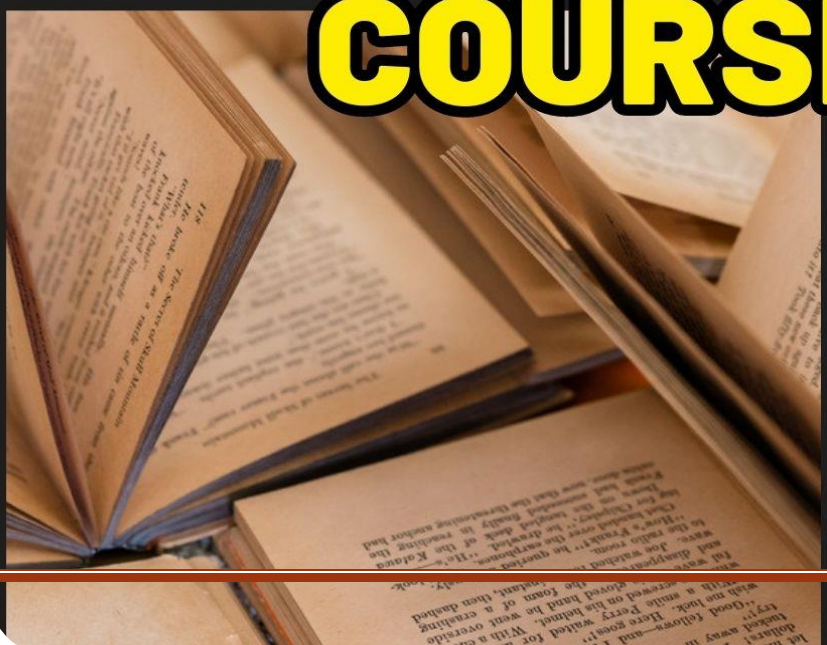
SHRI GURU RAM RAI UNIVERSITY
DEHRADUN

VALUE ADDED COURSES



SGRRU

SGRR UNIVERSITY

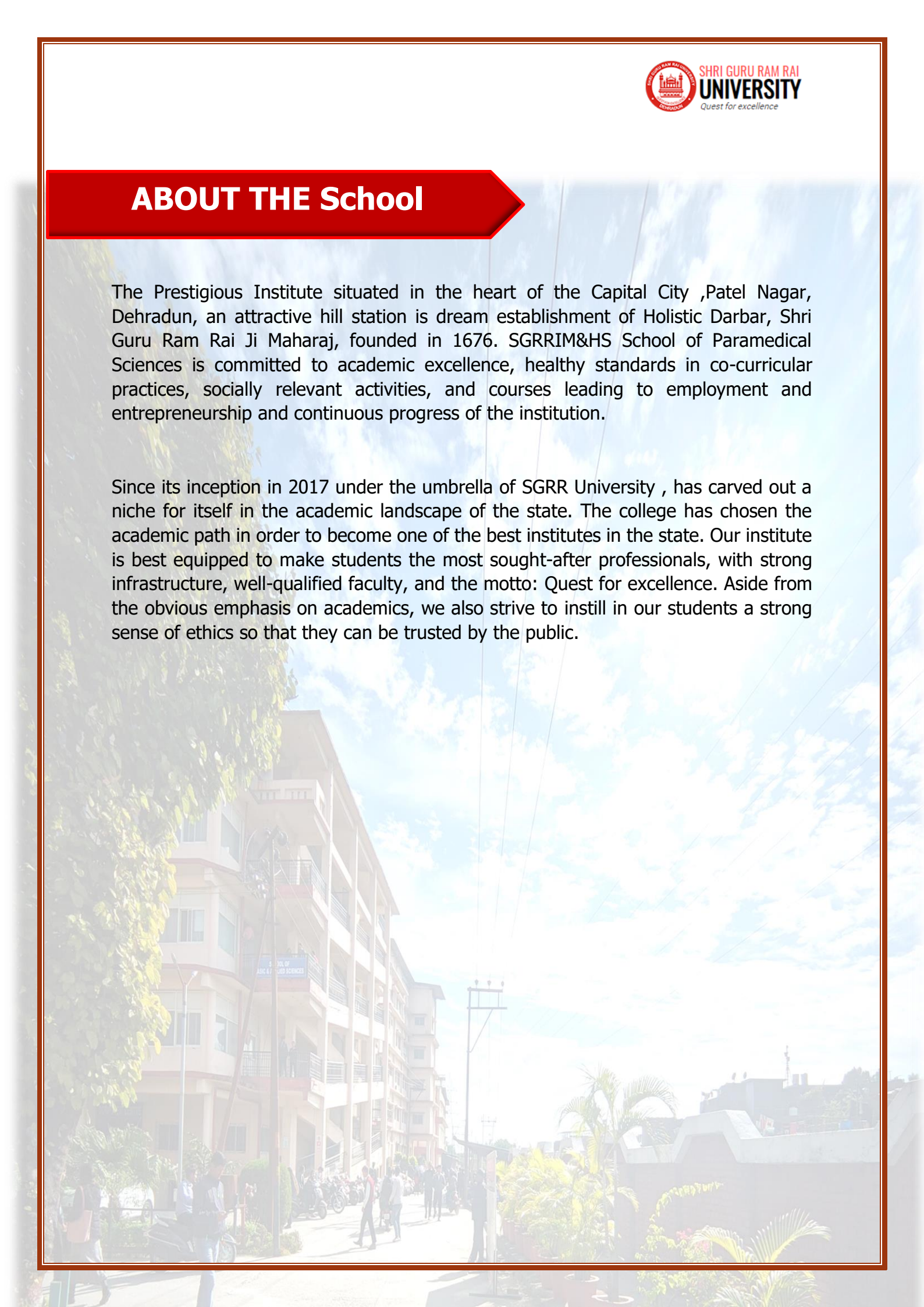
Brochure of Value-Added Courses

School of Paramedical Sciences

ABOUT THE School

The Prestigious Institute situated in the heart of the Capital City ,Patel Nagar, Dehradun, an attractive hill station is dream establishment of Holistic Darbar, Shri Guru Ram Rai Ji Maharaj, founded in 1676. SGRRIM&HS School of Paramedical Sciences is committed to academic excellence, healthy standards in co-curricular practices, socially relevant activities, and courses leading to employment and entrepreneurship and continuous progress of the institution.

Since its inception in 2017 under the umbrella of SGRR University , has carved out a niche for itself in the academic landscape of the state. The college has chosen the academic path in order to become one of the best institutes in the state. Our institute is best equipped to make students the most sought-after professionals, with strong infrastructure, well-qualified faculty, and the motto: Quest for excellence. Aside from the obvious emphasis on academics, we also strive to instill in our students a strong sense of ethics so that they can be trusted by the public.



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INTRODUCTION

The ever-changing global scenario makes the world more modest and needs high levels of lateral thinking and the spirit of entrepreneurship to cope up with the emergent challenges. Many a times, the defined skill sets that are being imparted to students today with Programme Specific Objectives in educational institutions become redundant sooner or later due to rapid technological advancements. No university curriculum can adequately cover all areas of importance or relevance. It is important for higher education institutions to supplement the curriculum to make students better prepared to meet industry demands as well as develop their own interests and aptitudes.

Objectives The main objectives of the Value-Added Course are:

- ✓ To provide students an understanding of the expectations of industry.
- ✓ To improve employability skills of students.
- ✓ To bridge the skill gaps and make students industry ready.
- ✓ To provide an opportunity to students to develop inter-disciplinary skills.
- ✓ To mould students as job providers rather than job seekers.

Course Designing The department interested in designing a Value Added Course should undertake Training Need Analysis, discuss with the generic employers, alumni and industrial experts to identify the gaps and emerging trends before designing the syllabus.

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.

SCHOOL OF PARAMEDICAL SCIENCES

Basic Knowledge About Sports Care

Course Code : VCSPMS 001

Course Objectives:

1. Defining about sports medicine and learning about its need, concept and importance
2. Learning about athletic injuries and exercise rehabilitation
3. Understanding the concept of aerobic and anaerobic training for athletes and methods and equipment's required for training
4. To have a knowledge about various systemic evaluation and emergencies related to respiratory, cardiac and orthopedic conditions
5. To gain the knowledge about Nutritional basics and their role and requirement of various nutrients in diet of athlete

Course Outcomes:

1. To define sports medicine and its concept, need, importance and rehabilitation of various athletic injuries.
2. Understanding the basic concept of aerobic and anaerobic training and different methods and equipment's for the same.
3. Implementing various nutritional and diet requirements and their role in athletic performance
4. Summarizing different environmental factors and illnesses and first aid techniques for them.
5. Assessing about various on-field emergencies and their potential causes; and applying the emergency protocol for the athlete.
6. Learning about injury prevention and various techniques and methods for treating the athlete.

Module I: Introduction to Sports Medicine and Rehabilitation

- Definition, need and importance and Concept of sports medicine
- Role of sports physician and athletic trainer in sports medicine
- Categories of athletic injuries: traumatic and overuse, sign and symptoms of inflammation and stages of healing
- Introduction to athletic rehab: role of therapeutic exercise in rehabilitation of athletic injuries

Module II: Concept of Aerobic and Anaerobic Training

A: Meaning and methods of warming up and cooling down

B: Aerobic and Anaerobic training

C: Different methods of aerobic and anaerobic training

D: Facilities and equipment required for both training

Module III: Nutritional Considerations

A: Nutritional basics and energy sources

B: Roles and requirements for macronutrients

1. Carbohydrate
2. Protein
3. Lipids
4. Water

C: Roles and requirements for micronutrients

1. Vitamins
2. Minerals

D: Eating and drinking practices for exercise and athletic performance

E: Body composition and weight control

1. Techniques to assess body composition
2. Caloric balance
3. Disordered eating behaviours
4. Safe techniques for weight management

Module IV: Environmental Considerations

A: Hyperthermia and heat illnesses

1. Risk factors and prevention techniques
2. Sign and symptoms
3. First aid techniques

B: Hypothermia and cold illnesses

1. Risk factors and prevention techniques
2. Sign and symptoms
3. First aid techniques

C: Exercising at altitude

D: Overexposure to the sun

Module V: On Field Emergency And Management

A: Onsite management of collapsed athlete triage

1. Primary ABCD survey: airway, breathing, circulation, defibrillation
2. Glascow coma scale (GCS)

B: Potential causes of on field emergencies- System evaluation

1. Head and neck: brain injury, intracranial haemorrhage, cervical spine fracture/dislocations, laryngeal fracture
2. Cardiac emergencies
3. Respiratory emergencies
4. Orthopedic conditions: Posterior Sternoclavicular dislocation, Fat embolism, Hip
   Dislocation, Knee dislocation

C: Emergency protocols

1. Emergency communication, Emergency equipment and supplies, Transportation

Module VI: PHYSIOTHERAPY TECHNIQUES

A: Principles of Injury prevention: Warm up, Cool down, Stretching, Types and principles of stretching.

B: PRICE technique: Immobilization and Early mobilisation

C: Splinting – Handling & Transfer

D: Cryotherapy: Methods of application (Ice packs, Icetowel, Ice Immersion, Ice cube massage, Excitatory cold, Vapocoolant spray, cryokinetics&Cold whirlpool)

E: Taping and Bracing: Principles, Types and Methods

F: Soft tissue Massage: Principle, Types and Methods

G: Bandage: types of bandage, application for major joints and body parts

Reference Books:

1.Sports injury management by Anderson Mk ,Wolters Kluwer.

2.Therapeutic exercise for sports injuries by Dr.Fatehmeh Karami

Ergonomics Importance for Students

Course Code : VCSPMS 002

Course Objectives:

1. Understanding about structure of various joints and how they are impacted by cumulative trauma
2. Learning about principles of workplace biomechanics
3. Integrating about body size and differences in workplace designs
4. To have a knowledge about various ergonomic tools and equipment's
5. To gain the knowledge about workplace design solutions for reducing risk of musculoskeletal disorder.

Course outcomes:

1. To describe ergonomic risk factors, select the appropriate assessment tool, and conduct a detailed ergonomic risk assessment.
2. To identify and analyze the biomechanical aspects of a manual material handling task and develop design recommendations to reduce the risk of injury.
3. To illustrate the applicability of various standardized ergonomic assessment tools.
4. To analyse work-rest schedule and develop recommendations based on the physical demands of the task, worker characteristics and environmental conditions.
5. Evaluate office work area for ergonomic concerns and provide design recommendations to improve performance and reduce injury risk.

Module I: Structure of the back, hand/wrist, shoulder, and neck, and how these joints are impacted by cumulative trauma. Principles of workplace biomechanics
Module II: Integrating employee body size and individual differences in workplace designs
Module III: The use of state-of-the-art ergonomics assessment tools including OWAS, RULA, REBA, and the Strain Index
Module IV: Workplace design solutions for reducing musculoskeletal disorders and improving productivity
Module V: How psychosocial and work organization factors impact employee health
Module VI: New technologies for improving workplace health**.** The use of state-of-the-art ergonomics assessment tools**.** Workplace design solutions for reducing musculoskeletal disorders and improving productivity**.** Setting up and maintaining an effective ergonomics process

Reference Books:

1. Kreighbaum E., Barthels K: Biomechanics _ A Qualitative approach for studying human motion, 2nd edn. 1985, Macmillan.
2. Rasch& Burk: kinesiology and Applied Anatomy, Lee &Fabiger
3. White and Punjabi – Biomechanics of Spine – Lappincott.
4. Norkin&Levangie: Joint Structure and function - A Comprehensive Analysis – F.A. Davis

Basics of Laboratory Practice

Course Code : VCSPMS 003

Course Objective:

1. Significance of Laboratory Safety practices, General and legal aspects.
2. Emphasis on Sample preparation and Processing.
3. Documentation of specimen and identification.

Module I: General aspects of laboratory safety

Ethics of laboratory practice. Laboratory safety – Common lab accidents their prevention and their first aid. Bio-Medical Waste Management - Legal Aspects and Environment Concern.

Module II: Sample preparation and processing

Clinical sample- collection, transport and processing, Examine and analyze body fluids, tissues and cells. Examination of urine, pus, blood, stool and CSF. Culture media preparation. Various methods of blood collection - Venipuncture and collection of blood samples, Preparation of blood films, staining of blood smears, Manual count of blood cells. Blood components separation – serum and plasma. Functions of RBC, WBC and platelets.

Module III: Sample Documentation

Preparation of container and swabs for collections of specimens for microbial examinations.

Portal regulation and transport of specimen. Flowchart of lab diagnostic procedures. Documentation of specimen in laboratory. Preservation of Micro-organisms.

References:

- Text Book of Pathology Harsh Mohan VIII Edition Bloom Taxonomy
- Text Book of Pathology by Dr. A K Mandal.
- Text Book of Microbiology by Dr. C P Baveja VIII Edition.
- Text Book of Microbiology by Apurba S Sastry & Sandhya Bhat.

Basics of Sanitation,Safety And Hygiene

Course Code : VCSPMS 004

Course Objective:

1. Introduction the causes and prevention of food poisoning anand introduce the requirement of safety in the workplace
2. To study the control, elimination and eradication of disease and focus on screening and diagnostic test for pathogens.
3. Present the rules of personal hygiene and the importance of adhering to safety rules and regulation.

Module I: The concept of food safety

The concept of food safety in the business environment. Modes of transmission and natural history of a disease. The definition of "micro-organism". Factors that influence the growth of micro-organism. The definition of food borne illness.

Module II: Concepts of Disease Occurrence.

Natural History and Spectrum of Disease. Infection agents (pathogens). Mode of transmission of infection.Chain of Infection. Epidemic Disease Occurrence. Need and uses of screening tests. Accuracy and clinical value of diagnostic and screening tests (sensitivity, specificity, & predictive values).

Module III : Principles of personal hygiene.

The linkage between personal hygiene and food safety.Characteristics of food contamination.

References :

1. Centers for disease Control and Prevention, Hepatitis A outbreak associated with green onions at a restaurant- Monaca,Pennsylvania, 2003. MMWR 2003.
2. Cobb S, Miller M, Wald N. On the estimation of the incubation period in malignant disease, J Chron Dis 1959;9:385-93. LastJM, editor. Dictionary of epidemiology, 4th ed. New York: Oxford University Press.
3. Principles of Food Sanitation (Food Science Text Series), 5th Edition 2006,Marriott & R B Gravanni, published by Springer
4. Food Poisoning and Food Hygiene. London: Arnold, 1998. Hobbs, Betty C. and Roberts, Diane