

# GUJARAT TECHNOLOGICAL UNIVERSITY

## B. Pharm. Semester - 3

Subject Code 230005  
Subject Name Pathophysiology

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Sr.No	Course content
1.	<b>Basic principles of cell injury, cell death and adaptation :</b> Causes, pathogenesis and morphology of cell injury, Apoptosis-causes and mechanism, intracellular alteration in lipids, proteins and carbohydrates, (abnormalities of lipoproteinemia, glycogen infiltration, and glycogen storage diseases) calcification, cellular adaptations-Atrophy, hypertrophy, metaplasia and hyperplasia
2.	<b>Inflammation :</b> Basic mechanism involved in the process of inflammation, pathogenesis of acute and chronic inflammation, chemical mediators of inflammation.
3.	<b>Tissue repair processes :</b> Control of cell proliferation, Growth factors and extra cellular matrix, Cell and tissue regeneration, repairs of wound in skin, pathological aspects of repair.
4.	<b>Diseases of the immune system :</b> Introduction, Hypersensitivity(type I,II,III,IV with examples of diseases), allergy due to food, chemicals, drugs; Autoimmunity (Immunological tolerance, mechanism of autoimmunity); transplantation and mechanism of allograft rejection; Autoimmune diseases (Systemic Lupus erythematosus, Rheumatoid arthritis, Systemic sclerosis, Inflammatory myopathies, Mixed connective tissue disease, polyarteritis nodosa and other vasculitides), AIDS, Amyloidosis.
5.	<b>Environmental and nutritional diseases :</b> Air pollution and smoking, SO <sub>2</sub> , NO, NO <sub>2</sub> and CO; protein calorie malnutrition, pathogenesis of starvation, vitamins, obesity.
6.	<b>Biological effects of radiation</b>

### Reference Books:

1. Pathologic basis of disease by- Cotran, Kumar, Robbins (Latest Edition)
2. Text book of Pathology- Harsh Mohan (Latest Edition)
3. Text book of Pathology- Y. M. Bhide (Latest Edition)