

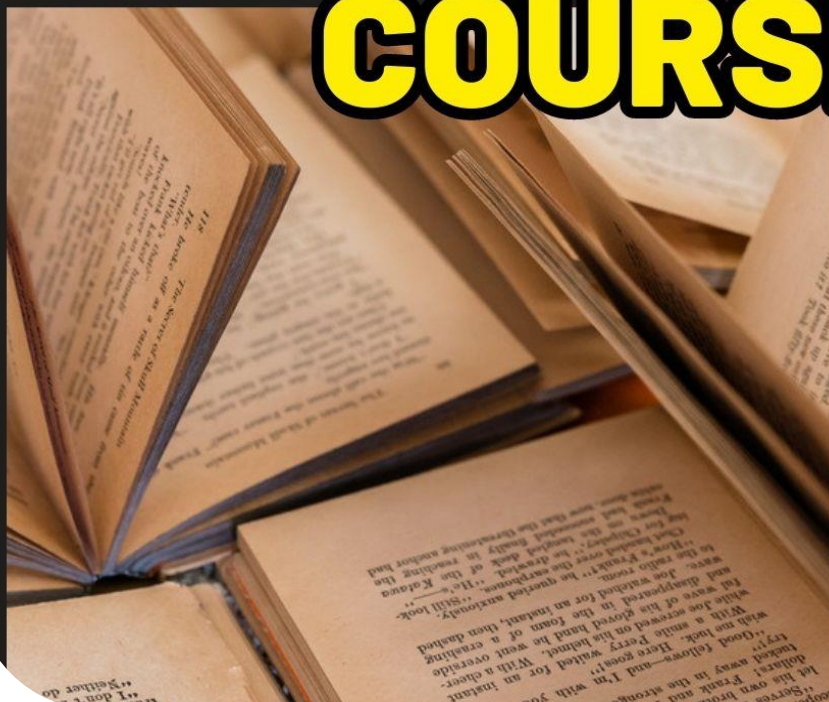


# SHRI GURU RAM RAI UNIVERSITY DEHRADUN



## VALUE ADDED COURSES

**SGRRU**





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# SGRR UNIVERSITY

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## Brochure of Value-Added Courses School of Agricultural Sciences 2019-2020



## ABOUT THE UNIVERSITY

Shri Guru Ram Rai University was established by a religious and philanthropic leader, Shri Mahant Devendra Dass Ji Maharaj in the year 2017. It is situated in the heart of city, Uttarakhand. We are extremely privileged to extend the values and ethos of the Shri Guru Ram Rai Education mission through SGRR University to impart quality education and in successfully placing more than 80% students in various companies across the globe. SGRR University has humongous campus spread over 80 acres of land. Its state-of-art facilities give opportunities to develop leadership skills and to achieve professional excellence. It has 5500+ students from different countries, 29 states and Union Territories and providing cultural melange and global exposure to our students. One of the biggest boosts from University is its unmatched experience of delivering quality education that helps to develop confidence and will give you more knowledge, industry exposure, building good networking and high self-esteem. This will change your overall personality and develop you into a complete professional to face any challenge.

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## INTRODUCTION

Traditional education provides a strong foundation, but to stay competitive and relevant, individuals must continually enhance their skill set. Enter value-added courses, a gateway to a world of specialized expertise designed to complement and enrich existing knowledge.

Value-added courses go beyond the conventional academic curriculum, offering practical insights and hands-on experience in niche areas. These courses are meticulously crafted to bridge the gap between theoretical learning and real-world application, empowering individuals to navigate the complexities of contemporary professional landscapes.

### **Conduction of value added courses :**

Value Added Course is not mandatory to qualify for any programme and the credits earned through the Value-Added Courses shall be over and above the total credit requirement prescribed in the curriculum for the award of the degree. It is a teacher assisted learning course open to all students without any additional fee.

Classes for a VAC are conducted during the RESERVED Time Slot in a week or beyond the regular class hours. The value-added courses may be also conducted during weekends / vacation period. A student will be permitted to register only one Value Added Course in a Semester.

student will be encouraged to opt for the VAC offered by his/her parent Department/Faculty. Industry Experts / Eminent Academicians from other Institutes are eligible to offer the value-added course. The course can be offered only if there are at least 5 students opting for it. The students may be allowed to take value added courses offered by other departments after obtaining permission from Dean offering the course. The duration of value added course is 30 hours with a combination 18 hours (60%) of theory and 12 hours (40%) of practical. However, the combination of theory and practical shall be decided by the course teacher with the approval of the Dean

### **Guidelines for conducting value added courses**

- ❖ Value Added Course is not mandatory to qualify for any program.
- ❖ It is a instructor supported learning course open to all students without any added fee.

- ❖ Classes for VAC will be conducted during the **RESERVED** Time Slot in a week or beyond the regular class hours.
- ❖ The value-added courses may be also conducted during weekends / vacation period.
- ❖ A student will be permitted to register only one Value Added Course in a Semester.
- ❖ Students may be permitted to enrol in value-added courses offered by other departments/ Schools after obtaining permission from the Department's Head offering the course.

### **Duration and venue**

- ❖ The duration of value-added course should not be less than 30 hours.
- ❖ The Dean of the respective School shall provide class room/s based on the number of students/batches.
- ❖ VAC shall be conducted in the respective School itself.

### **Registration procedure**

The list of Value-Added Courses, along with the syllabus, will be available on the University Website. A student must register for a Value-Added Course offered during the semester by completing and submitting the registration form. The Department Head shall segregate according to the option chosen and send it to the Dean of the school offering the specific Value-Added Courses.

- Each faculty member in charge of a course is responsible for maintaining Attendance and Assessment Records for candidates who have registered for the course.
- The Record must include information about the students' attendance and Assignments, seminars, and other activities that were carried out.
- The record shall be signed by the Course Instructor and the Head of the Department at the end of the semester and kept in safe custody for future verification.

- Each student must have a minimum of 75% attendance in all courses for the semester in order to be eligible to take certificate.
- Attendance requirements may be relaxed by up to 10% for valid reasons such as illness, representing the University in extracurricular activities, and participation in NCC.
- The students who have successfully completed the Value Added Course shall be issued with a Certificate duly signed by the Authorized signatories.

## Modern Techniques in Sericulture

Course Code: VAC2019-12

### Course Objectives:

- To impart the basic knowledge about mulberry sericulture.
- To develop understanding about handling of mulberry silkworm rearing equipment's.
- To develop the skills in recent scientific methods of mulberry sericulture.
- To impart the knowledge regarding management of diseases & pests of mulberry silkworm.

### Course Outcomes:

On successful completion of course, the student will be able to:

- Memorize basic terms & concepts used in Mulberry Sericulture
- Interpret classification, biology and other scientific aspects of mulberry silkworm
- Demonstrate rearing of mulberry silkworm
- Connect methods of cocoon processing to reel out silk
- Discriminate symptoms and damage caused by different pests & diseases of mulberry silkworms
- Develop new techniques of mulberry silk worm management

### Course Content :

- **Module I:** Importance of sericulture in the rural based economy of India. Entrepreneurial opportunities in the sericulture industry starting from leaf to fabric production. Scientific approach of mulberry production technology.
- **Module II:** Classification and biology of mulberry silkworm, comprehensive knowledge about pure/hybrid races of silkworm, silk structure & composition of silk proteins
- **Module III:** Modern & Scientific techniques in rearing and harvesting of cocoons, production through induction of modern technology in sericulture, characters and principles of cocoon assessments, methods of cocoon processing to reel out silk
- **Module IV:** Incidence, symptoms and damage caused by different pests & diseases of mulberry silkworms, management of different pests and diseases



## References :

- Aruga H. 1994. Principles of Sericulture. Oxford & IBH, New Delhi
- Jaiswal,K.,Trivedi,S.P.,Pandey,B.N. & Tripathi,A.K. 2009. Mulberry Sericulture: Problems and Prospects. APH Publishing Corporation,India.

## Training on Waste land development

**Course Code: VAC2019-13**

### **Course Objectives:**

- To impart knowledge to students on distribution and properties of waste lands.
- To develop understanding of waste land, their reclamation and crop suitability.
- To develop skills regarding different factors responsible for waste land formation.

### **Course outcomes**

On successful completion of course, the student will be able to:

- Imparted knowledge to students on distribution and properties of waste lands.
- Developed understanding of waste land, their reclamation and crop suitability.
- Developed skills regarding different factors responsible for waste land formation.

### **Course Content:**

- **Module I** (Total Topics-06 and Hrs.06) Introduction, Concept, Distribution of Waste land and problem soils in India. Their categorization based on properties.
- **Module II** (Total Topics-08 and Hrs.08) Reclamation and management of Saline and sodic soils, Acid soils, Acid Sulphate soils and submerged soils.
- **Module III** (Total Topics-08 and Hrs.8) Management of Eroded and Compacted soils, Flooded soils and Polluted soils. Multipurpose tree species, bio remediation through MPTs of soils.
- **Module IV** (Total Topics-08 and Hrs.8) Land capability and land suitability classification. Problematic soils under different Agroecosystems

### **References :**

- Bear FE. 1964. Chemistry of the Soil. Oxford and IBH. Jurinak JJ. 1978. Salt-affected Soils. Department of Soil Science and Biometeorology. Utah State Univ. 949 Oxford and IBH.
- Gunshyam, D. 2005. Hydrology and soil conservation engineering, Prentice-Hall of India Pvt. Ltd., New Delhi

- Suresh, R. 2005. Soil and Water Conservation Engineering, Standard Publishers & Distributors, New Delhi.
- Suresh, R. 2008. Land and water management principles, Standard Publishers & Distributors, New Delhi.

## Technologies in Agriculture and Allied Sector

**Course Code: VAC2019-14**

### **Course Objectives:**

- To impart the basic knowledge about Agriculture development.
- To develop understanding of the importance of technology.
- To develop the skills to analyze the proper use of technology.
- To impart the knowledge of improving agriculture.

### **Course outcomes:**

- On successful completion of course, the student will be able to:
- Imparted the basic knowledge about Agriculture development.
- Developed understanding of the importance of technology.
- Developed the skills to analyze the proper use of technology.
- Imparted the knowledge of improving agriculture.

### **Course Content:**

**Module I** (Total Topics-8 and Hrs.8) Definition & Importance of agriculture, Basic Knowledge of agricultural technology, protected cultivation.

**Module II** (Total Topics-8 and Hrs.8) Use of modern methods in agriculture. Nanotechnology, Biotechnology, Farm mechanization.

**Module III** (Total Topics-10 and Hrs.8) Modernize technology transfer tools, key interventions at different stages of the crop from sowing of the seed, crop protection and harvesting, post-harvest management to marketing, Swath control and variable rate technology.

**Module IV** (Total Topics-10 and Hrs.6) Problems in agriculture, sustainable agriculture, Food and national security. New agricultural policies.

### **References :**

- Feder, G, R E Just and D Zilberman (1985): "Adoption of Agricultural Innovations in Developing Countries: A Survey", Economic Development and Cultural Change, Vol. 33, No. 2, pp. 255-298
- Joshi, V. and Dubey, S.K. (2019): Direct and Spillover Effects of Agricultural Advisory Services: Evidence from the Farm Science Centre in Uttar Pradesh, India, IFPRIDiscussion Paper 1850, International Food Policy Research Institute, Washington D.C

## Use of Nanofertilizers in crop production

Course Code: VAC2019-15

### Course Objectives:

- To acquire the basic knowledge of climate and weather and its impact on agriculture.
- To determine the weather forecasting in future climatic changes for smart farming.
- Weather forecasting to know about the crop diversification strategies for farmers to decide cultivates his crop
- To impart theoretical and practical knowledge of forecasting techniques used for weather prediction and preparation of agro-advisories.

### Course outcomes :

On successful completion of course, the student will be able to:

- Acquired the basic knowledge of climate and weather and its impact on agriculture.
- Determined the weather forecasting in future climatic changes for smart farming.
- Acquainted about the crop diversification strategies for farmers to decide cultivates his crop
- Imparted theoretical and practical knowledge of forecasting techniques used for weather prediction and preparation of agro-advisories

### Course Content:

**Module-I** (Total Topics-10 and Hrs.8) Meaning and scope of agricultural meteorology; components of agricultural meteorology; roles and responsibilities of agricultural meteorologists; importance of meteorological parameters in agriculture; important meteorological processes to agriculture-importance of various micro environment on plant growth and development.

**Module-II** (Total Topics-12 and Hrs.8) Weather forecasting system: definition, scope and importance; historical background; observational network of weather forecasting; weather forecasting network in India; benefits of weather forecasting to agriculture; forecasting problem classified terminology of weather parameters used in weather forecasts and their interpretation.

**Module-III** (Total Topics-10 and Hrs.8) Weather forecasting: importance, types, tools, modern techniques and methods of weather forecasting; crop weather chart

calendars and diagrams; weather forecasting and agro advisories; crop weather calendar; general forecasting: short, medium and long range forecasting for agriculture; use of satellite cloud imageries and synoptic approach to weather forecasting.

**Module-IV** (Total Topics-10andHrs.6) Concept of agro meteorological advisory; interpretation of weather forecasts for soil moisture, farm operations, pest an disease development and epidemics, crops and livestock production; preparation of weather-based advisories for farmer and dissemination; verification of weather forecasts.

**References:**

- FAI 1997 Hand book on fertilizer uses
- Agrawal and Yawlkar 2005 Fertilizer and Manure
- ICAR 2013 Hand book of Agriculture
- SR. Reddy, Principles of Crop Production
- IFFCO, New Delhi, IFFCO Nano fertilizer
- S.C. Panda 2014, Modern Concept and advance principle of crop production