



# SYLLABUS

<b>Course Title</b>	<b>DISEASES PATHOPHYSIOLOGY</b>	
<b>Course Code</b>	PH305	
<b>Course Credit</b>	Lecture : 3	
	Practical : 0	
	Total : 3	
<b>Course Objectives</b>		
<p>Pathophysiology will provide a study of the cell and its homeostasis and mechanisms of adaptation in case of alterations in homeostasis. It provides the knowledge regarding cell death by apoptosis and necrosis and subsequent inflammation and tissue repair processes. It also highlights the occurrence and pathogenesis of the disease because of environmental hazards, nutritional imbalances, radiation and changes in immunity with respect to the effect of sex, age and genetic make-up. It provides the knowledge about pathogenesis, signs and symptoms, laboratory findings and complications of various diseases related to CNS, CVS, renal, respiratory, GIT, hormonal changes (diabetes mellitus, hypo and hyperthyroidism, etc) including that of rheumatoid arthritis, gout, anemia, and glaucoma.</p>		
<b>Detailed Syllabus - Theory</b>		
<b>Sr. No.</b>	<b>Name of Chapter &amp; Details</b>	<b>Hours Allotted</b>
	<b>Section-I</b>	

1	<p><b>Basic principles of cell injury, cell death and adaptation :</b></p> <p>Causes and pathogenesis of cell injury, cellular adaptations-Atrophy, hypertrophy, metaplasia and hyperplasia, Cell death by necrosis and apoptosis and their pathological and physiological role.</p>	06
2	<p><b>Inflammation:</b></p> <p>Basic mechanisms involved in pathogenesis of inflammation, mechanisms of acute and chronic inflammation.</p>	04
3	<p><b>Pathogenesis, symptoms and signs, laboratory findings and complications of following:</b></p> <ul style="list-style-type: none"> <li>• <b>Cardiovascular:</b> Hypertension, Coronary heart disease, Thrombosis, Stroke, Congestive heart failure, Cardiac arrhythmias and Dyslipidemia.</li> </ul>	13
<b>Section-II</b>		
4	<p><b>Pathogenesis, symptoms and signs, laboratory findings and complications of following:</b></p> <ul style="list-style-type: none"> <li>• <b>CNS:</b> Epilepsy, Parkinsonism, Alzheimer, Schizophrenia, Affective disorders, Pain and Migraine.</li> <li>• <b>Renal:</b> Acute renal failure, chronic renal failure.</li> <li>• <b>Respiratory:</b> Asthma, Chronic Obstructive Pulmonary Disease (COPD), Cough</li> <li>• <b>Gastro-intestinal System:</b> Peptic Ulcer, Inflammatory Bowel Disease, Diarrhea, Liver diseases.</li> <li>• <b>Endocrine disorders:</b> Hypo and hyperthyroidism, diabetes mellitus, Cortical dysfunctions.</li> <li>• <b>Disorders of eye:</b> Glaucoma.</li> <li>• <b>Other disorders:</b> Rheumatoid arthritis, gout and anemia.</li> </ul>	07 02 03 03 04 01 02

### **Instructional Method and Pedagogy:**

- Lectures will be conducted with the aid of multi-media projector, black board, OHP etc.
- Assignments based on course content will be given to the students at the end of each unit/topic and will be evaluated at regular interval.
- Surprise tests/Quizzes/Seminar/Tutorials will be conducted.
- The course includes language practices such as Group Discussion, Interviews etc to develop the communication skills of the students.

### **Students Learning Outcomes:**

1. Know the basic adaptations of cell by hypertrophy, atrophy, hyperplasia, and metaplasia.
2. Understand the mechanism and role of cell death by necrosis and apoptosis.
3. Understand the basic mechanism of inflammation and its mediators to know the targets of anti-inflammatory drugs.
4. Know about the tissue repair processes to learn about healing drugs.
5. Understand the immune processes, so that it can be realized how immunosuppressant drugs work while transplantation and how immunity is to be suppressed for curing autoimmune diseases.
6. Know the basic pathophysiology and subsequent changes in body related to several diseases, so that correct drug can be selected for curing disease and alleviating symptoms.

### **Text Books:**

1. Pathologic basis of disease by- Cotran, Kumar, Robbins (Latest Edition)
2. Essentials of medical pharmacology --K. D. Tripathi

3. Pharmacology-Rang and Dale
4. Text book of therapeutics - Herfindal

### Reference Books:

1. Text book of Pathology- Harsh Mohan (Latest Edition)
2. Text book of Pathology- Y. M. Bhide (Latest Edition)
3. Clinical Pharmacy and Therapeutics. Roger Walker and Clive Edwards, Churchill Livingstone Edinburgh / London.
4. Pathology & Therapeutics for Pharmacists. Russell J. Greene and Norman F. Harris.
5. Pharmacotherapy: A Pathophysiological Approach. J. T. Dipiro, R. L. Talbert et al, McGraw-Hill, New York.
6. Pharmacological basis of Therapeutics-Goodman and Gilman
7. Principles of Pharmacology – Paul L. Munson
8. Lewis's Pharmacology – James Crossland – Churchill Livingstone
9. Modern Pharmacology with clinical applications- Craig, Charles R.
10. Lippincott's illustrated reviews of Pharmacology- Mycek Mary J.
11. Principles of pharmacology.--H. L. Sharma

### Additional Resources

- Soft copies of pharmacology and pathophysiology books are available on websites.
- Latest informations are available from scientific journals available in library and on websites.