



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

**Academic Year : 2019-20**

**School : School of Natural Resources**

**Department : Rural Technology and Social Development**

**Date and Time : July, 12, 2019 - 11:30 AM**

**Venue : Seminar hall**

DEPARTMENT OF RURAL TECHNOLOGY AND SOCIAL DEVELOPMENT  
गुरु घासीदास विश्वविद्यालय, बिलासपुर (छ.ग.)  
GURU GHASIDAS VISHWAVIDYALAYA, BILASPUR (C.G.)  
विश्वविद्यालय अधिनियम 2009 के अंतर्गत स्थापित विश्वविद्यालय  
(A Central University established by the Central Universities Act, 2009)  
Website www.ggu.ac.in

**MINUTES OF MEETING OF BOARD OF STUDIES HELD ON 12-07-2019**

A meeting of board of studies (BOS) of the department of Rural Technology and Social Development was held on 12-07-2019 with following members to discuss, review and modify the syllabus for the degree of B.Sc., M.Sc. and Pre Ph.D. in Rural Technology.

I. Dr. P.R.Singh (Chairman)  
II. Prof. A.K. Gauraha (External Expert)  
III. Dr. R. Mehta (Member)  
IV. Dr. S.K. Nirala (Member)  
V. Dr. D.K.Patel (Member)  
VI. Dr. Bhaskar Chaurasia (Member)  
VII. Dr. Alka Mishra (Member)  
VIII. Dr. Dilip Kumar (Member)  
IX. Mr. Sanjeev Kumar Bhagat (Special Invitee)  
X. Mr. Prasoon Soni (Special Invitee)  
XI. Mr. Kamal Kumar Sen (Special Invitee)

The chairman of BOS Welcomed the BOS Members and following resolutions were passed:

1. The BOS invited few passed out students (namely Mr. Sanjeev Kumar Bhagat, Mr. Prasoon Soni) of this department and stakeholder Mr. Kamal Kumar Sen (M.Sc. Rural Technology Passed out from Bhojpur Vishwavidyalaya, Jagdalpur) to give their inputs as per their past experiences to improve course curriculum of the programmes running under the department of Rural Technology and Social Development.
2. After the discussion with all the members of the BOS, the existing choice based credit system (CBCS) syllabus of B.Sc. I and II Sem. had been improved which was implemented from 2018-19. Syllabus for B.Sc. III and IV Sem. has been proposed for implementation from 2019-20 in continuation of 2018-19.
3. The CBCS based scheme for B.Sc. Rural Technology for all the six semesters was approved by the BOS. (Scheme is attached herewith).

4. Existing Syllabus of M.Sc. I and II Semester of Rural Technology has been improved and syllabus of M.Sc. III -IV semester was approved by BOS for implementation from session 2019-20. (Scheme is attached herewith).

5. Syllabus for Pre Ph.D. of Rural Technology approved by the BOS to be implemented from session 2019-20 and onwards.

Meeting ended with vote of thanks by BOS chairman.

Prof. A.K. Gauraha  
Dr. R. Mehta (Member)  
Dr. S.K. Nirala (Member)  
Dr. D.K. Patel (Member)  
Dr. Bhaskar Chaurasia (Member)  
Dr. Alka Mishra (Member)  
Dr. Dilip Kumar (Member)  
Dr. P.R.Singh (Chairman)  
Mr. Sanjeev Kumar Bhagat (Special Invitee)  
Mr. Prasoon Soni (Special Invitee)  
Mr. Kamal Kumar Sen (Special Invitee)



### List of New Course(s) Introduced

**Department : Rural Technology and Social Development**

**Programme Name : M.Sc. and B.Sc. Rural Technology**

**Academic Year : 2019-20**

### List of New Course(s) Introduced

| Sr. No. | Course Code        | Name of the Course  |
|---------|--------------------|---|
| 1.      | RT-103             | Natural Products Processing Techniques  |
| 2.      | RT-104             | Laboratory Course (Based on RT-103)   |
| 3.      | RT-107             | Innovation Appraisal and action for Rural Development   |
| 4.      | RT-108             | Laboratory Course (Based on RT-108)   |
| 5.      | RT-309             | Seminar   |
| 6.      | NR/RT/C-101L       | Organic Manure Production Techniques  |
| 7.      | NR /RT/C-101P      | Practicals based on theory  |
| 8.      | NR /RT/C-102L      | Elementary Biology  |
| 9.      | NR /RT/C-P-102P    | Practicals based on theory  |
| 10.     | NR /RT/GE-101/LS   | Soil and Fertilizers  |
| 11.     | NR /RT/GE-P-101/LS | Practicals based on theory  |
| 12.     | NR /RT/AE-101/EC   | English Communication / MIL (Hindi Communication)   |
| 13.     |                    | ECA-Extra-curricular activity/ Tour, Field visit/ Industrial training/ NSS/ Swachchhta/ Vocational Training/ Sports/ others |
| 14.     | NR /RT/C-203       | Microbial Technology  |
| 15.     | NR /RT/CP-203      | Practicals based on theory  |
| 16.     | NR /RT/C-204       | Dairy Management and Products   |
| 17.     | NR /RT/CP-204      | Practicals based on theory  |
| 18.     | NR /RT/GE-202/LS   | Plant Propagation and Nursery Management  |
| 19.     | NR /RT/GE-P-202/LS | Practicals based on theory  |
| 20.     | NR /RT/AE-201/ES   | Environmental Science   |
| 21.     |                    | ECA-Extracurricular activity/ Tour, Field visit/ Industrial training/ NSS/ Swachchhta / vocational Training/ Sports/ others |
| 22.     | NR/RT/C-301L       | Sericulture   |
| 23.     | NR /RT/C-301P      | Practicals based on theory  |
| 24.     | NR /RT/C-302L      | Mushroom Production Techniques  |



|  |                                 |  |
|--|---------------------------------|--|
|  | NR /RT/C-P-302P                 | Practicals based on theory                                 |
|  |                                 |  |
|  | NR /RT/GE-301/LS                | Aquaculture  |
|  | NR /RT/GE-P-301/LS              | Practicals based on theory                                 |
|  | NR /RT/GE-II A-301/EC           | Integrated Pest Management                                 |
|  | NR/RT/GE-301L                   | Practicals based on theory                                 |
|  | NR /RT/SEC-1- 101P              | Horticulture and Landscaping                               |
|  | NR/RT/C-401L                    | Rural Social Structure and Planning                        |
|  | NR /RT/C-401P                   | Practicals based on theory                                 |
|  | NR /RT/C-402L                   | Poultry Production Techniques                              |
|  | NR /RT/C-P-402P                 | Practicals based on theory                                 |
|  | NR /RT/GE-401/LS                | Plant Morphology and Plant Reproduction                    |
|  | NR /RT/GE-P-401/LS              | Practicals based on theory                                 |
|  | NR /RT/GE-II B-401/EC           | Economic Botany  |
|  | NR/RT/GE-401L NR /RT/SEC-2-401P | Practicals based on theory<br>Herbal Production Techniques |

**HEAD**  
Department of Rural Technology  
& Social Development  
Guru Ghasidas Vishwavidyalaya  
Bilaspur (C.G.) 495009



## Scheme and Syllabus

Department of Rural Technology & Social Development  
Guru Ghasidas Vishwavidyalaya, Koni-Bilaspur (C.G.)  
Semester-wise syllabus for PG Course

### SEMESTER SCHEME Master of Science of Rural Technology 2019-20

#### M. Sc. I SEMESTER

| Subject Code | Course   | Marks Distribution |           |           | Marks |
|--------------|--|--------------------|-----------|-----------|-------|
|              |  | Theory             | Sessional | Practical |       |
| RT-101       | Soil and Water Conservation Engineering <i>III Sem</i>                             | 60                 | 40        | -         | 100   |
| RT-102       | Laboratory Course (Based on RT-101)  | -                  | 20        | 30        | 50    |
| RT-103       | Natural Product Processing Techniques <i>II Sem</i>                                | 60                 | 40        | -         | 100   |
| RT-104       | Laboratory Course (Based on RT-103)  | -                  | 20        | 30        | 50    |
| RT-105       | Instrumentation and Techniques ✓   | 60                 | 40        | -         | 100   |
| RT-106       | Laboratory Course (Based on RT-105)  | -                  | 20        | 30        | 50    |
| RT-107       | Innovation, Appraisal and action for Rural Development <i>Title changed/II Sem</i> | 60                 | 40        | -         | 100   |
| RT-108       | Field Work/ Survey (Based on RT-107)   | -                  | 20        | 30        | 50    |
| Total        |  | 240                | 240       | 120       | 600   |

#### M. Sc. II SEMESTER

| Subject Code | Course  | Marks Distribution |           |           | Marks |
|--------------|---|--------------------|-----------|-----------|-------|
|              |   | Theory             | Sessional | Practical |       |
| RT-201       | Fundamentals of Medicinal Plant ✓                           | 60                 | 40        | -         | 100   |
| RL-202       | Laboratory Course (Based on RT-201)                         | -                  | 20        | 30        | 50    |
| RT-203       | Application of Remote Sensing and GIS-I <i>II Sem Title</i> | 60                 | 40        | -         | 100   |
| RT-204       | Laboratory Course (Based on RT-203)                         | -                  | 20        | 30        | 50    |
| RT-205       | Rural Waste Management <i>Title changed</i>                 | 60                 | 40        | -         | 100   |
| RT-206       | Laboratory Course (Based on RT-205)                         | -                  | 20        | 30        | 50    |
| RT-207       | Research Methodology <i>Volume I Sem</i>                    | 60                 | 40        | -         | 100   |
| RT-208       | Laboratory Course (Based on RT-207)                         | -                  | 20        | 30        | 50    |
| Total        |   | 240                | 240       | 120       | 600   |



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

**M. Sc. III SEMESTER**

| Subject Code | Course                                    | Marks Distribution |           |           | Marks |
|--------------|---|--------------------|-----------|-----------|-------|
|              |   | Theory             | Sessional | Practical |       |
| RT-301       | Drug Formulation and Extraction           | 60                 | 40        | -         | 100   |
| RT-302       | Laboratory Course (Based on RT- 301)      | -                  | 20        | 30        | 50    |
| RT-303       | Geospatial Technology and its application | 60                 | 40        | -         | 100   |
| RT-304       | Laboratory Course (Based on RT-303)       | -                  | 20        | 30        | 50    |
| RT-305       | Concepts of Statistical Analysis          | 60                 | 40        | -         | 100   |
| RT-306       | Laboratory Course (Based on RT-305)       | -                  | 20        | 30        | 50    |
| RT-307       | Lac and Apiculture                        | 60                 | 40        | -         | 100   |
| RT-308       | Laboratory Course (Based on RT-307)       | -                  | 20        | 30        | 50    |
| RT-309       | Seminar                                   | -                  | 20        | 30        | 50    |
| Total        |   | 240                | 260       | 150       | 650   |

For the 1st & 2nd sem. of M.Sc. III Sem. is included in the 1st & 2nd sem. of M.Sc. III Sem. For the 3rd & 4th sem. of M.Sc. III Sem.

**M. Sc. IV SEMESTER**

| Subject Code | Course         | Marks Distribution |  | Marks |
|--------------|----------------|--------------------|--|-------|
|              |                | Dissertation       |  |       |
| RT-401       | Dissertation ✓ | 250                |  | 250   |
| Total        |                |                    |  | 250   |

Dissertation must be compulsory for all students. Students will have liberty to complete his dissertation work either in the Department or any other Department or Institution. If student desires to complete his dissertation work outside the Department, he/she will have bear all expenses.

*Not included*  
 - Drug formulation & evaluation  
 - GIS application in Nat. res. management & planning.  
 - Applied  
 - 12/7  
 - 12/11/19  
 - 12/11/19  
 - 12/11/19  
 - 12/11/19



| Course Code | NATURAL PRODUCT PROCESSING TECHNIQUES | Marks |
|-------------|---------------------------------------|-------|
| RT-103      |                                       | 100   |

**General Object:** To learn about the basics of lac, Mushroom, Honey production techniques and their importance in rural sector.

Students will also learn about the production of silk which is one of the important product of Chhattisgarh.

**Specific Object:** This course will promote the skills and entrepreneurship among the students.(2) as far as concern that the government jobs are less so it will promote self.

**Outcomes:** This course will promote entrepreneurship.

**Natural products:** Introduction, plants as a source of various products, types of natural products, natural products and tribal connection, dependence of tribes on forest, various method of collection, storage and marketing of natural products, .

**Fiber:** Introduction, classification of fibers, plant origin fibers, types, study of cotton, flax and jute fiber, various fiber industries and economic importance.

**Gum and Resin:** Introduction, classification, physical and chemical composition, plant origin gum and resins, collection techniques, processing and economic importance.

**Dye:** Sources, types of dyes, chemical nature, characteristics of natural dyes, preparation of natural dyes, extraction of dye, processing and uses.

| Course Code | Laboratory course (Based on RT-103) | Marks |
|-------------|-------------------------------------|-------|
| RT-104      |                                     | 50    |

**Laboratory exercises:**

1. Identification of fiber producing plant & herbaria formation.
2. Study of fiber 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 methods.
8. Microscopic observation of fibres



1. Microscopic observations of Biological materials.
2. Separation of biological material using Centrifuge, paper chromatography and electrophoresis.
3. Biochemical analysis of samples using spectrophotometer.
4. Microtomy and preparation of permanent mounts.

|                              |   |                     |
|------------------------------|---|---------------------|
| <b>Course Code</b><br>RT-107 | <b>INNOVATION, APPRAISAL AND ACTION FOR RURAL DEVELOPMENT</b> | <b>Marks</b><br>100 |
|------------------------------|---|---------------------|

**General Object:** To learn the concept of technology, innovation Adoption of technology. Learn the communication and familiar with the model of communication.  
**Specific Object:** Students aware with the technology and its development and Improvement of technology also which is the need of today. It develops the skill among the student.

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Department of Rural Technology & Social Development  
 Guru Ghasidas Vishwavidyalaya, Koni-Bilaspur (C.G.)  
 Semester-wise syllabus for PG Course

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**Outcomes:** Student will know the technology diffusion and Adoption of technology. Student identify the adopters and their categories. (1) Straight way was able to the students will attached with the rural sector.

**Innovation:** Definition, Characteristic of innovation, importance of innovation in day today life. Technology diffusion - Definition, innovation decision process and factors that affect diffusion process.

**Adoption process:** concept, stages in adoption process, rate of adoption, Adopter categories, identification of adopters.

**Communication:** Definition, concepts and model of communication, types of communication Barriers. Transfer of Technology - Concept of Technology, Appropriate Technology- Definition and characteristics, different Models of technology transfer, barriers in Transfer of Technology.

**PRA:** Definition, Principles and Approaches of PRA, PRA Tools- Mapping, Types of mapping- social resource, land use pattern map, enterprise map, transect walk, time line, change and trends, Matrix ranking, Mobility map, Venn diagram, RRA and PLA: Introduction, foundation, process, difference between RRA and PRA, Project appraisal.

Reference Books



| Course Code | Laboratory course (Based on RT-107)  | Marks |
|-------------|--|-------|
| RT-108      | Laboratory exercises:  | 50    |
|             | <ol style="list-style-type: none"><li>1. Exercise based on PRA Approaches</li><li>2. Visit to print media offices</li><li>3. To study communication models</li><li>4. To study adoption process.</li></ol> |       |

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| M.Sc. III SEMESTER  |                       | Marks: 50 |
|---------------------|-----------------------|-----------|
| Course Code: RT-308 | Course Title: Seminar |           |