Course Title	**Pharmacology II**				
Course Code	MD335				
Course Type	Compulsory				
Level	1st Cycle (MD)				
Year / Semester	3rd year/ 6th semester				
Teacher's Name	TBA				
ECTS	6	Lectures / week	3 hrs / 14 weeks	Laboratories / week	3 hrs / 14 weeks
Course Purpose and Objectives	The course is intended to familiarize students with the most important modes of action, therapeutic and adverse effects of the most important classes of pharmacological agents. The objective of this course is to extend the students' knowledge beyond the content of Pharmacology I with a principle focus on systems pharmacology. The course aims at allowing students to progress to more advanced medical courses such as Internal Medicine and the various medical specialties. The specific topics include: o Renal pharmacology o Haematopharmacology o Treatment of circulatory system diseases (peripheral and cerebrovascular) o Pharmacology of the respiratory tract o Endocrine pharmacology o Principles of drug interactions (beneficial and adverse)				
Learning Outcomes	Upon successful completion of the course the students will be able to: • Describe the pharmacology of diuretics, antidiuretics and drugs for acid/base and electrolyte balance (e.g. carbonic anhydrase inhibitors, loop diuretics, thiazides, aldosterone antagonists, sodium channel blockers, vasopressin, osmotic diuretics • Discuss the rennin-angiotensin system in terms of treatment of hypertension, congestive heart failure and diabetic nephropathy (e.g. ACE inhibitors, angiotensin II receptor antagonists, rennin inhibitors, vasopeptidase inhibitors). Describe additional antihypertensive drugs such as clonidine, minoxidil, fenoldopam, and alpha-blockers) • Discuss the Vaughan Williams classification of antiarrhythmic drugs (Classes I-V), their effects on cardiac rate and rhythm and their use in the treatment of arrhythmias such as atrial and ventricular fibrilation • Discuss the drugs commonly used in coronary heart disease, angina and myocardial ischemia (e.g. organic nitrates, beta-blockers, calcium channel antagonists, vasodilators, diuretics, aldosterone antagonists)				

	• Discuss lipid lowering drugs and their effects on cholesterol homeostasis (e.g. statins, fibrates, niacin, inhibitors of PCSK9, MTP and cholesterol absorption) • Describe the basic principles of hormone action and the hypothalamic-pituitary axis with a focus on thyroid and anti-thyroid drugs, parathyroid hormone, Vitamin D and calcium homeostasis • Describe the pharmacology of the male and female reproductive tracts with a focus on androgens, estrogens and progestins and their uses in hormone replacement therapy, therapy of hypogonatism, contraception and cancer chemotherapy • Summarize the pharmacology of the endocrine pancreas in the maintenance of glucose homeostasis with a specific emphasis on diabetes (e.g. insulin, insulin analogs, oral hypoglycemic agents sulfonylureas, meglitinides, α-glycosidase inhibitors)		
Prerequisites	None	Co-requisites	None
Course Content	In this regard the students will be familiar with the pathophysiology and systems pharmacology of the: o Renal System o Haematology and dyslepidimia o Circulatory system including cerebrovascular and peripheral vascular diseases o Respiratory System o Endocrine system (the hypothalamic-pituitary axis and the endocrine pancreas) o Male and female reproductive systems		
Teaching Methodology	Instructor-led lectures, instructor-supported group exercises and case studies		
Bibliography	Required textbook: Pharmacology, Richard Harvey, Lippincott's Illustrated Reviews Suggested supporting textbook: Goodman & Gilman's: The Pharmacological Basis of Therapeutics,		
Assessment	Examinations: 70% Assignment/Lab 20% Class Participation: 10%		
Language	English		