BMS SYLLABUS

CHOICE BASED CREDIT SYSTEM (CBCS)

OUTCOME BASED EDUCATION (OBE)



SCHOOL OF COMMERCE NATIONAL COLLEGE (Autonomous) (Nationally Re- Accredited at 'A+' Grade by NAAC, College with Potential for Excellence) Tiruchirappalli - 620 001. Tamil Nadu, India

2022-2023 ONWARDS

Our Team



Dr. R. SUNDARARAMAN Principal



Dr. K. KUMAR Vice Principal, Dean, Associate Professor & Head



Dr. K. PATTABIRAMAN Assistant Professor & Head

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CHOICE BASED CREDIT SYSTEM (CBCS) OUTCOME BASED EDUCATION (OBE)

ABOUT THE COLLEGE

National College, Tiruchirappalli was founded in June, 1919. The founders conceived idea of a National institution to promote among its youth the highest and the loftiest ideals which constitute the essence of Indian Culture and Nationalism. The College in fact had its origin to the National High School founded on the 11th of June 1886. The College functioned in the old Teppakulam campus for nearly four decades from 1919. The shifting of the College campus from Teppakkulam to the Junction area began in 1959. The College celebrated its Golden Jubilee in the year 1969, Platinum Jubilee in February 1995. The college continues its march to the centenary year with relentless vigour, keeping its mission and vision clear. National Evening College was started in the year 1978. The Evening College was recheristened as Unaided Programmes from the academic year 2005-06 and they co-exist with the Aided Programmes. The College introduced Co-Education pattern from the academic year 2007. The II shift classes were introduced from the year 2015-16. As on date, the college offers 19 PG Programmes and 20 UG Programmes. 13 Departments offers M.Phil and PhD Research Programmes. The College was first accredited by NAAC at "A" Grade in 2005 and Re-accredited in III cycle at "A+" Grade in 2016. The UGC, New Delhi, conferred "Autonomous" status on the college in 2010. The College has also been conferred the rare distinction of College with Potential Excellence status in 2011. The Managing Agency of the college is Dr. V. Krishnamurthy Educational Foundation, a registered society. There are 250 Teaching and 100 non-teaching staff working in the college. About 4300 students are studying in the college.

Vision

To offer quality Higher Education to the younger generations, especially from rural India, who are economically and socially backward, to liberate themselves from prejudice, oppression and ignorance and to gain knowledge for their bright future.

Mission

- To ignite the young minds with lofty ideals and inspire them to achieve excellence in the chosen field.
- To facilitate individual growth of students, with accent on character building, through co-curricular and extra-curricular activities.
- ✤ To encourage the students to take-up research and help them reach global
- To provide a congenial atmosphere to study and learn, with infrastructural facilities of highest order.
- To insist in the minds of the students, the sense of Nationalism and to train them in social awareness.

ABOUT THE DEPARTMENT

The BMS (Agri Storage and Supply Chain) programme was established by signing an MOU with Logistics Sector Skill Council (LSC) and Bharathidasan University in 2021. The LSC was set up by the Ministry of Skill Development and Entrepreneurship (MSDE) through the National Skill Development Corporation of India (NSDC) and promoted by the Confederation of Indian Industries Institute of Logistics (CII-IL).

BMS programme is an apprenticeship embedded UG Degree Programme. It has been designed with the primary objective of creating adequate skills for gainful employment at supervisory/ managerial levels in the logistics industry. The core focus of the programme is Skill Development, and nearly 60% of the programme component and duration constitutes on-the Job Training in the form of Industry Apprenticeship.

Vision

• The Department persistently strives to grow into a significant position in Management Studies in Agri Storage and Supply Chain to create graduates to become future business leaders, entrepreneurs, and socially responsible professionals who fit into the dynamic corporate world with a global outlook.

Mission

• To emphasize on highest quality education with a strong foundation of management concepts for students to excel and enhance their skills.

WHAT IS CREDIT SYSTEM?

Weightage to a course is given in relation to the hours assigned for the course. Generally one hour per week has one credit. For viability and conformity to the guidelines credits are awarded irrespective of the teaching hours. The following Table shows the correlation between credits and hours. However, there could be some flexibility because of practicals, field visits, tutorials and nature of project work. For UG courses, a student must earn a minimum of 140 credits as mentioned in the table below. The total number of minimum courses offered by a department are given in the course pattern

Course Pattern

The Undergraduate degree course consists of five vital components. They are as follows:

- Part -I: Languages (Tamil / Hindi / Sanskrit)
- Part-II: General English
- Part-III: Core Course (Theory, Practical, Core Electives, Allied, Project, Internship and Comprehensive Examinations)
- Part-IV: NMC, Value Education, Soft Skills and Environmental Studies (EVS)
- ◆ Part-V: Gender Studies, Fine Arts, Nature Club, NCC, NSS, etc.
- Non-Major Courses (NMC)

There are three NMC's – Communicative English, Computer Literacy and Environmental Studies offered in the I, II & III Semesters respectively.

Extra Credit Courses

In order to facilitate the students gaining extra credits, the extra credit courses are given. There are two extra credit courses – Massive Open Online Courses (MOOC) and Skillbased Course – offered in the III and V Semesters respectively. According to the guidelines of UGC, the students are encouraged to avail this option of enriching by enrolling themselves in the MOOC provided by various portals such as SWAYAM, NPTEL, etc. Skill based course is offered by the department apart from their regular class hours.

Non-Major Elective / Skill Based Elective

These courses are offered in two perspectives as electives "Within School" (WS) and "Between School" (BS).

Subject Code Fixation

The following code system (06 characters) is adopted for Under Graduate courses: Example U22BM1

UG Code	Year of Revision	Department	Running No. in that part						
UG	22	BMS	XX						
UG	2022	BMS	1						

A - Denotes for Allied Course

E – Denoted for Electives

Question Paper Pattern

The general pattern of the question paper (theory) for end semester examinations shall be followed as given below.

Part A	Twenty Mutiple Choice Questions (No choice)	$20 \ge 1 = 20 \text{ marks}$		
	Four Questions from each Unit	$20 \times 1 - 20$ marks		
Part B	Five Questions (Either-OR-Type)	$5 \ge 5 = 25 \text{ marks}$		
Fait D	One Question from each Unit	J X J = 2J marks		
Part C	Three Questions out of five	$3 \ge 10 = 30 \text{ marks}$		
Part C	One Question from each unit	$3 \times 10 = 50$ marks		

Evaluation

The performance of a student in each course is evaluated in terms of percentage of marks with a provision for conversion to grade points. Evaluation for each course shall be done by a continuous internal assessment by the concerned Course Teacher as well as by an end semester examination and will be consolidated at the end of the course. The components for continuous internal assessment are:

Components	Under Graduate
Assignments	3 x 2 Marks = 06 Marks
CIA Test	2 x 7 Marks = 14 Marks
Seminar	
Teaching Practice	
Attendance	05 Marks
Total	25 Marks

Marks for attendance will be awarded as below

96 - 100%	5marks
91 - 95%	4marks
86 - 90%	3marks
81 - 85%	2marks
75 - 80%	1marks
Less than 75%	withheld

The components for the Continuous Internal Assessment in the practical (for both UG & PG) are as follow:

Choice Based Credit System (CBCS)

Programmes of study under Choice Based Credit System (CBCS). The choice based credit system (an innovative instructional package developed to suit the needs of students to keep pace with the development in higher education and the quality assurance expected of it in the light of liberalization and globalization in higher education) was introduced in the Under graduate and Post graduate programmes during 2005-2006 as per the guidelines of Bharathidasan University, Tiruchirapalli.

As the college was conferred Autonomous status in 2010, a restructured syllabus was introduced under CBCS in all UG and PG programmes from the academic year 2010-2011 onwards.

Grading System

Range of Marks	Grade	Classification	Grade Point
90 - 100	0	Outstanding	10
75 - 89	D	Distinction	9
65 - 74	A+	Very Good	8
60 - 64	А	Good	7
50 - 59	В	Average	6
40 - 49#	С	Satisfactory	5
Below 40#	U	Re-appear	0
Below 50@	U	Re-appear	0
ABSENT	-	-	-

Conversion of Marks to Grade Points and Grades

Grade Point Average (GPA) = Σ (Credits x Grade Points) / Σ Credits (For each semester) Cumulative Grade Point Average (GPA) = Σ (Credits x Grade Points) / Σ Credits (for all the semesters)

CGPA	Grade	Classification Of Final Result
9.0 and above but below 10.0	0	First Class - Exemplary
7.5 and above but below 9.0	D	First Class with Distinction
6.5 and above but below 7.5	A+	First Class
6.0 and above but below 6.5	A	First Class
5.0 and above but below 6.0	В	Second Class
4.0 and above but below 5.0#	С	Third Class
0.0 and above but below 4.0#	U	Re-appear
0.0 and above but below 5.0@	U	Re-appear

Credits: The term 'Credit' refers to the weightage given to a course, usually in relation to the instructional hours and content of the course assigned to it. The total minimum credits, required for completing a UG Programme is 120 and PG programme is 90. The details of credits for individual components and individual courses shall be obtained from the course structure of the syllabus book provided to the students.

Ranking System: Two rank certificates shall be issued for every Programme under Autonomous Stream. The Bharathidasan University, Tiruchirapalli, conducts University Rank Examination (URE) for the toppers in every programme.

First rank-holders of all autonomous colleges and top 20 Rank holders of nonautonomous colleges (having passed the examinations in the first appearance within the prescribed duration of the programme; absence from an exam shall not be taken is an attempt) are required to take the examination.

The question papers of the examination comprise of objective type questions covering the core courses in each of the programme. The top scorers of University Rank Examination shall be declared as University Rank holders, irrespective of grades in their end-semester Autonomous examinations.

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Tiruchirapalli-620001 Programme Structure for BMS under CBCS(Apprenticeship Embedded Programme) For candidates admitted from the academic year 2022-2023 onwards - BMS

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Semester	Part	Course	Course Title		Ins tru Hrs Per week	Credit	Exam hr	CIA Marks	W	0	Total Marks
Ι		SEMESTER-I									
	Ι	Language course-I(LC-I)	Language	U22T1/ U22S1/ U22H1	6	3	3	25	7 5		100
	II	English Language course I- (ELC- I)	English	U22E1	6	3	3	25	7 5		100
	III	Core Course I- (CC-I)	Introduction to Agri Logistics	U22BM1	5	5	3	25	7 5		100
		Core Course II -(CC-II)	Warehousing for Agricultural Produces	U22BM2	6	4	3	25	7 5		100
		Allied Course I (IAC-I)	Post Harvest Management	U22ABM1	5	3	3	25	7 5		100
	IV	ES- Environmental Studies	Environmental Studies	U22ES	2	2	3	25	7 5		100
		Total			30	20					600
II		SEMESTER-II									
	Ι	Language course-II (LC-II)	Language	U22T2/U22S 2/ U22H2	6	3	3	25	7 5		100
	II	English Language course II- (ELC-II)	English	U22E2	4	2	3	25	7 5		100
		Communicative English Course I-(CEC I)	Communicative English	U22CE1	2	1	3	25	7 0	5	100
	III	Core Course III (CC III)	Trading in Agri Commodities	U22BM3	6	4	3	25	7 5		100
		Allied Course II(ACII)	Quality control, Assurance & Audit	U22ABM2	6	3	3	25	7 5		100
	IV	SBE 1	Office Automation	U22SBE1	2	2	3	25	7 5		100
		SS	Soft Skills	U22SS	2	2	3	25	7 5		100
	V	GSC	Gender Studies	U22GS	2	1	3	25	7		100

						5	
	Total		30	18			800

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Tiruchirapalli-620001

Programme Structure for BMS under CBCS(Apprenticeship Embedded Programme) For candidates admitted from the academic year 2022-2023 onwards

Semester	Part	Course	Course Title		Ins tru Hrs Dar weak	Credit	Exam hr	CIA	W	0	Total Marks
III		SEMESTER- III									
	Ι	Language course-III (LC- III)	Language	U22T3/U22S 3/U22H3	6	3	3	25	75		100
	II	English Language course III- (ELC-III)	English	U22E3	6	3	3	25	75		100
	III	Core Course IV (CC IV)	Cold Chain Technology	U22BM4	3	3	3	25	75		100
		Core Course V (CC V)	Risk Assessment & Management	U22BM5	3	2	3	25	75		100
		Allied Course III (AC III)	Pest Management	U22ABM3	2	2	3	25	75		100
		Allied Course IV (AC IV)	Handling of Fresh Produces- Value Chain	U22ABM4	2	2	3	25	75		100
		Core Course VI	Mechanisatio n in Agri Logistics	U22BM6	2	2	3	25	75		100
	IV	Skill Based Elective	Desktop Publishing- Theory	U22BE2	2	2	3	25	75		100
		Skill Based Elective- Practical	Office Automation & Desktop	U22SBE3P	2	2	3	25	75		100

Semester	Part	Course	Course Title		Ins tru Hrs Der week	Credit	Exam hr	CIA	W	0	Total Marks
			Publishing								
		NME-1	Principles of Accountancy	U22NME1	2	2	3	25	75		100
		Total			30	23					1000
IV		SEMESTER- IV									
	Ι	Language course-IV (LC- IV)	Language	U22T4/U22S 4/U22H4	6	3	3	25	75		100
	II	English Language course IV- (ELC-IV)	English	U22E4	4	2	3	25	75		100
	II	Communicative English-IV	Communicati ve English	U22CE2	2	1	3	25	70	5	100
	III	Core Course VII (CC VII)	Agripreneursh ip 1	U22BM7	3	3	3	25	75		100
		Allied Course V	Agricultural Exports & Imports	U22ABM5	3	3	3	25	75		100
		Allied Course VI	Legal Aspects of Agriculture	U22ABM6	3	2	3	25	75		100
		Core Course VIII	Packing Technology	U22BM8	3	2	3	25	75		100
		Core Course IX	Dairy Value Chain & Marketing	U22BM9E	2	2	3	25	75		100
	IV	Value Education Course (VEC)	Value Education	U22VE	2	2	3	25	75		100
		NME2	Principles of Management	U22NME2	2	2	3	25	75		100
		Total			30	22					1000

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Semeste r	Part	Course	Course Title		пıs Per	Credit	Exam	CIA Marks	W	0	Total Marks
V		SEMESTER-V									
	III	Allied Course	Agri by-products & Utilisation	U22ABM7	8	2	3	25	75		100
		Allied Course	Value chain for plantation crop	U22ABM8	8	2	3	25	75		100
		Core Course	Documentation- for Exports & Imports	U22BM10E	7	2	3	25	75		100
		Core Course	Apprenticeship 1	U22BMAPS1	7	22	3	250	150		400
		Total			30	28					700
VI		SEMESTER- VI									
	III	Allied Course	Seafood & Aquaculture Value Chain	U22ABM9	8	2	3	25	75		100
		Allied Course	Egg & Poultry Products- Value Chain	U22ABM10	7	2	3	25	75		100
		Core Course	Multi modal Transportation	U22BM11E	8	2	3	25	75		100
		Core Course	Apprenticeship 2	U22BMAPS2	7	22	3	250	150		400
	V	Extension Activities				1					
		Total			30	29					700

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Programme Structure for BMS under CBCS(Apprenticeship Embedded Programme)

For candidates admitted from the academic year 2022-2023 onwards

Part I Language	Language	4 Courses	12 Credits
Part II English	English	4 Courses	10 Credits
Part II	Communicative English	2 Courses	02 Credits
Part III	Core course I to VI	13 Courses	76Credits
	Allied Course I to V1	10 Courses	22 Credits
Part IV	Environmental Studies	1 Course	02 Credits
	Value Education	1 Course	02 Credits
	Non Major Elective	2 Courses	04 Credits
	Skill Based Elective	3 Courses	06 Credits
	Gender Studies	1 Course	01 Credit
	Soft Skills	1 Course	02 Credits
Part V	Extension Activities		01 Credit
	Total		140 Credits

PROGRAM OUTCOMES

- PO1: Demonstrate understanding of contextual knowledge to assess administration, commerce, economic, literary and social science solidarity for professional practice.
- PO2: Develop logical reasoning procedures with innovative correspondence, diversion and undertaking for sustainable development.
- PO3: Function proficiently, prioritize regular enthusiasm and perform adequately in multidisciplinary settings.
- PO4: Compile information, create methodologies to manage projects and propagate cordial practices.
- PO5: Adapt to self roused coordinated learning to circumstances rising in workspot and life.

PROGRAM SPECIFIC OUTCOMES

- PSO 1: Understand the complexities that companies are facing in today's global network economy.
- PSO 2: Recognize the critical challenges in the design and management of a modern supply chain network, and make strategic decisions to overcome the obstacles.
- PSO 3: Integrate the designing and setting up a warehousing facility and select the options that enable you to develop logistics networks that minimize costs and deliver top customer service.
- PSO 4: Evaluate and differentiate the advantages and disadvantages of different modes of transportation, and choose the optimal method of transportation.
- PSO 5: Analyze the Lean management philosophy's basic tenets that enable manufacturers to eliminate waste and make business processes more efficient.

PSO6: Evaluate the requisite knowledge about different forecasting techniques essential for building a Supply Chain Operations Plan. Learn about tools and techniques to analyze demand data, construct other forecasting techniques, and choose the most suitable one for projecting future demand.

To find out Correlation:

Mean Score of Cos	=	Total values
		Total No. of POs & PSOs

School of Commerce Programme: BMS CBCS Syllabus – Outcome Based Education (OBE) (For those who have joined during the Academic Year 2021-2022 onwards)

Part –III: Core Course I	(CC- 1)		Semester - I		
Course Title:Introduction to Agri Logistics					
Course Code: U22BM1	Hours per	week:5	Credit:5		
CIA: 25 Marks	ESE: 75	Marks	Total: 100 Marks		

Objective

• To impart knowledge on the role of logistics in agriculture.

Course Outcomes (COs)

After completing this course, the student will be able to:

- CO1: Understand the significance of agri-logistics in the entire process of supplychain.
- CO2: Enable students to select and gainfully use various types of logistics resources.
- CO3: Explain the digital tools which improve the effectiveness of Agri-logistics.
- CO4: Know the application of information technology inagri-logistics.
- CO5: Analyse various components of agri-logistics and their application in the effective supply chain management.

UNIT I: Introduction to Agri Logistics

Concept and Definition of Logistics and Supply Chain Management, Roleand Importance of Supply Chain Management in Agriculture, Difference between Logistics and Supply Chain Management, Produce Grown in Different Parts of the Country, Evolution and Growth of Agri Logistics in India, Outsourcing in Supply Chain - #3PLs and 4PLs, Reverse Logistics, *Opportunities and Challenges in Agri Logistics Management.

UNIT II: Elements of Agri Logistics Management

Need for Agri Logistics During Procurement, Processing and Packaging, Storage and Inventory Management, #Handling and Transportation of Agricultural Produce, Distribution Management, Delivery Practices for Agri. Produce, Grouping Agri Produce by Shelf Life, Distribution for Meeting Demands during Deficient Periods, *Challenges Faced and Suggested Strategies, Market driven Supply Chain Activities.

UNIT III: Procurement Processing and Packaging

Different Types of Purchases of Agricultural Produce, Post-harvest Processing and Value Addition, Packing and Packaging of Agricultural Produce, Laws relating to Packaging of Goods.

UNIT IV: Handling and Transport system in Agri Logistics

Role of Handling and Transport System in Effective Supply Chain Management. System for Handling of Agri produce during Different Stages of Supply Chain, *Transport Systems - Air Freight/Sea Freight/Roadways and Railways, Reefer Logistics, Terminologies Used in Transportation Sector, Significance of Integrated Logistics, #Multi-modal Transportation and its Advantages, Laws Governing Transport and Shipping of Goods, INCOTERMS 2010. UNIT V: IT Integration in Agri Logistics

Importance of Information in Logistics Management, *Concept of E- Logistics, MIS for Effective Logistics Management, Important IT Tools for Improving Effectiveness of Agri-Logistics,# GPS Technology in Agri Logistics.

Extra Credit:

Case Study

* Self Learning

Activities: 1.Quiz 2.Group Discussion

Text Books

- 1. Sundharam, K.P.M. and Sundharam., E.N. Business Economics, Sultan Chand and Sons, New Delhi-2, 2010.
- 2. Aryamala, T. Business Economics, Vijay Nichole Imprints Pvt. Ltd., Chennai, 2012. Books for Reference
- 1. Sankaran, S. Business Economics, Margham Publications, Chennai -17,2013.
- 2. Appannaiah and Reddy, Economics for Business, Himalaya Publishing, Mumbai, 2013.
- 3. Ahuja, H.L. Business Economics, S.Chand and Co, New Delhi, 2016.
- 4. Lipsey, R.G. and Chrystal, K.A. of Economics, Oxford: University Press, 2011.
- 5. Ramsfield, E. Micro Economics, W.W Norton and Company, New York, 2012. Online Resources:

Swayam course	• <u>http://ugcmoocs.inflibnet.ac.in/ugcmoocs/view_module_pg.php/1109</u>
E-Content	1. <u>https://www.youtube.com/watch?v=_sdw5brJWD0</u>
	2. <u>https://www.youtube.com/watch?v=356_pioFiss</u>
Other online	• <u>http://sucommerce.org/download/sem1/Managerial%20Economics%2</u>
resources	<u>0.pdf</u>
	• https://cablogindia.com/business-economics-notes-for-ca-foundation/
	• <u>https://www.tutorialspoint.com/managerial_economics/managerial_ec</u>
	onomics_tutorial.pdf
	• <u>https://examupdates.in/bcom-economics-notes/</u>
	• <u>http://www.ddegjust.ac.in/studymaterial/bba/bba-103.pdf</u>

Relationship Matrix for COs, POs and PSOs

Course	Programme Outcomes				nme Outcomes Programme Specific Outcomes				nes	
Outcomes	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	2	2				2	2		2
CO2	2	2	2	2			2	2	2	2
CO3	2	2	2			1	2	2	2	2
CO4	2	1	2			1	1		2	
CO5	2	3	3			1	2	2	2	2
AVG	2	2	2.2	1.8		0.8	1.8	1.6	1.6	1.6

Notes :1-Slight (Low) 2- Moderate (Medium) 3- Substantial (High), "" Indicates there is no correlation

Programme: BMS CBCS Syllabus – Outcome Based Education (OBE)
(For those who have joined during the Academic Year 2021-2022 onwards)

Part –III: Core Course II	(CC-II)		Semester - I	
Course Title: Warehousing for Agricultural Produces				
Course Code: U22BM2	Hours per week:6		Credit :4	
CIA: 25 Marks	ESE: 75 Marks		Total: 100 Marks	

Objective:

• To inculcate knowledge of importance of warehousing in supply chain management.

Course Outcomes (COs)

After completing this course, the student will be able to:

- CO1: Explain introduction to warehousing and issues and challenges in post-harvest management.
- CO2: State method of selecting and gainful ness of using various types standard operating procedure of a warehouse.
- CO3: Identify the need forinformation management in a warehouse.
- CO4: Know the uses of warehouse receipt management.
- CO5: Understand various components of opportunities and challenges in warehousing.

UNIT I: Introductionto Warehousing

Issues and Challenges in Post-harvest management of agricultural produce, Concepts of Warehousing, Services offered by Warehouses, Structural and Functional divers it Warehouses,Important law concerning warehouses, Use of Technology in warehouse management.

UNIT II: Standard OperatingProcedureofaWarehouse

Need for a Standard Operating Procedure to run a warehouse, Procedure for receipt of goods in warehouse, #Strategy for risk mitigation, Procedure for delivery of goods to depositor, * Human Resource Management.

UNIT III: InformationManagementinaWarehouse

Key information required to be captured, Maintenance of records pertaining to deposit, storage, quality management, inventory management, delivery, #bank pledge and trading activities, Warehouse Management System involving IT integration in record management and *Management Information System.

UNIT IV: WarehouseReceiptManagement

Conceptual Framework of Warehouse Receipt, Negotiability of Warehouse Receipt, Components of an Organized Warehouse Receipt System, Laws governing Negotiable Warehouse Receipt System, #Electronic Negotiable Warehouse Receipts. UNIT V: Opportunities and Challenges in Warehousing

Skill Sets required for Warehouse Management, *Warehousing as a business option, Employment Opportunities in Warehousing, Sector analysis of warehousing concerning various opportunities, Key Challenges of Warehousing Sector in India. Extra Credit:

Case Study

* Self Learning

Activities: 1. Quiz 2. Data Collection in GDP and NNP 3. Group Discussion

Textbooks

- 1. Course Material Prepared by LSC
- 2. Warehousing Corporations in India: AStudy: O.N. Chhibber,

Reference Books

1. The Indian Warehousing Industry: An Overview: Amitabh Jhingan and Guzder, Cyeus, Earnest and Young and Confederation of Indian Industry (CII), 2013.

Online Resources:

Swayam course	https://onlinecourses.swayam2.ac.in/nou21_ag11/preview
E-Content	• https://www.youtube.com/watch?v=6MKWJJbLa_s
Other online	• https://www.researchgate.net/publication/254558377 WTO and Indi
resources	<u>a's_Agricultural_Trade</u>
	 https://www.insightsonindia.com/indian-economy-
	3/agriculture/agricultural-marketing-and-warehousing/

Relationship Matrix for COs, POs and PSOs

Course	Programme Outcomes				Programme Specific Outcomes				nes	
Outcomes	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	1	1	1		1	1			
CO2	2	2	2			1	2	2		2
CO3	2	2	2	2			2	2	2	2
CO4	2	3	3	3			2	2	3	
CO5		3	3	3	3				3	3
AVG	1.4	1.2	1.2	1.8	.6	.4	1.4	1.2	1.3	1.4

Notes :1-Slight (Low) 2- Moderate (Medium) 3- Substantial (High), " " Indicates there is no correlation

Programme: BMS CBCS Syllabus – Outcome Based Education (OBE) (For those who have joined during the Academic Year 2021-2022 onwards)

Part –III: Allied Course I	(AC-1)		Semester - I		
Course Title:Post Harvest Management					
Course Code: U22ABM1	Hours per	week:3	Credit:3		
CIA: 25 Marks	ESE: 75	Marks	Total: 100 Marks		

Objective:

• To familiarise the post-harvest management practices and related technologies. Course Outcomes (COs)

After completing this course, the student will be able to:

- CO1: Understandthe introduction and principles of post-harvest management
- CO2: Enablepost-harvest handling practices and packhouse operations
- CO3: Explain the post-harvest physiology, packaging and storage methods.
- CO4: Useofpost-harvest management quality and standards
- CO5: Acquire various components of post-harvest management best practices for flowers, tubular and grain crops.

UNIT - I: Introduction and Principles of Post-Harvest Management

Introduction - Horticulture Geography, Area, production and statistics of horticulture and agriculture in India. *Pre-harvest Operations, Field Handling of Agriculture and horticultural produce Scope and importance of post-harvest handling of fruits and vegetables - Scenario of post-harvest sector – global and national level – Pre and post-harvest losses - #Factors influencing Pre and post-harvest losses.

UNIT – II: Post-Harvest Handling Practices and Pack house operations

Maturity indices-harvesting methods-mechanical harvesting. #Field packing, Pack house operations-Pre-cooling – *cooling methods-cold chain. Postharvest treatments to enhances shelf life-heat treatments, fungicides and biologically safe chemical treatments - irradiation, curing, sorting, grading and waxing-methods.

UNIT - III: Post Harvest Physiology, packaging and storage

Post-harvest Physiological and Biochemical Changes after Harvest in Horticultural Produce - Ripening – Role of ethylene in post-harvest technology – *Packaging - Post harvest disorders.

UNIT – IV: PHM Quality and Standards

*Pack house hygiene standards, safety and quality standards adopted for Fruits -Banana, Mango, Apple, Oranges and Grapes; Vegetables –Tomato, Potato and Onion.

UNIT - V: PH Management Best Practices for Flowers, Tubular and Grain Crops

Post-Harvest practices adopted for Flowers, Gerberas, Roses; Tubular crops Cassava, and PH Storage of Grain crops-maize and Corn-#Minimal processing of spice and plantation crops.

Extra Credit:

- # Case Study
- * Self Learning
- Activities: 1. Quiz 2. Data Collection

Text Book

1. Course Material Prepared by LSC

Reference Books

1 Kadar, A.A. 1992. Postharvest Technology of Horticultural Crops. 2nd Edition. University of California.

- 2 Gross,K.C.,Wang,C.Y.,andSaltveit,M.E.(Eds.).(2016).Thecommercialstorageoffruits,veget ables, and florist and nursery stocks. United States Department of Agriculture, Agricultural Research Service.
- 3 Teutsch,BandKitinoja,L.(2019)100under\$100:Toolsforreducingpostharvestlosses.The Post-harvest EducationFoundation,Oregon, USA.
- 4 Rolle, R.S. (2012) Good practices indesign, management and operation of fresh produce pack hous e, Food and Agriculture Organization of the United Nations, Regional Office for Asia and the Pacific, Bangkok.

Online Resources:

Swayam course	• https://www.examrace.com/SWAYAM/SWAYAM-Past-Papers/Post-
	Harvest-Management-of-Fruits-and-Vegetables/
E-Content	• https://www.youtube.com/watch?v=VJ5e_effZV8
Other online	• <u>http://ecoursesonline.iasri.res.in/course/view.php?id=164</u>
resources	 https://postharvest.ucdavis.edu/Library/

Relationship Matrix for COs, POs and PSOs

Course	Programme Outcomes				Programme Specific Outcomes				nes	
Outcomes	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	2	2	1		1	2	2		2
CO2	2	2	2	1		1	2	2		2
CO3	3		3	3					2	
CO4		3	3	3	3					3
CO5		3	3	3					3	
AVG	1.4	2	2.6	2.2	.6	.4	.8	.8	1	1.4

Notes :1-Slight (Low) 2- Moderate (Medium) 3- Substantial (High), "" Indicates there is no correlation

(For those who have joined during the Academic Year 2021-2022 onwards)					
Part –III : Core Course III	(CC-III)	Semester - II			
Course Title:Trading in Agri Commodities					
Course Code: U22BM3	Hours per week:6		Credit :4		
CIA: 25 Marks	ESE: 75	Marks	Total: 100 Marks		

Programme: BMS CBCS Syllabus – Outcome Based Education (OBE) For those who have joined during the Academic Year 2021-2022 onwards

Objective

• To provide knowledge on the basics of trading with commodities <u>Course Outcomes (COs)</u>

After completing this course, the student will be able to:

CO1: Know Introduction and Principles of Post-Harvest Management

CO2: Acquire post-harvest handling practices and pack house operations

CO3: Explain the post-harvest physiology, packaging and storage

CO4: Evaluate the use of post-harvest management quality and standards

CO5: Understand various components of post-harvest management best practices for flowers, tubular and grain crops

UNIT – I: Agricultural Marketing:

Concepts and Definitions of Market, Marketing, #Agricultural Marketing, Market Structure, Marketing Mix and Market Segmentation, Classification and Characteristics of Agricultural Markets; Demand, Supply and Producer's Surplus of Agri-commodities:* Nature and Determinants of Demand and Supply off Arm Products.

UNIT – II: Producer's Surplus and Marketing Process

Producer's surplus - meaning and its types, marketable and marketed surplus, factors affecting marketable surplus of agri-commodities; cost based and competition based pricing; market promotion-advertising, personal selling, sales promotion and publicity- their meaning and merits &demerits; marketing process and functions: Marketing process-concentration, dispersion and equalization; *exchange functions - buying and selling; physical functions storage, #transport and processing; facilitating functions-packaging, branding, grading, quality control and labeling (Agmark)

UNIT - III: Market functionaries and marketing channels:

Types and importance of agencies involved in agricultural marketing; meaning and definition of marketing channel; #number of channel levels; marketing channels for different farm products; Integration, efficiency, costs and price spread: Meaning, definition and types of market integration; marketing efficiency; marketing costs, margins and price spread; factors affecting cost of marketing; reasons for higher marketing costs of farm commodities; *Way so reducing marketing costs.

UNIT – IV: Agricultural prices and policy:

Meaning and functions of price; administered prices; need for agricultural price policy. *Study of relationship between market arrivals and prices of some selected commodities; Computation of marketable and marketed surplus of important commodities; Study of price behaviour over time for some selected commodities.

UNIT – V: International Trade:

Concept of International Trade and its need, theories of absolute and comparative advantage. Present status and prospects of international trade in agri-commodities; GATT and WTO; *Agreement on Agriculture (AoA) and its implications on Indian agriculture; IPR GST. Practical Plotting and study of demand and supply curves and calculation of elasticity; #Construction of index numbers; Application of principles of comparative advantage of international trade.

Extra Credit:

- # Case Study
- * Self Learning
 - Activities: 1. Quiz 2. Data Collection in GDP and NNP 3. Group Discussion

Text&ReferenceBooks:

1. CourseMaterialPreparedbyLSC

Online Resources:

Swayam course	 <u>https://www.classcentral.com/course/swayam-commodity-derivatives-and-risk-management-6563</u> https://www.google.com/search?q=trading+in+agri+commodities+swayam&ei=oLyVYtagH_bC4-
E-Content	 https://www.youtube.com/watch?v=_9PwVSCfGFc
Other online resources	 <u>https://www.cmegroup.com/markets/agriculture.html</u> https://extension.missouri.edu/publications/g603

Relationship Matrix for COs, POs and PSOs

Course		Programme Outcomes					Programme Specific Outcomes			
Outcomes	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	2	2				2	2		2
CO2	2	2	2	2			2	2	2	2
CO3	2	2	2			1	2	2	2	2
CO4	2	1	2			1	1		2	
CO5	2	3	3			1	2	2	2	2
AVG	2	2	2.2	1.8		0.8	1.8	1.6	1.6	1.6

Notes :1-Slight (Low) 2- Moderate (Medium) 3- Substantial (High), "" Indicates there is no correlation

(For those who have joined during the Academic Year 2021-2022 onwards)						
Part –III : Allied Course	II (AC-II)	Semester - II				
Course Title: Quality Control, Assurance & Audit						
Course Code : U22ABM2	Hours per	week:6	Credit :3			
CIA: 25 Marks	ESE : 75	Marks	Total: 100 Marks			

Programme: BMS CBCS Syllabus – Outcome Based Education (OBE) or those who have joined during the Academic Year 2021-2022 onwards

Objective:

• To understand the basic concept of quality and systems of quality management.

Course Outcomes (COs)

After completing this course, the student will be able to:

- CO1: Acquaint basic conceptsof quality and systems of quality management.
- CO2: Understand quality control in agri supply chain
- CO3: Explain the Quality Assurance
- CO4: Analyse the use of quality management systems
- CO5: State the various components of Quality Audit

UNIT – I: Introduction to Quality Management:

Definition of Quality, Evolution of Quality, *Components of Quality, Quality Control, Quality Assurance and Quality Management Systems, Total Quality Management, Monitoring and reporting of quality

UNIT – II: Quality Control in Agri Supply Chain

Concept and Process of Quality Control, Attributes of Quality of Agricultural Produce, Quality Standards, #Quality evaluation and Reporting, Factors affecting grain quality during to rage. Maintaining quality during storage

UNIT – III: Quality Assurance

Concept And process of Quality Assurance, *Management System for Quality Assurance, Different types of Quality Assurance, Quality Assurance during different stages of operation, Quality Planning

UNIT – IV Quality Management Systems

Concept of Quality Management System, Different Types of Quality System Standards, ISO – Benefits and types of ISO Standards, ISO Certification requirements and process, #HACCP –Benefits and Process of HACCP Certification, OHSAS Certification

UNIT – V Quality Audit

Significance of Quality Auditing in the Agri Supply Chain, #Components of Quality Audit, Audit for compliance to Quality System Standards like ISO, OHSAS and HACCP0. Extra Credit:

Case Study* Self Learning Activities: 1. Quiz 2. Data Collection 3.Group Discussion

Textbooks:

- 1. Course Material Prepared by LSC
- 2. Total Quality Management: PN Mukherjee

ReferenceBooks:

- 1. A Practical Guide for Implementation of Integrated ISO9001; HACCP System for the Food Processing Industry: Sohrab
- 2. Grain storage engineering and technology: S.Vijayaraghavan

Online Resources:

Swayam course	https://www.classcentral.com/tag/quality-assurance
E-Content	• https://www.youtube.com/watch?v=fQC3NzkfsSM
Other online	• <u>https://safetyculture.com/topics/quality-assurance-and-quality-control/</u>
resources	• <u>https://www.isotracker.com/blog/quality-control-and-quality-</u>
	assurance-whats-the-difference/
	• https://www.iata.org/en/training/courses/security-audit-
	virtual/tscs10/en/

Relationship Matrix for COs, POs and PSOs

Course		Programme Outcomes					Programme Specific Outcomes			
Outcomes	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	2	2	1		1	2	2		2
CO2	2	2	2	1		1	2	2		2
CO3	3		3	3					2	
CO4		3	3	3	3					3
CO5		3	3	3					3	
AVG	1.4	2	2.6	2.2	.6	.4	.8	.8	1	1.4

Notes :1-Slight (Low) 2- Moderate (Medium) 3- Substantial (High), " " Indicates there is no correlation

(For those who have joined during the Academic Year 2021 - 2022 onwards) Part -III Semester - II Course Title: Office Automation Course Code: U22SBE1 Credit: 2 Hours per week:2 CIA: 25 Marks ESE: 75 Marks Total: 100 Marks

School of Commerce Programme: BMS CBCS Syllabus - Outcome Based Education (OBE)

Objective:

To familiarize students with the use of MS Office-MS Word, MS Excel & MS PowerPoint.

Course Outcomes (COs)

After completing this course, the student will be able to:

- CO1: Describe the basics of computer and MS word.
- CO2: Know creation of table with the help of MS word and Working with internet.

CO3: Learning about MS- Excel and its plotting graphs

CO4: Demonstrating the basic mechanics and navigation of an Excel spreadsheet.

CO5: Prepare slides using MS-Power Point

UNIT I:

MS- Word- Introduction to Computers - Hardware - Software, Operating System: Windows XP -MS-Paint, Notepad, WordPad, Introduction to MS-Word, Creating, Editing and Formatting Document - Working with Drawing objects - Text Manipulation

UNIT II:

Working with Tables – Columns – Labels - Plotting, editing and Filling drawing objects - Bookmark - Header & Footer - Checking and Correcting a document - Creating Labels - Envelops - Mail Merge - Formatted output and Report generation Printing Documents, Working with Internet.

UNIT III:

Ms – Excel - Ms – Excel: Introduction – Data Entry – Cell Formatting - Plotting Graphs – Workbook Features – Library Functions

UNIT IV:

Conditional Functions and Data Sorting - Limit the data on a worksheet - Data Validation – Data consolidation - Chart creation - Checking and Correcting Data - Tracking and Managing Changes- Advanced Features

UNIT V:

MS - PowerPoint- Introduction - Creating, Editing and Formatting Presentation - Applying Transition and Animation Effects - Applying Design Templates - Viewing and Setting up a Slide Show - Navigating among Different Views - Ms Outlook: Introduction to Folder List – Address Book.

Extra Credit: # Case Study

* Self Learning Activities: 1. Quiz 2. Chartwork

TEXTBOOKS

- 1. Jill Murphy, Microsoft Office Word- Comprehensive Course, LabyrinthPublications, 2003.
- 2. McGraw-Hill/Irwin-Deborah Hinkle, Microsoft Office 2003 PowerPoint: AProfessional Approach, Comprehensive w/ Student CD, New Delhi, 2003.
- 3. Nellai Kannan, C., MS-Office, Nels Publications, Tamil Nadu, 2002.

Reference Books:

1. V.Rajaraman P.K. Sinha Sanjay Saxena B.P.B. Publications Vikas Publication house Pvt Ltd.

2. M.Geetha: Complete guide for Step-byStep Learning Quick and Easy Reference for learning MS Office 2010

Online Resources:

Swayam course	<u>https://onlinecourses.swayam2.ac.in/nou21_cm02/preview</u>
E-Content	• <u>https://www.msuniv.ac.in/images/e-</u>
	content/6.Computer%20%20Fundamentals%20and%20Office%20Aut
	<u>omation.pdf</u>

School of Commerce Programme: BMS CBCS Syllabus – Outcome Based Education (OBE) (For those who have joined during the Academic Year 2021 – 2022 onwards)

(1 of those who have joined during the reducine real 2021 2022 onwards)						
Part –III: Core Course IV (Co	C – IV)	Semester - III				
Course Title: Cold Chain Technology						
Course Code: U22BM4	Hou	rs per week: 3	Credit : 3			
CIA : 25 Marks	ES	ESE: 75 Marks Total : 100 N				

Objective:

• To make students understand the establishment of a strong cold chain facility for agricultural horticultural, diary, fish & marine, poultry & meat products by starting linkage from framer gate to the consumer, end to end, and reducing losses through efficient storage, transportation, and distribution.

Course Outcomes (COs)

After completing this course, the student will be able to:

CO1: Acquaint basic concepts of cold chain technology.

CO2: Understand the cold chain technology

CO3: Explain the cold chain technology

CO4: Analyse the use of cold chain technology systems

CO5: State the various components of cold chain technology

UNIT – I: Introduction to Cold Chain :

Preservation of Agricultural Produce, Respiration of Fresh Produce, Role of Temperature and Humidity, Storage conditions, Integrity of Cold Chain.

UNIT – II: Cold Chain Infrastructure

Cold Chain Components, Refrigeration and Insulation systems, Precooling in Farm, Cold Storage Types, Special Technologies adopted in Cold storages, Distribution centeres, Ripening systems

UNIT - III: Cold Chain Monitoring Systems

Temperature and Relative Humidity Measurement in Cold Chain, Automated Monitoring and Recording Systems, Remote monitoring systems

UNIT – IV: Reefer Logistics

Reefer Container in Agri logistics, Working principles, chilled and

Frozen Cargos, Transporting Fruits and Vegetables, Transporting Dairy products, Reefer Cargo ISO containers, Mixed loads, Good Transporting practices.

UNIT – V: Good practices adopted in Cold Chain

Cold Chain practices adopted for Fresh Fruits and Vegetables to Domestic and Export Markets, SOP for Selected F &V commodities, Traceability.

Textbooks:

1. Course Material Prepared by LSC

Reference Books:

1. Industrial Refrigeration ,Principles ,Design and Applications,P.C.Koelet. Publishers ,Marcel Dekkar Inc.

Online Resources:

Swayam course	<u>https://www.classcentral.com/tag/cold</u> chain technology
E-Content	 https://transportgeography.org/contents/applications/cold-chain- logistics/cold-chain-techology/
	• https://www.youtube.com/watch?v=2OqQ2cUm-Zg

Relationship Matrix for COs, POs and PSOs

Course		Programme Outcomes					Programme Specific Outcomes			
Outcomes	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	2	2	1	1	1	2	2	1	2
CO2	2	2	2	1	1	1	2	2	1	2
CO3	3	2	2	2	1	1	1	3	1	2
CO4	1	3	3	3	3	1	1	1	1	3
CO5	1	3	2	3	2	1	2	1	3	1
AVG	1.8	2.4	2.2	2	1.6	1	1.6	1.8	1.4	2

Notes :1-Slight (Low) 2- Moderate (Medium) 3- Substantial (High), " " Indicates there is no correlation

Programme: BMS CBCS Syllabus – Outcome Based Education (OBE)

(For those who have joined during the Academic Year 2021-2022 onwards)

Part –III : Core Course V	(CC- V)		Semester - III
Course	Fitle : Risk Assess	ment Managen	nent
Course Code : U22BM5	Hours per week:3		Credit :2
CIA: 25 Marks	ESE : 75 Marks		Total: 100 Marks

OBJECTIVE:

• To provide knowledge on the understanding of various risks in agri supply chain and risk management approaches

Course Outcomes (COs)

After completing this course, the student will be able to:

CO1: Familiarise the risk involved in the supply chain management

CO2: Enable risk management framework

- CO3: State the insurance for risk management
- CO4: Examine the use of handling major perils in agri supply chain
- CO5: State various components of regulatory frame work for risk management in agri supply chain

UNIT - I: Introduction to Risk in Supply Chain Management

Concept of Peril & Hazard, Introduction to risk, Risk Categories, #Types of Risk, Risk Prioritisation, Concepts of Risk Avoidance, Concept of Risk Handling, Effective Risk Management

UNIT – II: Risk Management Frame work

Planning to mitigate risk – Identifying potential Risks, Causes of Major Risks, * Standard Operating Procedures for Risk Mitigation, Inspection and Audits for Risk Mitigation, Strategies for Managing Market Risks, Measures to prevent frauds in Agri Supply Chain, Information technology and risk management. Management of Health and Safety Risk in warehousing.

UNIT – III: Insurance for Risk Management

Concepts of Insurance, Nature and Functions of Insurance, Types of Insurable Risks in Handling and Storage of Agricultural Produce, #Types Insurance Policies for Security against Major Risks. Effective Management of Insurance for Risk Mitigation.

UNIT – IV: Handling Major Perils in Agri Supply Chain

Prevention and Management of Fire, Types of Fire, Fire Fighting Infrastructure, *Handling Flood and Water Inundation, Safety and Security of Agricultural Produce, Infrastructure for Agri Produce in Storage and Transport, Processes for effective Security Management. UNIT - V: Regulatory Framework for Risk Management in Agri Supply Chain

Important regulations for mitigating risks in Agri Supply Chains, Significance and Process for Regulatory compliance, Identification of Non-Insurable Risks, *Indemnification for Risk Mitigation.

Extra Credit:

- # Case Study
- * Self Learning

Activities: 1. Quiz 2. Group Discussion

TextBooks

- 1 Course Material Prepared by LSC
- 2 Supply Chain Risk Management–Vulnerability and resilience in Logistics: Donald Waters, Kogan Page Limited

ReferenceBooks

- Report on Insurance Policies and Recommendations for Adequacy of Sum Insured: Warehousing Developmentand Regulatory Authority
- 2 Health and Safety in Logistics: Assessing and Avoiding Risk in Warehousing and Transportation: JerryRudd

Online Resources:

Swayam course	• <u>https://www.classcentral.com/course/swayam-financial-derivatives-</u> risk-management-14056
E-Content	 <u>https://www.youtube.com/watch?v=ohkrD9Md0M8</u> https://www.youtube.com/watch?v=xyANahuhGs0
Other online resources	 <u>https://www.coursera.org/courses?query=risk%20management</u> <u>https://www.lucidchart.com/blog/risk-assessment-process</u> <u>https://www.assp.org/resources/risk-assessment-and-management-for-safety-professionals</u>

Relationship Matrix for COs, POs and PSOs

Course	Programme Outcomes					Programme Specific Outcomes				
Outcomes	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	1	1	1		1	1			
CO2	2	2	2			1	2	2		2
CO3	2	2	2	2			2	2	2	2
CO4	2	3	3	3			2	2	3	
CO5		3	3	3	3				3	3
AVG	1.4	1.2	1.2	1.8	.6	.4	1.4	1.2	1.3	1.4

Notes :1-Slight (Low) 2- Moderate (Medium) 3- Substantial (High), " " Indicates there is no correlation

Programme: BMS CBCS Syllabus – Outcome Based Education (OBE) (For those who have joined during the Academic Year 2021-2022 onwards)

Part –III : Allied Course II	I (AC- III)	Semester - III
C	ourse Title: Pest Management	
Course Code : U22ABM3	Hours per week:2	Credit :2
CIA: 25 Marks	ESE : 75 Marks	Total: 100 Marks

OBJECTIVES:

- To get knowledge about various types of pests associated with stored produces.
- To learn about various methods for managing insect and non-insect pests during the storage of agricultural produces.

Course Outcomes (COs)

After completing this course, the student will be able to:

CO1: Understand the need for pest management

CO2: Find storage pests and their significance in the supply chain

CO3: Explain the methodology for control of insect pests

CO4: Determine the methodology for control of non-insect pests

CO5: Understand various components of integrated pest management in storage

UNIT - I: Introduction to Pest and need for their Management

Definition of Pest, Major categories of Pests, Significance of Pests in Storage and handling of Agricultural Produce Laws concerning Pests in Storage– #Food Safety and Standards Act, 2006, Insecticides Act, 1968

UNIT – II: Important Storage Pests and their Significance in Supply Chain

Micro-organisms – Fungi and Bacteria in Storage, Nature of Damage of Fungi and Bacteria, Insects and Mites Storage Pests,* Category of Insect Pests, Important Insect Pests and their characteristics, Sources of Insect Infestation and detection of Hidden Infestation, Nature of Damage of Insects and Mites, Important Rodent Pests, their habits and biology, Nature of Damage of Rodents, Important Birds Pests, Causes and Nature of Bird Infestation

UNIT - III: Methodology for control of Insect Pests

Prophylactic treatment for Insect control, Important insecticides, *Formulations of insecticides, Insecticide application equipment, dosage and frequency of important in pesticides for prophylactic treatment, Precaution during spraying of Insecticides, Fumigation for curative treatment of food grains in storage, types of fumigation, important fumigants and their dosages/ exposure period, #Fumigation Equipment, Fumigation process, Precautions during Fumigation

UNIT - IV: Methodology for control of Non-Insect Pests

Management of Fungi and Bacteria during storage, management of Rodent Pests, Signs of

Rodent attack, *Preventive control of Rodent Pests, Mechanical control of Rodents, Chemical Control of Rodents, Poison Baiting, Burrow Fumigation for Rodent Control, #Methods for Physical and Mechanical Control of Birds in Storage.

UNIT - V: Integrated Pest Management in Storage

What is IPM, Components of IPM, #Ideal conditions for Pest Development, Components of IPM – Sanitation, Understanding relation between temperature/moisture and pest population, monitoring pests, adoption of preventive methods, judicious application of curative methods of pest management, *Management of pests in the supply chain, Strategies for IPM

Extra Credit:

- # Case Study
- * Self Learning
- Activities: 1. Quiz

Textbooks:

- 1. Course Material Prepared by LSC
- 2. Pests of Stored Grainsand their Management M.C.Bhargava, Publ. NIPA

ReferenceBooks:

1. Insect Pests of Stored Grain-Biology, Behaviour and Management Strategies-Ranjeet Kumar, Apple Academic Press.

Online Resources:

Swayam course	• http://www.aau.in/training-programme-integrated-pest-management- ipm
E-Content	 <u>https://www.classcentral.com/course/youtube-agriculture-integrated-pest-management-ipm-47912</u>
Other online	<u>https://nptel.ac.in/courses/126104003</u>
resources	 https://www.epa.gov/ipm/integrated-pest-management-tools- resources-support-ipm-implementation

Relationship Matrix for COs, POs and PSOs

Course	Programme Outcomes					Programme Specific Outcomes				
Outcomes	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	1	1			1	1			
CO2	1	3	3	3		1	1		3	
CO3	2	3	3	3			2	2	3	2
CO4		3	3	3	3					3
CO5		3	3	3	3				3	3
AVG	.8	2.6	2.6	2.4	1.2	.4	.8	.4	1.8	1.6

Notes :1-Slight (Low) 2- Moderate (Medium) 3- Substantial (High), " " Indicates there is no correlation

Programme: BMS CBCS Syllabus – Outcome Based Education (OBE) (For those who have joined during the Academic Year 2021-2022 onwards)

Part –III : Allied Course IV	/ (AC- IV)	Semester - III		
Course Title :	Handling of Fresh	Produces – Va	alue Chain	
Course Code: U22ABM4	Hours per	week:2	Credit :2	
CIA: 25 Marks	ESE : 75 Marks		Total: 100 Marks	

OBJECTIVES:

• To develop a knowledge and understanding of the market requirements for fresh produce.

Course Outcomes (COs)

After completing this course, the student will be able to:

- CO1: Familiarise the concept of the fresh market in the pack house
- CO2: Able to understand important value addition of fresh produce

CO3: State the value creation systems

CO4: Examine suitable methodologies for fresh-cut packing

CO5: Know various components of e-commerce delivery

UNIT - I: Introduction to Fresh Produces

Introduction, Preparation for the Fresh market in Pack house, categories for Fresh Produce.

UNIT – II: Value Addition of Fresh Produce Sanitation, *Pre-cutting, Canning, Dehydration, Solardrying, Blanching, and steaming

UNIT – III: Value Creation Systems

Tropical Fruits Ripening, Degreening, #Colour Sorting and Grading techniques

UNIT - IV: Fresh Cut Packing

Retail packing for Fresh F&V,cartons and crates, *Special packing techniques MAP, Shrink Wrapping

UNIT - V: Ecommerce Delivery

Ecommerce for Fresh produce, #Opportunities and Challenges in last mile delivery systems.

Extra Credit:

Case Study

* Self Learning

Activities: 1. Quiz

TextBooks

1. CourseMaterialPreparedbyLSC.

Online Resources:

Swayam course	 <u>https://naip.icar.gov.in/download/naip-value-chain-2.pdf</u> https://www.google.com/search?q=handling+of+fresh+produces+%E2 %80%93+value+chain+managemen+swyamt
E-Content	 <u>https://www.youtube.com/watch?v=iOyPNhqLGBQ</u> https://www.youtube.com/watch?v=L-GST2KvDgQ
Other online resources	 https://www.routledge.com/Cold-Chain-Management-for-the-Fresh- Produce-Industry-in-the-Developing/Tokala- Mohammed/p/book/9780367498191

Relationship Matrix for COs, POs and PSOs

Course	Programme Outcomes					Programme Specific Outcomes				
Outcomes	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	2	3			2	2		2	
CO2	2	3	2		1		3	3		1
CO3	2	1	3			1	2	3		
CO4	1		3	3	2				3	3
CO5	2			2	3	2		3		3
AVG	2.00	1.2	2.2	1.00	1.2	1.00	1.4	1.8	1.00	1.4

Notes :1-Slight (Low) 2- Moderate (Medium) 3- Substantial (High), " " Indicates there is no correlation

Programme: BMS CBCS Syllabus – Outcome Based Education (OBE) (For those who have joined during the Academic Year 2021-2022 onwards)

Part –III : Core Course VI	(CC-VI)	Semester - III		
Course T	itle : Mechanisatio	on in Agri Log	istics	
Course Code : U22BM6	Hours per week:2		Credit :2	
CIA: 25 Marks	ESE : 75 Marks		Total: 100 Marks	

OBJECTIVE:

• To familiarize with the various mechanizers and innovative technologies adopted in agri logistics.

Course Outcomes (COs)

After completing this course, the student will be able to:

CO1: Know the concept of mechanisation in agri logistics.

CO2: Comprehend the mechanisation in product handling and transportation.

CO3: Provide knowledge on the advancement in automated systems for storage management.

CO4: Understand the methodology for automation in tracking and traceability.

CO5: Equip the role of blockchain technology in agriculture.

UNIT - I: Introduction to Mechanisation in Agri-Logistics

Introduction to mechanisation in agriculture–field logistics–transforming agriculture through mechanisation– transportation method for different commodities– *benchmarking.

UNIT - II: Mechanisation in Product Handling and Transportation

Product handling methods at farm level for Food grains-Automated system for Cleaning/ grading, Testing, Weighing, Packaging, Loading/ Unloading, Transportation and in transit (containerisation, trailers, shuttle systems), #Traceability Options (Quick response (QR) code, Bar Code, RFID Tagging)

UNIT - III: Advancement in automated systems for storage management

Automated system for storage management including Strapping/Wrapping, Palletisation, Warehouse automation systems - Forklifts, Pallet Trucks, Docklevellers, Mobile Bag Stackers, Trolleys, Conveyors, Silos, #Automated Storage and Retrieval Systems (AS&RS)

UNIT - IV: Automation in Tracking and Traceability

*Vehicle tracking and monitoring (GPS), Radio – Frequency Identification (RFID), Automatic Guided Vehicle System (AGVS), Real Time Warehouse Control Systems (RTWCS), #Computer Integrated Warehousing (CIW), Radio Frequency Data Terminals (RFDT).

UNIT - V: Introduction to Blockchain Technology

Blockchain technology- Blockchain in agriculture- sustainable and industrial agriculture – transparency and trust in agri food – *Future of blockchain in agriculture.

Extra Credit:

- # Case Study
- * Self Learning

Activities: 1. Quiz 2. Data Collection in GDP and NNP 3. Group Discussion

Textbooks:

1. Course Material Prepared by LSC

Online Resources:

Swayam course	• <u>https://agricultureandfoodsecurity.biomedcentral.com/articles/10.1186</u>
	<u>/s40066-018-017</u>
	• https://www.classcentral.com/course/swayam-farm-machinery-14050
E-Content	• <u>https://www.youtube.com/watch?v=FnpUw_aLIBA</u>
	• https://www.youtube.com/watch?v=
Other online	<u>https://www.jica.go.jp/jica</u>
resources	ri/publication/booksandreports/175nbg0000004ae

Relationship Matrix for COs, POs and PSOs

Refutionisin	Relationship Matrix for COS, 1 OS and 1 DOS									
Course		Programme Outcomes					Programme Specific Outcomes			
Outcomes	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2		2	2		1	2	2	2	
CO2	2	2	2	2			2	2	2	
CO3	2	2	2	2			2	2	2	2
CO4	2	2	2	2		1	2	2	2	2
CO5		3	3	3					3	3
AVG	1.6	1.8	2.2	2.2		0.4	1.6	1.6	2.6	1.4

Programme: BMS CBCS Syllabus – Outcome Based Education (OBE) (For those who have joined during the Academic Year 2021-2022 onwards)

Part –III : SBE2			Semester - III
Course	Title : Desktop Pu	blishing -Theo	ory
Course Code : U22SBE2	Hours per w	veek:2	Credit :2
CIA: 25 Marks	ESE : 75 N	Aarks	Total: 100 Marks

OBJECTIVE : To understand the fundamentals & concepts of Adobe Photoshop and Corel Draw

Course Outcomes (COs)

After completing this course, the student will be able to:

CO1: Know the concept of Photo shop for making graphics

CO2: Comprehend the different color models and concepts of layers in Photoshop

CO3: To impart the knowledge in order to create animations

CO4: Apply different kind of transformation, grouping, special effects etc.

CO5: To give students the skills to create business cards, pamphlets, banners, calendars etc

UNIT I:

Photoshop Tools : Move, Type, Marquee, Lasso, Crop, Shapes, Healing, Brush, Patch, Cloning

Stamp, Eraser, Gradient, Blur, Smudge, Dodge, Pen, Eye Dropper, Patch selection and Zoom tool.

Laver: New layer, Layer set, Duplicate layer, Rasterize and Merge down

Layer Styles: Drop shadow, inner shadow, outer glow & inner glow, Bevel and Emboss, Gradient overlay, Stroke. Text formatting

UNIT II:

File: Save, File formats, Page set up.

Edit: Check spelling, Copy merged, Fill, Transform, Define pattern.

112:m. Motion blur, Twirl, lens flare, Glowing edges, lighting effects, solarize, water paper,

Stained glass, Mosaic Tiles.

Window: Character and Paragraph settings.

COREL DRAW:

UNIT III:

<u>Drawing Tools:</u> Pick, Shape, Knife, eraser, Smudge, Roughen brush, free transform, Zoom ,hand, Free hand, Bezier, Artistic, Pen, Poly line, Point, Interactive connective, Spiral tool. <u>Colour Tool:</u> Paint Bucket Tool, Eye Dropper, Fill Tools. Fill Options, Stroke Options.

UNIT IV:

<u>Special Effects:</u> 3D effects, Add perspective, Blend, Contour, Artistic media, lens, and Power clip. <u>Shaping Options:</u> Weld, trim, Intersect.

Text Effects: Format text, bullet, and fit text to path, align and straighten, spell check.

File Menu: Save, Save as, Import, Page set Up.

PAGE MAKER:

UNIT V:

<u>Page Maker Tools:</u> Pointer, Rotate, Line, Rectangle, Ellipse, Polygon, Hand, Text, Crop, Rectangle frame tools. Text layout, Style and Objects: Alignments, Styles, fill, frame options, Stroke, Group, Lock, unlock, mask, polygon settings character and paragraph settings.

<u>Text Editing</u>: Edit story: Undo, Redo, Cut, Copy, Paste, paste Special, Spelling check and Find. File: Page set up, save, Save as.

TEXTBOOKS

- 1. CorelDraw IN Simple Steps Shalini Gupta Corel DRAW Bible DEBORAH MILLER
- Teach Yourself Adobe Photoshop Rose Carla Adobe Photoshop Cs Classroom in a Book by Adobe Press.
- Using Microsoft Word Asmita Bhatt Pagemaker In Easy Steps Scott Basham Ctoa Material By Genesis.

(For those who have joined during the Academic Year 2021-2022 onwards)						
Part –III : SBE2			Semester - III			
Course Title : Off	Course Title : Office Automation & Desktop Publishing -LAB					
Course Code : U22SBE3 P	Hours per	week:2	Credit :2			
CIA: 25 Marks	ESE : 75	Marks	Total: 100 Marks			

Programme: BMS CBCS Syllabus – Outcome Based Education (OBE) For those who have joined during the Academic Year 2021-2022 onwards

UNIT I:

Office Automation

- 1. MS Word: Text Formatting, Mail Merge
- 2. Ms Excel: Implement the Statistical & Mathematical Function

(Using Min, Max, Median, Average, Standard Deviation, Correlation, Logical _if Condition) for the given data.

Prepare a Chart for a given Data using Pie diagram / Histogram

UNIT II:

Photoshop

- **3**. Design a College Brochure / Birthday Card.
- 4. Cropping, rotating and Overlapping the image.
- 5. Create a single image from Multiple image.
- 6. Creating an image with multilayer's.

UNIT III:

Corel Draw

- 7. Design a Visiting Card \ Greeting Card using Draw & Text tools.
- **8**. Create a logo for a Company \ College.

UNIT IV:

Page Maker

9. Type and format a letter using text tool.

10.Prepare a Invitation for College Day /Sports Day.

Programme: BMS CBCS Syllabus – Outcome Based Education (OBE) (For those who have joined during the Academic Year 2021-2022 onwards)

Part –III : NME -	1		Semester - III
Cours	s of Accountance	су	
Course Code : U22NME1	Hours per	week:2	Credit :2
CIA: 25 Marks	ESE : 75	Marks	Total: 100 Marks

OBJECTIVES:

• To learn basic principles of accountancy and to prepare of sole trader

. Course Outcomes (COs)

After completing this course, the student will be able to:

CO1: Define basic accounting concept and conventions

CO2: Paraphrasing the need of subsidiary books

CO3: Interpret the bank reconciliation statement

CO4: Compute the depreciation under two methods

CO5: Construct final accounts with its adjustments

UNIT – I: Journal and Ledger

Definition of Accounting -Accounting Concepts and Conventions-Double entry system-Rules -Advantages-Journal -Ledger -Trial Balance.

UNIT -- II: Subsidiary Books

Purchase Day Book-Sales Day Book-Cash Book-Petty Cash Book.

UNIT -- III: Bank Reconciliation Statement

Bank Reconciliation Statement -Purpose-Preparation(Simple Problems Only).

UNIT – IV: Depreciation Accounting

Depreciation Accounting-Meaning -Causes-Methods -Straight Line Method-Written Down Value Method(Simple Problems Only)

UNIT - V

Final Accounts of Sole Trader- Adjustment and Closing Entries-(Simple Problems Only).

Extra Credit:

Case Study

* Self Learning

Activities: 1. Quiz 2.. Group Discussion 3. Chart Work

Marks Scheme

Theory:20% Marks Problems:80%	Total 75 Marks
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Text Book

*Reddy,T.S.,&Murthy,Y.(2021).FinancialAccounting,Margham Publications,Chennai.

Reference Books

- Jain, S.P., & Narang, K.L. (2022). Financial Accounting, Kalyani Publications, Ludhiana
- Gupta,R.L & Radhaswamy,M.(2021).Financial Accounting ,Sultan Chand & Sons.
- Gupta,R.L and Gupta,V.K.(2019).Financial Accounting ,Sultan Chand & Sons,
- New Delhi.
- Shukla,M.C.,Grewal T.S.,&Gupta,S.P.(2021),Advanced Accounts,S.Chand & Co., New Delhi.

Online Resources

Swayam course	 <u>https://onlinecourses.swayam2.ac.in/cec20mg23/preview</u> <u>https://onlinecourses.swayam2.ac.in/cec20mg02/preview</u>
E-Content	 <u>https://www.youtube.com/watch?v=nUgQYs47w2U</u> <u>https://www.youtube.com/watch?v=vuetn</u> PQOvM <u>https://www.youtube.com/watch?v=Y4azRCTTWoU</u> <u>https://www.learnpick.in/prime/documents/ppts/details/4026/accounting-concepts-principles</u>
Other online resources	 <u>https://drive.google.com/file/d/0B V4Kkm2koFqOUk3</u> <u>VDBlb0hNUEk/view</u> <u>https://icmai.in/upload/Students/Syllabus-2012/Study Material</u> <u>New/Foundation-paper2-Revised.pdf</u>

Relationship Matrix for COs, POs and PSOs

Course	Programme Outcomes					Programme Specific Outcomes				nes
Outcomes	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	1	2	2	-	1	1	-	2	-
CO2	1	1	1	-	-	1	1	-	-	-
CO3	2	2	2	-	-	-	2	2	-	2
CO4	2	2	2	-	-	-	2	2	-	2
CO5	-	3	3	3	3	-	-	-	-	3
AVG	1.6	1.8	1.8	1.4	0.6	0.6	1.6	0.8	1.2	1.4

Programme: BMS CBCS Syllabus – Outcome Based Education (OBE) (For those who have joined during the Academic Year 2021-2022 onwards)

Part –III : Core Course VII	(CC- VII)		Semester - IV		
Course Title: Agripreneurship 1					
Course Code : U22BM7	Hours per	week:3	Credit :3		
CIA: 25 Marks	ESE : 75	Marks	Total: 100 Marks		

OBJECTIVE:

• To learn about various processes involved in the development of agripreneurship venture.

Course Outcomes (COs)

- After completing this course, the student will be able to:
- CO1: Understand the concept of entrepreneurship
- CO2: Able to know the process of development of an agri-venture
- CO3: Explain the advancement in opportunities in agripreneurship
- CO4: Use of methodology for Challenges in Agripreneurship
- CO5: Familiarise with the Governmental initiatives towards agripreneurship development

UNIT – I: Introduction to Entrepreneurship

Concept of Entrepreneurship - role - significance and qualities of successful entrepreneurs - various categories of entrepreneurs - growth and development of entrepreneurship in India - need for entrepreneurship development in agriculture - *characteristics of an agripreneur

UNIT – II: Development of an Agri-venture

Innovative thinking and business development plan - selection of potential agri - venture - SWOT analysis - operational and market feasibility - developing a financially viable project - developing organisational framework - #mobilising resources - financial management - diversification - and sustainability of the agri - venture.

UNIT – III: Opportunities in Agripreneurship

Key ingredients of a viable agri - preneurship option - #potential agri - preneurship opportunities in crop/ horticulture production - Input management - Post-harvest processing and value addition, warehousing - marketing and logistics - allied sector opportunities - livestock and poultry - *agri-tourism, agri - advisory services. Economics of a potential agri - venture

UNIT – IV: Challenges in Agripreneurship

Challenges in rural areas - Key challenge of agripreneurs - lack of entrepreneurial culture - financial - infrastructural and market risks - lack of skilled manpower management issues - #technology issues, policy environment - strengthening agripreneurship in the country.

UNIT – V: Governmental initiatives towards agripreneurship development:

*Development of agripreneurs in rural areas - efforts required to wards agripreneurship development - important programmes launched for promotion and development of agripreneurship - institutional support towards agripreneurship - and # regulatory framework for agripreneurship development.

Extra Credit:

- # Case Study
- * Self Learning
- Activities: 1. Quiz 2. Data Collection in GDP and NNP 3. Group Discussion

Text Books

- Course Material Prepared by LSC
- Entrepreneurship Development in Agriculture: Rashmi Singh, Biotech Books

Reference Books

- Entrepreneurship Development: SSKhanka, Chand Publishing
- Rural Entrepreneurship: Mukesh Upadhyaya, Prateeksha Publications

Online Resources:

 https://www.amazon.in/-/hi/G-Valentina/dp/9380222602
 https://www.ramauniversity.ac.in/news-the-new-age-of-
agripreneurship-12-49-771
<u>https://www.g-fras.org/en/agripreneurship/resources.html</u>
 https://www.researchgate.net/publication/339843368_What_is_AGRI PRENEURSHIP

Relationship Matrix for COs, POs and PSOs

Course	Programme Outcomes					Programme Specific Outcomes				
Outcomes	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	1	1			1	1			
CO2	2	3	3	3			2	2	3	2
CO3	2	3	3	3					3	
CO4		3	3	3	3				3	3
CO5	2	3	3	3	3				3	3
AVG	1.4	2.6	2.6	2.4	1.2	.2	.6	.4	2.4	1.6

(For those who have joined during the Academic Year 2021-2022 onwards)						
Part –III :Allied Cou	rse V		Somestor IV			
(AC-V)		Semester - IV				
Course	Fitle: Agricultural	Exports & Imp	oorts			
Course Code : U22ABM5	Hours per	week:3	Credit :3			
CIA: 25 Marks	ESE : 75	Marks	Total: 100 Marks			

Programme: BMS CBCS Syllabus – Outcome Based Education (OBE) For those who have joined during the Academic Year 2021-2022 onwards

OBJECTIVE:

• To familiarise students with procedures for export and import of agricultural produces.

Course Outcomes (COs)

After completing this course, the student will be able to:

CO1: Understand the basic concept of international trade

CO2: Acquire the knowledge on the development of trade policy

CO3: Explain the export procedure and documentation

CO4: Know the strategies of international marketing

CO5: Introduce supporting agencies for export finance

UNIT – I: Introduction to international trade

Meaning and Scope of International trade – Growth of International Trade– challenges in international Trade - Incoterms -Theory of International Trade - Absolute and Comparative advantage – Competitive Advantage -*Trade in agricultural commodities

UNIT – II: Trade Policy

Trade Policy Instruments – #Trade policy impacts of Taxes - subsidies and quotas - welfare effect to free trade –Trade protection measures namely tariffs - quotas and subsidies - voluntary export restraint – GATT and Trade Liberalization – WTO – UNCTAD – Functions and Basic principles–Agreement on Agriculture – Impact on Indian Agriculture.

UNIT - III: Export Procedure and Documentation

Export documents – Procedure for exporting–Sanitary and Phytosanitary measures – Insurance-Trade promotion organisations – Scanning the International Marketing Environment- *Social, Cultural, Economic, Legal and Political.

UNIT - IV: International Marketing Strategy

International Marketing Research – International Market Identification – Segmentation and Selection of Markets - *Entering International Market- Mode of Entry -Product Strategy for International Markets - Standardisation and Adaptation - #Building Global Brands - Pricing Decisions - International Logistics and Promotion.

UNIT – V: Export Finance

Export Finance - Pre-shipment and Post-shipment Credit - Terms of Payment in International Transaction -Risks in International Transaction-Measures and Managing Risk in International Marketing – Emerging Issues in International trade.

Extra Credit:

- # Case Study
- * Self Learning
 - Activities: 1. Quiz 2. Data Collection in Procedure for exporting

Text and Reference Book

1. Course material from LSC

Online Resources:

Swayam course	https://www.naukri.com/learning/agro-export-certification
E-Content	• https://www.youtube.com/watch?v=AYx3mw_f-DU
Other online	<u>https://www.indiabudget.gov.in/budget_archive/es2000-</u>
resources	<u>01/chap820.pdf</u>
	• https://www.nal.usda.gov/legacy/topics/distribution-imports-and-
	exports

Relationship Matrix for COs, POs and PSOs

Course		Program	mme Ou	tcomes		Programme Specific Outcomes				
Outcomes	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	2	2	1		1	2	2		2
CO2	2	2	2		1		2	2		2
CO3	2	2	2	2			2	2	2	2
CO4	2	2	2			1	2	2	2	2
CO5	2	2	2				2	2		2
AVG	2	2	2	0.6	1.2	0.2	2	2	.4	2

Programme: BMS CBCS Syllabus – Outcome Based Education (OBE) (For those who have joined during the Academic Year 2021-2022 onwards)

Part –III : Allied Course- V	'I (AC- VI)	Semester - IV					
Course Title: Legal Aspects of Agriculture (Post – Harvest)							
Course Code : U22ABM6	Hours per	week:3	Credit :2				
CIA: 25 Marks	ESE : 75	Marks	Total: 100 Marks				

OBJECTIVE:

• To learn about various laws on the quality of agricultural produce.

Course Outcomes (COs)

- After completing this course, the student will be able to:
- CO1: Understand the laws relating to agriculture
- CO2: Introduce the concept of quality management of agricultural produce.
- CO3: Explain the transportation logistics.
- CO4: Facilitate to know about the methods of storage/ preservation and warehousing.
- CO5: Acquire knowledge on the marketing of agricultural produces.

UNIT -I: Introduction to Laws relating to Agriculture

Introduction to Post - Harvest management of agricultural produce - key challenges during post - harvest management - #Need for legal and regulatory framework in agriculture during post – harvest - Strategies towards ensuring a higher returns to farmers through an effective post - Harvest management in agricultures.

UNIT - II: Quality Management of Agricultural Produce

Need for quality standards of agricultural produce and their enforcement - #The Seeds Act 1966 - Protection of Plant Varieties and Farmers' Rights Act 2001 (PVR Act) -Agriculture Produce (Grading & Marking) Act 1937 (Act No1 of1937) - Bureau of Indian Standards (BIS) Act – 1986 - *The Food Safety and Standards Act 2006.

UNIT – III: Transportation logistics

Need and significance of Transportation logistics during post - *Harvest, relevance of legal and regulatory framework during transportation of agricultural produce - Motor Vehicles Act 1988 - Multimodal Transportation of GoodsAct 1993 - Carriage by Road Act - 2007

UNIT - IV: Storage/preservation and warehousing

State Warehouses Acts - #Warehousing Corporation Act 1962 - The Legal Metrology (Packaged Commodities) Amendment Rules 2012 - The Indian Contract Act 1872 - The Customs Act 1962 - Destructive Insects and Pests Act 1914 - Insecticides Act 1968 - The Essential Commodities Act 1955.

UNIT – V: Marketing of Agricultural produce

The Indian Sale of Goods Act 1930 - Consumer Protection Act 1986 - Model Agricultural Produce and Livestock Marketing (Promotion & Facilitation) Act 2017 - #The State/ UT Agricultural Produce & Livestock Contract Farming and Services (Promotion & Facilitation) Act 2018 - The Income Tax Act 1961- *The Goods and Services Tax Act 2017 – Multi - State Cooperative Societies Act 1984 (51 of 1985) - Warehousing (Development and Regulation) Act 2006 - The Foreign Trade (Development & Regulation) Act of 1992 - The Forward Contracts (Regulation) Act 1952.

Extra Credit:

- # Case Study
- * Self Learning

Activities: 1. Quiz 2. Data Collection in The Goods and Services Tax Act 2017

TextBooks

- 1. Course Material Prepared by LSC
- 2. Legal Regulation of Agricultural Procurement & Processing in India: Shweta Mohan, Satyam Law International

ReferenceBooks

- 1. Agricultural law in India: overview: Nusrat Hassan, DH Law Associates
- 2. A Practical Guide to Food Laws and Regulations: Kiron Prabhakar, Blooms bury India.

Online Resources:

Swayam course	• https://www.fao.org/3/t0522e/T0522E04.htm
E-Content	• https://www.youtube.com/watch?v=pBMr10PnZcY
Other online	• https://reeis.usda.gov/web/crisprojectpages/0182126-legal-issues-
resources	affecting-a gricultural-production-marketing-and-the-environment. html

Relationship Matrix for COs, POs and PSOs

Course		Program	nme Ou	tcomes		Programme Specific Outcomes				
Outcomes	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1		1	1	1	1	1	1			
CO2	1	1	1	1	1	1	1	1		1
CO3	2		3	3	1				2	3
CO4	1	1	1	1	1	1	1			
CO5	1	2	2	2	2	1	1			2
AVG	1	1	1.6	1.6	1.2	.8	.8	.2	.4	1

(For those who have joined during the Academic Year 2021-2022 onwards)							
Part –III : Core Course VIII	(CC- VIII)	Semester - IV					
Cou	rse Title:Packagir	ng Technology					
Course Code : U22BM8	Hours per	week:3	Credit :2				

ESE : 75 Marks

Total: 100 Marks

Programme: BMS CBCS Syllabus – Outcome Based Education (OBE)

OBJECTIVES:

• To know the importance and different packaging techniques of food packaging.

Course Outcomes (COs)

CIA: 25 Marks

After completing this course, the student will be able to:

- CO1: Know materials used in the packaging of agri products.
- CO2: Familiarize with the wood and paper packaging
- CO3: Explain the glass and metal packaging

CO4: Sate the various types of packaging of foods

CO5: Understand the different packaging methods

UNIT – I: Introduction to Agri-products Packaging

History - Importance - and functions of Food and agri - products packaging -Properties of packaging material in Relation to these functions, package design - *Tests for flexible packaging materials - Materials used in packaging - Rigid - Semi-rigid and flexible -#Types of containers – primary & secondary - flexible & rigid - hermetic & non-hermetic.

UNIT – II: Wood and Paper Packaging

Packaging materials: Wood-structure - types - properties and wooden containers used in packaging - types of Wooden boxes. Paper and paperboard - structure - making properties types and uses of paper and paperboard - CFB boxes and their comparison with wooden containers.

UNIT – III: Glass and Metal Packaging

Packaging materials: Glass-composition, properties, structure, types & manufacture of glass containers, their uses, breakage in glass, closure for glass containers. Metals-properties ofmetals, different metals used in food packaging, steel plate and functions of various constituents of steel, formation of two-piece and three-piece cans, tinning process, tin-free steel, aluminium containers, lacquering-type and applications, aluminium foil, corrosion of metal cans.

UNIT – IV: Packaging of Foods

Packaging Rules - Labelling techniques and procedures -Packaging Techniques and usage of technology - Bar coding Packaging Practices followed for fruits and vegetables and their products, Packaging machines (FFS), Filling machines, vacuum packaging machines.

UNIT – V: Packaging Methods

Aseptic packaging of foods: sterilization of packaging material, food contact surfaces & aseptic packaging systems. Active food packaging – definition, scope, physical and chemical principles involved. Edible films and coatings. Intelligent/ Smart/ Active packaging systems and their food applications, CAP/ MAP.

Extra Credit:

Case Study

* Self Learning

Activities: 1. Quiz 2. Data Collection in GDP and NNP 3. Group Discussion

TextandReferenceBook

- 1. Course Material Prepared by LSC
- Robertson, G.L.(2006). Food Packaging: Principles and Practice (3rded.) published by CRC, Taylor and Francis Group Bocaraton, London NewYorkpress (UnitI,IIIII, IV)
- 3. Food Packaging Technology-Edited by Richardcoles, DerekMcDowelland Mork JKirwan published by Blackwell publishing CRC Press (UnitI)
- 4. Food Science by B.Shrilakshmi published by New Age International, 2003 (UnitII, III, IV)
- 5. Novel Food Packaging Techniques-Edited by Raija Ahvenainen published by Woodhead Publishing Limited
- 6. Richard Coles, Berek McDowell and Mark J.Kirwan. 2003. Food Packaging Technology. Blackwell Publishing Ltd., Oxford, UK

Online Resources:

Swayam course	• <u>https://www.classcentral.com/course/swayam-electronic-packaging-and-manufacturing-13021</u>
	 https://onlinecourses.swayam2.ac.in/cec20_ag06/preview
E-Content	• https://www.youtube.com/watch?v=ARxFwDnj_2c
Other online resources	 <u>https://polymerinnovationblog.com/wp-</u> content/uploads/2017/02/Food-Packaging-Technology.pdf
	 https://onlinelibrary.wiley.com/journal/10991522

Relationship Matrix for COs, POs and PSOs

Course		Program	nme Ou	tcomes		Programme Specific Outcomes				
Outcomes	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	1	1			1	1			
CO2	2	2	2				2	2		2
CO3	2	2	2				2	2		2
CO4	2	2	2	2			2	2	2	2
CO5	1	3	3	3		1	1		3	
AVG	1.6	2	2	1		.4	1.6	1.2	1	1.2

School of Commerce Programme: BMS CBCS Syllabus – Outcome Based Education (OBE) (For those who have joined during the Academic Year 2021-2022 onwards)

Part –III : Core Course IX	(CC-IX)	Semester - IV					
Course Title: Dairy Value Chain & Marketing							
Course Code: U22BM9E	Hours per	week:2	Credit :2				
CIA: 25 Marks	ESE : 75	Marks	Total: 100 Marks				

OBJECTIVE:

• To expose knowledge on dairy operations, processing, and milk products.

Course Outcomes (COs)

After completing this course, the student will be able to:

CO1: Get exposure on the status of dairy production across the world.

CO2: Enable important clean milk production and procurement.

CO3: Explain the dairy operations, processing, and milk products.

CO4: Know the marketing of milk and milk products.

CO5: Understand the functions of milk value chain.

UNIT - I: Dairy production status

Trend and status of dairy products in India and the World; History of dairy development in India – Before and after Operation Flood; Dairy farming in India - Distinctive features; Milk production and consumption. Properties of milk; Composition and components of milk; Nutritional values of milk.

UNIT - II: Clean milk production and procurement

Clean milk; Importance of clean milk; Sources of milk contamination; Microbes in milk; Steps for clean milk production, Cleanliness, Milking process environment; Procurement of milk - Milk collection systems and pricing policies in India.

UNIT - III: Dairy operations, processing, and milk products

Milk collection, Chilling, and milk storage; Milk processing; Marketmilk–variants and standards, special milk; Milk products -Traditional Products, Fat-Rich Dairy Products. Cleaning- Protocols for cleaning and sanitation; Packaging of milk; Quality assurance and assessment; Preservatives, neutralisers, and adulterants in milk – Deduction; Quality and safety regulations.

UNIT - IV: Marketing of milk and milk products

Dairy market structure; Market segmentation; Milk marketing in India – channels, efficiency and integration; Peculiarities and constraints in dairy products marketing; Milk distribution; Price determination.

UNIT - V: Value Chain

Functionaries in Milk Value Chain in India; Government policies on dairy production and marketing; International dairy marketing Regulations, Status and Trends; Technologies in milk marketing; Case studies.

Extra Credit:

- # Case Study
- * Self Learning
 - Activities: 1. Quiz 2. Data Collection in GDP and NNP 3. Group Discussion

Text and Reference Book

- 1. Course material from LSC
- 2. HarryS. Mustard. (1960) An Introduction to Public Health, The Macmillan Co., NewYork.
- 3. Sukumar De(1980), Outlines of Dairy Technology, Oxford University Press, New Delhi
- 4. V.K.Muthu., (2005) A Short Book of Public Health, JAPEE Brother Medical Pub.(P)Ltd New Delhi.
- 5. Walstra, P. Wouters, J.T.M. and Geurts, T.J. 2006. Dairy Science and Technology. CRC Press, New York.

Online Resources:

Swayam course	• <u>https://www.intechopen.com/chapters/56732</u>
	• https://www.tandfonline.com/doi/abs/10.1080/08974438.2020.180538
E-Content	• https://www.youtube.com/watch?v=idL_Um0PmqE
Other online	• <u>https://www.eajournals.org/wp-content/uploads/Marketing-</u>
resources	Framework-in-the-Dairy-Value-Chain-for-Food-Security.pdf
	• https://core.ac.uk/download/pdf/234685538.pdf

Relationship Matrix for COs, POs and PSOs

Course		Program	mme Ou	tcomes		Programme Specific Outcomes				
Outcomes	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	1	1			1	1			
CO2	3	2	2			1	2	2		2
CO3	3					2	2	2		
CO4		3	3	3					3	
CO5	3	1	3	3			2	2	2	2
AVG	2.2	1.4	1.8	1.2		.8	1.4	1.2	1	.8

Programme: BMS CBCS Syllabus – Outcome Based Education (OBE) (For those who have joined during the Academic Year 2021-2022 onwards)

(For those who have Joined during the reductine Fed 2021 2022 on wards)								
Part –III : – NME	- 2	Semester - IV						
Course Title : Principles of Management								
Course Code : U22NME2	Hours per week:2		Credit :2					
CIA: 25 Marks	ESE : 75	Marks	Total: 100 Marks					

OBJECTIVE:

• To develop basic knowledge on principles of management.

Course Outcomes (COs)

After completing this course, the student will be able to:

- CO1: Know the concepts of elements of management knowledge about principles.
- CO2: Acquire the nature of organization
- CO3: Apply concepts to the planning

CO4: Train the students, on stuffily security and selection process in use.

CO5: Summarize on the recruitment and training procedure in management.

UNIT - I : Introduction to Management

Definition -Nature-Functions of Management- F.W.Taylor's Scientific Management-Henry Fayol's Principles of Management

UNIT - II : Planning

Definition-Nature- objectives-Characteristics of Planning-Types of Plans-Steps in planning.

UNIT - III : Organisation

Organisation- Meaning-Principles -Importance -Organisation Structure-Types of Organisation-Organisation Chart-Departmentation-Delegation-Decentralisation-Meaning -Activities.

UNIT - IV : Staffing

Staffing -Meaning - Nature-Elements/Functins-Purpose/Importance-Essentials of a Good Staffing Policy-Processing of Staffing.

UNIT – V: Recruitment, Selection and Training

Recruitment : meaning of Recruitment -Sources of Recruitment#,Internal Sources#,Advantages and Disadvantages of Internal Sources,External Sources,#,Advantages and Disadvantages:Meaning,Importance,Stages in Selection Procedure. Training:Meaning,Elements of Training,Importance of Training,Types of Training.

Extra Credit:

Case Study

* Self Learning

Activities: 1. Draw the flow chart of various types of organisation and Organisation Structure.

Text Book:

* Gupta ,C.B.(2021).Business Organisation and Management,Sultan Chand & Sons, New Delhi.

Reference Books

1. Bhushan, Y.K. (2021). Fudamentals of Business Organisation & Management, Sultan Chand & Sons, New Delhi.

2. Dinkar Pagare. 2019, Business Management, Sultan Chand & Sons, New Delhi.

3. Prasad, L.M. (2020). Principles of Management, Sultan Chand & Sons, New Delhi.

4. Chandran, D. (2020). Management Concepts, Himalaya Publishing House, Mumbai.

Online Resources:

Swayam course	 <u>https://onlinecourses.swayam2.ac.in/imb19 mg09/preview</u> <u>https://www.classcentral.com/course/nyif-capital-markets-18369</u>
E-Content	 <u>https://www.youtube.com/watch?v=CmC8UaCNQFc</u> <u>https://www.youtube.com/watch?v=16C1DIRfzA</u>
Other online resources	 <u>https://www.himpub.com/documents/Chapter1383.pdf</u> <u>https://www.himpub.com/documents/Chapter1696.pdf</u> <u>https://www.himpub.com/documents/Chapter458.pdf</u> <u>https://www.himpub.com/documents/Chapter1383.pdf</u> <u>https://www.tutorialspoint.com/recruitment and selection/recruitment and selection tutorial.pdf</u>

Relationship Matrix for COs, POs and PSOs

Course	Programme Outcomes					Programme Specific Outcomes				
Outcomes	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	1	1			1	1			
CO2	2	2	2				2	2		2
CO3	2	2	2				2	2		2
CO4	2	2	2	2			2	2	2	2
CO5	1	3	3	3		1	1		3	
AVG	1.6	2	2	1		.4	1.6	1.2	1	1.2

Notes :1-Slight (Low) 2- Moderate (Medium) 3- Substantial (High), " " Indicates there is no correlation

School of Commerce

Programme: BMS CBCS Syllabus – Outcome Based Education (OBE) (For those who have joined during the Academic Year 2021-2022 onwards)

Part –III : Allied Course-V	II(AC-VII)		Semester - V
Course	Title: Agri by-pro	ducts & Utilisa	tion
Course Code: U22ABM7	Hours per	week: 8	Credit : 2
CIA: 25 Marks	ESE : 75	Marks	Total: 100 Marks

OBJECTIVE:

• To create knowledge on agri by-products and its utitilsation and value chain for plantation crops.

Course Outcomes (COs)

After completing this course, the student will be able to:

CO1: To impart knowledge on By-Products of various agricultural crops and their commercial utilisation

CO2: To train students on the various processes of by-products utilisation

CO3:Students will possess knowledge and skills to explore business opportunities by utilizing agricultural by-products

CO4:Interest among students to start a business based on agricultural by-products

CO5: Evaluate the By-Products of forestry and sericulture

	Topics
Ι	Agricultural By-Products – Nature and challenges in utilisation
	Introduction to By-products of Various Crops-Agricultural Waste-Crop Waste-Agricultural Residues-Economics
	Products from Agriculture Waste/By-Products-Uses-Potential and Challenges in utilising Agricultural by-products.
II	By-Products of food grains - cereals and pulses
	Paddy, wheat, Millets, and pulses – various by-products after harvest and processing and their uses –technologies for effective utilisation of different by-products
III	By-Products of cash crops – cotton, sugarcane, oil seeds, tapioca, and coconut
	Cotton, sugarcane, oilseeds, tapioca, and coconut – various by-products after harvest and processing and their uses – technologies for effective utilisation of different by-products
IV	By-Products of fruits, vegetables, and flowers
	Selected fruits, vegetables, and flowers – various by-products after harvest and processing and their uses – technologies foreffective utilisation of different by-products
V	By-Products of forestry and sericulture
	Selected crops in forestry and sericulture – various by-products after harvest and processing and their uses – technologies foreffectiveutilisation of different by-products

Extra Credit:

Case Study

* Self Learning

Activities: 1. Quiz 2. Data Collection in GDP and NNP 3. Group Discussion

Textbook & Reference

1. Course Material from LSC

Online Resources:

Swayam course	• https://onlinecourses.nptel.ac.in/noc22_ag09/preview
E-Content	• https://pubs.acs.org/doi/pdf/10.1021/bk-1997-0668.ch001
Other online	• <u>https://www.tandfonline.com/doi/abs/10.1080/87559129.2020.1804930</u>
resources	 https://agrimoon.com/waste-and-by-product-utilization-pdf-book/

Relationship Matrix for COs, POs and PSOs

Course		Program	mme Ou	tcomes		Programme Specific Outcomes				
Outcomes	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	2	2	2	1	1	2	2	1	2
CO2	2	2	2	2	1	2	2	1	1	2
CO3	3	2	2	1	2	1	2	1	2	2
CO4	2	2	2	1	1	1	2	2	3	2
CO5	1	3	3	1	1	1	1	1	3	1
AVG	2	2.2	2.2	1.4	1.2	1.2	1.8	1.4	2	1.8

School of Commerce Programme: BMS CBCS Syllabus – Outcome Based Education (OBE) (For those who have joined during the Academic Year 2021-2022 onwards)

Part –III : Allied Course VII	I (AC- VIII)		Semester - V
Course T	itle: Value chain	for plantation of	crops
Course Code: U22ABM8	Hours per	week: 8	Credit : 2
CIA: 25 Marks	ESE : 75	Marks	Total: 100 Marks

OBJECTIVES:

• To teach knowledge and understanding of basic concepts of value chain management and its practices in plantation crops

Course Outcomes (COs)

After completing this course, the student will be able to:

CO1:To impart knowledge on Value chain for plantation crops and their commercial utilisation

CO2: To create cost-effectiveness and market competitiveness while considering the impacts

of technology, environment, and Government policies.

CO3:Knowledge creation about value chain management processes associated with

Tea,Coffee, Rubber and Cardamom

CO4:Understand about the Implementation of value chain practices in the Plantation Industry

CO5: Evaluate the various promoting plantations institutions

Unit	Topics
Ι	Introduction
	Introduction to Value chain – Components of a Value chain – Primary and Supportive Activities - Agricultural and Plantation Value Chains – Supply Chain Management and Value Chain Management. Benefits of Effective Value Chain Management - Current Scenario of Production, Marketing and Export of Plantation Crops – Tea, Coffee, Rubber and Cardamom, Problems and Prospects in the Plantation industry.
II	Value Chain Mapping in Plantation Crops
	Value Stream Mapping in Tea, Coffee, rubber, and cardamom industry – Key Actors and Key Activities - Processing of Tea, Coffee, Rubber and Cardamom.
III	Value Chain Analysis
	Value chain analysis - Steps and Tools used in VCA - Product development, branding, pricing, and promotion. Marketing and Sales - Distribution Channels – After Sales Service. Market Analysis, Competitive Advantage – Cost versus Differentiation Advantages.
IV	Value Chain Management

	Value chain management- Logistics management - Sourcing, Warehousing, Packaging and						
	Transportation. Value chain financing, Key Cost drivers. Quality Management, Cost-Volume-Profit						
	analysis, Principles of Waste Management - Export management in plantation crops.						
V	Institutions Promoting Plantation Value Chain Activities						
	Tea Board, Coffee Board, Rubber Boardand Spices Board– Evolution, Structure, Activities, Schemes,						
	Promotional programmes, and Policies. Government Regulations in the Plantation industry.						

Textbook & Reference

1. Course Material from LSC

Online Resources:

Swayam course	 <u>https://onlinecourses.nptel.ac.in/noc22_ag13/preview</u> <u>https://onlinecourses.nptel.ac.in/noc22_ag09/preview</u> https://naip.icar.gov.in/download/naip-value-chain-2.pdf
E-Content	 <u>https://www.agmoocs.in/course/ag243-agricultural-value-chain-management</u> https://www.igi-global.com/dictionary/e-entrepreneurship/42271
Other online resources	 <u>https://www.crispindia.org/wp-content/uploads/2020/11/Module-on-Training-of-Trainers-on-VCE-2020.pdf</u> https://www.pipedrive.com/en/blog/value-chain-analysis

Relationship Matrix for COs, POs and PSOs

Course	Programme Outcomes					Programme Specific Outcomes				
Outcomes	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	2	1	1	2	1	2	2	1	2
CO2	2	1	2	2	2	1	1	1	2	1
CO3	1	2	1	2	1	1	1	2	1	2
CO4	2	3	3	3	1	1	1	1	3	2
CO5	1	3	3	3	3	1	1	2	3	3
AVG	1.6	2.2	2	2.2	1.8	1	1.2	1.6	2	2

Programme: BMS CBCS Syllabus – Outcome Based Education (OBE)

(For those who have joined during the Academic Year 2021-2022 onwards)

Part –III : Elective cou	ırse: 1	Semester - V		
Course Title:	Documentation 1	for Exports and	d Imports	
Course Code: U22BM10 E	Hours per	week:7	Credit : 2	
CIA: 25	ESE :	75	Total: 100	

OBJECTIVES:

• To familiarize the student with the basic concept of formalities for export trade, and the documentation process required for import and export.

Course Outcomes (COs)

After completing this course, the student will be able to

- CO1: Get exposure about the export trade and its concepts
- CO2: Recognize the impact of information and communication technologies, especially of the internet in business operations.
- CO3: State about the methods of payments and Finance Recognize the fundamental principles of e.Business and e.Commerce.

CO4: Explain about quality and preshipment inspection

CO5:Know the customs clearance and insurance procedures

Unit	Topics
I	Introduction to Export and Import 12 Hrs Basics of Exports - Classification of goods - Preparation for Exports- Methods of Exporting - Export Marketing Organizations - Functions - Registration formalities IEC Number - Procedure of obtaining IEC Number - RCMC (Registration Cum Membership Certificate) –Export Credit Guarantee Council (ECGC) - Application for import and export of restricted items.
Π	Documentation Framework and Contracts 15 Hrs Aligned Documentation System: Commercial Documents - Auxiliary Commercial Documents - Regulatory Documents - Documents related to goods - Documents related to Shipment - Documents related to Payments - Documents related to Inspection - Documents related to Excisable Goods - Types of Contracts - Export Contracts.
III	Payments and Finance Factors - Methods of receiving Payment - Instruments of Payments- Letter of Credit Pre-shipment Finance - Post-shipment Finance - Post-shipment Credit in Foreign Currency - Negotiation of documents with bank - CENVAT - Duty Draw back
IV	Quality Control and Clearance of Cargo 15Hrs Objective of Quality Control - Methods - Procedure for Pre-shipment Inspection - Role of Clearing and Forwarding Agents – Role of Inspection Agents-Clearance of Cargo Central Excise Clearance Procedure - Central Excise Clearance Option - Shipment of Export Cargo.

V	Customs Clearance, Risk and Insurance Policy 15 Hrs Customs Clearance of Export Cargo -
	Customs Clearance of Import Cargo - Risk: Types - Types of cover issued by ECGC -
	Cargo Insurance. Processing of an export order - Major laws governing export contract.

Text & Reference Books:

- 1. RAMA, GOPAL C. (2008) Export Import Procedures Documentation and Logistics. New Age International Publishers: New Delhi.
- 2. KHUSHPAT, S. J. (2013) Export Import Procedures and Documentation. Himalaya Publishing House: New Delhi.
- 3. PAWAN, KUMAR (2001) Export of India's Major Products Problems and Prospects. New Century Publications: New Delhi.
- 4. KAPOOR, D. C. (2002) Export Management. Vikas Publications: New Delhi.
- 5. CHERUNILAM, F. (2004) International Trade and Export Management. Himalaya Publications: New Delhi.

Online Resources:

Relationship Matrix for COs, POs and PSOs

Swayam course	• https://www.classcentral.com/course/swayam-international-trade- theory-and-empirics-23010
E-Content	 https://www.mlsu.ac.in/econtents/1198_e- book%20on%20export%20import%20procedure.pdf
Other online	1. www.cbec.gov.in/customs/cs-act/cs-act-idx.htm (Central Board
resources	of Excise and Customs - Customs Act, 1962, Customs Tariff
	Act – 1975, Other Acts)
	2. <u>www.epckenya.org/(Export</u> Promotion Council)
	3. commerce.nic.in/MOC/index.asp (Ministry of Commerce and
	Industry)
	4. <u>www.dgft.gov.in/(Directorate General of Foreign Trade</u>)

Course		Program	mme Ou	tcomes		Programme Specific Outcomes					
Outcomes	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	2	3	2	1	1	2	2	3	1	2	
CO2	1	2	2	1	1	1	2	2	1	2	
CO3	2	2	2	2	2	1	1	1	2	1	
CO4	2	1	2	1	2	1	2	2	2	1	
CO5	2	2	2	1	1	1	2	2	1	2	
AVG	1.8	2	2	1.2	1.4	1.2	1.8	2	1.4	1.6	

School of Commerce Programme: BMS CBCS Syllabus – Outcome Based Education (OBE) (For those who have joined during the Academic Year 2021-2022 onwards)

Part –III :		Semester - VI		
C	ourse Title: Appro	enticeship 1		
Course Code: U22BMAPS1	Hours per	week: 7	Credit : 22	
CIA: 250	ESE :	150	Total: 400	

The students would be on boarded in Logistics Processes of companies by the Logistics Sector Skill Council for Apprenticeship Training. The duration of Apprenticeship Training is 6 months. During Apprenticeship Training students would be assigned on-the-job-training by companies. Being a legal engagement, students would receive a monthly stipend during Apprenticeship Training as per the existing norms.

On completion of the Apprenticeship Training, students shall submit Apprenticeship Report in the form of Work Diary to the Collaborating Institutions. The Report would be evaluated and Viva conducted by the Collaborating Institution

School of Commerce Programme: BMS CBCS Syllabus – Outcome Based Education (OBE) (For those who have joined during the Academic Year 2021-2022 onwards)

Part –III : Allied Co	urse		Semester - VI
Course Tit	tle: Seafood & Aqu	aculture Value	e Chain
Course Code: U22ABM9	Hours per	week:8	Credit :2
CIA: 25	ESE :	75	Total: 100

OBJECTIVE:

• To impart knowledge on value chains relating to seafood & aquaculture and egg & poultry products.

Course Outcomes (COs)

After completing this course, the student will be able to

- CO1:To implement the food systems and seafood value chains, in particular, are increasingly contributing to the economic growth and achieving the Sustainable Development Goals.
- CO2:To expose the Globalisation and the increasing complexity of markets, along with international concerns
- CO3To understand the required improved knowledge about how seafood value chains are functioning
- CO4: Analyse the dynamics of price-cost margins along the value chains.
- CO5:Recognise how the value chain analysis approach assists managers and decision-makers develop and implement both strategies and policies.

UNIT – I

Seafood supply chain – main activities - vessels, permits, equipment, fishing, off-loading, processing, distribution#, marketing, wholesale & retail buyers, consumers, wastes; Aquaculture supply chain – Equipment & system for production, supply of feed and seed, farming, processing, distribution, marketing, wholesale & retail buyers, consumers, wastes; Value chain activities – transportation - Cold chain*, infrastructure, finance, marketing, advertisement, procurement; Impacting factors – collaboration, government regulations, marketassess.

UNIT – II

Seafood supply chain management – IUU fishing – Routes of IUU fishing – Third country processors – High Sea Task Force (HSTF) – Regional Fisheries Management Organization (RFMOs)* – Catch & Trade documentation scheme (CDS) – Export Inspection Council – Trade document scheme – Failure of documentation scheme – Mislabeling, transshipment, - Need for electronic documentation.

UNIT – III

Marine Steward Council (MSE) – Chain of custody certification management program – Ecolabelling – Third-party independent certification; FAO Code of Conduct for Responsible Fisheries; European Fish Processors Association (AIPCE); Marine Products Export Development Authority (MPEDA): Corporate Socialresponsibility#.

UNIT - IV

Traceability – Definitions; Product recall; Traceability legislations – EU, US, FSSAI; Voluntary labels – Types of traceability – internal & external; Traceability systems# – paper-based, electronic – RFID, wireless sensor networks (WSN); Components of traceability systems – compatibility, data standard, traceable resource units; Database systems.

UNIT – V

Blockchain technology – Principles, Types of blockchain - public, consortium, private blockchains; asset ownership programme; Blockchain in the supply chain; Blockchain platforms–Bitcoin, Ethereum, Hyperledger; Smart contracts (agreement/ execution); Development and operation considerations; Regulatory and private; Types of states for data source – private certifications#, NGOs; Public policy implications.

Extra Credit:

Case Study

* Self Learning

Activities: 1. Quiz 2. Data Collection in GDP and NNP 3. Group Discussion

List of Textbooks

- 1. Carole R. Engle, Kwamena K. Quagrainie, and Madan M. Dey, 2016. Seafood and Aquaculture Marketing Handbook, Wiley-Blackwell (Publisher) P. 416.
- Miriam Greenwood. 2019. Seafood Supply Chains: Governance, Power and Regulation (Routledge Studies in Food, Society and the Environment), P 326, Routledge (5 February 2019)
- 3. Swapnil Shirke, Nalini Ranjan Kumar, Monalishadevi Sukham, 2012. Marine Fish Supply Chain Management in Mumbai, LAP Lambert Academic Publishing (10 May 2012) P 104,
- 4. Carole R. Engle, 2020. Aquaculture Businesses: A Practical Guide to Economics and Marketing, 5m Publishing (28February 2020),
- Francisco Blaha and Kenneth Katafono, 2020. Blockchain application in seafood value chain, Circular No. 1207 FAO Fisheries and Aquaculture Circular. FAO of the UN, Rome 2020

Online Resources:

Swayam course	• http://www.aau.in/training-programme-integrated-pest-management- ipm
E-Content	• <u>https://www.classcentral.com/course/youtube-agriculture-integrated-pest-management-ipm-47912</u>
Other online	• https://nptel.ac.in/courses/126104003
resources	• https://www.epa.gov/ipm/integrated-pest-management-tools-
	resources-support-ipm-implementation
resources	 <u>https://nptel.ac.in/courses/126104003</u> https://www.epa.gov/ipm/integrated-pest-management-tools-

Relationship Matrix for COs, POs and PSOs

Course	Programme Outcomes					Programme Specific Outcomes					
Outcomes	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	1	1	1			1	1				
CO2	1	3	3	3		1	1		3		
CO3	2	3	3	3			2	2	3	2	
CO4		3	3	3	3					3	
CO5		3	3	3	3				3	3	
AVG	.8	2.6	2.6	2.4	1.2	.4	.8	.4	1.8	1.6	

School of Commerce Programme: BMS CBCS Syllabus – Outcome Based Education (OBE) (For those who have joined during the Academic Year 2021-2022 onwards)

Part –III : Allied Cou	ırse		Semester - VI
Course Tit	le: Egg & Poultry I	Products- Value	Chain
Course Code: U22ABM10	Hours per	week:7	Credit :2
CIA: 25	ESE :	75	Total: 100

OBJECTIVE:

• To Familarise the processing and products of poultry and eggs

Course Outcomes (COs)

After completing this course, the student will be able to

CO1:To understand the practice of processing and products of poultry and eggs

- CO2:To recognise the functional characteristics of value-added poultry products as they affect consumer acceptance, the efficiency of production, and regulatory approval.
- CO3 : To develop an understanding of the introductory principles of poultry meat and egg processing

CO4:To enable students to identify the complexities of poultry processing

CO5:Evaluate the development of further processed products

Unit	Topics
Ι	Introduction to Poultry production
	Poultry production in India and world; Growth of poultry industry in India- Broiler and Layer Industries-
	Importance of Poultry sector, Scope and Constraints; Poultry classification.
II	Poultry production management
	Poultry production management- Housing and Feeding management of Layers and Broilers; Diversified poultry
	production; Management of diseases in Layers and Broilers; Waste management in poultry production
III	SCM, VCM and Logistics in Poultry
	Value Chain Management in Layers and Broilers-Introduction, concepts and definitions; Logistics
	Management in Layers and Broilers; Transportation management -Packaging and transport of egg and meat -
	Warehouses- Cold chain management.
IV	Poultry Marketing in India
	Poultry marketing in India; Wet and Dry markets - Integration in Layers and Broilers - Vertical Integration,
	Horizontal Integration, Parallel Integration, Backward and forward Integration. Marketing channel- Marketing
	agencies, NECC, BCCI.
V	VCM of Poultry
	Value chain Mapping of Eggs and role of different functionaries- Value chain Mapping of Chicken and role of
	different functionaries- New trends in poultry production, HACCP, Designer eggs, New marketing strategies.

Extra Credit:

Case Study
* Self Learning Activities: 1. Quiz 2. Data Collection in GDP and NNP 3.Group Discussion

Textbook & Reference

1. Course Material from LSC

Online Resources:

Swayam course	• https://www.fao.org/poultry-production-products/socio-economic- aspects/poultry-chain/en/
E-Content	• https://link.springer.com/chapter/10.1007/978-981-33-4268-2_7
Other online resources	https://meatprojects.com/docs/Poultry/P1019.pdf

Relationship Matrix for COs, POs and PSOs

Course		Program	mme Ou	tcomes		Programme Specific Outcomes					
Outcomes	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	2	1	2	1	1	1	1	1	2	2	
CO2	1	3	3	2	1	1	2	1	2	2	
CO3	2	3	3	3	1	2	2	2	2	2	
CO4	1	2	2	2	2	1	2	1	2	2	
CO5	2	2	2	3	3	1	1	2	3	3	
AVG	1.6	2.2	2.4	2.2	1.6	1.2	1.6	1.4	2.2	2.2	

Programme: BMS CBCS Syllabus – Outcome Based Education (OBE)

(For those who have joined during the Academic Year 2021-2022 onwards)

Part –III : Elective cou	urse: 2	Semester - VI				
Course Title: Multi-Modal Transportation						
Course Code: U22BM11E	Hours per week:8		Credit :2			
CIA: 25	ESE : 75		Total: 100			

• OBJECTIVE: Introduce about Multi-modal and Intermodal Transport concepts.

Course Outcomes (COs)

After completing this course, the student will be able to

CO1: Introduce Multi-modal and Intermodal Transport concepts.

CO2:Explain Regulatory framework and policies for Multi-modal transportation. CO3:Describe Indian Railways' initiatives to promote MultimodalLogistics in India. CO4:Overview evolution of infrastructure facilitating Multi-modalLogistics in India. CO5: Indian Government's policies and vision R for development of seamless multi-modal transport.

Unit	Topics
Ι	Transportation Systems & Multi modal Transport –Concept of Multi modal & Intermodal Transport – introduction Multi modal transport, the difference between Multi modal and Intermodal transport-Type of transport Modes
	- detail and characteristics of air, road, rail, water, pipelines, package carriers-Need, Aim and Key Issues of Multimodal transport.
II	How to organise Multi modal transport-Role of Containerisation in MMT- history, utility, types, ease of handling, cost saving-Types of Multi modal transport – combined container transport, rolling Road & forwarding of trailers, RORO & LASH transportation-National Multi modal Transport Committee (NMTC) and Logistics Policy of India – key features and importance
III	Multi modal Transportation Act & Procedures-MMTG Act of 1993-Custom procedures for Export & Import - Bill Of Lading – Hague Rules, Visby Rules, Hamburg Rules, Voyage by Sea-INCOTERMS – meaning, explanation, list, and types
IV	MMT and Indian Railways-PFT Policy – maintenance of rolling stock, cargo handling, customs, etc- WarehousingPolicy – stuffing, de-stuffing, stacking, use of MHE, etc-Layout and design of Multi modal Logistics parks
V	Multi modal transport & Practice Today-India's growing conflict between Trade & transport – issues, policy, problems & pricing-Integrated Transport – Bharatmala, Sagarmala, IWT, DFC, the concept of ICP (International Check Posts-Scenario in India and neighbouring countries with a case study

Extra Credit:

Case Study* Self Learning Activities: 1. Quiz 2. Data Collection in GDP and NNP 3.Group Discussion

Textbook & Reference

1. Course Material from LSC

Online Resources:

Swayam course	 <u>https://onlinecourses.nptel.ac.in/noc22_ce70/preview</u> https://archive.nptel.ac.in/courses/105/105/105105204/
E-Content	 https://www.dgshipping.gov.in/Content/PageUrl.aspx?page_name=Sh ipManualChap23
Other online resources	 <u>https://transportgeography.org/contents/chapter5/intermodal-transportation-containerization/multimodal-transport-system/</u> https://intellias.com/multimodal-transportation/

Relationship Matrix for COs, POs and PSOs

Course	Programme Outcomes				Programme Specific Outcomes					
Outcomes	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	2	2	1	2	2	3	1	1	2
CO2	2	2	2	3	2	1	1	2	3	2
CO3	2	1	1	3	1	1	1	1	1	1
CO4	2	3	2	3	2	2	1	1	2	3
CO5	3	2	2	2	2	1	1	2	3	3

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Part –III : Core Cou	irse	Semester - VI			
Course Title: Apprenticeship 2					
Course Code: U22BMAPS2	Hours per	week:7	Credit :22		
CIA: 250 Marks	ESE : 150) Marks	Total: 400 Marks		

The students would be onboarded in Logistics Processes of companies by the Logistics Sector Skill Council for Apprenticeship Training. The duration of Apprenticeship Training is 6 months. During Apprenticeship Training students would be assigned on-the-job-training by companies. Being a legal engagement, students would receive a monthly stipend during Apprenticeship Training as per the existing norms.

On completion of the Apprenticeship Training, students shall submit Apprenticeship Report in the form of Work Diary to the Collaborating Institutions. The Report would be evaluated and Viva conducted by the Collaborating Institution