	2	1	2	2	2	1	3	2	1	2	3	3	2	2	3
ABM 526 CO-3: Determine to supervise machine learning and basic frame work of application of regression analysis.	3	2	1	2	2	2	3	2	1	2	3	3	2	3	3	3



ABM 526 CO-4: Asses to supervised machine learning and deep learning and basic frame work of application of linear discriminate analysis	2	2	3	1	2	2	3	2	1	2	1	1	3	3	2	2
ABM 526 CO-5: Develop the micro finance credit lending models:- association model, Community Banking model, Credit union model	2	3	3	1	3	2	2	2	2	1	1	2	2	2	2	2

**Legend: 1 – Low, 2 – Medium, 3 – High**



### Course Curriculum Map: Business Analytics for Agriculture

POs & PSOs No.	COs No.& Titles	SOs No.	Laboratory Instruction(LI)	Classroom Instruction (CI)	Self Learning (SL)
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO 1,2, 3, 4, 5	ABM 526 CO-1 Describe the equip of agribusiness with knowledge, skills and attitude for using data science tools and techniques	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-1.0</b> Introduction to Management: Nature, Scope and Significance of Management, Evolution of Management Thought, Approaches to Management, functions and skills of a manager 1.1, 1.2, 1.3.	As mentioned in page number .....
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO 1,2, 3, 4, 5	ABM 526 CO-2: Operate the using of statistical analytical tools for analysis of research problems	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-2.0 –</b> Management functions: Planning – Types, Steps, Objective, Process, Strategies, Policies, MBO, Organizing – Structure & Process, Line, Staff, Authority & Responsibility, Staffing – Recruitment and Selection, Directing – Training, Communication & Motivation, Controlling- Significance, Process, Techniques, Standards & Benchmarks, Management Audit. 2.1, 2.2, 2.3.	As mentioned in page number .....
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO 1,2, 3, 4, 5	ABM 526 CO-3: Determine to supervise machine learning and basic frame work of application of regression analysis.	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-3.0</b> Nature, Scope and Significance of Organizational Behavior; Foundations of Individual behaviour – Emotions, Personality, Values, Attitudes, Perception, Learning and individual decision making, Motivation- Types of	As mentioned in page number .....



				motivation, theories of motivation, motivational practices at workplace, managing stress and work life balance. 3.1, 3.2, 3.3.	
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO 1,2, 3, 4, 5	ABM 526 CO-4: Asses to supervised machine learning and deep learning and basic frame work of application of linear discriminate analysis	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-4.0</b> Group dynamics- types of groups, group formation, Group decision making, teambuilding and developing collaboration, leadership styles and influence process; leadership theories, leadership styles and effective leader 4.1, 4.2, 4.3.	As mentioned in page number .....
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO 1,2, 3, 4, 5	ABM 526 CO-5: Develop the micro finance credit lending models:-association model, Community Banking model, Credit union model	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-5.0</b> Understanding and managing organizational culture, power and political behavior in organizations, conflict Management, negotiation, managing organizational change, concept of organizational development. 5.1, 5.2, 5.3.	As mentioned in page number .....



**Course Code: PGS 503**

**Course Title: Intellectual Property and Its Management in Agriculture**

**Pre-requisite:** To teach the physiology of Intellectual Property and Its Management in Agriculture

**Rationale:** The main objective of this course is to equip students and stakeholders with knowledge of Intellectual Property Rights (IPR) related protection systems, their significance and use of IPR as a tool for wealth and value creation in a knowledge based economy.

**Course outcomes:**

**PGS 503.1:** Students will be able to understand Historical perspectives and need for the introduction of Intellectual Property Right.

**PGS 503.2:** Students will be able to understand National Biodiversity protection initiatives. Convention on Biological Diversity

**PGS 503.3:** Students will be able to understand Research Collaboration Agreement, License agreement

**Scheme of Studies:**

Board of Study	Course Code	Course Title	Scheme of studies (Hours/Week)					Total Credits(C)
			CI	LI	SW	SL	Total Study Hours(CI+LI+SW+SL)	
Program Core (PGS)	PGS 503	Intellectual Property and Its Management in Agriculture	1	0	1	1	3	1

**Legend:**

**CI:** Classroom Instruction (Includes different instructional strategies i.e. Lecture (L) and Tutorial (T) and others),

**LI:** Laboratory Instruction (Includes Practical performances in laboratory workshop, field or other locations using different instructional strategies)

**SW:** Sessional Work (includes assignment, seminar, mini project etc.),

**SL:** Self Learning,

**C:** Credits.

**Note:** SW&SL has to be planned and performed under the continuous guidance and feedback of teacher to ensure outcome of Learning.

**Scheme of Assessment:**

**Theory**

Board of Study	Course Code	Course Title	Scheme of Assessment (Marks )					
			Progressive Assessment(PRA)				End Semester Assessment (ESA)	Total Marks (PRA +ESA)
			Class/Homework Assignment 1 number 5 marks each (CA)	Class Test2 (2bestout ) 20 marks each(CT)	Practical Exam (PA)	Class Attendance (AT)		



PGS	PGS 503	Intellectual Property and Its Management in Agriculture	5	40	0	5	50	50	100
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**Course-Curriculum Detailing:**

This course syllabus illustrates the expected learning achievements, both at the course and session levels, which students are anticipated to accomplish through various modes of instruction including Classroom Instruction (CI), Laboratory Instruction (LI), Sessional Work (SW), and Self Learning (SL). As the course progresses, students should showcase their mastery of Session Outcomes(SOs), culminating in the overall achievement of Course Outcomes (COs) upon the course's conclusion.

**PGS 503.1: Students will be able to understand Historical perspectives and need for the introduction of Intellectual Property Right.**

**Approximate Hours**

Item	AppXHrs
CI	04
LI	0
SW	01
SL	02
<b>Total</b>	<b>07</b>

Session Outcomes(SOs)	Laboratory Instruction(LI)	Classroom Instruction(CI)	Self-Learning (SL)
<p><b>SO1.1</b> Student will understand the Historical perspectives and need for the introduction of Intellectual Property Right.</p> <p><b>SO1.2</b> Student will recognize the TRIPs and various provisions in TRIPS Agreement.</p> <p><b>SO1.3</b> Student will understand different Intellectual Property and Intellectual Property Rights (IPR), benefits of securing IPRs</p>		<p><b>Unit-1.0</b> Historical perspectives and need for the introduction of Intellectual Property Right regime; TRIPs and various provisions in TRIPS Agreement; Intellectual Property and Intellectual Property Rights (IPR), benefits of securing IPRs.</p> <p>Historical perspectives and need for the introduction of Intellectual Property Right regime. TRIPs and various provisions in TRIPS Agreement. Intellectual Property and Intellectual Property Rights (IPR). Benefits of securing IPRs.</p>	<p>1. Role of IPR and its benefits.</p> <p>2. Role of TRIPS and its benefits</p>





**SW-1 Suggested Seasonal Work (SW):**

**a. Assignments:**

- I. Preparation of file and write the role of IPR and TRIPS and their purpose.

**PGS 503.2: Students will be able to understand National Biodiversity protection initiatives. Convention on Biological Diversity.**

Approximate Hours

Item	AppXHrs
CI	06
LI	0
SW	02
SL	03
<b>Total</b>	<b>11</b>

Session Outcomes(SOs)	Laboratory Instruction(LI)	Classroom Instruction(CI)	Self -Learning(SL)
<p><b>SO2.1</b> Students will understand the Indian Legislations for the protection of various types of Intellectual Properties; Fundamentals of patents, copyrights, geographical indications, designs and layout</p> <p><b>SO2.2</b> Students will understand the trade secrets and traditional knowledge, trademarks, protection of plant varieties and farmers' rights and biodiversity protection.</p> <p><b>SO2.3</b> Students will identify the role of Protectable subject matters, protection in biotechnology, protection of other biological materials, ownership and period of protection.</p>		<p><b>Unit-2</b> Indian Legislations for the protection of various types of Intellectual Properties; Fundamentals of patents, copyrights, geographical indications, designs and layout, trade secrets and traditional knowledge, trademarks, protection of plant varieties and farmers' rights and biodiversity protection; Protectable subject matters, protection in biotechnology, protection of other biological materials, ownership and period of protection.</p> <p>Indian Legislations for the protection of various types of Intellectual Properties.</p> <p>Fundamentals of patents, copyrights, geographical indications, designs and layout. trade secrets and</p>	<p>1. Basic Indian Legislature.</p> <p>2. Plant varieties and farmers' rights act (2001).</p> <p>3. Biodiversity act (2002)</p>



		<p>traditional knowledge and trademarks.</p> <p>protection of plant varieties and farmers' rights and biodiversity protection.</p> <p>Protectable subject matters, protection in biotechnology.</p> <p>protection of other biological materials, ownership and period of protection.</p>	
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**SW-2 Suggested Seasonal Work (SW):**

**Assignments:**

- I. Note on Plant varieties and farmers' rights act (2001).
- II. Note on Biodiversity act (2002).

**PGS 503.3: Students will be able to understand Research Collaboration Agreement, License agreement.**

**Approximate Hours**

Item	AppXHrs
CI	05
LI	0
SW	02
SL	01
Total	08

Session Outcomes (SOs)	Laboratory Instruction (LI)	Classroom Instruction (CI)	Self-Learning (SL)
<p><b>SO3.1</b> Students will identify the National Biodiversity protection initiatives and Convention on Biological Diversity.</p> <p><b>SO3.2</b> Students will understand the International Treaty on Plant Genetic Resources for Food and Agriculture and Licensing of technologies.</p> <p><b>SO3.2</b> Students will understand the Material transfer agreements,</p>		<p><b>Unit-3:</b> National Biodiversity protection initiatives; Convention on Biological Diversity; International Treaty on Plant Genetic Resources for Food and Agriculture; Licensing of technologies, Material transfer agreements, Research collaboration Agreement, License Agreement.</p> <p>National Biodiversity protection initiatives. Conventions on Biological Diversity.</p>	1. Plant Genetic Resources.



Research collaboration Agreement and License Agreement.		International Treaty on Plant Genetic Resources for Food and Agriculture. Licensing of technologies and Material transfer agreements. Research collaboration Agreement and License Agreement.	
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**SW-3 Suggested Sessional Work (SW):**

- a. **Assignments:**
  - i. Note on Plant Genetic Resources.
  - ii. Note on National Biodiversity protection initiatives



**Brief of Hours suggested for the Course Outcome:**

Course outcome	Course Outcomes	Class Lecture (CI)	Sessional Work (SW)	Self-Learning (SI)	Total hour (CI+SW+SI)
<b>CO-01</b>	Students will be able to understand Historical perspectives and need for the introduction of Intellectual Property Right.	04	01	02	07
<b>CO-02</b>	Students will be able to understand National Biodiversity protection initiatives. Convention on Biological Diversity.	06	02	03	11
<b>CO-03</b>	Students will be able to understand Research collaboration Agreement, License agreement.	05	02	01	08
	<b>Total</b>	<b>15</b>	<b>05</b>	<b>06</b>	<b>26</b>

**Suggestion for End Semester Assessment**  
**Suggested Specification Table (For ESA)**

CO	Unit Titles	Marks Distribution			Total Marks
		R	U	A	
<b>CO 1</b>	<b>Unit-1.0</b> Historical perspectives and need for the introduction of Intellectual Property Right regime; TRIPs and various provisions in TRIPS Agreement; Intellectual Property and Intellectual Property Rights (IPR), benefits of securing IPRs.	05	03	02	<b>10</b>
<b>CO 2</b>	<b>Unit-2</b> Indian Legislations for the protection of various types of Intellectual Properties; Fundamentals of patents, copyrights, geographical indications, designs and layout, trade secrets and traditional knowledge, trademarks, protection of plant varieties and farmers' rights and biodiversity protection; Protectable subject matters, protection in biotechnology, protection of other biological materials, ownership and period of protection.	05	02	03	<b>10</b>
<b>CO 3</b>	<b>Unit-3:</b> National Biodiversity protection initiatives; Convention on Biological Diversity; International Treaty on Plant Genetic Resources for Food and Agriculture; Licensing of technologies, Material transfer agreements, Research collaboration Agreement, License Agreement.	05	03	02	<b>10</b>

**Legend: R: Remember, U: Understand, A: Apply**



The end of semester assessment for **Intellectual Property and Its Management in Agriculture** will be held with written examination of 50 marks

**Note.** Detailed Assessment rubric need to be prepared by the course wise teachers for above tasks. Teachers can also design different tasks as per requirement, for end semester assessment.

Suggested Instructional/Implementation Strategies:

1. Improved Lecture
2. Tutorial
3. Case Method
4. Group Discussion
5. Role Play
6. Visit to organic fields
7. Demonstration
8. ICT Based Teaching Learning (Video Demonstration/Tutorials CBT, Blog, Facebook, Twitter, Whatsapp, Mobile, Online sources)
9. Brainstorming

**Suggested Learning Resources:**

**(a) Books:**

S.No.	Title	Author	Publisher	Edition & Year
1	Intellectual Property Rights in Agricultural Biotechnology	Erbisch FH and Maredia K	CABI.	1998
2	Intellectual Property Rights: Unleashing Knowledge Economy	Ganguli P	McGraw-Hill.	2001
3	Intellectual Property Rights: Key to New Wealth Generation		NRDC and Aesthetic Technologies.	2001
4	State of Indian Farmer. Vol. V. Technology Generation and IPR Issues	Ministry of Agriculture, Government of India	Academic Foundation	2004
5	Intellectual Property Rights in Animal Breeding and Genetics	Rothschild M and Scott N	CABI	2003

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**Cos, POs and PSOs Mapping**

**Course Code:-PGS 503**

**Course Title: - Intellectual Property and Its Management in Agriculture**

Course Outcomes	Program Outcomes												Program Specific Outcome			
	PO1	PO2	PO3	PO 4	PO5	PO6	PO7	PO8	PO9	PO1 0	PO1 1	PO1 2	PSO 1	PSO 2	PSO 3	PSO 4
	Man ageri al know ledge	Pro ble m anal ysis	Mod ern tool usag e	Ethi cs	Indivi dual and team work	Com muni catio n	Proj ect man age ment and finan ce	Busi ness decis ion maki ng	Life-long learn ing	Envi ron ment and susta inabi lity	Entr epre neur ial oppo rtuni ties	Glob al outlo ok	Ability to apply managerial and business skilled for developme nt of business growth with the available resources	Ability to understand the day to day business operational problems and startup developme nt of agribusines s and provide economical solution to enhance the decide goal without compromis ing ethical value	Inculcate proactive thinking to ensure effective performan ce in the dynamic socio-economic and business ecosystem entrepreneurial approach and skill sets aligned with the national priorities	Ability to use the research based innovati ve knowled ge for sustaina ble develop ment in agribusi ness growth and develop s
CO-1 Students will be able to understand	3	1	1	2	1	1	1	2	3	2	1	3	3	1	2	1



Historical perspectives and need for the introduction of Intellectual Property Right.																
CO-2 Students will be able to understand National Biodiversity protection initiatives. Convention on Biological Diversity.	3	2	1	2	2	2	1	3	2	1	2	3	3	2	2	3
CO-3 Students will be able to understand Research collaboration Agreement, License agreement.	3	2	1	2	2	2	3	2	1	2	3	3	2	3	3	3

**Legend: 1 – Low, 2 – Medium, 3 – High**



**Course Curriculum Map: Intellectual Property and Its Management in Agriculture**

<b>POs &amp; PSOs No.</b>	<b>COs No.&amp; Titles</b>	<b>SOs No.</b>	<b>Laboratory Instruction(LI)</b>	<b>Classroom Instruction (CI)</b>	<b>Self Learning (SL)</b>
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO 1,2, 3, 4, 5	CO-1 Students will be able to understand Historical perspectives and need for the introduction of Intellectual Property Right.	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b>		<b>Unit-1.0</b> Historical perspectives and need for the introduction of Intellectual Property Right regime; TRIPs and various provisions in TRIPS Agreement; Intellectual Property and Intellectual Property Rights (IPR), benefits of securing IPRs. 1.1, 1.2, 1.3. 1.4.	As mentioned in page number .....
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO 1,2, 3, 4, 5	CO-2 Students will be able to understand National Biodiversity protection initiatives. Convention on Biological Diversity.	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b>		<b>Unit-2</b> Indian Legislations for the protection of various types of Intellectual Properties; Fundamentals of patents, copyrights, geographical indications, designs and layout, trade secrets and traditional knowledge, trademarks, protection of plant varieties and farmers' rights and biodiversity protection; Protectable subject matters, protection in biotechnology, protection of other biological materials, ownership and period of protection. 2.1, 2.2, 2.3.2.4,2.5	As mentioned in page number .....
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO 1,2, 3, 4, 5	CO-3 Students will be able to understand Research collaboration Agreement, License agreement.	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b>		<b>Unit-3:</b> National Biodiversity protection initiatives; Convention on Biological Diversity; International Treaty on Plant Genetic Resources for Food and Agriculture; Licensing of technologies, Material transfer agreements, Research collaboration Agreement, License Agreement. 3.1, 3.2, 3.34,3.5	As mentioned in page number .....





**Course Code:** PGS 504

**Course Title:** Basic Concepts in laboratory techniques

**Pre requisite:** No specific requirements

**Rationale:** Studying basic laboratory techniques are fundamental for scientific research, ensuring accurate experimentation and data analysis. Mastery of these skills cultivates precision, reproducibility, and safety, forming the cornerstone of scientific inquiry across disciplines and facilitating advancements in knowledge and technology.

**Course Outcomes:**

**CO1-PGS504** Student will learn about basic instrumentation, its principles, working and use. They will learn about Making solutions of different concentrations, learn acid base interaction. Also, student will learn about Procedural outline of various experiments. Student will learn about Basics of plant tissue culture and seed viability testing.

### Scheme of Studies

Board Of Study	Course Code	Course Title	Scheme of Studies (Hours/Week)					Total Credit (C)
			CI	LI	SW	SL	Total Study Hours	
NC	PGS504	Basic Concepts in Laboratory Techniques	00	2	00	00	2	01

#### Legend:

**CI:** Classroom Instruction (Includes different instructional strategies i.e. Lecture (L) and Tutorial (T) and others),

**LI:** Laboratory Instruction (Includes Practical performances in laboratory workshop, field

**SW:** Sessional Work (includes assignment, seminar, mini project etc.),

**SL:** Self Learning,

**C:** Credits.

#### Note:

SW & SL has to be planned and performed under the continuous guidance and feedback of teacher to ensure outcome of Learning.

### Scheme of Assessment:

#### Practical

Board of Study	Course Code	Course Title	Scheme of Assessment (Marks)						End Semester Assessment (ESA)	Total Marks (PRA + ESA)
			Progressive Assessment (PRA)							
			Class/Home Assignment 5 number3 markseach(CA)	ClassTest 2 (2 bestout of3) 10 marks each(CT)	Seminarone	Class Activity anyone (CAT )	Class Attendance (AT)	Total Marks (CA+CT+SA+CAT+AT)		



NC	PGS504	Basic Concepts in Laboratory Techniques							100	100
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### Course-Curriculum Detailing:

Laboratory techniques are important for any person conducting an experiment. Every procedure needs to be complete with accuracy and precision with proper safety measures. Student will understand the safety and details of working in scientific laboratory. Student will familiarize with various instruments and their principles. Student will practice and visualize common experimental procedures.

**PGS504 CO-01 Student will learn about basic instrumentation, its principles, working and use. They will learn about Making solutions of different concentrations, learn acid base interaction. Also, student will learn about Procedural outline of various experiments. Student will learn about Basics of plant tissue culture and seed viability testing**

### Approximate Hours

Item	Appx Hrs
CI	00
LI	30
SW	00
SL	00
Total	30

Session Outcomes (SOs)	Laboratory Instructions (LI)	Classroom Instructions (CI)	Self-Learning (SL)
SO.L1 Identify safety measures while in Lab SO.L2 Recognize use of glasswares. SO.L3 Discover handling of glasswares. SO.L4 Recognize Drying of solvents/ chemicals; SO.L5 Describe working with chemicals. SO.L6 Describe working with solutions.	L1. Safety measures while in Lab; L2. Use of burettes, pipettes, measuring cylinders, flasks, separatory funnel, condensers, micropipettes and vaccupets; L3. Washing, drying and sterilization of glassware; L4. Drying of solvents/ chemicals; L5. Handling of chemical substances;		



SO.L7 Articulate the technique of formulating doses of agrochemicals SO.L8 Discover handling techniques of solutions SO.L9 Identify the handling of acid and bases SO.L10 Discover the formulation of buffer and solutions of specific pH. SO.L11 Identify the use of lab instruments SO.L12 Recognize and categorize the media requirements and its types SO.L13 Discover the methods and application of viability of germplasm SO.L14 Illustrate procedure for plant tissue culture SO.L15 Recognize flowering plant by its taxonomical description	Weighing and preparation of solutions of different strengths and their dilution; L6. Handling techniques of solutions; L7. Preparation of different agro-chemical doses in field and pot applications; L8. Preparation of solutions of acids; L9. Neutralisation of acid and bases; L10. Preparation of buffers of different strengths and pH values; L11. Use and handling of microscope, laminar flow, vacuum pumps, viscometer, thermometer, magnetic stirrer, micro-ovens, incubators, sandbath, waterbath, oilbath; Electric wiring and earthing; L12. Preparation of media and methods of sterilization; L13. Seed viability testing, testing of pollen viability; L14. Tissue culture of crop plants; L15. Description of flowering plants in botanical terms in relation to taxonomy		
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**Brief of Hours suggested for the Course Outcome**

Course Outcomes	Class Lecture (CL)	Sessional Work (SW)	Self-Learning (SL)	Total hour (CL+SW+SL)
Basic Concept of Laboratory Techniques	0+30	0	0	30

**Suggestion for End Semester Assessment**

**Suggested Specification Table (For ESA)**

CO	Unit Titles	Marks Distribution			Total Marks
		R	U	A	
<b>CO1</b>	Safety measures while in Lab; Use of burettes, pipettes, measuring cylinders, flasks, separator funnel, condensers, micropipettes and vascupets; Washing, drying and sterilization of glassware; Drying of solvents/ chemicals; Handling of chemical substances; Weighing and preparation of solutions of different strengths and their dilution; Handling techniques of solutions; Preparation of different agro-chemical doses in field and pot applications : Preparation of solutions of acids; Neutralisation of acid and bases; Preparation of buffers of different strengths and pH values; Use and handling of microscope, laminar flow, vacuum pumps, viscometer, thermometer, magnetic stirrer, micro-ovens, incubators, sunbath, water bath, oil bath; Electric wiring and earthing;Preparation of media and methods of sterilization; Seed viability testing, testing of pollen viability; Tissue culture of crop plants; . Description of flowering plants in botanical terms in relation to taxonomy.		<b>30</b>	<b>70</b>	<b>100</b>
	<b>Total</b>		<b>30</b>	<b>70</b>	<b>100</b>

**Suggested Learning Resources:**

Sl. No.	Title	Author	Publisher	Edition and Year
01	Laboratory Techniques in Organic Chemistry	Jerry R. Mohrig, David G. Alberg, and Gretchen M. Adams	W. H. Freeman and Company.	2014
02	Biotechnology: Expanding Horizons	B D Singh	Kalyani Publishers	2005



## *Second Semester*

Course Type	Course Code	Course Name	Number of credits			Credit
			Lecture (L)	Tutorial (T)	Practical (P)	
<b>Training</b>	<b>ABM – 595</b>	<b>Summer Training/ Industrial Attachment</b>	0	0	1	1
<b>Course Outcome</b>	<p>1. Identify the opportunity to develop skill in field of interest for agribusiness professionals.</p> <p>2. Develop the business skills in communication, technology, quantitative reasoning, and teamwork.</p> <p>3. Apply the gaining vital work – related experience and building strong resume for bright career with develop research skill</p> <p>4. Analyze the organizational level challenges programs to help build the academic career and personality</p> <p>5. Evaluate the ability understanding and managing thought for MBA (Agri Business management) students looking to gain experience in a particular field</p>					
<b>Topics Covered</b>	<p><b>INTRODUCTION</b></p> <p><b>TRAINING &amp; ITS IMPORTANCE:-</b></p> <p>Summer training / Industrial attachment is formal academic programs designed and conduction to provide practical experience in real world environment of the agribusiness students. Training programs are utilized in a number of different career fields, including, economics, advertising and many more. During the summer Training / industrial attachment student may attached in the industry or industrial campus and have to be trained about the business activities and develop the handling skill of business management</p> <p><b>OBJECTIVES:-</b></p> <p>The major objectives of summer training / industrial attachment are:-</p> <p>To provide students opportunity to develop skills in the field of interest.</p> <p>To assist students in gaining vital work – related experience and building strong bright career..</p> <p>One of the main objectives of an internship is to expose for particular job or profession or industry.</p> <p>.To get awareness about the various job opportunities. Perceive communicational skills and organizational dynamics.</p>					



<b>Procedures</b>	<p><b>The following procedures have been implement during the Tanning or Industrial attachment program</b></p> <ol style="list-style-type: none"><li>1. This program is organized during the end of second semester of the curriculum.</li><li>2. Department or University authority will decide the approach parameter or term and condition for of the Liasoning in the company under the jurisdiction of academic curriculum.</li><li>3. The terms condition or approach parameter should includes i.e. Tenure of training, venue of training, accommodation for trainees and it will be prepared MOU with the company and department or University authority before organize the training..</li><li>4. For Implement of the program different approach will be applied to connect the industry or company i.e. direct communicate by university authority to the industry /company or either liosoning officers or department for organize of the summer training programmer /industry attachment.</li><li>5. Summer / attachment program will be organized which have mandatory Physical participation of student as well as company authority</li></ol>
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**Course Code: - ABM 509**

**Course Title: - International Trade in Agricultural Products**

**Pre requisite:** -Student should have basic knowledge of International Trade

**Rationale:** -A applied Management Of International Trade in Agricultural Products course is to give the understanding of Cooperative management. International trade in agriculture is governed and managed by various bodies that can affect the quantity of food produced by different countries. The international market and its related laws and regulations have a significant impact on agricultural products and the GDP of a country, and all of these determine whether a country enters the international agricultural trade market or only sells its products for domestic consumption. International trade is more prominent in the developing countries of the world because their economies are heavily dependent on agricultural production.

**Course Outcomes:**

**ABM 509 CO-1** Expose the basic concepts of International trade with reference to WTO and International agreements on Agriculture.

**ABM 509 CO-2.**Apply to use different international trade technique and tools in international trade.

**ABM 509 CO-3.**Assess the practices of trade and foreign trade of agri business commodities.

**ABM 509 CO-4** Develop a clear understanding about the significant regulations and policy measures for International Trade.

**ABM 509 CO-5** Analyze to the international demand and supply with implication of foreign trade.

**Scheme of studies**

Board of Study	Course Code	Course Title	Scheme of studies (Hours/Week)					Total Credits (C)
			C I	L I	SW	S L	Total Study Hours (CI+LI+SW+SL)	
Program Core (PCC)	ABM 509	International Trade in Agricultural Products	02	00	02	01	05	0

**Legend: CI:** Classroom Instruction (Includes different instructional strategies i.e. Lecture (L) and Tutorial (T) and others)



**LI:** Laboratory Instruction (Includes Practical performances in laboratory workshop, field or other locations using different instructional strategies)

**SW:** Sessional Work (includes assignment, seminar, mini project etc.)

**SL:** Self Learning

**C: Credits.**

**Note:** SW & SL has to be planned and performed under the continuous guidance and feedback of teacher to ensure outcome of Learning.

**Scheme of Assessment:**

Board of Study	Course Code	Course Title	Scheme of Assessment ( Marks )							
			Progressive Assessment ( PRA )						End Semester Assessment (ESA)	Total Marks (PRA + ESA)
			Class/ Home Assignment 5 number 3 marks each ( CA)	Class Test 2 (2 best out of 3) 10 marks each (CT)	Seminar one ( SA)	Class Activity any one (CAT)	Class Attendance (AT)	Total Marks (CA+CT+SA+CAT+AT)		
(PCC)	ABM 509	International Trade in Agricultural Products	15	20	5	5	5	50	50	100

**Course-Curriculum Detailing:**

This course syllabus illustrates the expected learning achievements, both at the course and session levels, which students are anticipated to accomplish through various modes of instruction including Classroom Instruction (CI), Laboratory Instruction (LI), Sessional Work (SW), and Self Learning (SL). As the course progresses, students should showcase their mastery of Session Outcomes (SOs), culminating in the overall achievement of Course Outcomes (COs) upon the course's conclusion.





**ABM 509 CO-1** Expose the basic concepts of International trade with reference to WTO and International agreements on Agriculture.

**Approximate Hours**

Item	Appx hrs
C I	06
LI	0
SW	02
SL	02
Total	10

Session Outcomes (SOs)	Laboratory Instruction(LI)	Class room Instruction (CI)	Self Learning(SL)
<b>SO1.1-</b> Brief Introduction about International Trade <b>SO1.2</b> - Define the WTO <b>SO1.3</b> - Describe the Function of WTO <b>SO1.4-</b> Describe the Implications of WTO for Indian economy <b>SO1.5</b> Given the Importance of WTO	<b>LE1.1 –</b>	<b>Unit-1.0</b> International trade– basic concepts, WTO and its implications for Indian economy in general and agriculture sector in particular. 1.1-International Trade 1.2-World Trade Organization 1.3- Implications of WTO 1.4-Role of WTO 1.5-Agriculture sector in particular 1.6-Importance of WTO	<b>1.1-</b> Prepare the assignment

**SW-1 Suggested Seasonal Work (SW):**

- a. Assignments:** Prepare the assignment on management function evaluation thought
- b. Mini Project: -**
- c. Other Activities (Specify):-**



**ABM 509 CO-2: Apply to use different international trade technique and tools in international trade.**

**Approximate Hours**

Item	Appx hrs
C I	06
LI	00
SW	02
SL	02
Total	10

Session Outcomes (SOs)	Laboratory Instruction (LI)	Class room Instruction(CI)	Self Learning (SL)
<b>SO2.1</b> – Introduce to network methods <b>SO2.2</b> – Learned about the CPM and PERT <b>SO2.3-</b> Briefing about the Financial appraisal/evaluation techniques <b>SO2.4-</b> Explain about the NVP, IRR, B:C <b>SO 2.5</b> –Explain the Pay Back Period, Project control and information system	<b>LE2.1</b>	<b>Unit-2.0</b> - Apply to use different international trade technique and tools in international trade. <b>2.1</b> – Network Analysis <b>2.2</b> -CPM and PERT <b>2.3-</b> Project scheduling and resource allocation <b>2.4</b> -Discounted/ no discounted cash flows <b>2.5-</b> NPV, profitability index, IRR, Cost benefits ratio, Payback period <b>2.6-</b> Project control and information system	<b>2.1</b> – Prepare the assignment

**SW-1 Suggested Seasonal Work (SW):**

**a. Assignments:** Prepare the Assignment on given topics.

**b. Mini Project:** Prepare a project report of different function of management used in any case study

**c. Other Activities (Specify):**



**ABM 542 CO-3: Assess the practices of trade and foreign trade of agri business commodities**

**Approximate Hours**

Item	Appx hrs
C 1	06
LI	00
SW	02
SL	02
Total	10

Session Outcomes (SOs)	Laboratory Instruction (LI)	Class room Instruction (CI)	Self Learning (SL)
<b>SO3.1</b> – Define to the agri entrepreneurship <b>SO3.2</b> – Briefing the Entrepreneurial Development Models <b>SO3.3-</b> Discuss the Successful Models in Agro Entrepreneurship <b>SO3.4-</b> Discuss the Development of women entrepreneurship <b>SO3.5–</b> Describe the Social entrepreneurship	<b>LE3.1</b>	<b>Unit-3.0</b> Importance of foreign trade for developing economy; absolute and comparative advantage, foreign trade of India. Cases on agri business commodity trade practices. 3.1-Foreign trade 3.2-Importance of foreign trade 3.3-Absolute and comparative advantage 3.4- Foreign trade of India 3.5-Agri business commodity 3.6- Cases on agri business commodity trade practices	<b>3.1</b> Prepare the assignment

**SW-1 Suggested Seasonal Work (SW):**

- a. Assignments:** Prepare the assignment on individual or organizational behaviors
- b. Mini Project:** Prepare a project report of different function of management used in any case study
- c. Other Activities (Specify):**



**ABM 509 CO-4: Develop a clear understanding about the significant regulations and policy measures for International Trade.**

**Approximate hours**

Item	App X Hrs
CI	06
LI	00
SW	02
SL	02
Total	10

Session Outcomes (SOs)	Laboratory Instruction(LI)	Class room Instruction (CI)	Self Learning (SL)
<b>SO4.1</b> –Identify the India’s balance of payments <b>SO4.2</b> - Briefing the inter regional and international trade <b>SO4.3</b> -Apply the tariffs and trade control <b>SO4.4</b> - Briefing the exchange rate <b>SO4.5</b> –Explain the foreign trade multiplier	<b>LE1.1</b> -	<b>Unit-4.0</b> India’s balance of payments; inter regional Vs international trade; tariffs and trade control; exchange rate; the foreign trade multiplier.  <b>4.1</b> -Balance of payments <b>4.2</b> - India’s balance of payments <b>4.3</b> -Inter regional Vs international trade <b>4.4</b> -Tariffs and trade control <b>4.5</b> -Exchange rate <b>4.6</b> - Foreign trade multiplier	<b>1.1</b> - Prepare the assignment

**SW-1 Suggested Seasonal Work (SW):**

**. Assignments:** Prepare the assignment on Group decision making, team building and developing collaboration

**b. Mini Project:** Prepare a project report of leadership styles and influence process; leadership theories, leadership styles and effective leader

**c. Other Activities (Specify):**



**ABM 509 CO-5: Analyze to the international demand and supply with implication of foreign trade.**

**Approximate Hours**

Item	AppX Hrs
CI	06
LI	00
SW	02
SL	02
Total	10

Session Outcomes (SOs)	Laboratory Instruction(LI)	Class room Instruction (CI)	Self Learning (SL)
<b>SO5.1</b> –Define the Foreign demand <b>SO5.2-</b> Briefing the supply side analysis <b>SO5.3-</b> Discuss about the implications for developing countries <b>SO5.4-</b> Discuss about the , market entry methods <b>SO 5.5</b> - Explain the procedures & documentations	<b>LE1.</b>	<b>Unit-5.0</b> Foreign demand, supply side analysis, opportunity cost, trade and factories, implications for developing countries, market entry methods, procedures & documentations.  <b>5.1-</b> Foreign demand <b>5.2-</b> Supply side analysis <b>5.3-</b> Opportunity cost <b>5.4-</b> Implications for developing countries <b>5.5-</b> Market entry methods <b>5.6-</b> Procedures & documentations	<b>1.1</b> - Prepare the assignment

**SW-1 Suggested Seasonal Work (SW):**

- a. Assignments:** Prepare the assignment on individual or organizational behaviors
- b. Mini Project:** Prepare a project report of different function of management used in any case study
- c. Other Activities (Specify):**



**Brief of Hours suggested for the Course Outcome**

<b>Course Outcomes (ABM-509)</b>	<b>Class Lecture (C I)</b>	<b>Laboratory Lecture (L I)</b>	<b>Sessional Work (SW)</b>	<b>Self Learning (S I)</b>	<b>Total hour (C I + L I + SW + S I)</b>
CO-1. Expose the basic concepts of International trade with reference to WTO and International agreements on Agriculture.	06	00	02	02	10
CO-2. Apply to use different international trade technique and tools in international trade.	06	00	02	02	10
CO-3. Assess the practices of trade and foreign trade of agri business commodities.	06	00	02	02	10
CO-4. Develop a clear understanding about the significant regulations and policy measures for International Trade.	06	00	02	02	10
CO-5. Analyze to the international demand and supply with implication of foreign trade.	06	00	02	02	10
<b>Total Hours</b>	<b>30</b>	<b>00</b>	<b>10</b>	<b>10</b>	<b>50</b>



### Suggestion for End Semester Assessment

#### Suggested Specification Table (For ESA)

CO	Unit title	Marks Distribution			Total Marks
		R	U	A	
CO-1	<b>Unit-1.0</b> International trade–basic concepts, WTO and its implications for Indian economy in general and agriculture sector in particular.	2	2	2	06
CO-2	<b>Unit-2.0</b> - Apply to use different international trade technique and tools in international trade.	2	3	3	08
CO-3	<b>Unit-3.0</b> Importance of foreign trade for developing economy; absolute and comparative advantage, foreign trade of India. Cases on agri business commodity trade practices.	2	4	4	10
CO-4	<b>Unit-4.0</b> India's balance of payments; inter regional Vs international trade; tariffs and trade control; exchange rate; the foreign trade multiplier.	2	5	5	12
CO-5	<b>Unit-5.0</b> Foreign demand, supply side analysis, opportunity cost, trade and factories, implications for developing countries, market entry methods, procedures & documentations.	2	6	6	14
	Total	10	20	20	50

**Legend: R: Remember, U: Understand, A: Apply**

The end of semester assessment for Introduction to Portland cement will be held with written examination of 50 marks

**Note.** Detailed Assessment rubric need to be prepared by the course wise teachers for above tasks. Teachers can also design different tasks as per requirement, for end semester assessment.

#### Suggested Instructional/Implementation Strategies:

1. Improved Lecture
2. Tutorial
3. Case Method
4. Group Discussion



5. Visit to financial institutions
6. ICT Based Teaching Learning (Video Demonstration/Tutorials CBT, Blog, Facebook, Twitter, Whatsapp, Mobile, Online sources)
7. Brainstorming

**Suggested Learning Resources:**

S. No.	Title	Author	Publisher	Edition & Year
01.	Study materials by the Center for WTO Studies	The Future of Indian Agriculture	ITPO, New Delhi	2016
02.	International Trade and Food Security	Brouwer F and Joshi PK	LEI Wageningen UR, The Netherlands	2016

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**Cos, POs and PSOs Mapping**

**Course Code:-ABM 509**

**Course Title: - International Trade in Agricultural Products**

Course Outcomes	Program Outcomes												Program Specific Outcome			
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
	Managerial knowledge	Problem analysis	Modern tool usage	Ethics	Individual and teamwork	Communication	Project management and finance	Business decision making	Life-long learning	Environment and sustainability	Entrepreneurial opportunities	Global outlook	Ability to apply managerial and business skilled for development of business growth with the available resources	Ability to understand the day to day business operational problems and startup development of agribusiness and provide economic solution to enhance the decide goal without compromising	Inculcate proactive thinking to ensure effective performance in the dynamic socio-economic and business ecosystem entrepreneurial approach and skill sets aligned with the national	Ability to use the research based innovative knowledge for sustainable development in agribusiness growth and developments



														ethical value	priorities	
<b>CO-1:</b> Identify the basic concepts of management and organizational behavior.	3	1	1	2	1	1	1	2	3	2	1	3	3	1	2	1
<b>CO-2:</b> Demonstrate the overall view of various management functions, managerial skills and approaches.	3	2	1	2	2	2	1	3	2	1	2	3	3	2	2	3
<b>CO-3:</b> Apply the fundamentals of individual and group behavior in the organizational setting.	3	2	1	2	2	2	3	2	1	2	3	3	2	3	3	3
<b>CO-4:</b> Analyze the group	2	2	3	1	2	2	3	2	1	2	1	1	3	3	2	2



decision making, teambuilding and developing collaboration and leadership styles.																
<b>CO-5:</b> Evaluate the ability understanding and managing organizational culture, power and political behavior	2	3	3	1	3	2	2	2	2	1	1	2	2	2	2	2

**Legend: 1 – Low, 2 – Medium, 3 – High**



### Course Curriculum Map: International Trade in Agricultural Products

POs & PSOs No.	COs No.& Titles	SOs No.	Laboratory Instruction(LI)	Classroom Instruction (CI)	Self Learning (SL)
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO 1,2, 3, 4, 5	<b>CO-1:</b> Identify the basic concepts of management and organizational behavior.	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-1.0</b> Introduction to Management: Nature, Scope and Significance of Management, Evolution of Management Thought, Approaches to Management, functions and skills of a manager 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 1.9.	As mentioned in page number .....
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO 1,2, 3, 4, 5	<b>CO-2:</b> Demonstrate the overall view of various management functions, managerial skills and approaches.	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-2.0 –</b> Management functions: Planning – Types, Steps, Objective, Process, Strategies, Policies, MBO, Organizing – Structure & Process, Line, Staff, Authority & Responsibility, Staffing – Recruitment and Selection, Directing – Training, Communication & Motivation, Controlling- Significance, Process, Techniques, Standards & Benchmarks, Management Audit. 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10.	As mentioned in page number .....
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO 1,2, 3, 4, 5	<b>CO-3:</b> Apply the fundamentals of individual and group behavior in the organizational	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-3.0</b> Nature, Scope and Significance of Organizational Behavior; Foundations of Individual behaviour – Emotions, Personality, Values, Attitudes, Perception, Learning and individual	As mentioned in page number .....



	setting.			decision making, Motivation- Types of motivation, theories of motivation, motivational practices at workplace, managing stress and work life balance. 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8, 3.9, 3.10, 3.11.	
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO 1,2, 3, 4, 5	<b>CO-4:</b> Analyze the group decision making, teambuilding and developing collaboration and leadership styles.	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-4.0</b> Group dynamics- types of groups, group formation, Group decision making, teambuilding and developing collaboration, leadership styles and influence process; leadership theories, leadership styles and effective leader 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, 4.9.	As mentioned in page number .....
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO 1,2, 3, 4, 5	<b>CO-5:</b> Evaluate the ability understanding and managing organizational culture, power and political behavior	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-5.0</b> Understanding and managing organizational culture, power and political behavior in organizations, conflict Management, negotiation, managing organizational change, concept of organizational development. 5.1, 5.2, 5.3, 5.4, 5.5, 5.6.	As mentioned in page number .....



**Course Code: - ABM 542**

**Course Title: - Project Management and Agribusiness Entrepreneurship**

**Pre requisite:** -Student should have basic knowledge of Project Management

**Rationale:** -A applied Management Of Project Management and Agribusiness Entrepreneurship course is to give the understanding of project management. Agri-entrepreneurship can be used as chief remedy for the solution of this complexity such as lower the burden of agriculture, produce employment opportunities for rural youth, control migration from rural to urban areas, boost national income, sustain industrial development in rural areas and cut down the pressure on urban cities.

**Course Outcomes:**

**ABM 542 CO-1** Express to understand the fundamentals of project and project management.

**ABM 542 CO-2** Apply to develop a understanding of project analysis and financial appraisal of projects.

**ABM 542 CO-3** Contrast to agri entrepreneurship concept and developed the various entrepreneurship.

**ABM 542 CO-4** Analyze to develop a understanding of agri entrepreneurship opportunities and challenges.

**ABM 542 CO-5** Develop the method of developing a agri based venture through the support system available in the Indian scenario.

**Scheme of studies**

Board of Study	Course Code	Course Title	Scheme of studies (Hours/Week)					Total Credits (C)
			C I	LI	SW	SL	Total Study Hours (CI+LI+SW+SL)	
Program Core (PCC)	ABM 542	Project Management and Agribusiness Entrepreneurship	02	00	02	01	05	0

**Legend: CI:** Classroom Instruction (Includes different instructional strategies i.e. Lecture (L) and Tutorial (T) and others)

**LI:** Laboratory Instruction (Includes Practical performances in laboratory workshop, field or other locations using different instructional strategies)

**SW:** Sessional Work (includes assignment, seminar, mini project etc.)



**SL:** Self Learning

**C: Credits.**

**Note:** SW & SL has to be planned and performed under the continuous guidance and feedback of teacher to ensure outcome of Learning.

**Scheme of Assessment:**

Board of Study	Course Code	Course Title	Scheme of Assessment ( Marks )							
			Progressive Assessment ( PRA )						End Semester Assessment (ESA)	Total Marks (PRA + ESA)
			Class/ Home Assignment 5 number 3 marks each ( CA)	Class Test 2 (2 best out of 3) 10 marks each (CT)	Seminar one ( SA)	Class Activity any one (CA T)	Class Attendance (AT)	Total Marks (CA+CT+SA+CAT+AT)		
(PCC)	ABM 542	<b>Agribusiness Financial Management</b>	15	20	5	5	5	50	50	100

**Course-Curriculum Detailing:**

This course syllabus illustrates the expected learning achievements, both at the course and session levels, which students are anticipated to accomplish through various modes of instruction including Classroom Instruction (CI), Laboratory Instruction (LI), Sessional Work (SW), and Self Learning (SL). As the course progresses, students should showcase their mastery of Session Outcomes (SOs), culminating in the overall achievement of Course Outcomes (COs) upon the course's conclusion.



**ABM 542 CO-1 Express to understand the fundamentals of project and project management.**

**Approximate Hours**

Item	Appx hrs
C 1	06
LI	0
SW	02
SL	02
Total	10

Session Outcomes (SOs)	Laboratory Instruction (LI)	Class room Instruction (CI)	Self Learning (SL)
<b>SO1.1-</b> Brief Introduction about projects <b>SO1.2 -</b> Define the project life cycle <b>SO1.3 -</b> Describe the finance functions <b>SO1.4-</b> Describe the Project feasibility <b>SO1.5</b> Given the project risk analysis	<b>LE1.1 –</b>	<b>Unit-1.0</b> Concept, characteristics of projects, types of projects, project identification, and Project's life cycle. Project feasibility- market feasibility, technical feasibility, financial feasibility, and economic feasibility, social cost-benefit analysis, project risk analysis. 1.1-Define project and characteristics of projects 1.2- Types of projects 1.3- Project's life cycle 1.4-Market feasibility, technical feasibility 1.5-Financial feasibility, and economic feasibility 1.6-Social cost-benefit analysis, project risk analysis	<b>1.1-</b> Prepare the assignment





**SW-1 Suggested Seasonal Work (SW):**

- a. Assignments:** Prepare the assignment on management function evaluation thought
- b. Mini Project: -**
- c. Other Activities (Specify):-**

**ABM 542 CO-2 Apply to develop a understanding of project analysis and financial appraisal of projects**

**Approximate Hours**

Item	Appx hrs
C 1	06
LI	00
SW	02
SL	02
<b>Total</b>	<b>10</b>

Session Outcomes (SOs)	Laboratory Instruction (LI)	Class room Instruction (CI)	Self Learning (SL)
<b>SO2.1</b> – Introduce to network methods <b>SO2.2</b> – Learned about the CPM and PERT <b>SO2.3-</b> Briefing about the Financial appraisal/evaluation techniques  <b>SO2.4-</b> Explain about the NVP, IRR, B:C  <b>SO 2.5</b> –Explain the Pay Back Period, Project control and information system	<b>LE2.1</b>	<b>Unit-2.0</b> - Network Methods: Meaning, Network Analysis, Critical Path Method (CPM), Programme Evaluation and Review Technique (PERT), Project scheduling and resource allocation. Financial appraisal/evaluation techniques- discounted/no discounted cash flows; Net present values, profitability index, Internal rate of returns; Cost benefits ratio; Accounting rate of return, Payback period, Project implementation; Cost overrun, Project control and information system.  <b>2.1</b> – Network Analysis <b>2.2</b> -CPM and PERT	<b>2.1</b> – Prepare the assignment



		<b>2.3-</b> Project scheduling and resource allocation  <b>2.4-</b> Discounted/ no discounted cash flows  <b>2.5-</b> NPV, profitability index, IRR, Cost benefits ratio, Payback period  <b>2.6-</b> Project control and information system	
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**SW-1 Suggested Seasonal Work (SW):**

- a. Assignments:** Prepare the Assignment on given topics.
- b. Mini Project:** Prepare a project report of different function of management used in any case study
- c. Other Activities (Specify):**

**ABM 542 CO-3: Contrast to agri entrepreneurship concept and developed the various entrepreneurship**

**Approximate Hours**

Item	Appx hrs
C 1	06
LI	00
SW	02
SL	02
Total	10

Session Outcomes (SOs)	Laboratory Instruction (LI)	Class Instruction (CI)	Self Learning (SL)
<b>SO3.1</b> – Define to the agri entrepreneurship  <b>SO3.2</b> – Briefing the Entrepreneurial Development Models  <b>SO3.3-</b> Discuss the Successful Models in Agro Entrepreneurship Entrepreneur	<b>LE3.1</b>	<b>Unit-3.0</b> Concept of Agri Entrepreneurship: Objective, Introduction to agri entrepreneurship, Entrepreneurial Development Models, Successful Models in Agro Entrepreneurship Entrepreneur, Development of women entrepreneurship with	<b>3.1</b> Prepare the assignment



<b>SO3.4-</b> Discuss the Development of women entrepreneurship  <b>SO3.5-</b> Describe the Social entrepreneurship		reference to SHGs, Social entrepreneurship  3.1-Agri Entrepreneurship: Objective  3.2- Introduction to agri entrepreneurship  3.3-Entrepreneurial Development Models  3.4- Successful Models in Agro Entrepreneurship Entrepreneur  3.5- Development of women entrepreneurship with reference to SHGs  3.6- Social entrepreneurship	
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**SW-1 Suggested Sessional Work (SW):**

- a. Assignments:** Prepare the assignment on individual or organizational behaviors
- b. Mini Project:** Prepare a project report of different function of management used in any case study
- c. Other Activities (Specify):**

**ABM 542 CO-4: Analyze to develop a understanding of agri entrepreneurship opportunities and challenges.**

**Approximate hours**

Item	App X Hrs
CI	06
LI	00
SW	02
SL	02
<b>Total</b>	<b>10</b>

Session Outcomes (SOs)	Laboratory Instruction (LI)	Class room Instruction (CI)	Self Learning (SL)
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<p><b>SO4.1</b> –Identify the Inventions and Innovation</p> <p><b>SO4.2</b> - Briefing the Environment and Process of Creativity</p> <p><b>SO4.3</b>-Apply the Innovative Approaches to Agro Entrepreneurship</p> <p><b>SO4.4</b>- Briefing the steps and Procedure to start a new business</p> <p><b>SO4.5</b>–Explain the Business Opportunities in different field of Agriculture and Allied Sectors</p>	<p><b>LE1.1</b> -</p>	<p><b>Unit-4.0</b> Creativity, Innovation and Agro Entrepreneur: Inventions and Innovation, The Environment and Process of Creativity, Creativity and the Entrepreneur, Innovative Approaches to Agro Entrepreneurship, Business Incubation, Steps and Procedure to start a new business, Business Opportunities in different field of Agriculture and Allied Sectors.</p> <p><b>4.1</b>-Creativity, Innovation and Agro Entrepreneur</p> <p><b>4.2</b>- : Inventions and Innovation</p> <p><b>4.3</b>-Environment and Process of Creativity, Creativity and the Entrepreneur</p> <p><b>4.4</b>-Innovative Approaches to Agro Entrepreneurship</p> <p><b>4.5</b>- Steps and Procedure to start a new business</p> <p><b>4.6</b>- Business Opportunities in different field of Agriculture and Allied Sectors</p>	<p><b>1.1</b>- Prepare the assignment</p>
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**SW-1 Suggested Sessional Work (SW):**

- a. Assignments:** Prepare the assignment on Group decision making, team building and developing collaboration
- b. Mini Project:** Prepare a project report of leadership styles and influence process; leadership theories, leadership styles and effective leader
- c. Other Activities (Specify):**



**ABM 542 CO-5: Develop the method of developing a agri based venture through the support system available in the Indian scenario.**

**Approximate Hours**

Item	AppX Hrs
CI	06
LI	00
SW	02
SL	02
<b>Total</b>	<b>10</b>

Session Outcomes (SOs)	Laboratory Instruction(LI)	Class room Instruction (CI)	Self Learning (SL)
<b>SO5.1</b> –Define the <b>SO5.2-</b> Briefing the estimating Financial Requirements <b>SO5.3-</b> Discuss about the project appraisal <b>SO5.4-</b> Discuss about the Incentives and Subsidies <b>SO 5.5</b> - Explain the role of government organizations- SIDO, DIC, KVIC, NSIC, SIDBI, NABARD	<b>LE1.</b>	<b>Unit-5.0</b> Sources of Financing, Structure and Government Policy Support: Estimating Financial Requirements, Preparation of Detail Project Report, Project Appraisal, Sources of Long-Term Financing, Working Capital Financing, Venture Capitalist, Finance from Banking Institutions, Industrial Policy Resolutions in India, Incentives and Subsidies, Schemes for Incentives, Government Organizations like SIDO, DIC, KVIC, NSIC, SIDBI, NABARD and their role, Sick Industries and their Up gradation policy measures <b>5.1-</b> Sources of Financing <b>5.2-</b> Project Appraisal, Sources of Long-Term Financing <b>5.3-</b> Working Capital Financing, Venture Capitalist, Finance from Banking Institutions <b>5.4-</b> Industrial Policy Resolutions in India,	<b>1.1</b> - Prepare the assignment



		<p>Incentives and Subsidies, Schemes for Incentives</p> <p><b>5.5-</b> Government Organizations- SIDO, DIC, KVIC, NSIC, SIDBI, NABARD</p> <p><b>5.6-</b> Role, Sick Industries and their Up gradation policy measures</p>	
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**SW-1 Suggested Sessional Work (SW):**

- a. Assignments:** Prepare the assignment on individual or organizational behaviors
- b. Mini Project:** Prepare a project report of different function of management used in any case study
- c. Other Activities (Specify):**

**Brief of Hours suggested for the Course Outcome**

<b>Course Outcomes</b>	<b>Class Lecture (C I)</b>	<b>Laboratory Lecture (L I)</b>	<b>Sessional Work (SW)</b>	<b>Self Learning (S I)</b>	<b>Total hour (C I + LI+ SW +S I)</b>
1. Express to understand the fundamentals of project and project management.	06	00	02	02	10
2. Apply to develop a understanding of project analysis and financial appraisal of projects.	06	00	02	02	10
3. Contrast to agri entrepreneurship concept and developed the various entrepreneurship.	06	00	02	02	10
4. Analyze to develop a understanding of agri entrepreneurship opportunities and challenges.	06	00	02	02	10



5. Develop the method of developing a agri based venture through the support system available in the Indian scenario.	06	00	02	02	10
<b>Total Hours</b>	<b>30</b>	<b>00</b>	<b>10</b>	<b>10</b>	<b>50</b>

### Suggestion for End Semester Assessment

#### Suggested Specification Table (For ESA)

CO	Unit title	Marks Distribution			Total Marks
		R	U	A	
CO-1	<b>Unit-1.0</b> Concept, characteristics of projects, types of projects, project identification, and Project's life cycle. Project feasibility- market feasibility, technical feasibility, financial feasibility, and economic feasibility, social cost-benefit analysis, project risk analysis.	2	2	2	06
CO-2	<b>Unit-2.0</b> - Network Methods: Meaning, Network Analysis, Critical Path Method (CPM), Programme Evaluation and Review Technique (PERT), Project scheduling and resource allocation. Financial appraisal/evaluation techniques- discounted/no discounted cash flows; Net present values, profitability index, Internal rate of returns; Cost benefits ratio; Accounting rate of return, Payback period, Project implementation; Cost overrun, Project control and information system.	2	3	3	08
CO-3	<b>Unit-3.0</b> Concept of Agri Entrepreneurship: Objective, Introduction to agri entrepreneurship, Entrepreneurial Development Models, Successful Models in Agro Entrepreneurship Entrepreneur, Development of women entrepreneurship with reference to SHGs, Social entrepreneurship	2	4	4	10
CO-4	<b>Unit-4.0</b> Creativity, Innovation and Agro Entrepreneur: Inventions and Innovation, The Environment and Process of Creativity, Creativity and the Entrepreneur, Innovative Approaches to Agro Entrepreneurship, Business Incubation, Steps and Procedure to start a new business, Business Opportunities in different field of Agriculture and Allied Sectors.	2	5	5	12



CO-5	<b>Unit-5.0</b> Sources of Financing, Structure and Government Policy Support: Estimating Financial Requirements, Preparation of Detail Project Report, Project Appraisal, Sources of Long-Term Financing, Working Capital Financing, Venture Capitalist, Finance from Banking Institutions, Industrial Policy Resolutions in India, Incentives and Subsidies, Schemes for Incentives, Government Organizations like SIDO, DIC, KVIC, NSIC, SIDBI, NABARD and their role, Sick Industries and their Up gradation policy measures	2	6	6	14
	Total	10	20	20	50

**Legend: R: Remember, U: Understand, A: Apply**

The end of semester assessment for Introduction to Portland cement will be held with written examination of 50 marks

**Note.** Detailed Assessment rubric need to be prepared by the course wise teachers for above tasks. Teachers can also design different tasks as per requirement, for end semester assessment.

**Suggested Instructional/Implementation Strategies:**

1. Improved Lecture
2. Tutorial
3. Case Method
4. Group Discussion
5. Visit to financial institutions
6. ICT Based Teaching Learning (Video Demonstration/Tutorials CBT, Blog, Facebook, Twitter, Whatsapp, Mobile, Online sources)
7. Brainstorming





**Suggested Learning Resources:**

<b>S. No.</b>	<b>Title</b>	<b>Author</b>	<b>Publisher</b>	<b>Edition &amp; Year</b>
01.	Business Planning and Entrepreneurial Management	Desai V	Himalaya Publishing House, Mumbai	2016
02.	Managing a New Business Successfully	Ramachandran K	Global Business Press, New Delhi	2004 8 <sup>th</sup> edition
03.	Fundamentals of Entrepreneurship and Small Business Management	Maheshwari SN & Maheshwari SK	Arora R and Sood SK	03 <sup>th</sup> edition 2003

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**Cos, POs and PSOs Mapping**

**Course Code:- ABM 542**

**Course Title: - Project Management and Agribusiness Entrepreneurship**

Course Outcomes	Program Outcomes												Program Specific Outcome			
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
	Managerial knowledge	Problem analysis	Modern tool usage	Ethics	Individual and teamwork	Communication	Project management and finance	Business decision making	Life-long learning	Environment and sustainability	Entrepreneurial opportunities	Global outlook	Ability to apply managerial and business skilled for development of business growth with the available resources	Ability to understand the day to day business operational problems and startup development of agribusiness and provide economical solution to enhance the decision goal without compromise	Inculcate proactive thinking to ensure effective performance in the dynamic socio-economic and business ecosystem entrepreneurial approach and skill sets aligned with the national priorities	Ability to use the research based innovative knowledge for sustainable development in agribusiness growth and development



														missing ethical value	s	
CO-1: Express to understand the fundamenta ls of project and project managemen t.	3	1	1	2	1	1	1	2	3	2	1	3	3	1	2	1
CO-2: Apply to develop a understandi ng of project analysis and financial appraisal of projects.	3	2	1	2	2	2	1	3	2	1	2	3	3	2	2	3
CO 3: Contrast to agri entrepreneu rship concept and	3	2	1	2	2	2	3	2	1	2	3	3	2	3	3	3



developed the various entrepreneurship.																
CO 4: Analyze to develop a understanding of agri entrepreneurship opportunities and challenges.	2	2	3	1	2	2	3	2	1	2	1	1	3	3	2	2
CO 5: Develop the method of developing a agri based venture through the support system available in the Indian scenario.	2	3	3	1	3	2	2	2	2	1	1	2	2	2	2	2

**Legend: 1 – Low, 2 – Medium, 3 – High**



## Cos, POs and PSOs Mapping

**Course Code:-ABM 542**

### Course Curriculum Map: International Trade in Agricultural Products

<b>POs &amp; PSOs No.</b>	<b>COs No.&amp; Titles</b>	<b>SOs No.</b>	<b>Laboratory Instruction(LI)</b>	<b>Classroom Instruction (CI)</b>	<b>Self Learning (SL)</b>
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO 1,2, 3, 4, 5	<b>CO-1:</b> Express to understand the fundamentals of project and project management.	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-1.0</b> Concept, characteristics of projects, types of projects, project identification, and Project's life cycle. Project feasibility- market feasibility, technical feasibility, financial feasibility, and economic feasibility, social cost-benefit analysis, project risk analysis 1.1, 1.2, 1.3, 1.4, 1.5, 1.6.	As mentioned in page number .....
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO 1,2, 3, 4, 5	<b>CO-2:</b> Apply to develop a understanding of project analysis and financial appraisal of projects.	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-2.0</b> - Network Methods: Meaning, Network Analysis, Critical Path Method (CPM), Programme Evaluation and Review Technique (PERT), Project scheduling and resource allocation. Financial appraisal/evaluation techniques-discounted/no discounted cash flows; Net present values, profitability index, Internal rate of returns; Cost benefits ratio; Accounting rate of return, Payback period, Project implementation; Cost overrun, Project control and information system. 2.1, 2.2, 2.3, 2.4, 2.5, 2.6.	As mentioned in page number .....
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO 1,2, 3, 4, 5	<b>CO 3:</b> Contrast to agri entrepreneurship concept and developed the various	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-3.0</b> Concept of Agri Entrepreneurship: Objective, Introduction to agri entrepreneurship, Entrepreneurial Development Models, Successful Models in Agro Entrepreneurship Entrepreneur, Development of women entrepreneurship with reference to SHGs, Social entrepreneurship	As mentioned in page number .....



	entrepreneurships.			3.1, 3.2, 3.3, 3.4, 3.5, 3.6.	
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO 1,2, 3, 4, 5	<b>CO 4:</b> Analyze to develop a understanding of agri entrepreneurship opportunities and challenges.	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-4.0</b> Creativity, Innovation and Agro Entrepreneur: Inventions and Innovation, The Environment and Process of Creativity, Creativity and the Entrepreneur, Innovative Approaches to Agro Entrepreneurship, Business Incubation, Steps and Procedure to start a new business, Business Opportunities in different field of Agriculture and Allied Sectors. 4.1, 4.2, 4.3, 4.4, 4.5, 4.6.	As mentioned in page number .....
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO 1,2, 3, 4, 5	<b>CO 5:</b> Develop the method of developing a agri based venture through the support system available in the Indian scenario.	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-5.0</b> Sources of Financing, Structure and Government Policy Support: Estimating Financial Requirements, Preparation of Detail Project Report, Project Appraisal, Sources of Long-Term Financing, Working Capital Financing, Venture Capitalist, Finance from Banking Institutions, Industrial Policy Resolutions in India, Incentives and Subsidies, Schemes for Incentives, Government Organizations like SIDO, DIC, KVIC, NSIC, SIDBI, NABARD and their role, Sick Industries and their Up gradation policy measures 5.1, 5.2, 5.3, 5.4, 5.5, 5.6.	As mentioned in page number .....



**Course Code: ABM 528**

**Course Title:** Agri Extension Management

**Pre- requisite:** This course is designed to provide the students with knowledge of new innovations in agriculture and agri business sector to people living in rural areas.

**Rationale:** Carryout financial survey and evaluation of a proposed or existing agricultural enterprise and make recommendations , Provide administrative leadership in all sizes of agricultural enterprises , Market farm products and farming tools and equipment . Assist in Agricultural Management research To gather the skills on market survey, price determination techniques and supply chain management etc. The students know how to develop Entrepreneurship and agri-business plan, how to deal Cash Management and Marketing Management for Agri- Business.

**Course Outcomes:**

**ABM 528 CO - 01** Apply critically analyze different Agricultural Extension approaches.

**ABM 528 CO - 02** Asses the Advances in Extension - Cyber extension and Agricultural Knowledge Information System (AKISs) ITK.

**ABM 528 CO -03** Apply the fundamentals of Advances in Extension services and improving of extension efficiency.

**ABM 528 CO -04** Analyze the contemporary issue, Intellectual Property Rights, and Extension delivery with ATIC, IVLP, Kisan Call Centres.

**Scheme of Studies:**

Categories Of curriculum	CourseCode	Course Title	Scheme of studies(Hours/Week)					Total Credits (C)
			C I	LI	SW	SL	Total Study Hours (CI+LI+SW+SL)	
PSC	ABM 528	Agri Extension Management	1		1	1	3	1

**Legend:**

**CI:** Classroom Instruction (Includes different instructional strategies i.e. Lecture (L) and Tutorial (T) and others),

**LI:** Laboratory Instruction (Includes Practical performances in laboratory workshop, field or other locations using different instructional strategies)

**SW:** Sessional Work (includes assignment, seminar, mini project etc.),

**SL:** Self Learning,

**C:** Credits.

**Note:** SW & SL has to be planned and performed under the continuous guidance and feedback of teacher to ensure outcome of Learning.



**Scheme of Assessment:**

Catalog ories	Course Code	Course Title	Scheme of Assessment ( Marks )							
			Progressive Assessment ( PRA )						End Seme ster Asses sment	Tot al Ma rks
			Class/ Home Assign ment 5 numbe r 3 marks each ( CA )	Class Test 2 (2 best out of 3) 10 marks each (CT)	Seminar one (SA)	Class (Activi ty any one	Class Attend ance (AT)	Total Marks  (CA+CT+SA +CAT+AT)		
PCC	<b>ABM 528</b>	Agri Extension Management	10	40	0	0	0	50	50	50

**Course-Curriculum Detailing:**

This course syllabus illustrates the expected learning achievements, both at the course and session levels, which students are anticipated to accomplish through various modes of instruction including Classroom Instruction (CI), Laboratory Instruction (LI), Sessional Work (SW), and Self Learning (SL). As the course progresses, students should showcase their mastery of Session Outcomes (SOs), culminating in the overall achievement of Course Outcomes (COs) upon the course's conclusion.

**ABM 528 CO - 01 Apply critically analyze different Agricultural Extension approaches**  
**Approximate Hours**

Item	Approx Hrs.
CI	3
LI	0
SW	1
SL	1
Total	5

Session Outcomes(SOs)	Laboratory Instruction(LI)	Class Instruction(CI)	Self Learning(SL)
SO.1 Introduce the Approaches of Agricultural Extension: A critical analysis of different approaches of agricultural extension.		<b>Unit-1 Approaches of Agricultural Extension: A critical analysis of different approaches of agricultural extension and Importance</b>	Prepare the assignment on identification and documentation of ITK, Integration of ITK system in





SO.2 Assess the Importance and relevance of indigenous knowledge system.		<b>relevance of indigenous knowledge system, identification and documentation of ITK, Integration of ITK system in research formulation, Concept of Agricultural Knowledge and Information System, Training of Stakeholders of AKIS</b>	research formulation
SO.3 Inculcate identification and documentation of ITK, Integration of ITK system in research formulation			
SO.4 Discriminate the Concept of Agricultural Knowledge and Information System		1.1. Approaches of Agricultural Extension: A critical analysis of different approaches of agricultural extension	
SO.4 Discriminate the Training of Stakeholders of AKIS		1.2- Importance and relevance of indigenous knowledge system, identification and documentation of ITK 1.3. Integration of ITK system in research formulation, Concept of Agricultural Knowledge and Information System, Training of Stakeholders of AKIS	

**SW-1 Suggested Seasonal Work (SW):**

**a. Assignments:** Prepare the assignment on identification and documentation of ITK, Integration of ITK system in research formulation

**b. Mini Project: -**

**c. Other Activities (Specify):-**



**ABM 528 CO - 02** Asses the Agricultural Knowledge Information System ( AKISs ) ITK

**Approximate Hours**

Item	Approx Hrs.
CI	4
LI	0
SW	1
SL	1
<b>Total</b>	<b>6</b>

Session Outcomes(SOs)	Laboratory Instruction(LI)	Class room Instruction(CI)	Self Learning(SL)
<p><b>SO.1.1:</b> Introduce the cyber Extension: Concept of cyber extension, national and international cases of extension projects using ICT and their impact of agricultural extension.</p> <p><b>SO 1.2:</b> Learned to the alternative methods of financing agricultural extension - Scope, limitations and experience and cases.</p> <p><b>SO 1.3:</b> Asses the Research -Extension - Farmer - Market linkage: Importance, Scope, Implications etc., market – Led Extension, Farmer - Led Extension,</p> <p><b>SO 1.4:</b> Apply the Market – Led Extension, Farmer - Led Extension</p> <p><b>1.5:</b> Asses the concept of Farm Field School, Farm School, and Public - Private Partnership: Meaning, Models, and Identification of various areas for partnership. Stakeholder's analysis</p>		<p><b>Unit- 2</b></p> <p><b>Cyber Extension: Concept of cyber extension, national and international cases of extension projects using ICT and their impact of agricultural extension, alternative methods of financing agricultural extension - Scope, limitations and experience and cases. Research -Extension - Farmer - Market linkage: Importance, Scope, Implications etc., Market – Led Extension, Farmer - Led Extension, Concept of Farm Field School, Farm School, Public - Private Partnership: Meaning, Models, Identification of various areas for partnership. Stakeholder's analysis in Extension. Main streaming gender in Extension - Issues and Prospects</b></p> <p><b>2.1- Cyber Extension: Concept of cyber extension, national and</b></p>	<p>Prepare the assignment on Extension teaching methods– Meaning, Definition, Functions and Classification</p>



in Extension. Main streaming gender in Extension - Issues and Prospects		international cases of extension projects using ICT and their impact of agricultural extension 2.2- Alternative methods of financing agricultural extension - Scope, limitations and experience and cases. Research - Extension -Farmer - Market linkage: Importance, Scope, Implications etc. 2.3- Market – Led Extension, Farmer - Led Extension, Concept of Farm Field School, Farm School 2.4 – Public - Private Partnership: Meaning, Models, Identification of various areas for partnership. Stakeholder's analysis in Extension. Main streaming gender in Extension - Issues and Prospects	
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**SW-1 Suggested Seasonal Work (SW):**

**a. Assignments:** Prepare the assignment on Extension teaching methods– Meaning, Definition, Functions and Classification

**b. Mini Project:**

**c. Other activities (specify):**



**ABM 528 CO - 03 Apply the fundamentals of Advances in Extension services and improving of extension efficiency.**

**Approximate Hours**

Item	Approx Hrs.
CI	3
LI	0
SW	1
SL	1
Total	04

Session Outcomes(SOs)	Laboratory Instruction(LI)	Class Instruction(CI)	Self Learning(SL)
SO.1.1: introduce the implications of WTO: SO.1.2: Apply the OA for extension services, of extension services for agri-business SO.1.3: Apply the OA for re-orientation of extension services, of extension services for agri-business SO.1.4: Asses the OA for extension services, re-orientation of extension services for marketing activities SO.1.5: Apply the GOI- NGO collaboration to improve efficiency of extension.	,	<b>Unit-3</b> <b>Implications of WTO: OA for extension services, re-orientation of extension services for agri-business and marketing activities, GOI- NGO collaboration to improve efficiency of extension.</b> Implications of WTO: OA for extension services, Implications of WTO: OA for re-orientation of extension services for agri-business and marketing activities GOI- NGO collaboration to improve efficiency of extension.	Prepare the assignment on GOI- NGO collaboration to improve efficiency of extension

**SW-1 Suggested Seasonal Work (SW):**

**Assignments:** Prepare the assignment on Prepare the assignment on GOI- NGO collaboration to improve efficiency of extension

**Mini Project:**

**Other activities (specify):**



**ABM 528 CO - 04 Analyze the contemporary issue, Intellectual Property Rights, and Extension delivery with ATIC, IVLP, Kisan Call Centres. Approximate Hours**

Item	Approx Hrs.
CI	9
LI	0
SW	1
SL	1
<b>Total</b>	<b>11</b>

Session Outcomes(SOs)	Laboratory Instruction(LI)	Class Instruction(CI) room	Self Learning(SL)
<b>SO.1:</b> Incriminate the Extension and contemporary issues , <b>SO.2:</b> Introduce the Extension and issues related to rural poverty. <b>SO.3:</b> Asses the Privatization of Extension. Intellectual Property Rights (IPRs). <b>SO.4</b> Apply the Extension Reforms in India –Decentralized decision making, Bottom up planning, Farming System and Situation based Extension Delivery System <b>SO.5:</b> Inculcate the Extension delivery through Commodity Interest Groups. Organization innovations in Extension - ATIC, IVLP, Kisan Call Centres		<b>Unit- 4.0</b> <b>Extension and contemporary issues: Extension and issues related to rural poverty. Privatization of Extension. Intellectual Property Rights (IPRs). Extension Reforms in India –Decentralized decision making, Bottom up planning, Farming System and Situation based Extension Delivery System, Extension delivery through Commodity Interest Groups. Organization innovations in Extension - ATIC, IVLP, Kisan Call Centres.</b> Extension and contemporary issues: Extension and issues related to rural poverty Privatization of Extension. Intellectual Property Rights (IPRs). Extension Reforms in India Decentralized	Prepare the assignment on Organization innovations in Extension - ATIC, IVLP, Kisan Call Centres .



		decision making, Bottom up planning, Farming System and Situation based Extension Delivery System 4.4 Extension delivery through Commodity Interest Groups 4.5.Organization innovations in Extension - ATIC, IVLP, Kisan Call Centres.	
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**SW-1 Suggested Seasonal Work (SW):**

**a. Assignments:** Prepare the assignment on Organization innovations in Extension - ATIC, IVLP, Kisan Call Centres.

**b. Mini Project:**

**c. Other activities (specify):**

**Brief of Hours suggested for the Course Outcome:**

Course Outcomes	Class Lecture (C I)	Laboratory Instruction (LI)	Sessional Work (SW)	Self Learning (SI)	Total hour (CI+SW+SI+ LI)
<b>ABM528CO-01.</b> Apply critically analyze different Agricultural Extension approaches.	03	0	1	1	<b>05</b>
<b>ABM528CO-02</b> Asses the Agricultural Knowledge Information System ( AKISs ) ITK	04	0	1	<b>1</b>	<b>06</b>
<b>ABM528CO-03</b> Apply the fundamentals of Advances in Extension services and improving of extension efficiency.	03	0	1	<b>1</b>	<b>05</b>
<b>ABM 528 CO - 04</b> Analyze the contemporary issue, Intellectual Property Rights, and Extension delivery with ATIC, IVLP, Kisan Call Centres.	05	0	1	1	<b>07</b>
<b>Total Hours</b>	<b>15</b>	<b>00</b>	<b>04</b>	<b>04</b>	<b>23</b>



### Suggestion for End Semester Assessment

Suggested Specification Table (For ESA)

CO	Unit Titles	Marks Distribution			Total Marks
		R	U	A	
<b>CO-1</b>	<b>Unit-1</b> Approaches of Agricultural Extension: A critical analysis of different approaches of agricultural extension Importance and relevance of indigenous knowledge system, identification and documentation of ITK, Integration of ITK system in research formulation, Concept of Agricultural Knowledge and Information System, Training of Stakeholders of AKIS	03	04	3	10
<b>CO-2</b>	<b>Unit- 2</b> Cyber Extension: Concept of cyber extension, national and international cases of extension projects using ICT and their impact of agricultural extension, alternative methods of financing agricultural extension - Scope, limitations and experience and cases. Research -Extension -Farmer - Market linkage: Importance, Scope, Implications etc., Market – Led Extension, Farmer - Led Extension, Concept of Farm Field School, Farm School, Public - Private Partnership: Meaning, Models, Identification of various areas for partnership. Stakeholder's analysis in Extension. Main streaming gender in Extension - Issues and Prospects	02	05	3	10
<b>CO-3</b>	<b>Unit-3</b> Implications of WTO: OA for extension services, re-orientation of extension services for agri-business and marketing activities, GOI- NGO collaboration to improve efficiency of extension.	04	04	3	11
<b>CO-4</b>	<b>Unit- 4.0</b> Extension and contemporary issues: Extension and issues related to rural poverty. Privatization of Extension. Intellectual Property Rights (IPRs). Extension Reforms in India –Decentralized decision making, Bottom up planning, Farming System and Situation based Extension Delivery System, Extension delivery through Commodity Interest Groups. Organization innovations in	05	07	7	19



	Extension - ATIC, IVLP, Kisan Call Centres.				
Total		14	20	16	50

**R: Remember, U: Understand, A: Apply**

**Legend:**

**Note.** Detailed Assessment rubric need to be prepared by the course wise teachers for above tasks. Teachers can also design different tasks as per requirement, for end semester assessment.

**Suggested Instructional/Implementation Strategies:**

1. Improved Lecture
2. Tutorial
3. Group Discussion
4. ICT Based Teaching Learning (Video Demonstration/Tutorials CBT, Blog, Facebook, Twitter, Whatsapp, Mobile, Online sources)
5. Brainstorming

**Suggested Learning Resources:**

S. No.	Titles	Authors	Publishers	Edition & Year
1	Management	Robbins SP, Coulter M and Vohra N	Pearson Edu	2010.
2	Principles of Agribusiness Management.	Beierlein JG, Schneeberger KC, Osburn DD.	Waveland Press	2014. Fifth edition.
3	PRINCIPLES AND PRACTICE OF MANAGEMENT.	L M Prasad	SULTAN CHAND & SON	2021 , 10TH EDITION, ISBN: 9789351611813

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**Cos, POs and PSOs Mapping**  
**Course Code:- AMB 528**  
**Course Title: - Agri Extension Management**

Course Outcomes	Program Outcomes												Program Specific Outcome			
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
	Managerial knowledge	Problem analysis	Modern tool usage	Ethics	Individual and teamwork	Communication	Project management and finance	Business decision making	Life-long learning	Environment and sustainability	Entrepreneurial opportunities	Global outlook	Ability to apply managerial and business skilled for development of business growth with the available resources	Ability to understand the day to day business operational problems and startup development of agribusiness and provide economic solution to enhance the	Inculcate proactive thinking to ensure effective performance in the dynamic socio-economic and business ecosystem entrepreneurial approach	Ability to use the research based innovative knowledge for sustainable development in agribusiness growth and developments



														decide goal without compromising ethical value	h and skill sets aligned with the national priorities	
<b>ABM528CO-01.</b> Apply critically analyze different Agricultural Extension approaches.	3	1	1	2	1	1	1	2	3	2	1	3	3	1	2	1
<b>ABM528CO-02</b> Asses the Agricultural Knowledge Information System ( AKISs ) ITK	3	2	1	2	2	2	1	3	2	1	2	3	3	2	2	3
<b>ABM528 CO-03</b> Apply the fundamentals of Advances in Extension services and improving of	3	2	1	2	2	2	3	2	1	2	3	3	2	3	3	3



extension efficiency.																
<b>ABM 528 CO - 04</b> Analyze the contemporary issue, Intellectual Property Rights, and Extension delivery with ATIC, IVLP, Kisan Call Centres.	2	2	3	1	2	2	3	2	1	2	1	1	3	3	2	2

**Legend: 1 – Low, 2 – Medium, 3 – High**



### Course Curriculum Map: Agri Extension Management

POs & PSOs No.	COs No.& Titles	SOs No.	Laboratory Instruction (LI)	Classroom Instruction (CI)	Self Learning (SL)
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO 1,2, 3, 4, 5	<b>ABM528CO-01.</b> Apply critically analyze different Agricultural Extension approaches.	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-1.0</b> Approaches of Agricultural Extension: A critical analysis of different approaches of agricultural extension Importance and relevance of indigenous knowledge system, identification and documentation of ITK, Integration of ITK system in research formulation, Concept of Agricultural Knowledge and Information System, Training of Stakeholders of AKIS 1.1, 1.2, 1.3.	As mentioned in page number .....
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO 1,2, 3, 4, 5	<b>ABM528CO-02</b> Asses the Agricultural Knowledge Information System ( AKISs ) ITK	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-2.0 –</b> Cyber Extension: Concept of cyber extension, national and international cases of extension projects using ICT and their impact of agricultural extension, alternative methods of financing agricultural extension - Scope, limitations and experience and cases. Research -Extension -Farmer - Market linkage: Importance, Scope, Implications etc., Market – Led Extension, Farmer - Led Extension, Concept of Farm Field School, Farm School, Public - Private Partnership: Meaning, Models, Identification of various areas for partnership. Stakeholder's analysis in Extension. Main streaming gender in Extension - Issues and Prospects	As mentioned in page number .....



				2.1, 2.2, 2.3. 2.4.	
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO 1,2, 3, 4, 5	<b>ABM528CO-03</b> Apply the fundamentals of Advances in Extension services and improving of extension efficiency.	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-3.0</b> Implications of WTO: OA for extension services, re-orientation of extension services for agri-business and marketing activities, GOI- NGO collaboration to improve efficiency of extension. 3.1, 3.2, 3.3.	As mentioned in page number .....
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO 1,2, 3, 4, 5	<b>ABM 528 CO - 04</b> Analyze the contemporary issue, Intellectual Property Rights, and Extension delivery with ATIC, IVLP, Kisan Call Centres.	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-4.0</b> Extension and contemporary issues: Extension and issues related to rural poverty. Privatization of Extension. Intellectual Property Rights (IPRs). Extension Reforms in India –Decentralized decision making, Bottom up planning, Farming System and Situation based Extension Delivery System, Extension delivery through Commodity Interest Groups. Organization innovations in Extension - ATIC, IVLP, Kisan Call Centres. 4.1, 4.2, 4.3. 4.4. 4.5	As mentioned in page number .....



### *Third Semester*

Course Type	Course Code	Course Name	Number of credits			Credit
			Lecture (L)	Tutorial (T)	Practical (P)	
<b>Research / PRC</b>	<b>ABM-595</b>	Project Work	0	0	20	20
<b>Course Outcome</b>	<ol style="list-style-type: none"> <li>1. Demonstrate an ability to plan a research project, such as is required in a research proposal prior to the starts of their work.</li> <li>2. Demonstrate an ability to comply with ethical, safety, and documentation processes appropriate to their project.</li> <li>3. Demonstrate expert knowledge in the subject of their research project, such as through a integrated literature survey.</li> <li>4. Demonstrate expert knowledge in the research methods appropriate to generating reliable data for their research questions.</li> <li>5. Demonstrate the ability of project manage and to make constructive use of expertise associated with their project, while working as an independent learner.</li> <li>6. Demonstrate an ability to relate their original data with existing literature, or to create an novel synthesis of existing materials.</li> </ol>					
<b>Topics Covered</b>	<p><b>Course description:</b> The Agri Business Management culminates in a research project of the student's own design. This project is documented by a final thesis or research report or dissertation. The student's work is guided by an academic supervisor. It is also supported by a variety of key skill program. Students are expected to construct a research project that includes original research, deliberate and well considered methodological choices, and shows relevance to significant conversations within the discipline. The dissertation should represent the best research and analysis which student can produce.</p> <p>Convenors are appointment by Head of Department and this is responsible for overall management of the supervisory process and for the overall management of the marking process. They organize all project work or research related activities. They are responsible for quality assurance. They are the first port-of-call for students with concerns over provision in this module. The primary contact will be the project supervisor who will be appointed by the module convenor.</p> <p><b>Syllabus proceeding Plan:</b> <b>Step 1: Informal conversations:</b> Students are strongly encouraged to discuss possible project ideas with tutors, fellow students, and other research professionals, Students are encouraged to attend all sessions as part of their wider professional training. Students interested in research methods. . All research projects begin with open-ended conversations and scoping exercises. These</p>					



should be non-committal. These conversations should begin in semester 3, becoming increasingly focused and developed.

**Step 2: Identify topic:**

The first formal step in the module involves identifying a preliminary project title and writing an abstract of no more than 100 words. This requires submitting a completed registration form. Writing an abstract for a research proposal or for completed research work is an important transferable skill. Supervisors will be assigned to students after the project title/ abstract forms have been submitted.

**Supervision:**

A supervisor is required. This is required to ensure comparability and clarity about the scale of the project as well as to allow for certain quality assurance processes to be in place. The main responsibilities of the supervisor are to assist the student with project management and to advise the student on criteria for assessment.

**Stage 3: Project proposal:**

In semester 3, students will write a 2,000-word project proposal. This proposal is assessed. The supervisory purpose of this proposal is to refine key research questions, review existing scholarship and identify required resources. A further purpose is to require the student to identify the methods they believe will be most relevant for engaging the research questions to be investigated. Relevant compliance documentation should be appended, even if in pre-submission form. The proposal should reflect a student's best effort. At the same time, we recognize research often raises new questions. Some redefinition of topics and titles is common later in the research process. Students should keep their supervisors up to date on these developments, and they can expect a reasonable amount of adaptation.



### ***Third Semester***

Course Type	Course Code	Course Name	Number of credits			Credit
			Lecture (L)	Tutorial (T)	Practical (P)	
Seminar/SC	ABM 544	Master's Seminar	0	0	1	1
Course Outcome	Apply with exposure, creative thought or innovative ideas, design the special program, trial, mini research, business trial, skill developing activity are expose in a report or dissertation forms..					
Topics Covered	<p>Master seminar program is also formal academic programs designed and conducted to provide practical experience in global environment for the agribusiness student. This program is focusing to expose the own idea or thought or creativity on tactical way in descriptive or analytical form. Under this curriculum student can express own developed idea or thought through presentation form or special assignment or dissertation or mini project by the student during assigned period.</p> <p><b>OBJECTIVES:-</b></p> <p>The major objective of master's seminar is as under</p> <p>To create the innovative idea or thought in current issue i.e. special work, trial or Pilot project , government scheme or policies and projects etc. students will prepare the brief report as dissertation or seminar report for particular period under any expert of ABM field.</p>					
Text/ Reference Book/s	<p><b>The following procedures have been implement during the Tanning or Industrial attachment program</b></p> <ol style="list-style-type: none"> <li>1. Organize the orientation classes for introduction of master seminar activity of students.</li> <li>2. Allotment of Seminar in charge or Instructor or Expert for all enrolled students under master seminar curriculum.</li> <li>3. Distribution of the master seminar topics or issue or mini projects or seminar by allotted expert.</li> <li>4. Each student have to finish the master seminar\ assigned work under the guidance and supervision of assigned supervisor or seminar in charge or instructors.</li> <li>5. Students have to ultimately after finish the seminar work, how to submit the seminar report or dissertation with original work certification by seal and sign of assigned supervisor or seminar in charge or instructors.</li> <li>6. Students have appeared in final examination after submission and presentation of prepared seminar reports</li> </ol>					





**Course Code: - PGS 505**

**Course Title: - Agricultural Research, Research Ethics and Rural Development Programmes**

**Pre requisite:** -Student should have basic knowledge of agricultural research, research ethics, and agricultural history along with fellowship program, rural development programme.

**Rationale:** - The students studying agricultural research and research ethics should possess understanding about method of research application, research ethics and fellowship for research and other scholars in construction agricultural development. This encompasses familiarity with the invention and evolution of agricultural research and development of agricultural programme, students ought to acquire fundamental insights into various agricultural technologies, their applications, as well as the Indian needs in agricultural developments.

**Course Outcomes:**

**PGS 505 CO 1:** Identify the history, levels of research, economic and social welfare through research programme.

**PGS 505 CO 2:** Apply the functioning, role and significant of regional, national and international research.

**PGS 505 CO 3:** Asses the agricultural research, research ethics with operating and safety of laboratory.

**PGS 505 CO 4:** Analyze the various development programmes and their functioning with its impact on agricultural development

**PGS 505 CO 5:** Evaluate the role and functioning of panchayati raj, NGO and evaluation of different rural development program.

**Scheme of studies**

Categories of course	Course Code	Course Title	Scheme of studies (Hours/Week)					Total Credits (C)
			CI	LI	SW	SL	Total Study Hours (CI+LI+SW+SL)	
Non credit course (NCC)	<b>PGS 505</b>	Agricultural Research, Research Ethics and Rural Development Programmes	01	00	02	01	04	01

**Legend: CI:** Classroom Instruction (Includes different instructional strategies i.e. Lecture (L) and Tutorial (T) and others),

**LI:** Laboratory Instruction (Includes Practical performances in laboratory workshop, field or other locations using different instructional strategies)



**SW:** Sessional Work (includes assignment, seminar, mini project etc.),

**SL:** Self Learning,

**C: Credits.**

**Note:** SW & SL has to be planned and performed under the continuous guidance and feedback of teacher to ensure outcome of Learning.

**Scheme of Assessment:**

Categories of course	Course Code	Course Title	Scheme of Assessment ( Marks )							
			Progressive Assessment ( PRA )						End Semester Assessment (ESA)	Total Marks (PRA+ ESA)
			Class/ Home Assignment 5 marks each ( CA )	Class Test 2 (2 best out of 3) 10 marks each (CT)	Seminar one ( SA )	Class Activity any one (CAT)	Class Attendance (AT)	Total Marks (CA+CT+SA+CAT+AT)		
(NCC)	<b>PGS 505</b>	Agricultural Research, Research Ethics and Rural Development Programmes	15	30	00	00	5	50	50	100

**Course-Curriculum Detailing:**

This course syllabus illustrates the expected learning achievements, both at the course and session levels, which students are anticipated to accomplish through various modes of instruction including Classroom Instruction (CI), Laboratory Instruction (LI), Sessional Work (SW), and Self Learning (SL). As the course progresses, students should showcase their mastery of Session Outcomes (SOs), culminating in the overall achievement of Course Outcomes (COs) upon the course's conclusion.



**PGS 505 CO-1 Identify the history, levels of research, economic and social welfare through research programmes**  
**Approximate Hours**

Item	AppX Hrs
C 1	3
LI	0
SW	2
SL	1
Total	06

Session Outcomes (SOs)	Laboratory Instruction (LI)	Class room Instruction (CI)	Self Learning (SL)
<b>SO1.1-</b> Introduce about the history of agriculture in brief <b>SO1.2 -</b> Brief the basic concept global agricultural research system. <b>SO1.3 - Discuss</b> about the need, scope, opportunities; Role in promoting food security of global agricultural research system. <b>SO1.4-</b> Describes the reducing poverty and protecting the environment through global agricultural research system <b>SO1.5</b> Asses the functions and use of national Agricultural Research Systems (NARS) and Regional Agricultural Research Institutions.		<b>Unit-I</b> <b>History of agriculture in brief; Global agricultural research system: need, scope, opportunities; Role in promoting food security, reducing poverty and protecting the environment;</b> <b>National Agricultural Research Systems (NARS) and Regional Agricultural Research Institutions;</b> <b>1.1-</b> History of agriculture in brief <b>1.2-</b> Global agricultural research system: need, scope, opportunities; Role in promoting food security, reducing poverty and protecting the environment <b>1.3-</b> National Agricultural Research Systems (NARS) and Regional Agricultural Research Institutions	<b>1.1-</b> Prepare the assignment on Global agricultural research system



**SW-1 Suggested Sessional Work (SW):**

- a. Assignments:** Prepare the assignment on Global agricultural research system
- b. Mini Project:** -
- c. Other Activities (Specify):-**

**PGS 505 CO 2: Apply the functioning, role and significant of regional, national and international research.**

**Approximate Hours**

Item	AppX Hrs
C 1	3
LI	0
SW	1
SL	2
Total	06

Session Outcomes (SOs)	Laboratory Instruction (LI)	Class room Instruction (CI)	Self Learning (SL)
<p><b>SO2.1</b> – introduce to the Consultative Group on International Agricultural Research (CGIAR)</p> <p><b>SO2.2</b> – learned about the International Agricultural Research Centers (IARC),</p> <p><b>SO2.3-</b> Briefing the partnership with NARS, role as a partner in the global agricultural research system</p> <p><b>SO2.4-</b> Briefing the strengthening capacities at national levels; International fellowships for scientific mobility</p> <p><b>SO 2.5</b>–Discuss to</p>	<p><b>LE2.1</b></p>	<p><b>Unit-II</b></p> <p><b>Consultative Group on International Agricultural Research (CGIAR): International Agricultural Research Centres (IARC), partnership with NARS, role as a partner in the global agricultural research system, strengthening capacities at national and regional levels; International fellowships for scientific mobility</b></p> <p><b>2.1</b> - Consultative Group on International Agricultural Research (CGIAR): International Agricultural Research</p>	<p><b>2.1</b> – Prepare the assignment on partnership with NARS, role as a partner in the global agricultural research system</p>



the strengthening capacities at regional levels; International fellowships for scientific mobility		Centers (IARC)  <b>2.2-</b> Partnership with NARS, role as a partner in the global agricultural research system.  <b>2.3-</b> , Strengthening capacities at national and regional levels; International fellowships for scientific mobility.	
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**SW-1 Suggested Sessional Work (SW):**

**a. Assignments:** Prepare the assignment on partnership with NARS, role as a partner in the global agricultural research system.

**b. Mini Project:**

**c. Other Activities (Specify):**

**PGS 505 CO 3: Asses the agricultural research, research ethics with operating and safety of laboratory.**

**Approximate Hours**

Item	AppX Hrs
C I	3
LI	0
SW	2
SL	1
Total	06

Session Outcomes (SOs)	Laboratory Instruction (LI)	Class room Instruction (CI)	Self Learning (SL)
<b>SO3.1</b> – Identify to the Research ethics  <b>SO3.2</b> – Discuss to the research integrity, research safety in laboratories  <b>SO3.3-</b> Apply the welfare of animals used in research <b>SO3.4-</b> Discuss to computer ethics and	<b>LE3.1</b>	<b>Unit-3</b> <b>Research ethics: research integrity, research safety in laboratories, welfare of animals used in research, computer ethics, standards and problems in research ethics</b>  <b>3.1-</b> Research ethic and research integrity	<b>3.1</b> Prepare the assignment on Research ethic and research integrity.



standards		<b>3.2-</b> Research safety in laboratories, welfare of animals used in research. <b>3.3-</b> Computer ethics, standards and problems in research ethics.	
<b>SO3.5–</b> Describe the problems in research ethics			

**SW-1 Suggested Sessional Work (SW):**

**a. Assignments:** Prepare the assignment on Research ethic and research integrity

**b. Mini Project:**

**c. Other Activities (Specify):**

**PGS 505 CO 4: Analyze the various development programmers and their functioning with its impact on agricultural development**

**Approximate Hours**

Item	App X Hrs
CI	3
LI	0
SW	2
SL	1
Total	06

Session Outcomes (SOs)	Laboratory Instruction(LI)	Class room Instruction (CI)	Self Learning (SL)
<b>SO1.1</b> –Identify the Concept and connotations of rural development.  <b>SO1.2</b> - Apply the rural development policies and strategies  <b>SO1.3-</b> Asses the Rural development programmes: Community Development Programme, Intensive	<b>LE1.1 -</b>	<b>Unit-4.0 - I</b> <b>Concept and connotations of rural development, rural development policies and strategies. Rural development programmes: Community Development Programme, Intensive Agricultural District Programme, Special group – Area Specific Programme, Integrated</b>	<b>1.1-</b> Prepare the assignment on Community Development Programme.



Agricultural District Programme.		<b>Rural Development Programme (IRDP)</b> <b>4.1-</b> Concept and connotations of rural development, rural development policies and strategies <b>4.2-</b> Rural development programmes: Community Development Programme, Intensive Agricultural District Programme <b>4.3-</b> Special group – Area Specific Programme, Integrated Rural Development Programme (IRDP)	
<b>SO1.4-</b> Describes the Special group – Area Specific Programme.			
<b>SO1.5–</b> Brief the Integrated Rural Development Programme (IRDP)			

**SW-1 Suggested Sessional Work (SW):**

- a. Assignments:** Prepare the assignment on Community Development Programme
- b. Mini Project:** Prepare a project report of leadership styles and influence process; leadership theories, leadership styles and effective leader
- c. Other Activities (Specify):**

**PGS 505 CO 5: Evaluate the role and functioning of panchayati raj, NGO and evaluation of different rural development program.**

**Approximate Hours**

Item	AppX Hrs
CI	06
LI	00
SW	02
SL	02
Total	10

Session Outcomes (SOs)	Laboratory Instruction (LI)	Class room Instruction (CI)	Self Learning (SL)
<b>SO1.1</b> –Identify Panchayati Raj Institutions and Co-operatives. <b>SO1.2-</b> Identify the	<b>LE1.</b>	<b>Unit-5.0 Panchayati Raj Institutions, Co-operatives, Voluntary Agencies/Non-Governmental</b>	<b>1.1</b> - Prepare the assignment on Panchayati Raj Institutions,



<p>Voluntary Agencies <b>SO1.3-</b> Identify the Non-Governmental Organizations</p> <p><b>SO1.4-</b> Discuss the , Critical evaluation of rural development policies</p> <p><b>SO1.5-</b> Briefs the programmers. Constraints in implementation of rural policies and programmers</p>		<p><b>Organisations.</b> <b>Critical evaluation of rural development policies and programmes.</b> <b>Constraints in implementation of rural policies and programmes</b></p> <p><b>5.1-</b> Panchayati Raj Institutions, Co-operatives, Voluntary Agencies/Non-Governmental Organisations</p> <p><b>5.2-</b> Critical evaluation of rural development policies and programmes</p> <p><b>5.3-</b> Constraints in implementation of rural policies and programmes</p>	
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**SW-1 Suggested Sessional Work (SW):**

- a. Assignments:** Prepare the assignment on Panchayati Raj Institutions,
- b. Mini Project:**
- c. Other Activities (Specify):**

**Brief of Hours suggested for the Course Outcome**

<b>Course Outcomes</b>	<b>Class Lecture (C I)</b>	<b>Laboratory Lecture (L I)</b>	<b>Sessional Work (SW)</b>	<b>Self Learning (S I)</b>	<b>Total hour (C I + LI+ SW +S I )</b>
PGS 505 CO-1 Identify the history, levels of research, economic and social welfare through research programme	3	0	2	1	06
PGS 505 CO 2: Apply the functioning, role and significant of regional, national and international research.	3	0	2	1	06
PGS 505 CO 3: Asses the agricultural research, research ethics with operating and safety of laboratory.	3	0	2	1	06





PGS 505 CO 4: Analyze the various development programmes and their functioning with its impact on agricultural development	3	0	2	1	06
PGS 505 CO 5: Evaluate the role and functioning of panchayati raj, NGO and evaluation of different rural development program.	3	0	2	1	06
<b>Total Hours</b>	<b>15</b>	<b>00</b>	<b>10</b>	<b>05</b>	<b>30</b>

**Suggested Specification Table (For ESA)**

CO	Unit title	Marks Distribution			Total Marks
		R	U	A	
CO-1	Identify the history, levels of research, economic and social welfare through research programme.	02	03	00	05
CO-2	Apply the functioning, role and significant of regional, national and international research.	02	05	03	10
CO-3	Asses the agricultural research, research ethics with operating and safety of laboratory.	00	08	07	15
CO-4	Analyze the various development programmes and their functioning with its impact on agricultural development.	02	05	08	15
CO-5	Evaluate the role and functioning of panchayati raj, NGO and evaluation of different rural development program	00	03	02	05
	<b>Total</b>	<b>06</b>	<b>24</b>	<b>20</b>	<b>50</b>

**Legend: R: Remember, U: Understand, A: Apply**

The end of semester assessment for Introduction to Portland cement will be held with written examination of 50 marks

**Note.** Detailed Assessment rubric need to be prepared by the course wise teachers for above tasks. Teachers can also design different tasks as per requirement, for end semester assessment.

**Suggested Instructional/Implementation Strategies:**

1. Improved Lecture
2. Tutorial
3. Case Method
4. Group Discussion



5. Role Play
6. Visit to Industry
7. Demonstration
8. ICT Based Teaching Learning (Video Demonstration/Tutorials CBT, Blog, Face book, Twitter, Whatsapp, Mobile, Online sources)
9. Brainstorming

**Suggested Learning Resources:**

S. No.	Title	Author	Publisher	Edition & Year
01	Indian Agriculture - Four Decades of Development	Bhalla GS & Singh G.	Sage Publ	2001
02	Manual on International Research and Research Ethics	Punia MS	CCS, Haryana Agricultural University, Hisar.	
03	Rural Development Strategies and Role of Institutions Issues, Innovations and Initiatives.	Rao BSV.	Mittal Publ	2007
	Rural Development - Principles, Policies and Management	Singh K..	Sage Publ	1998.

**Development Team:**

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**Cos, POs and PSOs Mapping**

**Course Code:- PGS 505**

**Course Title: - Agricultural Research, Research Ethics and Rural Development Programmes**

Course Outcomes	Program Outcomes												Program Specific Outcome			
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
	Managerial knowledge	Problem analysis	Modern tool usage	Ethics	Individual and team work	Communication	Project management and finance	Business decision making	Life-long learning	Environment and sustainability	Entrepreneurial opportunities	Global outlook	Ability to apply managerial and business skilled for development of business growth with the available resources	Ability to understand the day to day business operational problems and startup development of agribusiness and provide economical solution to enhance the decide	Inculcate proactive thinking to ensure effective performance in the dynamic socio-economic and business ecosystem entrepreneurial approach and	Ability to use the research based innovative knowledge for sustainable development in agribusiness growth and develops



														goal without compro mising ethical value	skill sets aligned with the national prioritie s	
PGS 505 CO-1 Identify the history, levels of research, economic and social welfare through research programme	3	1	1	2	1	1	1	2	3	2	1	3	3	1	2	1
PGS 505 CO 2: Apply the functioning, role and significant of regional, national and international research.	3	2	1	2	2	2	1	3	2	1	2	3	3	2	2	3
PGS 505 CO 3: Asses the agricultural	3	2	1	2	2	2	3	2	1	2	3	3	2	3	3	3



research, research ethics with operating and safety of laboratory.																
PGS 505 CO 4: Analyze the various development programmes and their functioning with its impact on agricultural development	2	2	3	1	2	2	3	2	1	2	1	1	3	3	2	2
PGS 505 CO 5: Evaluate the role and functioning of panchayati raj, NGO and evaluation of different rural development program.	2	3	3	1	3	2	2	2	2	1	1	2	2	2	2	2

**Legend: 1 – Low, 2 – Medium, 3 – High**



**Course Curriculum Map: Agricultural Research, Research Ethics and Rural Development Programmes**

<b>POs &amp; PSOs No.</b>	<b>COs No.&amp; Titles</b>	<b>SOs No.</b>	<b>Laboratory Instruction (LI)</b>	<b>Classroom Instruction (CI)</b>	<b>Self Learning (SL)</b>
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO 1,2, 3, 4, 5	PGS 505 CO-1 Identify the history, levels of research, economic and social welfare through research programme	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-1.0</b> History of agriculture in brief; Global agricultural research system: need, scope, opportunities; Role in promoting food security, reducing poverty and protecting the environment; National Agricultural Research Systems (NARS) and Regional Agricultural Research Institutions 1.1, 1.2, 1.3.	As mentioned in page number .....
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO 1,2, 3, 4, 5	PGS 505 CO 2: Apply the functioning, role and significant of regional, national and international research.	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-2.0 –</b> Consultative Group on International Agricultural Research (CGIAR): International Agricultural Research Centres (IARC), partnership with NARS, role as a partner in the global agricultural research system, strengthening capacities at national and regional levels; International fellowships for scientific mobility 2.1, 2.2, 2.3.	As mentioned in page number .....



PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO 1,2, 3, 4, 5	PGS 505 CO 3: Asses the agricultural research, research ethics with operating and safety of laboratory.	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-3.0</b> Research ethics: research integrity, research safety in laboratories, welfare of animals used in research, computer ethics, standards and problems in research ethics 3.1, 3.2, 3.3.	As mentioned in page number .....
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO 1,2, 3, 4, 5	PGS 505 CO 4: Analyze the various development programmes and their functioning with its impact on agricultural development	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-4.0</b> Concept and connotations of rural development, rural development policies and strategies. Rural development programmes: Community Development Programme, Intensive Agricultural District Programme, Special group – Area Specific Programme, Integrated Rural Development Programme (IRDP) 4.1, 4.2, 4.3.	As mentioned in page number .....
PO 1,2,3,4,5,6 7,8,9,10,11,12  PSO 1,2, 3, 4, 5	PGS 505 CO 5: Evaluate the role and functioning of panchayati raj, NGO and evaluation of different rural development program.	<b>SO1.1</b> <b>SO1.2</b> <b>SO1.3</b> <b>SO1.4</b> <b>SO1.5</b>		<b>Unit-5.0</b> Panchayati Raj Institutions, Co- operatives, Voluntary Agencies/Non- Governmental Organizations. Critical evaluation of rural development policies and programmes. Constraints in implementation of rural policies and programmers 5.1, 5.2, 5.3.	As mentioned in page number .....



### *Fourth Semester*

Course Type	Course Code	Course Name	Number of credits			Credit
			Lecture (L)	Tutorial (T)	Practical (P)	
<b>Research / PRC</b>	<b>ABM-595</b>	Research Project	0	0	20	20
<b>Course Outcome</b>	1. Identify the basic concepts of management and organizational behavior. 2. Demonstrate the overall view of various management functions, managerial skills and approaches. 3. Apply the fundamentals of individual and group behavior in the organizational setting 4. Analyze the organizational level challenges in managing the resources optimally 5. Evaluate the ability understanding and managing organisational culture, power and political behavior					
<b>Topics Covered</b>	<p><b>Stage 4: Summer term research</b>            Students are expected to commit substantial time during the summer to their research project. Supervisions The principal form of academic input for the research project normally comes through discussions with the designated supervisor. The majority of these meetings should be face-to-face, either in person or via video- or audio-conferencing technology. Supervisors also may make themselves available for additional consultation, at their discretion.</p> <p><b>Phase 5: Submit project report</b>            The project report is due near the end of April, with the specific due date posted by HoD through notice. The project report is assessed by the supervisor. Part of what is being tested here is your ability to manage a substantial research project and to complete the project on time. . Such time management is critical to many commercial and academic projects.</p>					