SGT UNIVERSITY

VALUE ADDED COURSES

Faculty of Medicine & Health Sciences 2023-24

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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INTRODUCTION

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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.

- 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.

Awareness of First Aid in Trauma

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Course Code: VAC/FMHS/001

COURSE OBJECTIVES:

- This module aims to enhance participants' understanding of trauma-related emergencies and equip them with essential first aid skills. Through a combination of theoretical knowledge and hands-on practice, participants will learn to assess and respond effectively to situations involving trauma.

COURSE CONTENT:

Module I: Course Introduction

- Objectives of the module
- Importance of first aid in trauma
- Overview of course structure
- Introduction to trauma care

Module II: Understanding Trauma

- Definition of trauma
- Types of traumas (e.g.,blunt, penetrating, thermal)
- Mechanisms of injury
- Common causes of traumatic injuries(sports, road accidents, falls)
- Psychological impact of trauma on victims

Module III: The First Aid Principles

- The ABCs of first aid (A - Airway,B - Breathing, C - Circulation)
- The D - Disability and E - Exposure
- Scene safety and personal protection
- Assessing the victim and prioritizing care

Module IV: Recognizing and Managing Traumatic Injuries

  - Soft Tissue Injuries
- Cuts, scrapes, and lacerations
- Abrasions and avulsions
- First aid measures (cleaning, bandaging)
  - Bone and Joint Injuries
- Fractures and dislocations
- Signs and symptoms of fractures
- Splinting techniques

- Head, Neck, and Spinal Injuries
- Concussions and traumatic brain injury
- Spinal column injuries
- Stabilization and transport techniques

Module V: Managing Bleeding And Shock

- Types and causes of bleeding (external and internal)
- Methods for controlling bleeding(direct pressure, elevation, pressure points)
- Understanding shock (definition, causes,signs)
- First aid for shock;laying the victim down, keeping warm, and monitoring vital signs

Module VI: CPR and Choking Emergencies

- Basic Life Support(BLS) overview
- CPR techniques for adults, children,and infants
- Choking emergencies (recognition and response)
- Using an Automated External Defibrillator (AED)

Module VII: Special Considerations in Trauma

- Trauma in vulnerable populations (children, elderly)
- Unique situations (e.g., sports injuries,outdoor emergencies)
- Environmental considerations (extreme weather cases)
- Handling psychological trauma and offering emotional support

Module VIII: Practical Skills Sessions

- Hands-on practice for all techniques learned:
- Bandaging and splinting
- CPR with manikins
- Simulated trauma scenarios
- Role-playing with peer feedback

Module XI: Assessment and Review

- Overview and Q&Asession
- Written and practical assessments to evaluate learnercompetence
- Discussion of real-life situations and experiences
- Feedback from trainers and peers

REFERENCES:

General References on First Aid and Trauma

- American Heart Association (AHA) Guidelines: American Heart Association. (2020)."Highlights of the 2020 American Heart Association Guidelines for CPR and ECC."
- World Health Organization (WHO): World Health Organization. (2016)."First Aid: A Training Manual for Trainers." Available at: [WHO First Aid Manual](https://www.who.int/news-room/fact-sheets/detail/first-aid).
- National Safety Council (NSC): "First Aid Training."Available at: [NSC First Aid] (https://www.nsc.org/safety-training/first-aid).
- American Red Cross: "First Aid/CPR/AED Participant's Manual."

Health Education in Diabetes

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Course Code: VAC/FMHS/002

COURSE OBJECTIVES:

- Understand the pathophysiology and types of diabetes.
- Develop skills for effective patient education and self-management strategies.
- Gain knowledge about lifestyle interventions, pharmacological treatments, and complications management.
- Foster an interdisciplinary approach to diabetes care.

COURSE OUTCOMES:

- Health Education in Diabetes course is specifically designed for non- medical students interested in diabetes. This course covers basic pathophysiology of diabetes, diagnosis and its management. More emphasis shall be on prevention and early management through lifestyle changes and diet restriction. The course consists of 6 modules that shall train the participants for various aspects of diabetes. At the end of each module specific practical activities shall be conducted for a deeper understanding. At the end of this course, assessment shall be done by a multiple-choice questions test and some case based scenarios followed by certification. Diabetes is a public health burden in India. Awareness and health education are the foundation of its overall control through prevention and early management.

COURSE CONTENT:

Module I: Understanding Diabetes

1. Overview of Diabetes Mellitus:

- Definition and classification (Type 1, Type 2, Gestational, MODY, etc.).
- Global and local prevalence statistics

2. Pathophysiology of Diabetes:

- Key organs related to diabetes
- Insulin production and function.
- Mechanisms of hyperglycemia.

3. Risk Factors and Predispositions:

- Genetic Predisposition
- Environmental, and Lifestyle influences.
- Self-assessment for risk of diabetes

4. Addressing Common myths about diabetes

- Group discussion on myths
- Busting the myths
- Facts against myths about diabetes

Module II: Diagnosis and Monitoring

1. Signs and symptoms of diabetes
- Common symptoms of diabetes
- Differentiation from general symptoms

2. Signs and symptoms of diabetes
- Early treatment seeking behaviour
- Consequences of delaying proper medical treatment

3. Screening and diagnosis of diabetes:
- Screening in diabetes
- Fasting plasma glucose
- HbA1c and its importance
- OGTT, and random blood sugar tests

Module III: Nutrition and Lifestyle Management

1. Principles of a Diabetes-Friendly Diet:
- Macronutrient distribution of food items
- Concept of Glycemic Index
- Identification of low glycemic foods
- Meal planning and portion control.

2. Role of Physical Activity:
- Types of exercise and their effects on blood glucose
- Maintaining glycemic control during exercise
- Safety precautions during exercise

3. Behavioral and Psychosocial Considerations:
- Addressing stress, stigma
- Mental health in diabetes
- Maintaining the overall quality of life

Module IV: Pharmacological Management

1. Overview of Medications:
- Basic knowledge of anti-diabetic drugs
- Oral hypoglycaemic agents and their mechanisms
- Insulin therapy: types, administration, and storage.

2. Signs and symptoms of diabetes

- Strategies for improving compliance
- Overcoming barriers to medication use

3.Glucose monitoring

- Monitoring Tools and Techniques
- Self-monitoring of blood glucose (SMBG)
- Continuous glucose monitoring (CGM)
- Importance of Regular Monitoring

4. Innovations in Diabetes Management

- Identifying trends and preventing complications.
- Emerging therapies and technologies (e.g., artificial pancreas)

Activities:

- Demonstration of insulin injection techniques.
- Interactive session on solving common medication challenges.