

Sr. No.	Programme	Name of Course	Course ID	Type of Course	Credits (Theory)	Credits (Practical)	Total Credits	Theory Ext Marks	Theory Int Marks	Total Theory Marks	Practical Ext Marks	Practical Int Marks	Total Practical Marks	Total marks
1	B.A. Major in Economics	Sustainable Development	240/ECO/VA401	Value Added Course	2	0	2	35	15	50				50
2	BA SANSKRIT Single Major	चाणक्य नीति	240/SKT/VA401	Value Added Course	2	0	2	35	15	50	0	0	0	50
3	B.A Yoga	Yogic Lifestyle & Sustainable Development	250/YOG/VA401	Value Added Course	2		2	35	15	50				50
4	B.Sc. Chemistry	Chemistry in everyday life Soaps, detergents & dyes	240/CHE/VA401	Value Added Course	2		2	35	15	50				50
5	B.A. Psychology	Art of happiness or Social & Emotional learning	240/PSY/VA401	Value Added Course	2	0	20	35	15	50				
6	MBA INTEGRATED NEP	Environmental Management	242/MBAI/VA401	Value Added Course	2	-	2	35	15	50	-	-	-	50
7	Bachelor Of Business Administration In Hospitality Management	Introduction to Data Analytics	240/BBAHM/VA401	Value Added Course	0	2		NA	NA	NA	35	15	50	50
8	Bachelor of Science in Hospitality & Hotel Administration	Appraisals and reflective entries	240/HHA/VA401	Value Added Course		2	2					50	50	50
9	Bachelor of Arts in International Culinary Arts (Advanced Bakery & Food Production)	Point of Sale Analytics	240/ICA/VA401	Value Added Course			2				35	15		50
10	M.Com Integrated	Indian Knowledge System	242/COMI/VA401	Value Added Course	2	0	2	35	15	50	0	0	0	50

11	B.Sc. Botany	Plants in everyday life	240/BOT/VA401	Value Added Course	2	0	2	35	15	50				
12	B.Com	Business Ethics based on Indian Knowledge System	240/COM/VA401	Value Added Course	2	0	2	50	15	35	0	0	0	50
13	B.A./B.Sc. Mathematics) Single Major	History of Mathematics	240/MAT/VA401	Value Added Course	2	0	2	35	15	50				50
14	B.A. Major in Geography	Field Survey and Report Writing on Environmental Issues		Value Added Course	1	1	2	20	5	25	20	5	25	
15	BBA	Goods & Service Tax	240/BBA/VA401	Value Added Course	2		2	35	15	50				50
	B.A Political Science	Gandhian Values & Ethics	240/PS/VA401		2		2	35	15	50				50

Instructions for Paper Setters	
1. Nine Questions will be set in all and students will be required to attempt 5 questions. 2. Question No. 1 will be compulsory and will consist of 7 short answer type questions of 2 marks spread over the entire syllabus (2*7=14 marks). 3. For the remaining four questions, students will attempt 1 out of 2 questions from each of the four units (14 marks each)	
Unit	Topics
I	Growth of colonial administrative apparatus in India; Indian Economy in the mid-nineteenth century; Systems of land settlements in India under British Rule; Indian Economy at the time of Independence.
II	Transformation of the traditional village economy during the British Rule; Commercialization of Agriculture: its causes and Consequences; Rural Indebtedness -Extent, Nature, Causes and Effects.
III	The state of Industrial Development in mid-nineteenth-century India; De-industrialization: causes and consequences; Growth of Textile (jute and cotton), Iron and Steel, Cement, Coal and Tea Industries during colonial period.
IV	Foreign capital in colonial India-its extent and impact; Growth and Composition of foreign trade during British Rule, Nature and problem of public debt, Economic Drain from India-form, extent and consequences.
Part-C Learning Resources	
Recommended Books/E-Resources/LMS <ul style="list-style-type: none"> • Kaushal G., Economic History of India -1757 to 1966, Kalyani publishers, New Delhi. • R.C.Dutt: The Economic History of India volume 1(1848-1909), English publications Division, Ministry of Information and Broadcasting, GOI. • Roy, Tirthankar : The Economic History of India, 1857-1947(3rd ed.)2011 • Singh V.B. (ed.): Economic History of India 1857-1956, Allied Publication Private limited, Bombay, 1965 	

240/ECO/VA401

VAC- 3

Part-A Introduction	
Subject	Economics
Semester	IV
Name of the Course	Sustainable Development
Course Code	VAC- 3
Course Type: (CC/MCC/MDC/ CCM/ DSEC/VOC/DSE/PC/AEC/ VAC	VAC

4V

Course Learning Outcomes (CLO)	<ol style="list-style-type: none"> 1. Understand the Concept and Evolution of Sustainable Development 2. Analyse the core dimensions of sustainability 3. Examine major environmental problems and barriers in achieving sustainability. 4. Develop Familiarity with Sustainable Development Goals (SDGs) 5. Examine Key Government Initiatives Promoting SDGs in India 		
Credits	Theory	Tutorial	Total
	02	-	02
Contact Hours	02	-	02
Max. Marks: 50 Internal Assessment Marks:15 End Term Exam Marks: 35	Time: 2 Hrs		
Part-B Contents of the Course			
Instructions for Paper Setters			
<ol style="list-style-type: none"> 3. Five Questions will be set in all and students will be required to attempt three questions. 4. Question No. 1 will be compulsory and will consist of 5 short answer type questions of 3 marks spread over the entire syllabus 5*3=15 marks). 5. For the remaining two questions, students will attempt 1 out of 2 questions from each of the two units (10 marks each) 			
Unit	Topics		
I	<p>Introduction to Sustainable Development –Meaning and Brief Historical background of Sustainable Development, Pillars of Sustainability, Features, Significance and Challenges of Sustainable Development.</p> <p>Environmental problems in achieving sustainability. Circular Economy – Concept and importance, Green Economy – Concept and importance.</p>		
II	<p>Overview of Sustainable Development Goals (SDGs), SDG Localisation: Meaning and India's approach to SDG localisation in brief.</p> <p>Key Initiatives of Government of India to promote SDGs: Swachh Bharat Mission, Jal Jivan Mission, PMJDY (Pradhan Mantri Jan Dhan Yojana), MGNREGA (Mahatma Gandhi National Rural Employment Guarantee Act), National Food Security Act (NFSA)2013, Beti Bachao Beti Padhao (BBBP), National Solar Mission, Skill India Mission</p>		
Part-C Learning Resources			
Recommended Books/E-Resources/LMS <ol style="list-style-type: none"> 1. Clayton, B.D. and Bass, Stephen (2002), Sustainable Development Strategies- a resource book, Earthscan Publications Ltd, London, 2. Fulekar, M.H., Pathak Bhawana, Kale R.K., Environment and Sustainable Development; Springer (2014) 3. Peacock, Kathy Wilson, Natural Resources and Sustainable Development, 4. Sachs, Jeffrey D., The Age of Sustainable Development 5. World Bank "Inclusive Green Growth - The pathway to Sustainable development, World Bank- Washington DC,2012 			

Value Added Course**Semester 4**

Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
VAC-3	चाणक्य नीति	240/SKT/V A303	2			2			2	15	35			50

अधिगम उपलब्धि:-

1. विद्यार्थियों को चाणक्य नीति के माध्यम से सुखी निरोग्य व्यक्ति बनने का ज्ञान प्राप्त होगा।
2. संस्कृत भाषा में प्रयुक्त स्वर संधि का ज्ञान प्राप्त होगा ।

अधिगम उद्देश्य:-

1. विद्यार्थियों को चाणक्य नीति के माध्यम से सुखी निरोग्य व्यक्ति बनने का ज्ञान कराने हेतू।
2. संस्कृत भाषा में प्रयुक्त स्वर संधि का ज्ञान कराने हेतू।

पाठ्यक्रम :

इकाई 1 चाणक्य नीति (प्रथम अध्याय)

इकाई 2 चाणक्य नीति (द्वितीय अध्याय)

इकाई 3.अनुशासनम् (तैत्तिरीयोपनिषद्)

दिशा -निर्देश :

- * सभी इकाइयों से पांच वस्तुनिष्ठ प्रश्न अनिवार्य है -10
- * इकाई 1 से 4 श्लोकों में से 2 की सप्रसंग व्याख्या -8
- * इकाई 2 से 4 श्लोकों में से दो की सप्रसंग व्याख्या -8
- * इकाई 3 से 2 में से 1 की व्याख्या -5
- * इकाई 3 से 2 में से 1 आलोचनात्मक प्रश्न- 4

संदर्भ ग्रंथ सूची:-

- चाणक्य नीति
- तैत्तिरीयोपनिषद् शिक्षावल्ली

Value-Added Course
Importance of Yoga in Sustainable Development
Or
Yogic lifestyle & Sustainable development

Course Code: 240/YOG/VA405	Credits:2
TI: 15 TE: 35	PI: PE:

Instruction for External Examination: This question paper shall be divided in two sections. Examiner is requested to set section A as compulsory question containing 11 marks and from the entire syllabus (can be either subjective or objective). Section B will be in choice from two question from each unit. The student will be required to attempt one question from each unit, these question in section B will be of 12 marks.

Objectives: Understand the principles of a yogic lifestyle and sustainable development. Explore the physical, mental, and spiritual aspects of yoga. Examine the relationship between personal well-being and ecological sustainability. Develop practical skills for integrating yogic practices with sustainable living.

Outcome:

After completion of course the student understands how adopting a yogic lifestyle can contribute to personal well-being and the well-being of the planet. The course covers physical yoga practices, mental and spiritual aspects of yoga, and how these can be aligned with sustainable living practices.

Unit-1 Introduction to Yogic Lifestyle

- 1.1 History and evolution of yoga Bhagavad Gita,
- 1.2 Yoga Sutras of Patanjali- The Eight Limbs of Yoga
- 1.3 Yogic Principles and Ethics
- 1.4 Mindfulness and conscious living

Unit-2 Principles of Sustainable Development

- 2.1 Definition and goals of sustainable development
- 2.2 The United Nations Sustainable Development Goals (SDGs)
- 2.3 Interconnection between environmental, social, and economic sustainability
- 2.4 Integrating Yogic Lifestyle with Sustainable Development

Suggested Reading

The Yoga Sutras of Patanjali" translated by Swami Satchidananda
 The Sustainable Development Goals Report" (United Nations)

Department of Chemistry
B.Sc Physical Sciences

Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
VAC-2	Human Values and Ethics OR Environmental Studies		2						2	15	35			50

Semester 4

Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
VAC-3	Chemistry in everyday life-Soaps, detergents & dyes		2						2	15	35			50

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Department of chemistry UG (sem IV)
240/CHE/VA401

Course Title	Chemistry in everyday life-Soaps, detergents & dyes
Semester	Semester-4
Course Code	VAC-3
Course ID	
Level of Course	
Total Credits	02 (Lecture: 02, Tutorial: 0, Practical: 0)
Total Marks	50
Marks Distribution	Theory External: 35 Theory Internal: 15 Practical External: NA Practical Internal: NA

COURSE CURRICULUM DELIVERY WEEKLY DISTRIBUTION:

Total Hours per Week: 2	
Lectures (L) Hours per Week: 2	Practical (P) Hours per Week: NA

COURSE OBJECTIVES:

- Understand the historical development and evolution of soaps and detergents.
- Explain the chemical structure and properties of soaps and detergents.
- Compare and contrast traditional soap making (saponification) with modern industrial methods.
- Describe the manufacturing processes involved in making detergents, including sulfonation and sulfation.
- Identify different types of soaps and detergents and their respective applications and uses.

COURSE OUTCOMES:

- Students will be able to trace the historical timeline and major developments in the field of soaps and detergents.
- Students will analyze and interpret the chemical compositions and properties of various types of soaps and detergents.
- Students will demonstrate practical knowledge of traditional and modern manufacturing methods of soaps and detergents.
- Students will evaluate the suitability of different types of soaps and detergents for specific applications and industries.

DETAILED CONTENT OF COURSE:

Theory Syllabus: Total Contact Hours: 30

Department of Chemistry UG (sem IV)

Unit	Topics	Contact Hours
I	Introduction to Soaps and Detergents History and Development, Chemical Structure and Properties, Manufacturing Processes: Traditional soap making (saponification) Modern industrial methods (cold process, hot process, melt and pour) Manufacturing of detergents (sulfonation and sulfation) Types of Soaps and Detergents, Applications and Uses	8
II	Analytical and Quality Control Methods Qualitative Analysis: Determination of pH, Foam stability and surface tension; Quantitative Analysis: Acid value, saponification value, and iodine value; Moisture content and total fatty matter; Quality Control: Standards and specifications (BIS, ASTM); Testing protocols and safety measures, Environmental and Health Aspects	8
III	Dyes and Pigments Fundamentals of Dyes; Introduction (Definition and classification of dyes, Natural vs synthetic dyes, Historical development; Chemical Structure and Properties: Chromophores and auxochromes; Absorption of light and color, Solubility and fastness properties	7
IV	Synthesis and Application of Dyes Synthesis Techniques, Synthetic Methods-Batch and continuous processes; Common intermediates and starting materials; Green Chemistry Approaches-Eco-friendly synthesis methods, Use of natural sources; Environmental Impact-Treatment of dye effluents, Regulations and sustainable practices	7

COURSE EVALUATION METHODS

Theory Exams:

Total Marks: 50 (External: 35 + Internal: 15)

Internal Assessment: 15 Marks	<ul style="list-style-type: none"> • Class Participation: NIL • Seminar/Presentation/ Assignment: 05 Marks • Mid Term Exam: 10 Marks
External Assessment: 35 Marks (02 Hours)	<ul style="list-style-type: none"> • End Term Exam: 35 Marks

Instruction for End-Term Theory Exam:

The Examiner is requested to set nine questions in total, selecting two questions from each section. Question-1 will be a compulsory question consisting short answer type questions

Department of Chemistry UG (Sem IV)

covering all the units of the syllabus. All questions should carry equal marks. Log table and non-programmable calculator is allowed.

RECOMMENDED BOOKS

- "Soaps and Detergents: Manufacture, Properties, and Formulation" by Luis Spitz (Wiley)
- "Chemistry and Technology of Surfactants" by Richard J. Farn (Blackwell Publishing)
- "Analytical Chemistry: Principles and Techniques" by H.D. Belitz, W. Grosch, P. Schieberle (Springer)
- "Instrumental Methods of Chemical Analysis" by B.K. Sharma (Goel Publishing House)
- "The Chemistry of Synthetic Dyes" by K. Venkataraman (Academic Press)
- "Organic Chemistry of Synthetic High Polymers" by G. R. Koshti (New Age International Publishers)

Course Outcomes:

- Students will learn and analyze how various factors influence concepts and experiences of happiness.
- Students will gain knowledge of difference approaches of happiness.
- Students will be able to implement interventions aimed at increasing happiness and well-being in themselves and others.

Note:

- a) Candidates would be required to attempt four questions in all.
- b) Question No. 1 would be compulsory. It shall be based on the entire syllabus and would contain 5 short answer type questions of one mark each.
- c) There would be two questions (10 marks each) from each of the three units. Candidates would attempt one Question from each unit.

Unit-I

Happiness: Definition and Nature. Theories of Happiness, Factors Affecting Happiness.

Unit-II

Waysto Increase Happiness: Role of Mindfulness and meditation, Measuring Happiness: Key Indicators. Happiness Index; Happiness in India.

Recommended Books/e-resources/LMS:

- Seligman,M.(2002).AuthenticHappiness:UsingtheNewPositivePsychologytoRealizeYour Potential for Lasting Fulfillment. New York: Free Press.
- Selin,H.and Davey,G.(2012).Happiness Across Cultures. Springer.
- HH Lama, D. and Cutler, H.C.(2009).The Art of Happiness:A Handbook of Living(10th Anniversary Edition).New York: Riverhead Books.
- Clark,A.E., Fleche,S., Laya C,R.,Powdthavee, N.andWard,G.(2019).The Origins of Happiness. NJ: Princeton University Press.
- Yew-KwangNg(2022).Happiness-Concept, Measurement and Promotion. Springer

Environmental Management

Name of Subject: Environmental Management	Maximum Theory Marks: 50(35+ 15)
Course Code:	Time Allowed: 2 Hrs
Credits 2	Value Added Course

Course Description: This course introduces students to the core concepts of environmental management, focusing on sustainable practices, conservation, and global environmental initiatives. It covers the role of NGOs, pollution control, water conservation, and international frameworks like the Stockholm Declaration and Kyoto Protocol. Through case studies and practical exercises, students will explore real-world environmental challenges and solutions. By the end of the course, students will be equipped to apply sustainable development principles and ethical practices to address environmental issues with confidence and competence.

Instructions for Paper Setter: The question paper shall be divided into two sections. **Section ‘A’** shall comprise seven short answer type questions from the whole of the syllabus carrying one marks each, which shall be compulsory. The answer to each question should not exceed 100 words normally. **Section ‘B’ shall comprise 8 questions (2 questions from each unit). All the questions need to be mapped with Course Outcomes (COs) and need to be specified in the question paper against each question.** The students will be required to attempt four questions by selecting one question from each unit. All questions will carry equal marks.

Course Outcomes:-After completing the course, students will be able to:

CO1: Demonstrate an understanding of the role of NGOs, public participation, and international environmental initiatives, including the Stockholm Declaration, Ramsar Convention, and Kyoto Protocol, in promoting environmental awareness and ethical practices.

CO2: Analyze environmental challenges such as vehicular pollution, fly ash utilization, eutrophication, and water conservation, with specific reference to case studies like the Narmada, Tehri, and Almetti dams, and propose strategies for sustainable resource management.

CO3: Apply the principles of sustainable development and cost-benefit analysis to evaluate the ecological and economic impacts of environmental management practices.

CO4: Evaluate the significance of global environmental frameworks, such as the Vienna Convention, Montreal Protocol, Earth Summit, and Agenda-21, in fostering conservation and sustainable development policies.

UNIT - I

Role of NGO's public participation in environmental movements, Concepts of Environmental education and awareness International environmental initiatives – the club of Rome report, Stockholm Declaration, environmental ethics.

UNIT - II

Vehicular pollution and urban air quality, Fly ash utilization, Eutrophication and restoration of Indian lakes, Wet land conservation, Water crisis-conservation of water. Narmada dam, Tehri dam, Almetti dam.

UNIT - III

Sustainable development- principles and practices in relation to economics and ecology. Cost-benefit analysis- its relevance.

UNIT - IV

Ramsar convention on wetlands, Vienna convention and Montreal Protocol, Kyoto protocol, Earth Summit, Agenda-21.

References

1. Natural Resource Conservation Owen and Chiras.
2. Environmental planning, policies and programs in India- K.D. Saxena.
3. Conservation Ecology- G.W.Cox.
4. Global Biodiversity - W.R. L. IUCN

Instructions for Internal Examiner: The internal assessment should be spread evenly throughout the semester and must include at least 3 independent components including a mid-term exam. Below are the suggested components for 30 marks. A teacher has a choice to change these components as per the need except for the mid-term exam. All the questions of mid-term Exams need to be mapped with Course Outcomes (COs) and need to be specified in the question paper against each question.

S. No.	Course Assessment Components	Marks/Weightage (%)
1	Assessment 1 : Class Participation(CP) And Individual Assessment	5
2	Assessment 2: Mid-Term Exam (MTE)	5
3	Assessment 3: Case Analysis / Presentation (CAP)/ Group Project (GP) / Role Play / Live Projects/ Simulation / Worksheet Assessment	5

	Internal Assessment (IA) (1+2+3)	15 (33%)
	End-Term Examination (EE)	35 (67%)
Total Marks (IA+EE)		50

Mapping Matrix of Course: Environmental Management

Table 1: CO-PO & CO-PSO Matrix for the Course: Environmental Management

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
CO1	3	3	1	2	1	3	3	3	1	2
CO2	3	3	1	2	2	3	3	3	2	3
CO3	2	3	1	1	2	3	3	3	2	2
CO4	2	3	1	2	1	3	3	3	1	3
Average	2.5	3	1	1.75	1.5	3	3	3	1.5	2.5

240/BBAHM/VA401

Semester IV

Introduction to Data Analytics (Course Code -240/ BBAHM /VA407)

CREDITS				MARKS				
L	T	P	Total	TI	TE	PI	PE	Total
-	-	2	2	-	-	15	35	50

Course Description:

This course introduces students to Microsoft Excel as a powerful business tool for data management, analysis, and decision-making in the hospitality sector. Through a hands-on, practical approach, students will develop foundational and advanced Excel skills, enabling them to analyse operational data, generate reports, and visualize trends relevant to hospitality businesses. The curriculum integrates real-world applications from hospitality operations to enhance analytical thinking and business intelligence, preparing students for data-driven roles in hotels, restaurants, event planning, and tourism management. The course also emphasizes accuracy in computations, logical functions for scenario building, and visual storytelling using charts and pivots.

Course Objectives:

The objective of this course is to:

- CO1 Recall and explain key elements and functions of Microsoft Excel.
- CO2 Apply Excel tools and functions to perform data formatting, basic calculations, and text manipulation
- CO3 Analyse and interpret operational hospitality data using logical functions and data visualization tools.
- CO4 Create and evaluate dynamic dashboards and summaries using pivot tables and consolidated data techniques.

Units (Practical):

Unit I: Introduction to Excel

- Introduction & Basics of Excel
- Elements, Worksheets
- Formulae and functions
- BODMAS, Rounding
- Inserting images

Unit II: Functions in Excel

- Formatting
- Rows & Columns, Comments
- Advanced functions (count if, sum if, average if, today)
- Date and Time
- Dealing with text
- Inserting Charts in excel
- Logical functions - (if, and, or), - comparison operators (=, , ...)

Unit III: Mathematical Concepts in Excel

- Cell referencing
- Percentage (Increase and Decrease)

- Conditional Formatting with data
- Formatting
- Mean, Median and Mode
- Pivots

Unit IV: Topic – Data Handling

- Hospitality Operations
- Summarising and consolidating data
- Data validation: cell control
- Data Visualization

Suggested Readings:

- Schmuller, J. (2016). Statistical analysis with Excel for Dummies. John Wiley Sons, Inc.

Introduction to Data Analytics												
COs	P01	P02	P03	P04	P05	P06	P07	P08	PS01	PS02	PS03	PS04
CO1	2	–	1	2	–	–	2	–	2	1	–	–
CO2	2	2	2	2	–	–	2	–	2	2	2	–
CO3	3	3	3	3	–	–	2	–	3	3	2	1
CO4	3	3	3	3	–	–	3	–	3	3	3	2

**COURSE TYPE: VALUE ADDITION COURSE(VAC)
OFFERED BY DEPARTMENT OF MANAGEMENT**

SEMESTER 4

Name of Subject: Goods and service Tax	Maximum Theory marks:50 (TE+TI+PE+PI= (35+15+0+0))
Course Code:244BBAVAC6	Time Allowed: 3 Hrs
Credits 2 (L-T-P =2-0-0)	Core Course: VAC

Instructions for Paper Setter: The question paper shall be divided into two sections. Section 'A' shall comprise five short answer type questions from the syllabus carrying three marks each, which shall be compulsory. The answer to each question should not normally exceed 100 words. Section 'B' shall comprise eight questions of five marks each (2 questions from each unit). The students will be required to attempt four questions by selecting one question from each unit.

Course Outcomes: - After completing the course, students will be able to:

- CO1. To understand basic concepts of indirect taxes and GST framework.
- CO2. To analyse GST exemptions, composite and mixed supply taxability.
- CO3. To evaluate the composition scheme, time, and valuation of supply under GST.
- CO4. To apply input tax credit, and comprehend customs duties and related rules.

COURSE CONTENTS:

Unit 1: Basic Concept of Indirect Taxes and Introduction of GST, Supply, Levy and collection Under GST	
Unit 2: Exemption from GST, Taxability of Composite and Mixed supply, Location of the suppliers and place of supply of Goods and services under GST	
Unit 3: Composition Levy (Composition Scheme), Time of supply and valuation of supply in GST,	
Unit 4: Input tax credit and its utilization, Tax invoice, Credit & Debit Notes, Registration, payment of tax and Returns under GST. Customs Law: Basic concepts, Territorial water, High Seas, Types of custom duties, valuation, Baggage Rule & Exemptions.	

Suggested Readings:

1. GST and Customs- Law & Practices- V.S. Datey, Taxmann
 2. Indirect Taxes-Snowwhite Publications.
- GST Ready Reacnor- Saxena


 Chairperson
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Point of Sale Analytics
Subject code - CVAC406

L	T	P	Credits	TI	TE	PI	PE	Time Allowed
0	0	2	2	0	0	15	35	Hours

Type of Course: Value Addition Courses (VAC)

Core Course (CC)	Minor Course (MIC) including Vocational Courses (VOC)	Multidisciplinary Course (MDC)	Ability Enhancement Course (AEC)	Skill Enhancement Courses (SEC)	Value Addition Courses (VAC)	Internship
					√	

Introduction to the Course:

It is a practical oriented module which trains the student on understanding and using the point of sales. It gives hands-on experience to the students to learn and implement the skills acquired during the tenure.

Course Outcome: - After completing the course learners will be able to:

- CO1. Understand the competencies required sales in real time
- CO2. Gain valuable work experience on operating the point of sales system
- CO3. Exhibit an understanding of the commercial/business environment and provide opportunities to evaluate experiences with international organizational practices.
- CO4. Enhance their employability and employment prospects upon graduation.

Detailed Syllabus:

Unit - I

Practical Kitchen Orientation and Production Basics -Hands-on orientation in a working kitchen, includes familiarization with the layout, tools, production workflow, and initial preparation tasks. Focus is on understanding and performing routine kitchen operations.

Unit - II

Live Food Production and Presentation Practice - Preparing and plating individual dishes for service, understanding and managing food production timing, executing buffet-style and à la carte preparations, hands-on experience with cold kitchen and finishing station, coordination with FOH for service flow.

Unit- III

Learning POS navigation and functions - Entering orders and managing modifiers/special instructions, operating kitchen display systems in sync with food runners, tagging completed dishes in POS and marking dispatch, recording real-time sales and tracking dish performance.

Unit - IV

POS System Operation and Kitchen Display Interface- Pulling and interpreting basic POS reports, observing dish turnaround time and performance, identifying slow/fast-moving dishes and correlating with prep volume, logging kitchen errors (e.g., refires, missed orders) and suggesting workflow improvements based on POS feedback.

Assessment

Practical Internal	15 Marks (Continuous assessment)
Practical External	35 Marks (Final Practical)

Mapping Matrix of Course**Table 1: CO-PO Matrix for the Course**

COURSE OUTCOMES	PO1	PO2	PO3	PO4
CO1	3	3	3	3
CO2	3	3	3	3
CO3	3	3	3	3
CO4	3	3	3	3
Average	3	3	3	3

Table 2: CO-PSO Matrix for the Course

CO	PSO1	PSO2	PSO3	PSO4
CO1	3	3	3	3
CO2	3	3	3	3
CO3	3	3	3	3
CO4	3	3	3	3
Average	3	3	3	3

Skill Enhancement and Knowledge Application - Development of technical and operational skills, Practical application of academic theories or models, Learning new techniques, tools, or systems, Problem-solving and decision-making instances, Initiative-taking and accountability.

UNIT IV:

Reflective Analysis and Post-Internship Evaluation -Reflection on personal and professional transformation, re-evaluation using the same self-assessment tools, key takeaways from the internship, feedback from mentors and supervisors (if available), career direction and future development plans.

Assessment

Practical Internal	15 Marks (Report or Presentation or Viva or Final Practical)
Practical External	35 Marks (Practical external will be assessed based on the feedback given by industry mentors to the student via a personal interview from a panel of members from interdepartmental schools.)
Final Assessment	50 Marks

Mapping Matrix of Course:

Table 1: CO-PO Matrix for the Course

COURSE OUTCOMES	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	3	3	3	3	3	2	2
CO2	3	3	3	3	3	3	2	2
CO3	3	3	3	3	3	3	2	2
CO4	3	3	3	3	3	3	2	2
Average	3	3	3	3	3	3	2	2

Table 2: CO-PSO Matrix for the Course

CO	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8
CO1	3	3	3	3	3	3	2	2
CO2	3	3	3	3	3	3	2	2
CO3	3	3	3	3	3	3	2	2
CO4	3	3	3	3	3	3	2	2
Average	3	3	3	3	3	3	2	2

240/HHA/VA401

**Semester 4
Appraisals and Reflective Entries
Course ID – HVAC404**

L	T	P	Credits	TI	TE	PI	PE	Time Allowed
-	-	2	2	-	-	50	-	__ Hours

Type of Course:

Name of Subject: Indian Knowledge System	Maximum Theory Marks: 50 (35+ 15)
Course Code:244MCVAC7	Time Allowed: 2hours
Credits 2	Value Added Courses (VAC)

Instructions for Paper Setter: The question paper shall be divided into two sections. **Section ‘A’** shall comprise seven short answer type questions from the whole of the syllabus carrying one marks each, which shall be compulsory. The answer to each question should not exceed 50 words normally. **Section ‘B’ shall comprise 8 questions (2 questions from each unit). All the questions need to be mapped with Course Outcomes (COs) and need to be specified in the question paper against each question.** The students will be required to attempt four questions by selecting one question from each unit. All questions will carry equal marks.

Course Outcomes: - After completing the course students will be able to:

CO1: Explain the historical significance of ancient Bhāratīya educational institutions like Takṣaśilā and Nālandā University.

CO2: Apply Vedic mathematical concepts to solve complex number system problems.

CO3: Examine the impact of the Saraswatī-Sindhu civilization on contemporary knowledge systems and practices.

CO4: Evaluate the effectiveness of traditional Āyurvedic practices in modern integrated healthcare systems.

COURSE CONTENTS:

Unit 1: Bhāratīya Civilization and Development of Knowledge System :Bhāratīya Civilization and Development of Knowledge System (4 hours) Genesis of the land, Antiquity of civilization, On the Trail of the Lost River, Discovery of the Saraswatī River, the Saraswatī-Sindhu Civilization, Traditional Knowledge System, The Vedas, Main Schools of Philosophy (6+3), Ancient Education System, the Takṣaśilā University, the Nālandā University, Alumni, Knowledge Export from Bhārata.	10 Lectures
Unit 2: Science, Astronomy, and Mathematics :Concept of Matter, Life and Universe, Gravity, Sage Agastya’s Model of Battery, Velocity of Light, Vimāna: Aeronautics, Vedic Cosmology and Modern Concepts, BhāratīyaKāla-gaṇanā, Kerala School for Mathematics and Astronomy, History and Culture of Astronomy, Sun, Earth, Moon, and Eclipses, Earth is Spherical and Rotation of Earth, Archacostronomy; Concepts of Zero and Pi, Number System, Pythagoras Theorem, and Vedic Mathematics.	10 Lectures

Unit 3: Arts, Literature, and Scholars :Art, Music, and Dance. Naṭarāja– A Masterpiece of Bhāratīya Art, Literature, Life and works of Agastya, Lopāmudrā, Ghoṣā, Vālmīki, Patañjali, Vedavyāsa, Yājñavalkya, Gārgī, Maitreyī, Bodhāyana, Caraka, Suśruta. Jīvaka, Nāgārjuna, Kaṇāda, Patañjali, Kauṭīlya, Pāṇini, Thiruvalluvar, Āryabhaṭa, Varāhamihira, ĀdiŚaṅkarācārya, Bhāskarācārya, Mādhavācārya.	10 Lectures
Unit 4: Life, Environment, and Health : Ethnic Studies, Life Science in Plants, Anatomy, Physiology, Agriculture, Ecology and Environment, Āyurveda, Integrated Approach to Healthcare, Medicine, Microbiology, Medicine, Surgery, and Yoga, etc.	10 Lectures

SUGGESTED READINGS:

1. Textbook on The Knowledge System of Bhārata by Bhag Chand Chauhan,
2. History of Science in India Volume-I, Part-I, Part-II, Volume VIII, by Sibaji Raha, et al. National Academy of Sciences, India and The Ramkrishan Mission Institute of Culture, Kolkata (2014).
3. Pride of India- A Glimpse of India's Scientific Heritage edited by Pradeep Kohle et al. Samskrit Bharati (2006).
4. Vedic Physics by Keshav Dev Verma, Motilal Banarsidass Publishers (2012).

Instructions for Internal Examiner: The internal assessment should be spread evenly throughout the semester and must include at least 3 independent components including a mid-term exam. Below are the suggested components for 30 marks. A teacher has a choice to change these components as per the need except for the mid-term exam. All the questions of mid-term Exams need to be mapped with Course Outcomes (COs) and need to be specified in the question paper against each question.

S. No.	Course Assessment Components	Marks/Weightage (%)
1	Assessment 1: Class Participation(CP) And Individual Assessment	5
2	Assessment 2: Mid-Term Exam (MTE)	5

3	Assessment 3: Case Analysis / Presentation (CAP)/ Group Project (GP) / Role Play / Live Projects/ Simulation / Worksheet Assessment	5
	Internal Assessment (IA) (1+2+3)	15 (30%)
	End-Term Examination (EE)	35 (70%)
Total Marks (IA+EE)		50

Mapping Matrix of Course: 244MCVAC7

CO-PO & CO-PSO Matrix for the Course 244MCVAC7 Indian Knowledge System:

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
CO1	2	1	1	2	1	1	1	2	1
CO2	2	2	1	1	1	3	1	2	3
CO3	3	2	2	3	1	1	2	3	2
CO4	2	3	3	3	2	2	2	3	3
Average	2.25	2	1.75	2.25	1.25	1.75	1.5	2.5	2.25

Semester-II
Course Code-VAC-2
Course Title-Human Rights And Value Education

Credit-2
 Maximum Marks –50
 Theory – 35
 Internal Assessment – 15
 Time – 2 hours

The students will be required to attempt three questions in all. Question No. I will be compulsory comprising of 8 short answer type questions of 3 marks each and will cover the entire syllabus. The answer should be in 100-200 words. The students are required to attempt five short answer type questions out of 8, i.e., $5 \times 3 = 15$ marks. In addition to it, Question Nos. II to V will consist of long answer (essay type) questions, two Questions from each Unit with internal choice carrying 10 marks each i.e. $2 \times 10 = 20$ marks thus making it the total weight age to 35 marks. Two questions to be attempted. One from each unit.

Course Outcomes:

- An attempt has been to define the human rights as enshrined in UDHR.
- The importance of values education with special attention to universal modern values has been explained to the students.

UNIT- I

Human Rights: Concepts, Characteristics, Universal Declaration of Human Rights

UNIT- II

Value Education: Meaning and Importance, Values : Liberty, Equality, Fraternity, Justice

Reading:

- (Available in Hindi translation), Pearson Education,
 Andrew Heywood, (2013), Politics, Palgrave Macmillan, (Fourth Edition)
 Andrew Heywood, (2004) Political Theory, Palgrave Macmillan, (Third Edition)
 Andrew Vincent, (2013) Modern Political Ideologies, Macmillan, (Fourth Edition)
 Bandyopadhyay, Sekhar (2009) (ed.) Nationalist Movement in India Delhi, Oxford
 David Held, (1989) Political Theory and the Modern State, Polity Press,
 Dudley Knowles, (2001) Political Philosophy, Routledge,
 Economic Reforms on India's Federal System, Sage, New Delhi,
 Jean Hampton, (1998), Political Philosophy, New Delhi, Oxford University Press,
 John Dryzek, Bonnie Honig and Anne Phillips (2008) (eds), The Oxford Handbook of
 Jonathan Wolff, (1996) An Introduction to Political Philosophy, OUP,
 Khanna, Avinash Rai, (2020) Samaj Chintan, Prabhat Prakashan,
 O. P. Gauba, (2010) An introduction to Political Theory, Macmillan, (Fifth Edition)
 Political Theory, OUP,
 Rajeev Bhargava and Ashok Acharya (2008) (ed) Political Theory: An Introduction
 Saez, Lawrence, (2002) Federalism without a Centre: The Impact of Political and
 Singh B. and Das, B. International Human Rights: Issues and Challenges, Taran Publication, New Delhi
 University Press, New Delhi,
 Will Kymlicka, (2002), Contemporary Political Philosophy (Available in Hindi translation), OUP, (Second Edition)

Value added course –VAC 3

Session:2025-26	
Part A- Introduction	
Subject	BOTANY
Semester	4th
Name of the Course	Plants in Everyday life
Course Code	240/BOT/VAC/401
Course Type: (CC/MCC/MDC/CC- M/DSEC/VOC/DSE/PC/AEC/VAC)	VAC-3
Level of the course (As per Annexure-I)	
Pre-requisite for the course(if any)	

Course Learning Outcomes (CLO):

- After completing this course, the learner will be able to:
1. Students will acquire a foundational understanding of plant diversity.
 2. Students will develop a conceptual grasp of plants utilized for human welfare.
 3. Students will gain knowledge about the origins of certain cultivated plants.
 4. Students will acquire a conceptual understanding of the utilization of fruits, nuts, and other plant components for human welfare.
 5. Students will acquire the knowledge about the economic valuable plants and their products.

Credits

Theory	Practical	Total
2	0	2
2	0	2

Contact Hours

THEORY

Max. Marks: 50

Internal Assessment Marks: 15

End Term Exam Marks: 35

Time: 3 Hours

Part B-Contents of the Course

Instructions for Paper-Setter

3. Nine questions will be set in all. All questions will carry equal marks.
4. Question No.1 will be short answer type covering the entire syllabus and will be compulsory. The remaining eight questions will be set unit wise selecting two questions from each unit. The candidate will be required to attempt question No. 1 and four more questions selecting one question from each unit.

Unit	Topics	Contact Hours
I	<p>Unit I: Plants and Food Security</p> <p>Major food crops: Cereals (rice, wheat), pulses (chickpea, lentils), oilseeds</p> <p>Fruits and vegetables: Nutritional importance. (mango, apple, banana, spinach, okra, potato)</p> <p>Nutritional value of seeds: flax seeds, pumpkin seeds and chia seeds.</p> <p>Role and importance of millets.</p>	11

	<p>Underutilized crops in sustainable agriculture</p> <p>Functional foods and nutraceutical plants (e.g., moringa, amaranth)</p>	
II	<p>Medicinal and Aromatic Plants</p> <p>Overview of traditional medicine systems: Ayurveda, Unani, Siddha</p> <p>Common medicinal plants: Tulsi, Neem, Aloe vera, Amla</p> <p>Aromatic and essential oil-yielding plants: Lemongrass, Eucalyptus, Lavender.</p>	11

240/COM/VA401

Course Type: - Vocational Course (VAC)

Offered by Department of Commerce

Semester: 4th

Name of Subject: Business Ethics Based on Indian Knowledge System	Maximum Marks: 50 (TE+TI+PE+PI=35+15+0+0)
Course ID: 240/COM/VA408	Time Allowed: 2 Hrs.
Credits: 2 (L-T-P = 2-0-0)	

Instructions for Paper Setter: The question paper shall be divided into two sections. Section 'A' shall comprise seven short answer type questions from the syllabus carrying one mark each, which shall be compulsory. The answer to each question should not normally exceed 100 words. Section 'B' shall comprise 8 questions (2 questions from each unit). The students will be required to attempt five questions by selecting one question from each unit. All questions will carry equal marks i.e. 7.

Course Outcomes: - After completing the syllabus, students will be able to:

CO1: Understand the foundational concepts of the Indian Knowledge System (IKS) and their relevance to business ethics.

CO2: Analyze ethical dilemmas using insights from Indian philosophical texts.

CO3: Apply ethical principles derived from Indian traditions to modern business practices.

CO4: Develop ethical leadership and management skills integrating insights from the Indian Knowledge System (IKS).

Course Contents:

Unit1: Introduction to Business Ethics: Concept of business ethics: Need, factors, principles, and ethical values for success in business. Ethics, & significance of Indian Knowledge System. Business ethics in the context of globalization, privatization and liberalization.
Unit 2: The Indian knowledge system: Four goals of life: Dharma, Artha, Kama, Moksha, Karma Yoga and teachings from the Bhagavad Gita, Vedantic view of life and ethics, Ethical teachings from the Ramayana and Mahabharata, Views of Gandhi, Aurobindo, and Vivekananda on ethics.
Unit 3: Ethics at the Workplace and Ethical Leadership: Importance of work-place ethics; Guidelines for managing ethics at the workplace, Factors influencing workplace ethics, Forms of discrimination; Ethical arguments against discrimination, Types of discrimination practices and prevention of other types of harassment, Ethical issues for leaders
Unit 4: Ethical Issues and challenges: Ethical problems faced by managers, Ethical Issues and challenges in the field of Marketing, HR, Finance, IT, Medical services.

Suggested Readings: Suggested Readings:

1. "Business Ethics" by Andrew Crane and Dirk Matten
2. "Introduction to Indian Knowledge Systems" by B. Mahadevan
3. "The Bhagavad Gita" (translated by Eknath Easwaran or other versions)
4. "The Upanishads" (translated by Eknath Easwaran or other versions)
5. "Ethics in the Ramayana" by Satya P. Agarwal
6. "Business Ethics & Human Values" by Hundepar, S.G

7. "Ethics in Management and Indian Ethos" by Ghosh, Biswanath
8. "Business Ethics: An Indian Perspective" by A.C. Fernando
9. "Ethics and Business: An Indian Perspective" by Rituparna Raj

Session: 2025-26			
Part A – Introduction			
Subject	Mathematics		
Semester	IV		
Name of the Course	History of Mathematics		
Course Code	VAC-3		
Course ID			
Course Type: (CC/MIC/MDC/ /VOC/AEC/VA C/SEC)	VAC		
Course Learning Outcomes(CLOs)	<p>After completing this course, the learner will be able to:</p> <ol style="list-style-type: none"> 1. Understand the Evolution of Mathematical Thought. 2. Recognize Contributions from Diverse Civilizations. 3. Identify the Work of Major Mathematicians. 4. Develop Historical Thinking and Analytical Skills. 5. Appreciate the Philosophy and Nature of Mathematics. 		
	Theory	Practical	Total
Credits	2	-	2
Contact Hours	2	-	2
Internal Assessment Marks	15	-	15
End Term Assessment Marks	35	-	35
Examination Time	2 Hours	2 Hours	50
Part B - Course Content			
<p>Instructions for Paper- Setter Note: The examiner will set 9 questions asking two questions from each unit and one compulsory question by taking Course Learning Outcomes (CLOs) into consideration. The compulsory question (Question No. 1) will contain 5 parts covering entire syllabus. The examinee will be required to attempt 5 questions, selecting one question from each unit and the compulsory question.</p>			

Unit	Topic	Contact Hours
I	Introduction to the History of Mathematics: Importance and scope of the history of mathematics, Relationship between mathematics and civilization, Chronological overview of mathematical development	7
II	Mathematics in Ancient Civilizations: Egyptian Mathematics : Numeration system, Geometry in land measurement, Practical applications (e.g., pyramids, calendar) Vedic and Indian Mathematics: Sulba Sutras and geometry, Contributions of Aryabhata, Brahmagupta, Bhaskara, Decimal number system and concept of zero	8
III	Indian Mathematicians in the Modern Era: Srinivasa Ramanujan: Number theory and infinite series, Contributions of modern Indian mathematicians in algebra, number theory, and applied mathematics	7
IV	Philosophy and Nature of Mathematics: Mathematics: A discovery or invention, Role of abstraction and proof in mathematics, Mathematics and its interdisciplinary nature (connection with science, art, and philosophy)	8

Suggested Evaluation Methods

Internal Assessment:

➤ **Theory 15**

- Class Participation: 5
- Seminar/presentation/assignment/quiz/class test etc.: 5
- Mid-Term Exam: 5

End Term Examination:

➤ **Theory 35**

- Written Examination

Part C-Learning Resources

Recommended Books:

1. C. B. Boyer & U. C. Merzbach (1991), *A History of Mathematics*. John Wiley & Sons, New York, USA.
2. D. M. Burton (2010), *History of Mathematics*. McGraw-Hill Education, New York, USA.
3. K. Plofker (2009), *Mathematics in India*. Princeton University Press, Princeton, USA.
4. B. Datta & A.N. Singh (2001), *A History of Hindu Mathematics*, Motilal Banarsidass, Delhi, India.
5. E.T. Bell (1937), *Men of Mathematics*. Simon & Schuster, New York, USA.

6. S.R. Ranganathan (1967), *Ramanujan: The Man and the Mathematician*. Indian Mathematical Society.
7. G. H. Jain (1992), *Great Indian Mathematicians: Their Lives and Works*, Bhartiya Vidya Bhavan, Mumbai, India.

Value Added Course
Undergraduate Programme (Political Science)
Semester IV
VAC 3 Gandhian Values and Ethics

VAC-3 Gandhian Values and Ethics (Credit-02)	Maximum Marks:50
Course ID:	Theory Marks: 35
Semester: IV	Theory Internal Assessment: 15
	Examination Time: 2 Hrs.

Course Outcome: After completing this course, the learner will be able to;

- Understand Gandhi's idea of non-violence.
- Learn the meaning and use of Ahimsa in society and politics.
- Know what Swaraj means and why it matters.
- Understand how Satyagraha works as a peaceful way to bring change.

Note:

1. Five Questions will be set in all and students will be required to attempt 3 questions.
2. Question No. 1 will be compulsory and will consist of 5 short answer type questions of 3 marks spread over the entire syllabus (3x5=15 marks).
3. For the remaining four questions, students will attempt 1 out of 2 questions from each of the two units (10 marks each).

Unit 1

Gandhian Concept of Satya and Ahimsa

Unit 2

Swaraj and Satyagrah

Suggested Readings:

1. **Gandhi, M. K.** (1993). *The collected works of Mahatma Gandhi* (Vols. 1-100). Ahmedabad: Navajivan Publishing House.
2. **Gandhi, M. K.** (1996). *Hind Swaraj and other writings*. Cambridge University Press.
3. **Tharoor, S.** (2008). *The elephant, the tiger, and the cell phone: Reflections on India in the 21st century*. New York: Arcade Publishing.
4. **Kumar, R.** (2005). *Gandhi and the contemporary world*. New Delhi: Sage Publications.
5. **Nair, V. P.** (2010). *Gandhian non-violence and contemporary conflict resolution*. New Delhi: Sarup & Sons.
6. **Gandhi, M. K.** (2012). *Satyagraha in South Africa*. Ahmedabad: Navajivan Publishing House.
7. **Patel, K.** (2013). *Gandhi: A life*. New York: Viking Press.
8. **Iyer, R. (Ed.)** (2010). *The moral and political philosophy of Mahatma Gandhi*. New Delhi: Oxford University Press.
9. **Chatterjee, P.** (2004). *The nation and its fragments: Colonial and postcolonial histories*. Princeton University Press.
10. **Fischer, L.** (1950). *The life of Mahatma Gandhi*. New York: Harper & Row.
11. **Chakrabarty, B.** (2013). *Gandhi's Thought in Practice*. Kolkata: Orient Blackswan.
12. **Kumar, A.** (2009). *The Concept of Swaraj in Gandhi's thought*. New Delhi: New Age International.
13. **Parekh, B.** (1997). *Gandhi: A very short introduction*. Oxford: Oxford University Press.