



SGT UNIVERSITY

VALUE ADDED COURSES



**Faculty of Allied Health
Sciences 2024-25**



INTRODUCTION

In the dynamic and ever-changing global landscape, the need for lateral thinking, innovation, and entrepreneurial spirit has never been greater. Traditional educational approaches that focus solely on specific skill sets often become outdated due to the rapid pace of technological advancements. As such, no university curriculum can comprehensively address all areas of importance or relevance. To ensure that students are better equipped to meet industry demands, it is crucial for higher education institutions to supplement the core curriculum, helping students develop both their aptitudes and interests.

Objectives:

The primary objectives of the Value-Added Course (VAC) are:

1. **To enhance industry understanding:** Equip students with knowledge of industry expectations and requirements.
2. **To improve employability:** Enhance students' employability skills, making them more competitive in the job market.
3. **To bridge skill gaps:** Address existing gaps in skills and ensure students are industry ready.
4. **To foster inter-disciplinary skills:** Provide students with opportunities to develop diverse skills across various disciplines.
5. **To encourage entrepreneurship:** Inspire students to become job creators rather than just job seekers.

Course Design

Departments designing Value-Added Courses should begin by conducting a **Training Need Analysis** and engaging with industry experts, alumni, and employers to identify skill gaps and emerging trends. This will guide the creation of a syllabus tailored to current demands.

Conduction of Value-Added Courses

- **Voluntary Participation:** VAC is not a mandatory requirement for completing any academic program, and the credits earned through these courses are additional to the degree's total credit requirement.
- **Learning Format:** VAC is an instructor-supported learning course, available to all students without any additional fee. Classes are typically scheduled during reserved time slots, beyond regular class hours, and may also be conducted on weekends or during vacations.
- **Course Registration:** Students may register for only one Value-Added Course per semester, preferably offered by their own department. However, with prior permission from the Dean, they can take courses from other departments.



About the University

SGT University, established in 2013 and recognized by the University Grants Commission (UGC), has set its sights on fostering a culture of research, innovation, and interdisciplinary education. Nestled on a sprawling 70-acre campus on the outskirts of Gurgaon, the university boasts state-of-the-art resources and infrastructure designed to facilitate cutting-edge academic and research achievements.

Driven by a relentless pursuit of excellence, SGT University has earned the prestigious NAAC A+ accreditation, becoming one of the youngest institutions in the country to receive this honour. This recognition highlights the university's commitment to maintaining high standards in education and research.

Among its broad array of academic programs, the university offers premier medical courses through the SGT Medical College, Hospital & Research Institute, which are considered among the best in the nation. These programs are seamlessly integrated with practical training and research opportunities, ensuring that students receive a comprehensive, world-class education in the medical field.

Our Vision

To nurture individual's excellence through value based, cross-cultural, integrated and holistic education adopting the contemporary and advanced means blended with ethical values to contribute in building a peaceful and sustainable global civilization.

Our Mission

- To impart higher education at par with global standards that meets the changing needs of the society
- To provide access to quality education and to improve quality of life, both at individual and community levels with advancing knowledge in all fields through innovations and ethical research.
- To actively engage with and promote growth and welfare of the surrounding community through suitable extension and outreach activities
- To develop socially responsible citizens, fostering ethical values and compassion through participation in community engagement, extension and promotion activities.
- To create competitive and coordinated environment wherein the individual develops skills and a lifelong learning attitude to excel in their endeavours.

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- **Minimum Participants:** A minimum of 5 students must opt for a course for it to be offered.
- **Industry and Expert Involvement:** Eminent industry professionals or academicians may conduct VACs. This broadens students' exposure and enhances the learning experience.

Course Duration and Structure

- **Duration:** Each Value-Added Course should last at least 30 hours, with a balanced structure of 18 hours (60%) theory and 12 hours (40%) practical. The exact division of theory and practical hours will be determined by the course instructor with the approval of the Dean.
- **Location:** The courses will be conducted within the respective schools, with classrooms assigned by the Dean based on student numbers.

REGISTRATION PROCEDURE

1. **Course Listings:** A list of available Value-Added Courses, along with syllabi, will be posted on the university website.
2. **Registration Process:** Students must complete and submit a registration form to enroll in a course. The Department Head will group students based on their choices and send them to the Dean for final approval.
3. **Attendance and Assessment Records:** The course instructor is responsible for maintaining attendance and assessment records, including details on assignments, seminars, and other activities. These records must be signed by both the course instructor and the Department Head and kept for future reference.
4. **Attendance Requirements:** Students must maintain at least 75% attendance in the Value-Added Course to be eligible for a certificate. Up to a 10% relaxation in attendance may be granted for valid reasons, such as illness or extracurricular participation.

Certification

Upon successfully completing a Value-Added Course, students will be awarded a **certificate** signed by the authorized university signatories, recognizing their accomplishment in the course.

Medical Equipment Handling



SGT UNIVERSITY

Course Code: VAC/FAHS/004

COURSE OBJECTIVES:

- Develop Practical Skills in Equipment Handling
- Understanding about skills regarding equipment handling
- Ensure Patient Safety and Comfort
- Learn Troubleshooting and Maintenance Techniques

COURSE OUTCOMES:

- Demonstrate Proficiency in Equipment Operation skills
- To develop skills to Perform Safe and Accurate Testing
- Develop effective communication skills.

COURSE CONTENT:

Module I:

- Introduction to healthcare and hospitals
- Communication skills
- Basic techniques related to neurophysiology
- Instrumentation of neurophysiology techniques

Module II:

- Introduction of medical equipment technology
- Types of Neurodiagnostic equipments
- EEG instrumentation, principle and working
- Introduction to patient safety and quality

Module III:

- Instrumentation of NCV Set up and Operation
- Introduction to Polysomnography and sleep studies
- Familiarization and working with ECG machine, EEG and NCV equipments
- Introduction to Neurostimulation techniques

Module IV:

- Safety Procedural Guidelines
- Maintenance and Calibration of Medical Equipments
- Quality Assurance Protocols of Medical Equipments
- Maintenance of records
- Internship



REFERENCES:

- Clinical Neurophysiology by U K Mishra
- Fundamentals of Neurophysiology by R.F. Schmidt
- EEG in Clinical Practice by Kurupath Radhakrishnan



Radiation Hazards and Protection



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Course Code: VAC/FAHS/005

COURSE OBJECTIVES:

- To develop understanding about the different types of patients in the hospital.
- Understand concept of important of radiation protection.
- Comprehend the role of biological effects of radiation.
- Differentiate between different types of radiation.

COURSE OUTCOMES:

- Understand the concept of radiation.
- Importance of radiation hazarding day to day life.
- Having awareness about the radiation harm in human body.
- Gain knowledge about how we can protect our self from ionizing radiation

COURSE CONTENT:

Module I: Introduction to Radiation.

- History and Development.
- Introduction
- Importance of ionizing radiation.
- Types of radiation

Module II: Introduction to Radiation Hazard.

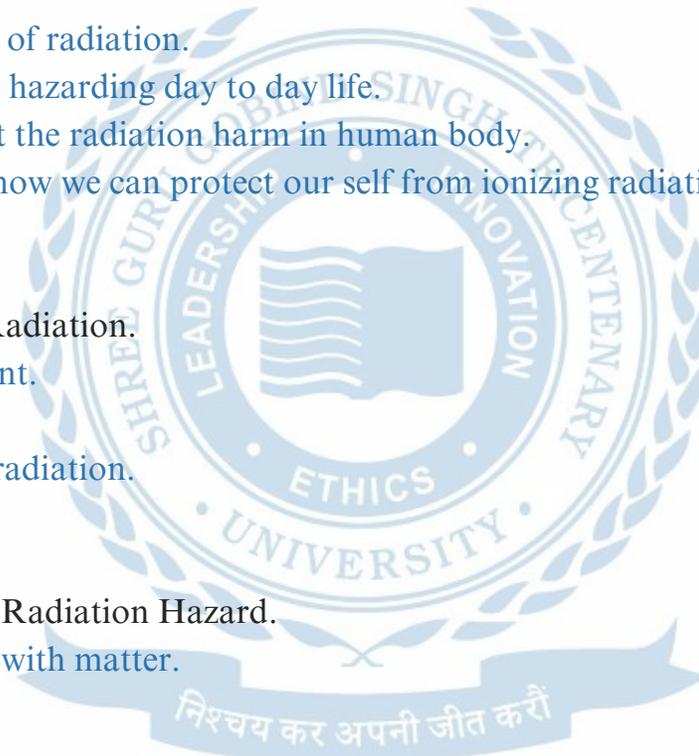
- Interaction of radiation with matter.
- Radiation Damage.

Module III: Types of Radiation Hazard.

- Stochastic and non-stochastic effect..
- Genetic effects from radiation.
- Biological effects of radiation.

Module IV: Radiation Protection.

- Need for protection.
- Various methods of radiation protection.
- Advantages and disadvantages of radiation protection.
- Regulating bodies for radiation protection.





REFERENCES:

- Radiation protection in hospital, Richard F.Mould.
- Basic radiological physics, Jaypee Brothers pvt limited New Delhi.
- An Introduction to radiation protection Allen Martin & Samuel.
- Radiation safety in Medical Practice M.M. Rechami.



Course Code: VAC/FAHS/006

COURSE OBJECTIVES:

- To provide an understanding of hospital patient handling procedures.
- To familiarize students with legal and ethical considerations in patient care.
- To equip students with knowledge of medical laws, patient rights, and responsibilities.
- To develop skills for ensuring patient safety and dignity during hospital handling.
- To understand the role of healthcare professionals in legal and ethical decision-making.

COURSE OUTCOMES:

- Demonstrate patient handling techniques following safety guidelines.
- Explain the legal of patient rights, consent, and confidentiality.
- Analyze ethical dilemmas in healthcare settings and apply ethical principles.
- Identify and apply standard protocols for patient safety and risk management.
- Understand the role of healthcare professionals in medico-legal cases.

COURSE CONTENT:

Module I: Introduction to Patient Handling

- Importance of safe patient handling
- Basic patient mobility and transfer techniques
- Common risks and hazards in patient handling
- Role of caregivers and healthcare professionals

Module II: Legal Aspects in Patient Handling

- Patient rights and responsibilities
- Legal implications of improper handling
- Informed consent and refusal of treatment
- Medical negligence and malpractice laws
- Health Insurance Portability and Accountability Act (HIPAA) compliance

Module III: Ethical Considerations in Patient Care

- Ethical principles in healthcare (autonomy, beneficence, non-maleficence, justice)
- Confidentiality and professional
- Ethical decision-making in critical situations
- Case studies on ethical dilemmas



Module IV: Hospital Safety and Risk Management

- Occupational health and safety in hospitals
- Preventing patient falls and injuries
- Infection control and hygiene practices
- Handling emergency situations and crisis management

Module V: Medico-Legal Issues in Healthcare

- Role of healthcare professionals in medico-legal cases
- Documentation and reporting of patient care
- Death certification and post-mortem considerations
- Medical ethics committees and legal frameworks

REFERENCES:

- Pozgar, G. D. (2020). Legal Aspects of Health Care Administration. Jones & Bartlett Learning.
- Eyal, N., Hurst, S. A., Norheim, O. F., & Wikler, D. (2013). Ethical Challenges in Global Public Health. Oxford University Press.
- Gupta, M. C. (2019). Medical Law and Ethics in India. Springer.
- World Health Organization. (2017). Patient Safety: Making Health Care Safer. WHO Publications.
- Pandit, M. S., & Pandit, S. (2009). Medical Negligence: Indian Perspective. Indian Journal of Urology, 25(3), 379-383.