RT Semester III

Code	Course Levels	Course	Course Title	Credit	L:T: P	Teaching Hours	Marks		
							CIA	ESE	Total
RT301C	100	DSC	Remote Sensing and GIS for Rural Planning	4	3:1:0	60 Hours	30	70	100
Practical		DSC	Remote Sensing and GIS for Rural Planning		0:0:2	30 Hours		50	50
RT301 TE -- RT305TE	300	DSE	Three DSEs from the pool of DSEs for the III semester	3 × 4 = 12	3:1:0	60 Hours	30	70	100 × 3 = 300
Practical		DSE	Selected three DSEs from the pool of DSEs for the III semester		0:0:2	60 Hours	30	50	50 × 3 = 150
RT309R	100	DSRM	Research Methodology	4	4:1:0	60 Hours	30	70	100
Practical		DSRM	Research Methodology					50	50
	500		**Total**	**20**					**750**

List of DSE of Third Semester

Code	Course Title
RT302E	Medicinal Plant Production Techniques and Extraction
RT303E	Food Science Technology and Value Addition in Natural Product
RT304E	Lac Production Technique
RT305E	Rural Waste management
RT306E	Rural Banking And Financing
RT307E	History and ideology for Rural Development

06/11/24

RT Semester IV

Code	Course Levels	Course	Course Title	Credit	L:T: P	Teaching Hours	Marks		
							CIA	ESE	Total
RT401C	100	DSC	Indigenous Art and Its Management	4	3:1:0	60 Hours	30	70	100
Practical		DSC	Indigenous Art and Its Management		0:0:2	30 Hours		50	50
RT 402R	100	RES	Focussed Group Discussion, Analysis, and Report	4	0:0:4	120 Hrs	30	70	100
RT 403R	100	RES	Formulation of Research Problem and Review of Literature, Synopsis Presentation, Research Work	4	0:0:16	60 Hrs	30	70	100
RT - 404R	200	RES	Research Thesis	8	4:0:0	240 Hrs	--	200	200
	500		**Total**	**20**					**550**

06/12/24

I Semester 750

II Semester 750

II Semester 750

IV Semester 550

Grand Total 2800

Semester – III					
Code: RT301TC	**Title :**Remote Sensing and GIS for Rural Planning		**Max. Marks**		
			CIA	**ESE**	**Total**
Type: Core	**Credit : 4** **L:T:P= 4:0:0**	**Teaching Hours : 60 hrs**	**30**	**70**	**100**

CO1	Obtain fundamental knowledge of remote sensing and gain basic experience in hands on application of remote sensing.
CO2	Aware with the prospect and potential of remote sensing and its application in the field of rural development.
CO3	Understand the software of remote sensing and GIS application in the field of rural development.
CO4	Interpret the remotely sensed data

Unit	**Contents**	**Bloom's Correspondence**	**Cos**
Unit 1	Concepts & Fundamental of Remote Sensing: Introduction, Early History, Energy Sources & Radiation Principles, Energy Interactions in the atmosphere, Energy Interactions with Earth surface. Features, Spectral Reflectance of vegetation, Soil & water etc. Real and ideal remote sensing.	U	CO1
Unit 2	Photo-Grammetry: Introduction, Types of Aerial Photographs, Basic principles of Photogrammetry, Geometry of a vertical aerial photograph, photographic Scale, Applications of vertical aerial photograph. Stereo-photogrammetry: Stereo models, Stereoscopic Vision.	U	CO2
Unit 3	Satellites and sensor, imaging and non-imaging sensor, Different satellite related with remote sensing. Digital Image Processing (DIP): Introduction, Preprocessing of image – Image interpretation, Geometric & Radiometric Correction, Image Enhancement. Microwave Remote Sensing Introduction, sensors, synthetic aperture RADAR, radar returns and image signatures, radar image characteristics. Remote Sensing Satellite Orbit- Geosynchronous orbit, Sun synchronous orbit. Thematic Image classification and information Extractions	An	CO3

Unit 4	Global Positioning System: Definition, main segment, types, uses, nature and sources of errors in GPS signals. Geographical information system: Introduction, component of GIS, role of remote sensing and GIS in the Chhattisgarh region, Spatial Data information, Image Interpretation.	Ap	CO4
	Reference		
Text/ Reference Books	Remote Sensing - Principles & interpretation - F.F. Sabins Digital Remote Sensing - Dr. P. Nag, Dr. M. Kudrat Principles of Remote Sensing - P.J. Curran. Remote Sensing principals and application- Dr. B. C. Panda		

Semester – III					
Course Code: RT301PC	**Course Title:** Remote Sensing and GIS for Rural Planning- Practical			**Max. Marks**	
Type: Core	**Credit : 4** **L:T:P= 0:0:4**	**Teaching Hours : 32 hrs**	**CIA**	**ESE**	**Total**
			30	**70**	**100**
	Field based/Laboratory exercises: 1. Geometric and radiometric correction of satellite data, Image enhancement techniques, Principal component analysis, 2. Supervised classification, Supervised classification schemes (Maximum likelihood, nearest neighbor and artificial numeral net-work classification), Vegetation indices. 3. Creation of digital evaluation model through contour digitization and surface hydrology. 4. Digitization of different features of given topo-sheet. Editing attributes of geo-database features. Creating different features like polygon line, tic, polyline etc. 5. Creation of personal geo-database.				

COs and POs/PSOs mapping and Co relational matrix

Course Out Come	POs											PSOs			
	1	2	3	4	5	6	7	8	9	10	11	1	2	3	4
CO1	3	2	2	2	1	1	2	1	1	2	1	2	1	-	-
CO2	3	2	2	2	1	1	1	1	1	2	1	2	1	-	-
CO3	2	3	2	2	1	2	1	1	1	2	1	2	1	-	-
CO4	3	1	1	2	1	1	2	1	1	2	1	2	1	-	-

Semester –III					
Code: RT301TE	**Title :** Entrepreneurship and Small Business Technology and Management		**Max. Marks**		
Type: Core	**Credit : 4 L:T:P= 4:0:0**	**Teaching Hours : 60 hrs**	**CIA** 30	**ESE** 70	**Total** 100

CO1	Understand entrepreneurship and qualities about an entrepreneur.
CO2	Aware about the MSME, their function and its role in self employment.
CO3	Understanding about the project, plan of action in any business environment.
CO4	Knowledge about various state and central schemes for small business establishment.

Unit	Contents	Bloom's Correspondence	COs
Unit 1	Entrepreneurship- Meaning, definition and concept of Entrepreneurship. Importance of being an entrepreneur, qualities of a successful entrepreneur, types of entrepreneurs, functions of an entrepreneur, issues and problems faced by Entrepreneurs.	U	CO1
Unit 2	Micro, small and medium enterprises (MSME) -Meaning, characteristics and scope of MSME, classification of MSME, importance of small business in India. Choosing a career, concept of career, importance of choosing a career, career avenues in business, wage, Employment, self - employment. Possible areas of self - employment, qualities required for success in self — employment.	U	CO2
Unit 3	Project Management and Setting up a Small Business - characteristics, needs and Classification of a project, phases of project management, roles and responsibilities of project manager, Identifying entrepreneurial Opportunity, Preparing Plan of Action, Deciding the nature and forms of business, Location of Business, Arrangement of Resources, Legal formalities.	U	CO3
Unit 4	Government Policy towards Small Business Industrial and commercial policy of Chhattisgarh. Schemes and programs for entrepreneurship development. Institutional Support to Small Business: National Small Industries Corporation (NSIC), State Small Industries Development Corporations (SSIDCs), National Bank for Agriculture and Rural Development (NABARD), Khadi and Village Industries Commission (KVIC), Small Industries Service Institutions (SISIS), Small Industries Development Bank Of India (SIDBI), District Industries Centers.	Ap	CO4

Reference	
Text/Reference Books	S. Kanka: Entrepreneurial Development P. Chandra: Project Planning, Analysis, Selection, Implementation and Review Tata McGraw Hill. VasanthaDesai: Dynamics of Entrepreneurial Development C.B. Gupta & N.P. Sreenivasan: Entrepreneurial Development Dr.AnupamTiwari: Grain Management: To Ensure Food Security, Marks Books, New Delhi Nirmal K. Gupta: Small Industry - Challenges and Perspectives

Semester – II					
Course Code: RT301PE	**Course Title:** Entrepreneurship and Small Business Technology and Management- Practical		**Max. Marks**		
Type: Core	**Credit : 4** **L:T:P= 0:0:4**	**Teaching Hours :32 hrs**	**CIA**	**ESE**	**Total**
			30	**70**	**100**
	Field based/Laboratory exercises: 1. Visit of near small scale industry. 2. Visit of NABARD and report preparation.				

COs and POs/PSOs mapping and Co relational matrix

Course Out Come	Pos											PSOs			
	1	2	3	4	5	6	7	8	9	10	11	1	2	3	4
CO1	3	2	1	2	1	1	-	-	-	2	-	2	1	-	-
CO2	3	2	1	1	1	-	2	1	-	1	1	2	1	-	-
CO3	2	2	2	2	2	-	-	1	-	2	1	2	1	-	-
CO4	3	2	1	1	1	1	2	1	-	1	1	2	1	-	-

Semester – III					
Code: RT302TE	**Title :**Food Science Technology		**Max. Marks**		
Type: Elective	**Credit : 4** **L:T:P= 4:0:0**	**Teaching Hours : 60 hrs**	**CIA**	**ESE**	**Total**
			30	**70**	**100**
CO1	Understand about the meal planning.				
CO2	Learn various method of food preparation.				
CO3	Understand the importance microorganisms in food preservation.				

CO4	Learn various food processing and preservation technologies.		
Unit	**Contents**	**Bloom's Correspondence**	**Cos**
Unit 1	Food Science- Introduction, functions of food, nutrition and nutrients, nutrient requirements, inter relationship of food, nutrition and health. Scope & job opportunities of food science. Govt. Schemes for food processing.	U	CO1
Unit 2	Meal Planning - Food groups, balanced diet, meal planning, importance of meal planning, factors affecting meal planning, modification of family meals for various age groups, need for special diet, Purchase and Storage of Food- Perishability of foods, quality indicators, selection, purchase and storage of food, food spoilage: causes and hazards, safe handling of food.	U	CO2
Unit 3	Preparation of Food - Need for cooking, pre-preparation of food, preparation of food, loss of nutrients, effect of heat on cooking, enhancement of nutritive value, effective use of leftover food. Household Equipment- Classification of equipment's, selection of household equipment's, care and maintenance of household equipment's.	An	CO3
Unit 4	Food Preservation - Meaning and need for preservation, principles of food preservation, household methods of food preservation, Importance & uses of Food Preservation. Value addition: Jam, Jelly, Juice, Pickles, Beverage production of different fruit and vegetable. Rural cottage industries for preservation of food and their products.	Ap	CO4
Reference			
Text/ Reference Books	Textbook of Food Science and Technology - Vijay Khader. Preservation of Fruit and Vegetable - G.Lal, G.S.Siddappa and G.L.Tandon. Food Preservation and Processing - M.Kalia and 8. Sood. Grain Management: To Ensure Food Security, Dr.Anupam Tiwari, Marks Books, New Delhi Fruit Preservation- Principles and Methods - $.S.Srivastav - KitabMahal, Delhi		

Semester – III					
Course Code: RT302PE	**Course Title:** Food Science Technology- Practical		**Max. Marks**		
			CIA	**ESE**	**Total**
Type: Core	**Credit : 4** **L:T:P= 0:0:4**	**Teaching Hours : 32 hrs**	**30**	**70**	**100**
	Field based/Laboratory exercises: 1. Study of basic instruments used in microbial techniques- Laminar air flow, oven, Incubator, Autoclave. 2. Gram staining technique for the identification of Gram +ve and Gram –ve bacteria. 3. Identification of Nostoc, Anabaena, Rhizopus, Yeast 4. Detection of adulteration in food items. 5. Study of various food preservative methods.				

COs and POs/PSOs mapping and Co relational matrix

Course Out Come	POs											PSOs			
	1	2	3	4	5	6	7	8	9	10	11	1	2	3	4
CO1	3	2	1	1	1	1	2	1	-	1	1	2	1	-	-
CO2	3	2	1	1	2	1	2	1	-	1	1	2	1	-	-
CO3	3	2	1	1	2	1	1	-	-	1	1	2	1	-	-
CO4	3	2	1	1	3	1	1	1	-	1	1	2	1	-	-

Semester – III					
Code: RT303TE	**Title :** Lac Production Technique		**Max. Marks**		
			CIA	**ESE**	**Total**
Type: Elective	**Credit : 4** **L:T:P= 4:0:0**	**Teaching Hours : 60 hrs**	**30**	**70**	**100**

CO1	Understand the basics of lac culture, biology and life cycle of lac insect.
CO2	Enhance their knowledge and technical skills to produce lac in various host plants.
CO3	Gain knowledge on scientific method of lac cultivation, processing technique of raw lac, shell and white lac.
CO4	Develop marketing skill for commercial lac products.

Unit	Contents	Bloom's Correspondence	Cos
Unit 1	Lac insect: meaning, concept and economic importance of lac cultivation. Classification and morphology and life cycle of lac insect, types of lac insect, history of lac cultivation, area and geographical distribution of lac insect, natural habitat of lac insect, types of lac and its characteristics.	U	CO1
Unit 2	Lac production in *Buteamonosperma*: Introduction, history, natural habitat, merits and limitations, lac insect and crop, stages of rangeeni lac insect, selection of trees, pruning of trees. Inoculation of host tree, removal of used-up broodlac, pest management, crop harvesting; scraping of lac from sticks, primary processing of lac, storage, transport and marketing of lac.	U	CO2
Unit 3	Lac production in *Ziziphusmauritiana*: Introduction, history, natural habitat, merits and limitations, lac insect and crop, stages of rangeeni and kusmi lac insect, selection of trees, pruning of trees, inoculation of host tree, removal of used-up broodlac, pest management, crop harvesting, scraping of lac from sticks, primary processing of lac, storage, transport and marketing of lac.	An	CO3
Unit 4	Lac production in *Schleicheraoleasa*: Introduction, history, natural habitat, merits and limitations, lac insect and crop, stages of kusmi lac insect, selection of trees, pruning of trees, inoculation of host tree, removal of used-up broodlac, pest management winter and summer crops, crop harvesting, scraping of lac from sticks, primary processing of lac, storage, transport and marketing of lac. Lac	Ap	CO4

	production in *Flemingiasemkalara*: Introduction, history, natural habitat, merits and limitations, lac insect and crop, stages of kusmi lac insect, propagation and nursery management, planting and nutrient management, pruning of trees, inoculation of host tree, removal of used-up broodlac, pest management winter and summer crops, crop scraping of lac from sticks, primary processing of lac, storage, transport and and marketing of lac.		

Reference

Text/Reference Books

- ✔ Chapinan: The Insects: structure and function 94 ed, 1998, ELBS)
- ✔ Imms: A general text book of entomology. 2 vol. (1997, Asia publishing house)
- ✔ Megavin: Essential Entomology 92001, Oxford Univ Press)
- ✔ The Insect. Ramesh Arora and GS Dariwal
- ✔ Atlas of Indian Lac, Ajit Prasad Jain.
- ✔ Lac cultivation in India. M.G.Kamath
- ✔ A handbook of shellac Analysis. G.N.Bhattacharya and P.K.Bose.

Semester – III

Course Code: RT303PE	**Course Title:** Lac Production Technique- Practical		**Max. Marks**		
			CIA	**ESE**	**Total**
Type: Core	**Credit : 4** **L:T:P= 0:0:4**	**Teaching Hours : 32 hrs**	**30**	**70**	**100**

Field based/Laboratory exercises:

1. Identification and preparation of different host plants for lac cultivation.
2. Selection and inoculation of brood lac in host plant.
3. Removal of used-up brood lac sticks from host plants.
4. Processing of lac.
5. Lac crop protection.
6. Study of equipments used in lac cultivation.
7. Identification of lac insect and lac crops.

COs and POs/PSOs mapping and Co relational matrix

Course Out Come	POs											PSOs			
	1	2	3	4	5	6	7	8	9	10	11	1	2	3	4
CO1	3	2	1	-	1	2	1	1	-	1	1	2	1	-	-
CO2	3	2	1	-	3	2	1	1	-	1	1	2	1	-	-
CO3	3	2	1	-	2	2	1	2	-	1	1	1	1	-	-
CO4	3	2	1	-	3	2	1	1	-	1	1	2	1	-	-

Semester – III					
Code: RT304TE	Title :Rural Waste management		Max. Marks		
Type: Elective	Credit : 4 L:T:P= 4:0:0	Teaching Hours : 60 hrs	CIA	ESE	Total
			30	70	100

CO1	Learn broader understandings on various aspects of waste management practiced in industries.
CO2	Aware about sanitation and waste water management.
CO3	Learn about waste water management
CO4	Learn about the recovery of products from waste to compost and biogas, incineration and energy recovery, hazardous waste management and treatment, and integrated waste management

Unit	Contents	Bloom's Correspondence	Cos
Unit 1	Introduction of Rural waste, Type of waste, different methods of systematic collection and disposal of waste, Types of sever. Concept of sewage treatment, principle of primary, secondary treatment and Tertiary treatment of wastewater, General composition of sewage, method of determination of B.O.D. and C.O.D.	U	CO1
Unit 2	Rural Sanitation- Provision of safe and potable water for domestic purposes, collection and disposal of dry refuse, collection and disposal of sullage, disposal of excretal waste, night soil disposal without water carriage, Construction of low-cost latrines in rural areas Septic tanks, soak pit, privy pit and bore hole privy, can privy, concrete vault privy, aqua privy, PRAI latrine.	U	CO2
Unit 3	Waste water management- performance criteria Que waste water management system, house drainage plan, classification of traps- P-trap, O-trap, S trap, floor trap, gully trap, intercepting trap. grease trap, principle for efficient drainage system.	An	CO3
Unit 4	Solid waste management- classification of solid waste, quantity and composition of refuse, collection and removal of refuse, transport of refuse, disposal of refuse controlled tipping, landfill, trenching, dumping into sea, pulverization, incineration, composting- composting by trenching, open window composting, mechanical composting, composting adopted in India, Biogas technology properties of biogas, types of biogas plant recognized of Non-conventional Energy Sources).	Ap	CO4

Reference

Text/ Reference Books

- ✔ Rangwala S.C, Water Supply & Sanitary Engineering, Charotar Publishing House (P) Ltd., Anand.
- ✔ Gurcharan Singh, Water Supply & Sanitary Engineering, Standard Publishers Distributors, Delhi
- ✔ Garg, S.K., Water Supply Engineering, Kharma Publishers, Delhi. Gupta, D.V. Water Supply & Sanitary Engineering, Asian Publishers, Muzaffarnagar
- ✔ Modi, P.N. Water Supply Engineering, Standard Book House, Delhi

Semester – III					
Course Code: RT304PE	**Course Title:** Rural Waste management- Practical		**Max. Marks**		
			CIA	**ESE**	**Total**
Type: Core	**Credit : 4** L:T:P= 0:0:4	**Teaching Hours : 32 hrs**	**30**	**70**	**100**

Field based/Laboratory exercises:

1. To study types of waste material.
2. To study the physical treatment of waste water.
3. To study the biological treatment of waste water.
4. To study the chemical treatment of waste water
5. Visit to sewage treatment plants.
6. To study biogas technology of solid waste management.
7. To study landfill method of solid waste management
8. To study various model of privy.
9. To study biogas technology as solid waste management

COs and POs/PSOs mapping and Co relational matrix

Course Out Come	POs											PSOs				
	1	2	3	4	5	6	7	8	9	10	11	1	2	3	4	5
CO1	3	2	1	-	1	1	1	2	-	2	2	2	1	-	-	3
CO2	3	2	1	-	3	2	1	1	-	2	1	2	1	-	-	3
CO3	3	2	1	-	2	1	1	2	-	1	2	1	1	-	-	3
CO4	3	2	1	-	3	2	1	1	-	2	1	2	1	-	-	3

Semester – III					
Course Code: RT305TE	**Course Title:** Natural Product Management		**Max. Marks**		
			CIA	**ESE**	**Total**
Type: Elective	**Credit : 4** L:T:P= 4:0:0	**Teaching Hours : 60 hrs**	**30**	**70**	**100**

CO1	Aware the forest product and their linkages to livelihood.
CO2	Gain knowledge of the major classes of natural products with detailed examples.
CO3	Develop the product as per indigenous knowledge, traditional use and cultural perspectives.
CO4	Knowledge about the deferent edible forest-based food.

Unit	Contents	Bloom's Correspondence	COs
Unit 1	Definition, contribution of natural products for National Economy, important product of forest, and their role in rural economy and livelihood, utilization pattern of forest products.	U	CO1
Unit 2	Classification and use, Grasses, bamboos and canes, essential oils from grass, root and flower oils. Methods of extraction of essential oils, distillation, uses of oils, Role of oils and waxes in rural economy.	U	CO2
Unit 3	Tanes and it's uses - Wood tanes, bark tanes, fruit tanes and leaf tanes, Dyes-wood, bark, flower and fruit dyes, root dyes leaf dyes, animal dyes, uses of tannins and dyes in Rural industries. Gums and resins- true gums, hard resins, oleo resins, utilizations of gums and resins, gum and resin tapping: Manufacturing of turpentine. Katha, cutch and charcoal making.	Ap	CO3
Unit 4	Edible foods- leaves and young shoots, flower and young buds, fruits, seeds and nuts, bark and pith, gums, tubers, rhizomes and corms, nutritional value of important of edible food, Special food of Bastar region — Boda, imli, kaju, basta, mata, salfi.	Ap	CO4

Reference	
Text Books /Reference Books	Non Timber Forest Product - S. Negi. Forest Non - Wood Resources - A.P. Devadi. Textbook of Food Science and Technology - Vijay Khader. Preservation of Fruit and Vegetable - G. Lal, G. S.Siddappa and G. L.Tandon. Food Preservation and Processing -M.Kalia and 8. Sood

Semester – III					
Course Code: RT305PE	**Course Title:** Natural Product Management-Practical		**Max. Marks**		
Type: Core	**Credit : 4** **L:T:P= 0:0:4**	**Teaching Hours :32 hrs**	**CIA**	**ESE**	**Total**
			30	**70**	**100**

Field/Laboratory based exercises:

1. Identification of fibre producing plants.
2. Study of fibre processing techniques.
3. Identification of gum producing plants & characteristics.
4. Tapping & collection of gums from various plant sources.
5. Study of various types of resin & their sources
6. Identification of dye producing plants.
7. Study on dye preparation techniques.

Cos and POs/PSOs mapping and Co relational matrix

Course Out Come	Pos											PSOs			
	1	2	3	4	5	6	7	8	9	10	11	1	2	3	4
CO1	3	2	2	-	1	-	-	-	-	1	-	2	1	-	-
CO2	3	2	1	-	1	-	2	1	-	1	1	2	1	-	-
CO3	2	3	2	-	2	-	-	-	-	1	1	2	1	-	-
CO4	3	2	1	-	1	1	2	1	-	1	1	2	1	-	-

Semester – IV					
Code: RT401TC	Title: Indigenous Art and Its Management		Max. Marks		
			CIA	ESE	Total
Type: Core	Credit : 4 L:T:P= 03:01:0	Teaching Hours : 60 hrs	30	70	100

CO1	Understand the constitution of drug and drug delivery system.
CO2	Learn drug formulation and extraction phenomenon.
CO3	Learn innovation in design and processes
CO4	Understand the economy and marketing of indigenous art

Unit	Contents	Bloom's Correspondence	Cos
Unit 1	Introduction to Indian art, Art scope in Chhattisgarh, Various traditional arts and its importance in Chhattisgarh. Origin and history of Chhattisgarh traditional art,background, different technique related with Chhattisgarh traditional art.	U	CO1
Unit 2	Bell metal craft (Dhokara Art/Ghardwa Art) - Materials, Processes and techniques. Tribal Iron Art- Materials, processes, techniques and equipments, Woodenart, Terracotta art and Bamboo art - Materials, Processes, techniques, equipments and applications, Stone Art..	An	CO2
Unit 3	Innovation in Design and Processes- Mixing of modern art with indigenous art, Creativity development in traditional art, required improvement in raw materials and equipment.	An	CO3
Unit 4	Economy and marketing- Marketing problems related with rural; art; present situation of rural artisans of Chhattisgarh state, role of different government and non-government organization in the development of rural artisans.	An	CO4

Reference

Text/ Reference Books

1. Chandra, Seema, Social Problem and Social Works, 2012, ALP Books, ISBN-10 .9382215816
2. Zastrow, Charles, Social Problems: Issues and Solutions, 2000, Wadsworth, 0534523927, 9780534523923
3. Madan, G.R., Indian Social Problems, Allied Publishers Pvt Ltd, 2013,ISBN-13 8184244533-978 :
4. Agrawal, Namita (2002) Women and Law in India, Women Studies and Development Centre, December, New Century Publication.

Semester – IV					
Course Code: RT401PC	**Course Title:** Indigenous Art and Its Management-Practical			**Max. Marks**	
				CIA	**ESE**	**Total**
Type: Core	**Credit : 4** **L:T:P= 0:0:4**	**Teaching Hours : 32 hrs**		**30**	**70**	**100**
	Field based/Laboratory exercises: 1. Visit of Bell metal craft manufacturing site. 2. Making of bamboo art. 3. Visit of Wooden art and Terracotta art manufacturing site.					

COs and POs/PSOs mapping and Co relational matrix

Course Out Come	Pos											PSOs				
	1	2	3	4	5	6	7	8	9	10	11	1	2	3	4	5
CO1	2	-	1	-	1	2	1	2	-	2	1	-	3	-	-	-
CO2	2	3	3	1	1	2	1	1	-	2	1	-	3	1	-	-
CO3	3	2	2	2	1	2	1	1	-	2	1					
CO4	3	2	2	1	1	2	1	1	-	2	1					

Semester – IV					
Code: RT402PR	**Title : Focussed Group Discussion, Analysis and Report**		**Max. Marks**		
Type: Research Methodology	**Credit : 4 L:T:P= 0:0:04**	**Teaching Hours : 120 hrs**	**CIA**	**ESE**	**Total**
			100	**00**	**100**

CO1	Able to understand how to conduct a Focus Group Discussion.
CO2	To develop ability to build relationship with groups and communities.
CO3	To develop the quality of analyzing the problems of a particular group as well as the ability to think and understand to solve those problems.
CO4	Able to help the group in getting benefits of government schemes and connecting them with the mainstream.

Unit	**Contents**	**Bloom's Correspondence**	**Cos**
Focus group discussion, Analysis and Report	A focus group discussion (FGD) is a good way to gather together people from similar backgrounds or experiences to discuss a specific topic o interest. Students will be divided into some groups. A group of student will select a Focused group. Students will go to the field and study that group. Understand their problems and study what can be done for the development of that group. Students will have to submit FGD report to the department.	U	CO1

Reference

Text Books

1. Hennink Monique M., Focus Group Discussion, understanding qualitative research, 2014, Oxford University Press Inc, ISBN 13- 978-0199856169
2. Hennink Monique M., International Focus Group Research, 2014, Cambridge University Press, ISBN 13- 978-0521845618

COs and POs/PSOs mapping and Co relational matrix

Course Out Come	Pos											PSOs				
	1	2	3	4	5	6	7	8	9	10	11	1	2	3	4	5
CO1	2	-	2	-	-	3	2	-	-	-	-	2	2	1	-	-
CO2	-	-	1	-	3	3	-	-	2	-	-	-	2	1	-	-
CO3	3	2	3	2	-	3	-	2	-	3	-	3	-	3	3	3
CO4	2	-	2	-	-	3	3	3	-	3	-	3	-	3	3	3

Semester – IV					
Code: RT403R	**Title : Formulation of Research Problem and Review of Literature, Synopsis Presentation, Research Work**		**Max. Marks**		
Type: Research Methodology	**Credit : 8 L:T:P= 0:0:16**	**Teaching Hours : 240 hrs**	**CIA**	**ESE**	**Total**
			100	**00**	**100**

CO1	Develop the quality to identify the Problems.
CO2	Describes problem formulation, review of literature related to the study, preparing the research proposal, choosing an appropriate research strategy.
CO3	Assess to develop instruments of data collection, collecting the data, processing, analyzing and interpreting the data and preparing the research report.
CO4	Learn Skills and able to apply methods and Principles during the Research, Develop skill to make research report and project report.

Unit	**Contents**	**Bloom's Correspondence**	**Cos**
Formulation of Research Problem and Review of Literature, Synopsis Presentation, Research Work	In this part of the course students will be offered to learn research methodology and prepare a small dissertation. The purpose of the research work is to acquaint the student with the methods and Process of research, to make them intelligent and smart users of research work available and also to some extent, to help them to be a producer of a quality research. Each student of Rural Technology has to undertake a research project for investigating any social problem or issue. An effort is made to select subjects of interest to the students and which fall in their field of specialization.	Cr	CO1

COs and POs/PSOs mapping and Co relational matrix

Course Out Come	Pos											PSOs				
	1	2	3	4	5	6	7	8	9	10	11	1	2	3	4	5
CO1	3	2	2	-	-	3	3	2	-	-	1	3	2	1	-	3
CO2	1	2	1	-	2	3	2	2	2	1	-	3	2	1	-	3
CO3	-	2	-	2	-	3	3	3	-	3	-	3	-	3	3	3
CO4	-	-	-	-	-	3	-	1	-	-	-	-	-	-	-	3

Semester – IV					
Code: RT404R	**Title : Research Thesis**		**Type: Research**		
Type: Research Methodology	**Credit : 4 L:T:P= 0:0:04**	**Teaching Hours : 60 hrs**	**CIA**	**ESE**	**Total**
			00	**200**	**200**

CO1	Able to use skills and knowledge in the area of interest and understand the day-to-day activity in a Rural Area work field
CO2	Able to developed to integrate learning and generate new learning by participation through intervention process
CO3	Able to acquire the knowledge about the direct practice with social issues.
CO4	Able to do data analysis and report writing, Able to present our research work.

Unit	**Contents**	**Bloom's Correspondence**	**Cos**
Research Thesis	In this part of the course students will prepare the report of research. Viva-Voce will be conducted by the Department. Viva-voce will be held in the presence of External Examiner appointed by the Vishwavidyalaya.	Cr	CO1

COs and POs/PSOs mapping and Co relational matrix

Course Out Come	Pos											PSOs				
	1	2	3	4	5	6	7	8	9	10	11	1	2	3	4	5
CO1	2	2	2	-	-	-	-	2	-	-	-	2	-	3	2	1
CO2	-	2	2	-	-	-	-	2	-	-	-	2	-	3	2	1
CO3	-	-	-	-	-	-	-	-	-	-	-	2	-	3	2	-
CO4	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-

Semester – IV					
Code: RT404R	Title : Research Thesis		Type: Research		
Type: Research Methodology	Credit : 4 L:T:P= 0:0:04	Teaching Hours : 60 hrs	CIA	ESE	Total
			00	200	200

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CO1	2	2	2	-	-	-	-	2	-	-	-	2	-	3	2	1
CO2	-	2	2	-	-	-	-	2	-	-	-	2	-	3	2	1
CO3	-	-	-	-	-	-	-	-	-	-	-	2	-	3	2	-
CO4	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-

Semester – IV					
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Type: Research Methodology	Credit : 4 L:T:P= 0:0:04	Teaching Hours : 60 hrs	CIA	ESE	Total
			00	200	200

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CO1	2	2	2	-	-	-	-	2	-	-	-	2	-	3	2	1
CO2	-	2	2	-	-	-	-	2	-	-	-	2	-	3	2	1
CO3	-	-	-	-	-	-	-	-	-	-	-	2	-	3	2	-
CO4	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-

Semester – IV					
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Type: Research Methodology	Credit : 4 L:T:P= 0:0:04	Teaching Hours : 60 hrs	CIA	ESE	Total
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CO1	2	2	2	-	-	-	-	2	-	-	-	2	-	3	2	1
CO2	-	2	2	-	-	-	-	2	-	-	-	2	-	3	2	1
CO3	-	-	-	-	-	-	-	-	-	-	-	2	-	3	2	-
CO4	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-

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CO2	-	2	2	-	-	-	-	2	-	-	-	2	-	3	2	1
CO3	-	-	-	-	-	-	-	-	-	-	-	2	-	3	2	-
CO4	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-