



### List of Revised Courses

**Department : Rural Technology and Social Development**

**Programme Name : B.Sc. (Rural Technology)**

**Academic Year : 2020-21**

### List of Revised Courses

Sr. No.	Course Code	Name of the Course
01.	NR/RT/C-501L	Land, Surveying, Leveling and Drawing
02.	NR /RT/C-501P	Practicals based on theory
03.	NR /RT/C-502L	Building Construction Material and Rural Infrastructure
04.	NR /RT/C-P-502P	Practicals based on theory
05.	NS/RT/DSE-1-501L	A: B: Rural Entrepreneurship and Management
06.	NS/RT/DSE-1-501P	Practicals based on theory
07.	NS/RT/DSE-2-502L	A: Natural Product Management B: Agricultural Equipments and Crop Production
08.	NS/RT/DSE-2-502P	Practicals based on theory
09.	NR/RT/C-601L	Introduction to Remote Sensing
10.	NR /RT/C-601P	Practicals based on theory
	NR /RT/C-602L	Introduction to Medicinal Plants
	NR /RT/C-P-602P	Practicals based on theory
	NS/RT/DSE-3-601L	A: Rural Energy Sources B: Watershed Management
	NS/RT/DSE-3-501P	Practicals based on theory
	NS/RT/DSE-4-601L NS/RT/DSE-4-601P	Rural Health Care Or Organic Framing Or Linkages with Rural Organization
	NS/RT/Dissertation	



## Minutes of Meetings (MoM) of Board of Studies (BoS)

**Academic Year : 2020-21**

**School : SOS of Interdisciplinary Education and Research**

**Department : Rural Technology and Social Development**

**Date and Time : July 26, 2020 - 11:30 AM**

**Venue : Library hall**

The scheduled meeting of member of Board of Studies (BoS) of Department of Rural Technology and Social Development School of Studies of Interdisciplinary Education and Research, Guru Ghasidas Vishwavidyalaya, Bilaspur was held to design and discuss the B.Sc. Final year (V and VI semesters) M.Sc., Ph.D. scheme and syllabus.

The following members were present in the meeting:

1. Prof. A.K. Gauraha (External Expert Member BoS, IGKV Raipur)
2. Dr. Rajendra Mehta (Member BoS, Dept. of Rural Technology and Social Development)
3. Dr. P.R. Singh (HOD, Associate Prof., Dept. of Rural Technology and Social Development -cum Chairman, BOS)
4. Dr. S.K. Nirala (Member BoS, Assistant Professor, Dept. of Rural Technology and Social Development)
5. Dr. Bhaskar Chaurasia (Invited Member, Assistant Professor, Dept. of Rural Technology and Social Development)
6. Dr. Alka Mishra (Invited Member, Assistant Professor, Dept. of Rural Technology and Social Development)
7. Dr. Dilip Kumar (Invited Member, Assistant Professor, Dept. of Rural Technology and Social Development)
8. The BOS invited passed out students (namely Mr. Rakesh Kumar Ghritlahre, and Mr. Prasoon Soni) of this department to give their inputs as per their past experiences to improve course curriculum of the programs running under the department of Rural Technology and Social Development.

Following points were discussed during the meeting

1. After the discussion with all the members of the BOS, the existing choice based credit system (CBCS) Syllabus of B.Sc. I to IV semester had been improved which was implemented from 2018-19. Syllabus for B.Sc. V and VI Semester has been proposed for the implementation from 2020-21 in continuation of 2018-19.
2. The CBCS based scheme for B.Sc. Rural Technology for all the six semesters was approved by the BOS. (Scheme is attached here with).



3. Existing syllabus of M.Sc. I to IV semester of Rural Technology has been improved and approved by BOS which was implemented from session 2019-20.(Scheme is attached here with).
4. Syllabus for Pre Ph.D. of Rural Technology had been improved and approved by the BOS which was implemented from session 2019-20.

The following new courses were introduced in the of B. Sc. Final year (V and VI Semesters):

- ❖ All courses of B.Sc. V and VI Semester

Signature & Seal of HoD



## Scheme and Syllabus

Semester	Course Opted	Course Code	Name of the course	Credit	Hour / week	
V	Core-11	NR/RT/C-501L	Land, Surveying, Leveling and Drawing	4	4	
	Core -11 Practical	NR /RT/C-501P	Practicals based on theory	2	4	
	Core -12	NR /RT/C-502L	Building Construction Material and Rural Infrastructure	4	4	
	Core -12 Practical	NR /RT/C-P-502P	Practicals based on theory	2	4	
	Discipline Specific Elective (DSE-1)	NS/RT/DSE-1-501L	A: Goat and Pig Production Techniques B: Rural Entrepreneurship and Management	4	4	
	DSE-1 - Practical	NS/RT/DSE-1-501P	Practicals based on theory	2	4	
	Discipline Specific Elective (DSE-2)	NS/RT/DSE-2-502L	A: Natural Product Management B: Agricultural Equipments and Crop Production	4	4	
	DSE-2 - Practical	NS/RT/DSE-2-502P	Practicals based on theory	2	4	
			<b>TOTAL</b>	<b>24</b>	<b>32</b>	
VI	Core-13	NR/RT/C-601L	Introduction to Remote Sensing	4	4	
	Core -13 Practical	NR /RT/C-601P	Practicals based on theory	2	4	
	Core -14	NR /RT/C-602L	Introduction to Medicinal Plants	4	4	
	Core -14 Practical	NR /RT/C-P-602P	Practicals based on theory	2	4	
	Discipline Specific Elective (DSE-3)	NS/RT/DSE-3-601L	A: Rural Energy Sources B: Watershed Management	4	4	
	DSE-3 - Practical	NS/RT/DSE-3-501P	Practicals based on theory	2	4	
	Discipline Specific Elective (DSE-4) + DSE-4 – Practical	NS/RT/DSE-4-601L NS/RT/DSE-4-601P	Rural Health Care Or Organic Farming Or Indigenous Arts and Crafts	4+2=6 <b>Or</b> 5 +1=6	8	
	Or Dissertation/ Project work followed by seminar	Or NS/RT/Dissertation				
				<b>TOTAL</b>	<b>24</b>	<b>32</b>
				<b>TOTAL CREDITS</b>	<b>152 + 4 (SI)</b>	

As per UGC CBCS guidelines, University / departments have liberty to offer GE and SEC courses offered by any department to students of other departments. The No. of GE course is four. One GE course is compulsory in first 4 semesters each. In present scheme it is proposed to have minimum two GE courses (from one subject) in first two semester after which student shall change two GE for another subject in III<sup>rd</sup> and IV<sup>th</sup> semester, so that all the student can have exposure of one additional subject. (Subject to approval by the competent authority)

13/01/2023





B.Sc. V SEMESTER

Course: Core -11	Credit:04	Marks: 100
Course Title: LAND, SURVEYING, LEVELING AND DRAWING		

**General Objective:** To Learn about the Land surveying methods and drawing.

**Specific Objective:** Students get to learn about basic concept of land survey drawing and design..

**Outcomes:** Students get to know about the various constructions related skills that are necessary for self employment and job opportunity.

Concept of surveying for rural development, objectives, types, units of measurement, instruments used for surveying.

Chain surveying introduction, principle and purpose, accessories for chaining, methods, running survey lines, Types of ranging survey, Errors in chaining, Testing and adjustment of chain.

Plane table survey introduction, principle and purpose, various equipments used in plane table survey, Method of plane tabling, Errors in plane table survey and precautions to use.

Concept of contour, characteristics of contour; Methods of contouring, various contour map application. Concept of leveling, level surface, Differential Global Positioning System (DGPS) and Global Positioning System (GPS).

Introduction to various drawing techniques, instruments and accessories used for drawing, Sizes of drawing sheets and their layouts, Lettering techniques and printing.

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B.Sc. V SEMESTER		
Course Code: Core 11 Practical	Credit:02	Marks: 100
Course Title: Laboratory Course		

1. To study about the instruments used in chain survey.
2. To study about the conventional signs and symbol used in chain survey.
3. Calculation of area by using chain survey.
4. To study about the field book.
5. Calculation of area by using plane table survey by radiation method.
6. Numericals related to the error in measurement.
7. Chain survey for the measurement of the area.
8. Instrument related to the plane table survey (theodelite)

B.Sc. V SEMESTER		
Course: Core -12	Credit:04	Marks: 100
Course Title: BUILDING CONSTRUCTION MATERIAL AND RURAL INFRASTRUCTURE		

**General Objective:** To Learn about the construction process of building and other important infrastructure.

**Specific Objective:** Students get to learn about basic concept of construction engineering.

**Outcomes:** Students get to know about the various constructions related skills that are necessary for self employment and job opportunity.

Building construction- introduction and site selection, Foundation, choice of soil for foundation, anti-termite treatment for building foundation, causes of foundation failure, concept of green building.

Building construction materials, stone, lime, bricks, properties of bricks, manufacturing of bricks, sand, properties of good sand- components and specification

Building construction materials, stone, lime, bricks, properties of bricks, manufacturing of bricks, sand, properties of good sand- components and specification.

Cement, Manufacturing of cement, types of cement, mortar, functions of mortar, Concrete, Reinforced cement concrete (RCC), Flooring material Concept of plastering.

Type of Rural Housing: Brief study about rural housing and design of RCC, pattern of bamboo house, mud house, wooden house, and other low cost housing structure. Govt. schemes for rural housing.

*(Handwritten signatures and initials)*

**Department of Rural Technology & Social Development**  
Guru Ghasidas Vishwavidyalaya, Koni-Bilaspur (CG)  
Semester-wise syllabus for UG Course 2019-20

Rural Road – Type of rural road, condition of rural roads, manufacturing process of rural road, Practices adopted for construction of rural roads.

**Reference Books:**

- Gurcharan Singh, Building Materials, Standard Publishers Distributors, Delhi.  
Rangwala S.C., Engineering Materials, Charotar Publishing House Pvt. Ltd., Adand.  
Mittal D.C., Engineering Materials  
S. Kulkarni G.J., Engineering Materials

B.Sc. V SEMESTER		
Course Code: Core 12 Practical	Credit:02	Marks: 100
Course Title: Laboratory Course		





**Course Title: Laboratory Course**

1. Study of Building materials.
2. Study of various types of bricks and cement.
3. Calculation techniques of bricks for building
4. Calculation techniques of bar for building.
5. Calculation techniques of cement and sand for building.
6. Visit to some under construction sites of urban and rural areas.
7. Geotagging of construction site.

B.Sc. V SEMESTER		
Course: DSE-I A	Credit:04	Marks: 100
Course Title: GOAT AND PIG PRODUCTION TECHNIQUES		

**General Objective:** To Learn about the different breeds of goats and pigs and understanding of their feeding management.

**Specific Objective:** Students get to learn about basic concept of construction engineering.

**Outcomes:** Students get to know about the various housing and health management of of different breed of goats and pigs. On completion of this course, the students will be able to establish self employment and job opportunity.

Breeds, Breeding and Feeding of goats: Characteristics of important Indian breeds of goat of different regions. Modern techniques in reproduction. Feed, forage, nutrition and rationing.

Housing and health management in goats: Sheds/shelters and their orientation, ventilation, height and roofing material, floor type and space, shelter surroundings, essential appliances and hygiene. Health management in goats.

General caring practices of goat: determination of age, identification, disbudding and dehorning, castration, exercise, hoof trimming, care of bucks, mating seasons, care of kids, does. Techniques of milking and its collection.

Breeds, Breeding and Feeding of pigs: Characteristics of important breeds of pigs. Breeding systems, feeding and rationing.