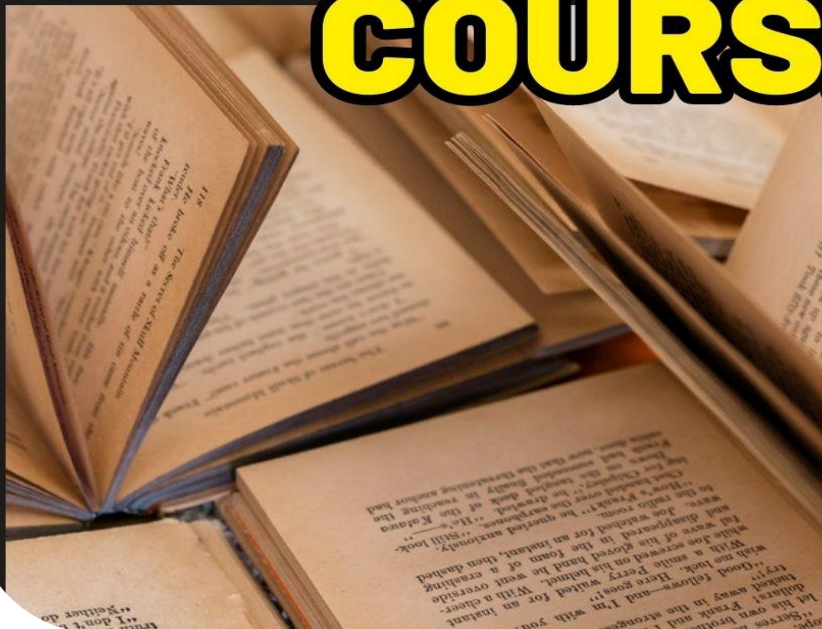




SHRI GURU RAM RAI UNIVERSITY DEHRADUN



VALUE ADDED COURSES



SGRRU



SHRI GURU RAM RAI
UNIVERSITY
Quest for Excellence



SGRR UNIVERSITY

Brochure of Value-Added College of Basic & Applied Sciences Courses 2018-19



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 3500+ 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 in 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 an 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.

Ground water Exploration

Course Code: VAC2018-16

Course Objectives:

- Students will understand the problem related to the groundwater.
- To ensure that students begin to understand the relationship between surface and subsurface groundwater management.

Course Outcomes:

- To gain knowledge overview of methods for groundwater explorations
- Understanding the concept of ground water recharge
- Understand the concept of different methods of groundwater exploration.

Module I:

Objectives of groundwater exploration, Overview of methods of groundwater exploration, Concept & methods of artificial ground water recharge.

Module II:

Geological, geophysical, electrical resistivity, seismic refraction methods

Module III:

Dynamic equilibrium in natural aquifers, management potential & safe yield of aquifers, stream-aquifer interaction.

Module IV: Practical work: Collection techniques of water sampling.

References:

- D.K. Todd and L. F. Mays, "Groundwater Hydrology", John Wiley and sons.
- K. R.Karanth, "Hydrogeology", Tata McGraw Hill Publishing Company.
- S. Ramakrishnan, "Ground water", S. Ramakrishnan.

Environmental Economics and Globalization

Course Code: VAC2018-17

Course Objectives:

- Understanding the fundamental concepts and principles of environmental economics and its significance in a globalized world
- Gaining knowledge of various valuation methods and cost-benefit analysis techniques used in assessing environmental resources.
- Analysing Trade, Development, and Environmental Concerns

Course Outcomes:

- Develop a comprehensive understanding of the core concepts, theories, and principles of environmental economics and their interconnectedness with globalization.
- Evaluate and analyze the effectiveness of different environmental policies implemented at national and international levels and their implications for global environmental sustainability.
- Gain a global perspective on the intricate relationship between trade, economic development, and environmental concerns, while recognizing the complexities and trade-offs involved.
- Effectively communicate and collaborate with peers, discussing and debating environmental economics and globalization-related topics while respecting diverse viewpoints.

Module 1: Introduction to Environmental Economics and Globalization

Overview of Environmental Economics, Basic concepts and principles, Understanding externalities and market failures, Globalization and its Impact on the Environment, Exploring the relationship between globalization and environmental challenges, Case studies illustrating the effects of globalization on the environment

Module 2: Economic Valuation of Environmental Resources

Valuation Methods, Introduction to various economic valuation techniques (e.g., contingent valuation, hedonic pricing, etc.), Practical applications and limitations of valuation methods,

Cost-Benefit Analysis, Understanding the principles of cost-benefit analysis in environmental decision-making, Case studies showcasing cost-benefit analysis in environmental policy

Module 3: Environmental Policy and Global Strategies

Environmental Policy Frameworks, Overview of national and international environmental policies, Analysis of policy instruments, Global Strategies for Environmental Sustainability, Examination of global initiatives (e.g., Paris Agreement, Sustainable Development Goals), Role of international organizations in addressing global environmental challenges

Module 4: Trade, Development, and Environmental Concerns

Trade and Environment, Exploring the link between international trade and environmental impacts, Trade-offs between economic growth and environmental conservation, Sustainable

Development, Understanding the concept of sustainable development in the context of globalization, Case studies highlighting successful models of sustainable development.

References:

- The Earthscan reader in Environmental economics, Markandya, A. 1992
- Hanley, Nick, Jason F. Shogren & Ben White: Environmental Economics in Theory and Practice, New Delhi: Macmillan –India, 1997
- Whytte, Anne, V. and Ian Burton (eds), Environmental Risk Assessment, John Wiley & Sons, 1980.
- Allen V. Kneese and James L. Sweeney, eds. Handbook of Natural Resource and Energy Economics, Chapters 2,12,14,17, North Holland,1985



Spawn Production in Mushroom

Course Code: VAC2018-18

Course Objectives:

- This course is designed to equip participants with the knowledge and practical skills necessary for successful and sustainable edible mushroom production.
- Describe the basic biology and life cycle of mushrooms, including key stages such as mycelium growth, fruiting body formation, and spore production.
- Recognize and differentiate between common edible mushroom varieties, understanding their unique characteristics and optimal growing conditions.
- Demonstrate proficiency in sterile techniques to prevent contamination during substrate inoculation and mushroom cultivation.
- Apply various cultivation methods such as inoculation, spawn running, casing, pinning, and fruiting for different mushroom species.
- Develop skills in identifying and troubleshooting common issues encountered in mushroom cultivation, and implement effective solutions.

Course Outcomes:

- Know about the life cycle, anatomy, and reproductive processes of mushrooms.
- Understand the Design and set up suitable growing environments for different mushroom species, considering factors such as substrate preparation, temperature, humidity, and lighting.
- Apply various cultivation methods, including spawn preparation, inoculation, substrate colonization, fruiting, and harvesting.
- Analyze the economic viability of mushroom cultivation, considering cost analysis, market demand, and potential revenue.

Module I Introduction to Sponge Production

Overview of sponge production Importance and applications of mushroom sponges

Module II: Basic Mushroom Cultivation Techniques

Introduction to mushroom cultivation Substrate preparation and sterilization
Inoculation and spawn run.

Module III: Selection of Mushroom Species

Overview of mushroom species suitable for sponge production Considerations for species selection

Module IV Environmental Conditions for Sponge Production

Temperature and humidity requirements Light conditions and their impact Ventilation and air exchange studies; Joint forest management, Role of NGOs Ethical and legal aspects; Eco- travel and environmental awareness; Impacts of ecotourism, Green report card, Eco-labelling; Environmental sustainability practices.

Module V Mycelium Development and Formation of Sponges

Understanding mycelium growth Triggering and managing sponge formation Factors influencing sponge morphology.

Module VI - Harvesting and Post-Harvest Handling

Determining the optimal time for harvest Techniques for sponge harvesting Post-harvest handling and storage

Module VII Quality Control in Sponge Production

Assessing sponge quality Addressing common issues and challenges Implementing quality control measures.

Reference:

- "Mushroom Cultivation: An Illustrated Guide to Growing Your Own Mushrooms at Home" by Tavis Lynch
- Research papers and articles on mushroom sponge production techniques

Bioethics & Biosafety

Course Code: VAC2018-19

Course Objectives: The objectives of the course are as follows:

- To understand importance of bioethics and biosafety.
- To understand legal social and economic impacts of biotechnology.
- To understand regulatory guidelines and their importance.
- To understand importance of patent.
- To understand procedure to apply for patent.
- To understand procedure of assessment of biosafety for biotech foods.
- To understand ethical implications of biotechnology.

Course Outcomes :

- Understanding of Ethical Principles in Biological Research:
- Knowledge of Biosafety Standards and Practices:
- Ability to Analyze Bioethical Issues:
- Application of Biosafety and Bioethics in Professional Practice:

Course Content :

Module I (6hrs)

Bioethics – Necessity of Bioethics, different paradigms of Bioethics – National & International. Ethical issues against the molecular technologies.

Module II (12hrs)

Biosafety– Introduction to biosafety and health hazards concerning biotechnology. Introduction to the concept of containment level and Good Laboratory Practices (GLP) and Good Manufacturing Practices (GMP).

Module III (6hrs)

Introduction to Indian Patent Law. Intellectual/Industrial property and its legal protection in research, design and development.

Module IV (6hrs)

The basic regulations of excise: Demand for a given product, feasibility of its production under given constraints of raw material, energy input, financial situations export potential etc.

References :

- Entrepreneurship: New Venture Creation : David H. Holt Patterns of Entrepreneurship Jack M. Kaplan
- Entrepreneurship and Small Business Management: C.B. Gupta, S.S. Khanka, Sultan Chand & Sons.
- Sateesh MK (2010) Bioethics and Biosafety, I. K. International Pvt Ltd.
- Sree Krishna V (2007) Bioethics and Biosafety in Biotechnology, New age international publishers.