

# Surat Municipal Institute of Medical Education and Research

(SMIMER), Surat

Department of Pathology

## UG Curriculum

### a. Competencies:

The undergraduate must demonstrate:

- Comprehension of the causes, evolution and mechanisms of diseases.
- Knowledge of alterations in gross and cellular morphology of organs in disease states.
- Ability to correlate the natural history, structural and functional changes with the clinical manifestations of diseases, their diagnosis and therapy.

### b. Broad subject specific objectives

#### Knowledge:

At the end of one and half years, the student shall be able to:-

- Describe the structure and ultra structure of a sick cell, causes and mechanisms of cell injury, cell death and repair.
- Correlate structural and functional alterations in the sick cell.
- Explain the path physiological processes, which govern the maintenance of homeostasis, mechanisms of their disturbance and the morphological and clinical manifestation associated with it.
- Describe the mechanisms and patterns of tissue response to injury so as to appreciate the pathophysiology of disease processes and their application to clinical science.
- Correlate the gross and microscopic alterations of different organ systems in common disease to the extent needed for understanding disease processes and their clinical significance.
- Develop an understanding of steps in neoplastic changes in the body and their effects in order to appreciate need for early diagnosis and further management of neoplasia.
- Understand mechanisms of common hematological disorders and develop a logical approach in their diagnosis and management.
- Develop understanding of the blood banking, blood donors & transfusion of blood & blood products, (components).
- Understand pathophysiology of infectious diseases in relation with tissue changes.
- Describe the various immunological reactions in understanding the disease process & tissue transplant.
- Develop an understanding for genetic disorders
- Understand the vital organ function test of Kidney, liver & thyroid.

### **c. Skills**

At the end of one and half years, the student shall be able to: .

- Describe the rationale and principles of routine technical procedures of the diagnostic laboratory tests & perform it.
- Interpret routine diagnostic laboratory tests and correlate with clinical, hematological and morphological changes.
- Perform the simple bed-side tests on blood, urine and other biological fluid samples:
- Draw a rational scheme of investigations aimed at diagnosing and managing the cases of common disorders.
- Able to understand the microscopic and macroscopic features of common diseases.
- Develop different type of skills such as observation skills, communication skill and presentation skill.
- Understand biochemical/physiological disturbances that occur as a result of disease in collaboration with all concerned departments.

### **d. Integration:**

The teaching should be aligned and integrated horizontally and vertically in organ systems recognizing deviations from normal structure and function and clinically correlated so as to provide an overall understanding of the etiology, mechanisms, laboratory diagnosis, and management of diseases.