

Programa de Tecnología Médica

Título del Curso	Codificación	Descripción
Clinical Biochemistry I	TMED 4001	This course has been designed to give a general introduction to the biochemical analysis of blood and other body fluids. The thematic content will include the following topics: study of Carbohydrates, Enzymes, Proteins, Vitamins, Toxicology, Therapeutic Drug Monitoring, and others. Emphasis will be given to the discussion of principles, statistical and quality control procedures, analytical procedures and clinical-pathological correlation. The students will participate in laboratory experiences applying principles of basic procedures to accurately perform tests.
Clinical Biochemistry II	TMED 4002	This course has been designed to give a general introduction to the biochemical analysis of blood and other body fluids to medical technology students. The thematic content will include the following topics: lipids, hormones, gastrointestinal functions, renal functions, water and acid-base balance. Emphasis will be given to the discussion of principles, statistical and quality control procedures, analytical procedures and clinical-pathological correlation. The students will participate in laboratory experiences applying principles of basic procedures to accurately perform tests
Hematology I	TMED 4021	The course will focus on the basic concepts and laboratory techniques related to clinical hematology. Included will be an in depth discussion and evaluation of the differential blood smear and observation of normal erythrocyte, leukocyte, and platelet morphology. Basic principles and techniques of coagulation and fibrinolysis will also be discussed.
Hematology II	TMED 4022	The course will focus on the pathophysiology, morphology and classification of the anemias and other erythrocyte disorders, and on pathologic and physiologic deviations of the white blood cells as observed in leukemias, lymphomas, and infections. Related diagnostic tests will be discussed.
Immunoematology I	TMED 4041	This two-credit course (approximately 34 conference hours and 7 laboratory hours) has been designed to prepare entry-level medical technologists who are responsible, knowledgeable and motivated for lifelong-learning in the clinical area of Blood Banking. A basic knowledge of blood group serology will be acquired during conferences which are based upon required readings on blood collection, processing and storage; fundamentals of immunoematology, in particular - genetics, immunology and antiglobulin testing; and the major blood group systems. The urgency for recruiting adequate numbers of qualified donors in order to meet patients' transfusion needs will be stressed throughout this course. Evaluations will be administered continually to monitor student learning and permit intervention, as well as modify educational strategies, if needed. Particular emphasis will be placed on the development of students' skills for interpreting results, problem solving and decision-making. Laboratory sessions will provide students the opportunity to practice routine pretransfusion testing procedures.

Immunohematology II	TMED 4042	This two-credit course (approximately 33 conference hours and 11 laboratory hours) has been designed to prepare entry-level clinical laboratory scientists who are responsible, knowledgeable and motivated for lifelong-learning in the clinical area of Blood Banking. Building upon the basic knowledge of serological testing and blood group systems acquired during the first semester course (TMED 4041), conferences will be offered based upon required readings on pretransfusion testing, clinical conditions associated with immunohematology, possible complications of transfusion and the practical aspects of transfusion medicine. Students will also be introduced to the ethical and legal responsibilities of the blood bank technologist. The principal theme throughout this course will be the need to provide the public the safest possible blood transfusion therapy within today's reality. Particular emphasis will be placed on the development of students' skills for interpreting results, problem solving and decision-making. Evaluations will be administered continually to monitor student learning and permit intervention, as well as modify educational strategies, as needed. Laboratory sessions will provide students the opportunity to practice routine pre-transfusion testing procedures.
Introducción a las Ciencias del Laboratorio Clínico	TMED 4010	Es necesario que el estudiante que se inicia en el estudio de la Tecnología Médica desarrolle interés en convertirse en un profesional competente y en ofrecer servicio a la comunidad. Este curso está diseñado para que el estudiante comprenda la importancia del Laboratorio Clínico dentro del campo de la salud. El mismo incluye orientación sobre reglamentos de la profesión y agencias concernidas, equipo básico usado en el área de trabajo, reglas de seguridad, bioestadísticas en control de calidad y oportunidades de empleo, ética, aspectos legales y de comunicación.
Urinalisis	TMED 4095	Este curso está diseñado para proveer a los estudiantes de Tecnología Médica el conocimiento y las competencias necesarias para realizar el análisis completo de orina en el laboratorio clínico. El curso incluye aspectos del examen físico, químico y microscópico de la orina. También incluye la correlación clinicopatológica de los resultados.
Principles of Instrumentation	TMED 4135	Laboratory automation has expanded rapidly and understanding how an instrument operates represents a challenge for new professionals in the field. This course is designed to provide the students of medical technology with general abilities and knowledge needed to operate clinical laboratory equipment that is currently available in the marketplace. It includes general information about basic principles and theory of instrumental analysis as applied to the field of laboratory medicine.
Inmunología Clínica	TMED 4075	Este curso adiestrará al estudiante en anatomía, fisiología y funcionamiento del sistema inmune, toma y manejo de muestras biológicas, técnicas utilizadas en el laboratorio clínico para diagnóstico desde las básicas y simples hasta las más modernas y sofisticadas, evaluación y selección de métodos e instrumentación apropiada para realizar el análisis, medidas de seguridad y desarrollo de programas de control de calidad que garanticen la exactitud y precisión del análisis.

Clinical Laboratory Administration	TMED 4140	The course will focus on the fundamental principles of clinical laboratory management and supervision, government regulations, and financial aspects of the clinical laboratory operation. Basic education principles and methodologies and assessment of Laboratory Information Systems (LIS) will be discussed.
Clinical Microbiology	MICR 4006	The purpose of this seven (7) credit course is to provide the medical technology students with the necessary tools and knowledge to perform efficiently as a microbiologist in the clinical laboratory. Technical procedures used in the isolation and identification of microorganisms pathogenic to man will be emphasized.
Parasitology Course for Medical Technology Students	ZOME 6503	Course includes the study of the Life of Cycle, Symptomatology, Epidemiology, Diagnosis, Treatment, and Control of diseases of medical importance transmitted by Protozoa and Helminth parasite. Especial attention will be dedicated to laboratory microscopical techniques, morphological differentiation of biological specimens, handle of sample and performance of concentration or special techniques for diagnosis.
Modern Concepts in Clinical Laboratory Science	TMED 4150	Themes related to the major clinical areas of laboratory sciences will be discussed; modern concepts, new methodologies and instrumentation. Introduction to written and analytical skills used in professional journal writing.