

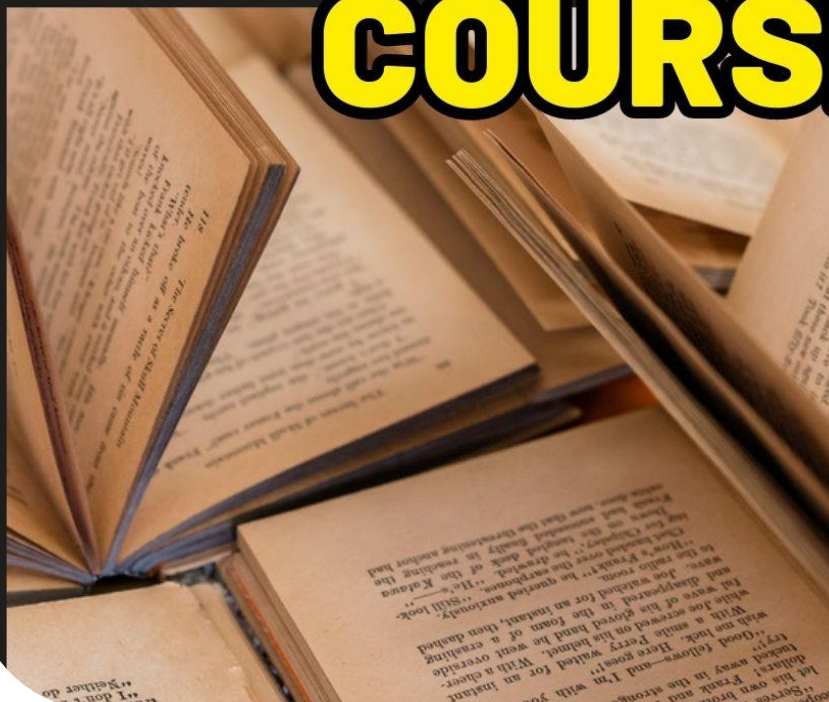


SHRI GURU RAM RAI UNIVERSITY DEHRADUN



VALUE ADDED COURSES

SGRRU





SGRR UNIVERSITY

Brochure of Value-Added Courses School of Pharmaceutical 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 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.

Drug Design

Course Code: VAC2019-20

Course Objectives- The course on Drug Design aims to provide participants with a comprehensive understanding of the principles and methodologies involved in developing new pharmaceutical compounds. The primary objectives include imparting knowledge on the fundamental concepts of medicinal chemistry, drug targets, and molecular mechanisms. Participants will learn to apply computational tools and techniques for rational drug design, exploring structure-activity relationships. The course also focuses on strategies for optimizing drug candidates, including pharmacokinetics, toxicity assessment, and formulation. By the end of the course, participants should be equipped to contribute to the drug development process, applying innovative approaches and staying abreast of emerging trends in the dynamic field of drug design.

Course Outcomes- After this course, participants will be able to-

- Define key concepts in medicinal chemistry, including drug targets, receptors, and molecular mechanisms of drug action,,
- Apply computational methods, such as molecular modeling and docking,
- Synthesize knowledge from case studies in successful drug design projects, critically evaluating the strategies employed and lessons learned.
- Apply ethical principles in drug design, considering transparency, patient safety, and societal impact.

Course Content-

Module 1- Introduction to Medicinal Chemistry and Drug Targets- Overview of Medicinal Chemistry, Drug Targets and Receptors, Molecular Mechanisms of Drug Action

Module 2- Computational Methods in Drug Design- Molecular Modeling Techniques, Structure-Based Drug Design, Ligand-Based Drug Design

Module 3- Optimization of Drug Candidates- Pharmacokinetics and ADMET, Toxicity Assessment, Formulation and Drug Delivery

Module 4- Case Studies and Drug Development Pipeline- Case Studies in Successful Drug Design, Drug Development Process, Challenges in Drug Design

Module 5- Emerging Trends and Future Directions in Drug Design- Advanced Drug Design Technologies, Personalized Medicine and Targeted Therapies, Ethical Considerations in Drug Design

Recommended Books-

- "Principles of Medicinal Chemistry" by William O. Foye, Thomas L. Lemke, and David A. Williams.
- "Medicinal Chemistry: The Modern Drug Discovery Process" by Erland Stevens and William O. Foye
- "Introduction to Medicinal Chemistry: How Drugs Act and Why" by Alex Gringauz
- "Case Studies in Medicinal Chemistry" by Terry Kenakin and Mark L. Laterra

Health education and Health Promotion

Course Code: VAC2019-21

Course Objectives- The course on Health Education and Health Promotion aims to equip participants with the knowledge and skills necessary to effectively educate and promote health in diverse populations. Key objectives include providing an understanding of health behaviour theories, strategies for community engagement, and the development of culturally sensitive health promotion programs. Participants will learn to design, implement, and evaluate health education initiatives, addressing prevalent health issues and fostering positive behavioural changes. The course emphasizes the importance of effective communication, collaboration, and ethical considerations in promoting health and preventing diseases within communities. Ultimately, participants will be prepared to contribute to the improvement of public health through evidence-based health education and promotion efforts.

Course Outcomes- After this course, participants will be able to-

- Define key concepts in health education and promotion, including health behaviour theories and determinants of health.
- Apply health behaviour theories to analyze and understand the factors influencing individual and community health behaviours.
- Synthesize information from case studies in health promotion,
- Apply effective communication skills to convey health information.

Course Content-

Module 1: Foundations of Health Education and Promotion- Introduction to Health Education and Promotion, Health Behaviour Theories, Determinants of Health

Module 2: Planning and Designing Health Education Programs- Needs Assessment and Program Planning, Health Communication Strategies, Culturally Competent Health Promotion

Module 3: Implementation and Evaluation of Health Programs- Implementation Strategies, Monitoring and Evaluation, Ethical Considerations in Health Promotion

Module 4: Targeted Health Promotion Initiatives- Maternal and Child Health Promotion, Chronic Disease Prevention and Management, Mental Health Promotion

Module 5: Global Health Promotion and Emerging Trends- Global Health Promotion, Emerging Trends in Health Education, Advocacy and Policy in Health Promotion

Recommended Books-

- "Health Behavior: Theory, Research, and Practice" by Karen Glanz, Barbara K. Rimer, and K. Viswanath
- "Health Promotion Planning: An Educational and Ecological Approach" by Lawrence W. Green, Marshall W. Kreuter, and Richard L. Lewis
- "Health Education: Creating Strategies for School & Community Health" by Glen G. Gilbert and Guy S. Parcel
- "Health Promotion in Nursing Practice" by Nola J. Pender, Carolyn L. Murdaugh, and Mary Ann Parsons

Health Behaviour and sociology

Course Code: VAC2019-22

Course Objectives- The course on Health Behaviour and Sociology aims to provide participants with a concise understanding of the reciprocal relationship between societal influences and individual health behaviors. Key objectives include analyzing health behaviors through sociological lenses, exploring the impact of social determinants on health, and designing interventions that consider cultural diversity and social structures. Participants will develop communication skills for engaging diverse populations and contribute to addressing health disparities by promoting cultural competence and sensitivity in healthcare practices. The course seeks to equip individuals with the knowledge and skills to bridge sociology and public health, fostering a holistic approach to understanding and influencing health behaviors within communities.

Course Outcomes- After this course, participants will be able to-

- Explain key sociological concepts related to health behavior, such as social determinants of health
- Apply sociological theories to analyze health behaviors in diverse populations
- Synthesize information from case studies and research in health behavior and sociology, critically evaluating the sociological impact on health outcomes.
- Apply effective communication skills to engage with individuals and communities.
- Apply ethical principles in conducting sociological research

Course Content-

Module 1: Introduction to Health Behavior and Sociological Perspectives- Definition and Scope, Theories of Health Behavior, Social Determinants of Health

Module 2: Cultural Competence and Health Beliefs- Cultural Competence and Health Beliefs, Health Disparities and Inequalities, Cultural Competence in Healthcare

Module 3: Social Structures and Health- Social Capital and Community Health, Gender and Health, Work and Occupational Health

Module 4: Health Communication and Societal Influence- Societal Influence on Health Behavior, Communication Strategies for Behavior Change,

Module 5: Intervention Strategies and Future Trends- Designing Sociologically-Informed Interventions, Evaluation of Sociological Health Interventions, Emerging Trends in Health Behavior and Sociology

Recommended Books-

- "Sociology of Health and Illness" by Peter Conrad and Valerie Leiter
- "Health, Illness, and Society: An Introduction to Medical Sociology" by Steven E. Barkan
- "Social and Behavioral Foundations of Public Health" by Jeannine Coreil
- "Sociology as Applied to Medicine" by Graham Scamble
- "Social Determinants of Health: A Comparative Approach" by Alan Davidson and Elizabeth Gould

Clinical Data Management

Course Code: VAC2019-23

Course Objectives- The Clinical Data Management course aims to equip participants with the essential skills for effective handling of clinical trial data. Key objectives include understanding regulatory guidelines, mastering electronic data capture systems, ensuring accurate and consistent data entry, implementing quality control measures, and upholding data privacy standards. Participants will learn to create and maintain crucial documentation, resolve data queries efficiently, and contribute to the overall integrity and reliability of clinical trial databases. The course emphasizes practical application, ethical considerations, and compliance with industry standards to prepare individuals for successful careers in clinical data management.

Course Outcomes- After this course, participants will be able to-

- Define key terms related to clinical data management.
- Explain the importance of accurate and reliable clinical data.
- Apply data validation techniques in the context of clinical data management.
- Evaluate the effectiveness of different data management strategies.
- Construct a data validation framework tailored to specific research requirements.
- Judge the effectiveness of data monitoring and quality assurance measures.

Course Content-

Module 1: Introduction to Clinical Data Management- Definition and Scope of Clinical Data Management, Regulatory Guidelines and Compliance, Electronic Data Capture (EDC) Systems

Module 2: Data Collection and Entry- Case Report Form (CRF) Design and Completion, Data Validation and Quality Control, Coding of Medical Terminologies

Module 3: Database Design and Development- Principles of Database Design, Electronic Data Capture (EDC) System Implementation, Data Cleaning and Query Resolution

Module 4: Data Privacy and Documentation- Data Privacy and Confidentiality, Clinical Trial Documentation

Module 5: Advanced Topics in Clinical Data Management- Adverse Event Reporting, Data Reconciliation and Database Locking, Emerging Trends and Continuous Learning

Recommended Books-

- "Clinical Data Management" by Susanne Prokscha
- "Principles and Practice of Clinical Trial Medicine" by Richard Chin, Bruce Y. Lee
- "Clinical Data Management" by Richard K. Rondel, Sheila A. Varley
- "Handbook of Clinical Trials Data Management and Biostatistics" by Laura M. McNeill