

Courses Description

College: Pharmaceutical Sciences

Department:

Course ID: ١٣١٧٠٢٢٢١ **Description:** Biochemistry

Full Course Description: This course aims to provide the students with the basic information about the physical and chemical properties for macromolecules (carbohydrate, lipids and proteins) and their function in the biological system. The metabolism of carbohydrate, proteins, triglycerides, cholesterol and phospholipids will also be studied. In addition, it concerns with explanation of energy production and oxidative phosphorylation reactions.

Course ID: ١٣١٧٠٢٢٢٢ **Description:** Biochemistry - Practical

Full Course Description: This course aims to discuss the practical application of the basic methods used in the laboratory identification of sugars, proteins, and lipids. in addition to their methods of analysis in vitro and in biological specimens such as blood and urine and to study different enzymatic reactions and their analysis methods and applications. Gel electrophoresis (SDS-PAGE) for protein isolation is also studied. □

Course ID: ١٣١٧٠٢٢٥١ **Description:** Anatomy and Histology

Full Course Description: Anatomy and Histology are two essential basic medical courses. Histology is the science that studies normal microscopic structures, ultra-structures and their related function; whereas, Anatomy studies the gross appearance of the various organs that make up the systems of the human body. Through class lecture, the students will be made to master the basic knowledge of the morphology and relations of the anatomical structures that are present in humans and the histological tissues that form these structures. The relation between the type of tissue present in an organ and the shape and functions of that organ is stressed.

Course ID: ١٣١٧٠٢٢٥٢ **Description:** Physiology

Full Course Description: The course is a lecture based one. Physiology is discussed in systemic approach. Each unit of the human body will be discussed from both structural and functional basis. □
This course is designed to provide students with an understanding of the function & regulation of the human body and physiological integration of the organ systems to maintain homeostasis. Course content will include neural & hormonal homeostatic control mechanisms, as well as study of the musculoskeletal, circulatory, respiratory, digestive, urinary, immune, reproductive, and endocrine organ systems. □
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Course ID: ١٣١٧٠٢٢٥٣ **Description:** Pathology

Full Course Description: This course aims to introduce the basic terminology, concepts, aetiologies and characteristics of altered function, causes and complications of many diseases including cardiovascular, gastrointestinal, respiratory, liver and renal diseases. In addition to pain pathogenesis. Furthermore, the course discusses the pathogenesis of inflammation and cancer.

Course ID: ١٣١٧٠٢٣٤٣ **Description:** Pharmacokinetics

Full Course Description: This course focuses on basic pharmacokinetic principles, discusses time concentration curve, and aims at teaching students how to calculate drug levels in blood and in urine after various administrations (IV bolus, IV infusion, oral, single dosing and multiple dosing) by solving various practice problems.

Course ID: ١٣١٧٠٢٣٥٥ **Description:** Pathophysiology

Full Course Description: This course aims to introduce the basic terminology, concepts, aetiologies and characteristics of altered function, causes and complications of many diseases including cardiovascular, gastrointestinal, respiratory, liver and renal diseases. In addition to pain pathogenesis. Furthermore, the course discusses the pathogenesis of inflammation and cancer.

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Course ID: ١٣١٧٠٢٣٦١ **Description:** Pharmacology (١)

Full Course Description: Pharmacology is the study of drugs. This course will cover a brief introduction about pharmacology, pharmacokinetics, pharmacodynamics and receptors. Moreover, this course provides the students with the pharmacology of the drugs working on the autonomic nervous system (ANS), cardiovascular (CV) system and drugs used in dyslipidemia, anemia and coagulation diseases regarding their mechanism of action, biotransformation, side effects, contraindications and their clinical uses.

Course ID: ١٣١٧٠٢٣٦٢ **Description:** Pharmacology (٢)

Full Course Description: Pharmacology is the study of drugs. Pharmacology II course deals with the action, mechanism of action, biotransformation, side effects, clinical uses, and contraindications of: drugs used in Asthma, autocooids, nonsteroidal anti-inflammatory drugs, disease modifying antirheumatic drugs, drugs used in gout as well as endocrine drugs and drugs act in the CNS.

Course ID: ١٣١٧٠٢٣٦٨ **Description:** Community Pharmacy (١)

Full Course Description: This course is the first part of the college's experiential training program. It aims at training students in community pharmacies or other pharmaceutical institutions as deemed appropriate under the supervision of faculty members where they will be evaluated at the end of the course.

Course ID: ١٣١٧٠٢٤٢٦ **Description:** Clinical Biochemistry

Full Course Description: The course covers electrolyte hemostasis, acid-base balance tests, kidney function tests, liver function tests, glucose metabolism disorders, calcium and magnesium hemostasis, proteins and amino acid disorders, hematology and hemoglobin disorders, lipid profile and thyroid glands disorders.

Course ID: ١٣١٧٠٢٤٥٦ **Description:** Toxicology

Full Course Description: This course introduces the students to the fundamentals of toxicology, at both molecular and clinical aspects. It also introduces the general concepts behind poison treatments. The course starts with introducing the student to toxicological terms such as LD⁵⁰. Then, it moves to describing animal toxicological studies and dose-response curves with a focus on acute and chronic intoxications. Afterwards, the basic pharmacokinetics of toxicants is described such as absorption, metabolism, distribution and elimination, with great emphasis on the last aspect as a mechanism of detoxification.□

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Part of the course focuses on famous toxicants such as cyanide and carbon monoxide toxicities and their clinical treatment strategies. By the end of the week, every student will present a case study of a drug that caused significant toxicity and how this was managed pharmacologically and clinically.□

Course ID: ١٣١٧٠٢٤٥٧ **Description:** Communication Skills and Pharmaceutical Care

Full Course Description: This course aims to teach essential daily communication skills, best conflict management practices, best ethical practices, and best pharmacist-patient communication practices within the society. It aims to teach students the optimum healthcare communication skills especially within a pharmacy; how to best communicate with the elderly and people with special needs to ensure the best specialized pharmaceutical services. It provides students with basic concepts on public health, the role of the pharmacy in the community and the role of the pharmacist in promoting public health.

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Course ID: ١٣١٧٠٢٤٥٨ **Description:** Immunology and Vaccines

Full Course Description: This course focuses on the study of the immune system of humans that has evolved to protect against infection by pathogens. The course will provide a basic understanding of human immunology and its relationship to health and disease. Immunology overlaps with many other biological disciplines including biochemistry, molecular biology, cell biology, genetics, physiology, and microbiology, it relies on methods and concepts derived from these disciplines and in turn makes a major contribution to them. This course aims to teach basic immunology and its role in disease and treatment. It also includes a section on vaccine types and their mechanism of action and a section on pharmacogenomics and drug response based on genetic differences.

Course ID: ١٣١٧٠٢٤٦٣ **Description:** Pharmacology (٣)

Full Course Description: This course provides students the knowledge of mechanism of action, pharmacokinetics, clinically significant side effects & drug interactions, contraindications and clinical uses of antimicrobials, anticancer drugs, immunotherapy and medications used for gastrointestinal disorders. In addition, this course will introduce the students on pathophysiology and clinical manifestations of some diseases. Thereby, they will understand the goal of pharmacotherapy, patient education of selected medications □
Some of the drugs that will be mentioned include: □
Drugs that have antibacterial, antiviral, antifungal and antiprotozoal activity as well as ones used to treat cancer. □
Drugs for gastrointestinal disorders including peptic ulcer, vomiting, diarrhea and constipation. □
Drugs that act or manipulate on the immune system and the immune response respectively.

Course ID: ١٣١٧٠٢٤٦٤ **Description:** Pharmacotherapy (١)

Full Course Description: This course teaches pharmacy students how to integrate their background in biomedical and pharmaceutical sciences with pharmacotherapy to make reasonable judgment and decisions about patients' care in a patient-centered and team-based approach. It helps students to develop and refine their skills in critical thinking and problem-solving to identify and manage medication-related problems for safe, appropriate and cost-effective drug therapy regimens that respect the choice of the patient and enhance adherence. These skills promote students' self-confidence and self-learning and allow them to appreciate the vital role of pharmacists as key healthcare providers for optimal outcomes of patients' health in preparation for the students' professional practice. □
Topics that are covered here include cardiovascular, endocrinologic and respiratory disorders, and other miscellaneous topics. These topics will be discussed based on the knowledge of the pathophysiology, diagnosis, clinical manifestations, risk factors, complications, goals of therapy, and treatment guidelines. □

Course ID: ١٣١٧٠٢٤٦٥ **Description:** Pharmacotherapy Case Studies (١)

Full Course Description: This course discusses patient case studies related to the topics covered in pharmacotherapy ١. It aims to help pharmacy students develop their critical thinking and problem-solving skills to identify and resolve drug therapy problems. By practicing developing patients' pharmacotherapeutic care plans for the patient case studies, students are actively engaged in the learning process, and developing their self-confidence, self-study and learning, decision-making process, oral communication and teamwork. □

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Course ID: ١٣١٧٠٢٤٦٩ **Description:** Community Pharmacy (٢)

Full Course Description: This course helps pharmacy students identify and understand the role of pharmacists in the community and the hospital at practice sits. In this experiential training program, students will spend most of their class and learning time (at least ٢٢٤ hours) in the practice environment interacting and communicating with pharmacists, technicians, peers, other healthcare providers, and patients. Students will develop their skills to integrate their basic pharmaceutical and medical knowledge and apply it into patient care particularly, in the outpatient setting. It also offers the students to acquire an understanding of their role in the pharmaceutical care of hospitalized patients with an appreciation of some important hospital-related medications. In addition, students will have the opportunity to enhance their communication and interpersonal skills to promote constructive relationships with patients and co-workers including healthcare professionals and develop professional attitude.

Course ID: ١٣١٧٠٢٤٧٣ **Description:** Pharmaceutical Marketing and Management

Full Course Description: This course is designed to introduce students to the theory and practice of the management and marketing sciences in the pharmacy profession. The purpose of this course is to provide students with the necessary skills relating to the management of health care products and services. Furthermore, this course will focus on the fundamental principles of marketing and selling of pharmaceutical products by providing students with a broad understanding of the different consumer and health care provider's behavior. Students will be given the opportunity to apply the relevant theories to practical marketing issues through encouraging students to conduct role-plays; produce written work and collaborate with peers on set tasks or projects.

Course ID: ١٣١٧٠٢٤٧٤ **Description:** Phytotherapy

Full Course Description: This course aims to introduce the student to the phytochemical and natural drugs that has been registered internationally and nationally, in addition, the student will be introduced to the medicinal plants used to treat various disorders such as the disorders related to the GI tract, the nervous system, the cardiovascular system the autonomic system, the skin and the endocrine system. This course will emphasize on the duration of drug use, drug-drug interactions and side effects related to the use of the medicinal plants. In addition to that the student will learn more about the use of hallucinogenic plants, their toxicity and side effects related to these plants with emphasis on the plants that habitat in the Jordanian environment. □
□

Course ID: ١٣١٧٠٢٥٤٤ **Description:** Pharmaceutical Statistics

Full Course Description: Introduces students to the most important concepts in pharmaceutical statistics which help undergraduate students to acquire knowledges in different important topics with the purpose of improving the students' statistical knowledge to use the proper methods to collect the data, employ the correct analyses, and effectively present the results, as well as to make decisions based on data, and make predictions in different aspects of pharmaceutical researches. Topics include understanding types of data entercountered in pharmaceutical studies and their appropriate graphical presentation, other statistical tools for describing central tendency and dispersion of data; probability concepts; statistical hypothesis testing and its application to group comparisons; and epidemiology concepts.

Course ID: ١٣١٧٠٢٥٤٥ **Description:** Pharmacoeconomics

Full Course Description: This course will discuss the concepts and applications of Pharmacoeconomics. Moreover, studying different Pharmacoeconomic evaluation methods to identify, measure and compare the costs, risks and benefits of therapies and determining which alternative produces the best health outcome for the resource invested. In addition to provide students with decision making skills based on different pharmacoeconomic evaluation methods. Furthermore, provide the students with the ability to criticize published Pharmacoeconomics studies and its suitability for Jordan.

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Course ID: ١٣١٧٠٢٥٦٦ **Description:** Pharmacotherapy (٢)

Full Course Description: This course teaches senior pharmacy students how to integrate their background in biomedical and pharmaceutical sciences with pharmacotherapy to make reasonable judgment and decisions about patients' care in a patient-centered and team-based approach. It helps students to develop and refine their skills in critical thinking and problem-solving to identify and manage medication-related problems for safe, appropriate and cost-effective drug therapy regimens that respect the choice of the patient and enhance adherence. These skills promote students' self-confidence and self-learning and allow them to appreciate the vital role of pharmacists as key healthcare providers for optimal outcomes of patients' health in preparation for the students' professional practice. □
Topics that are covered here include infectious diseases, gastrointestinal disorders, anemia, rheumatologic disorders, and other miscellaneous topics. These topics will be discussed based on the knowledge of the pathophysiology, diagnosis, clinical manifestations, risk factors, complications, goals of therapy, and treatment guidelines. □

Course ID: ١٣١٧٠٢٥٦٧ **Description:** Pharmacotherapy Case Studies (٢)

Full Course Description: This course discusses patient case studies related to the topics covered in pharmacotherapy ٢. It aims to help pharmacy students develop their critical thinking and problem-solving skills to identify and resolve drug therapy problems. By practicing developing patients' pharmacotherapeutic care plans for the patient case studies, students are actively engaged in the learning process, and developing their self-confidence, self-study and learning, decision-making process, oral communication and teamwork.

Course ID: ١٣١٧٠٢٥٧٧ **Description:** Drug Informatics

Full Course Description: This ١ credit hours course introduces students to the increasing importance of drug information. Provides students with skill and ability to obtain, manage, evaluate, and use information across different settings (i.e. community pharmacy, hospitals, pharmaceutical companies and educational institutions) and various levels (i.e. general resources and specific case oriented resources). Furthermore, this course aims to encourage students to lead innovations and attempts to support National Jordanian Health Information Care Systems for building better applications, similar to informatics systems in U.K., USA., and other developed countries.

Course ID: ١٣١٧٠٢٥٨١ **Description:** Field Training

Full Course Description: This course aims to train students on-site in one of the predetermined pharmaceutical institutions under the supervision of a faculty member. The student will be evaluated at the end of the training period. □
The course outline has detailed clarification of the intended learning outcomes. Training will be in the following main departments: Sales and medical representative visits, Awareness and public relations department, Human resources department, Financial department, Supply Chain department, Medical department, Compliance - Pharmacovigilance department and Registration department. □

Course ID: ١٣١٧٠٢٥٨٢ **Description:** Business Principles

Full Course Description:

Course ID: ١٣١٧٠٢٥٨٣ **Description:** Advanced Marketing and Promotion

Full Course Description: Students in the previous course (Management and Marketing course) had been introduced to the main concepts of management and marketing, how they are affecting each other, the importance of the planning process. Managerial skills in marketing and other pharmaceutical functions, wherein advanced pharmaceutical marketing the course will focus on practice tips to answer questions as How do the pharmaceutical marketing companies function? what is the role of the sales force? what is the job description of the medical sales representative? How do medical reps manage their areas and territories during their job?

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College: Pharmaceutical Sciences

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Course ID: ١٣١٧٠٢٥٨٤ **Description:** Pharmaceutical Epidemiology

Full Course Description: Students must acquire knowledge to: explain the nature and use of pharmacoepidemiology; recognize and apply the terms associated with the pharmacoepidemiology; calculating measures of morbidity and mortality; compare without bias measures of morbidity and mortality for various populations; enumerate and evaluate the designs of pharmacoepidemiological studies; discuss limitations of methods for collecting pharmacoepidemiological data; calculate measures of association and impact between risk factors and the onset of disease; evaluating diagnostic tests. It is intended that students develop research skills, information gathering and critical analysis of the scientific literature. They should also develop the necessary recognition of the major research methodologies in Epidemiology and Public Health skills and understand the importance of research in the prevention and control of health events in populations.

Course ID: ١٣١٧٠٢٥٨٥ **Description:** Health Policy

Full Course Description: ت

Course ID: ١٣١٧٠٢٥٨٦ **Description:** Research Methods in Drug Policy

Full Course Description: This course aims to train students on the scientific methods for pharmacy research, policy setting, methods of sampling and data analysis. □
□
The aim of this course is to provide students with advanced knowledge related to research designs, type of studies and specific terms in statistics. Moreover, the course will provide an overview of the tools to assess pharmaceutical care policies in a given country. Finally, common theories in Pharmaceutical care policies shall be illustrated. □

Course ID: ١٣١٧٠٢٥٨٧ **Description:** Selected Topics in Pharmacy Management

Full Course Description:

Course ID: ١٣١٧٠٢٥٨٨ **Description:** Applied Research in Management Pharmacy

Full Course Description:

Course ID: ١٧١٧٠٢١٥٨٠ **Description:** Pharmaceutical Finance

Full Course Description: This Course covers the basics of financial analysis, including the time value of money, simple and compound interest, using comparative financial statements, trend analysis, and ratio analysis. Through comparative financial statement analysis, it describes how the pharmacy students can apply financial information to create usable metrics to assess the internal business performance. □
□
These analyses can then be used to determine the necessary resource allocation for staffing, inventory, and investment, as well as the overall current and future business direction. In addition a case study will be held to apply the previous knowledge. □
□
Subsequently, shows how pharmacy students can use the financial information from pharmacy businesses, along with knowledge of the marketplace and customer needs, to appropriately control the inventory of a pharmacy operation. Proper inventory control can result in optimal levels that keep inventory costs to a minimum while at the same time ensuring customer/ patient satisfaction. □

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College: Pharmaceutical Sciences

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Course ID: ١٧١٧.٢١٥٨٩ **Description:** Pharmaceutical Accounting

Full Course Description: This course consists of understanding the guiding principles of accounting and how individual business transactions are summarized in financial statements and reports. This basic understanding should allow pharmacy students to determine the source and flow of financial information within any pharmacy and form a knowledge base of how their financial information should be categorized, recorded, and then reviewed. In addition to lectures, A case study workshop will be held to apply the previous knowledge.□

□

Withal, the importance of financial statements in analyzing a company's economic activity is discussed as well as a review of the various users and types of financial statements used to determine the success or failure of a pharmacy business over a specified time period, and how their analysis affects the current and future business direction.□

□

Course ID: ١٩١٧.٢١٢٤١ **Description:** Pharmaceutical Statistics

Full Course Description: Introduces students to the most important concepts in pharmaceutical statistics which help undergraduate students to acquire knowledges in different important topics with the purpose of improving the students' statistical knowledge to use the proper methods to collect the data, employ the correct analyses, and effectively present the results, as well as to make decisions based on data, and make predictions in different aspects of pharmaceutical researches. Topics include understanding types of data entercountered in pharmaceutical studies and their appropriate graphical presentation, other statistical tools for describing central tendency and dispersion of data; probability concepts; statistical hypothesis testing and its application to group comparisons; and epidemiology concepts.

Course ID: ١٩١٧.٢١٢٥١ **Description:** Anatomy and Histology

Full Course Description: Anatomy and Histology are two essential basic medical courses. Histology is the science that studies normal microscopic structures, ultra-structures and their related function; whereas, Anatomy studies the gross appearance of the various organs that make up the systems of the human body. Through class lecture, the students will be made to master the basic knowledge of the morphology and relations of the anatomical structures that are present in humans and the histological tissues that form these structures. The relation between the type of tissue present in an organ and the shape and functions of that organ is stressed.

Course ID: ١٩١٧.٢١٢٥٣ **Description:** Pathophysiology

Full Course Description: This course aims to introduce the basic terminology, concepts, aetiologies and characteristics of altered function, causes and complications of many diseases including cardiovascular, gastrointestinal, respiratory, liver and renal diseases. In addition to pain pathogenesis. Furthermore, the course discusses the pathogenesis of inflammation and cancer.

Course ID: ١٩١٧.٢١٣٤٣ **Description:** Pharmacokinetics

Full Course Description: This course focuses on basic pharmacokinetic principles, discusses time concentration curve, and aims at teaching students how to calculate drug levels in blood and in urine after various administrations (IV bolus, IV infusion, oral, single dosing and multiple dosing) by solving various practice problems.

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Course ID: ١٩١٧٠٢١٤٦٣ **Description:** Pharmacology (٣)

Full Course Description: This course provides students the knowledge of mechanism of action, pharmacokinetics, clinically significant side effects & drug interactions, contraindications and clinical uses of antimicrobials, anticancer drugs, immunotherapy and medications used for gastrointestinal disorders. In addition, this course will introduce the students on pathophysiology and clinical manifestations of some diseases. Thereby, they will understand the goal of pharmacotherapy, patient education of selected medications□
Some of the drugs that will be mentioned include:□
Drugs that have antibacterial, antiviral, antifungal and antiprotozoal activity as well as ones used to treat cancer.□
Drugs for gastrointestinal disorders including peptic ulcer, vomiting, diarrhea and constipation.□
Drugs that act or manipulate on the immune system and the immune response respectively.

Course ID: ١٩١٧٠٢١٥٦٧ **Description:** Hospital Pharmacy

Full Course Description: The course provides students with the knowledge and understanding of the responsibilities of the hospital pharmacist. It discusses several relevant topics to the hospital pharmacy practice in order to ensure adequate and appropriate healthcare to patients and support to healthcare professionals. It also focuses on developing and enhancing the student's effective communication skills with all parties involved in the hospital pharmacy practice. Students will be offered a learning experience about hospital pharmacy practice through visits to regional hospitals and/or hospital pharmacy simulations at the Faculty of Pharmaceutical Sciences.□
Topics include hospital pharmacy organization, laws and regulations of hospital pharmacy practice, pharmacy and therapeutic committee, safe use of medications in the hospital, crash cart medications, specialisation in pharmacy practice, preparing and administering parenteral medications, and communication skills (nonverbal communication, barriers to communication, ethical patient care, assertiveness).□

Course ID: ١٩١٧٠٢١٥٧٧ **Description:** Drug Informatics

Full Course Description: This ١ credit hours course introduces students to the increasing importance of drug information. Provides students with skill and ability to obtain, manage, evaluate, and use information across different settings (i.e. community pharmacy, hospitals, pharmaceutical companies and educational institutions) and various levels (i.e. general resources and specific case oriented resources). Furthermore, this course aims to encourage students to lead innovations and attempts to support National Jordanian Health Information Care Systems for building better applications, similar to informatics systems in U.K., USA., and other developed countries.

Course ID: ١٩١٧٠٢١٥٨٣ **Description:** Advanced Pharmaceutical Marketing and Promotion

Full Course Description: Students in the previous course (Management and Marketing course) had been introduced to the main concepts of management and marketing, how they are affecting each other, the importance of the planning process. Managerial skills in marketing and other pharmaceutical functions, wherein advanced pharmaceutical marketing the course will focus on practice tips to answer questions as How do the pharmaceutical marketing companies function? what is the role of the sales force? what is the job description of the medical sales representative? How do medical reps manage their areas and territories during their job?

Course ID: ٢١١٧٠٢١٢٥٠ **Description:** Pharmacology for Nursing

Full Course Description: This course focuses on the basic principles of pharmacology, methods of administration of the most common used drugs. It emphasizes on drugs' classes and their therapeutic uses to treat body disorders in common body systems (cardiovascular, blood, gastrointestinal, endocrine systems and central nervous systems).

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Course ID: ٢١١٧.٢١٢٥١ **Description:** Pharmacology for Applied Health Sciences

Full Course Description: This course helps nursing students identifies and understands the basics of pharmacology which is relevant to students from applied health sciences backgrounds. This course focuses on the basic principles of pharmacology, methods of administration of the most common used drugs, drug properties including pharmacokinetic and pharmacodynamic processes and on understanding the role of nerve pathways in exerting drug's action. It emphasizes on drugs' classes and their therapeutic uses to treat body disorders in common body systems (cardiovascular, blood, gastrointestinal, endocrine and nervous systems). In addition, this course provides the basic knowledge about the antimicrobial agents' mechanisms of action to treat infectious diseases. Dietary supplements and herbal medications also will be covered as well as topics related to Laboratory test-drug interactions and Drug -Food Interactions.