LORMA COLLEGES
Carlatan, City of San Fernando, La Union

COURSE DESCRIPTION
BACHELOR in MEDICAL LABORATORY SCIENCE

I. PROFESSIONAL COURSES

Introduction to Medical Technology with STS
This course is designed to introduce students to the major disciplines in the Medical Technology profession. In addition, students are introduced to the structure of clinical laboratory and pathology services and an examination of the roles and functions of Medical Technologists. Students are acquainted with Professional Practice issues including ethical practices in Medical Technology and laboratory based research and an introduction to environmental and occupational health and safety issues affecting laboratory practices. The course includes discussion on the historical foundation of the Profession, its impact to society and its contribution to other medical sciences.

Cytogenetics
This course deals with the study of the concepts related to the study of heredity and inheritance. Nucleic acids (DNA and RNA) and their application to medical science are given emphasis.

Pharmacology
This course deals with the study of drugs: history and source; physical and chemical properties; biochemical and physiologic effects; mechanism of action; distribution; metabolism; excretion; pharmacokinetics; indications; side and adverse reactions and drug interactions. Emphasis is on therapeutics and drugs of abuse.

Histology
This course deals with the study of the fundamental of cells, tissues and organs with emphasis on microscopic structure, characteristics and functions.

Histopathologic and Cytologic Techniques
The course is divided into three. The first part deals with the study of basic disease processes, correlating the etiology of disease with the course of development of anatomic and clinical changes brought about by the disease. The second part is a study of the histologic techniques essential in the production of histologic slides for the diagnosis of diseases including special staining procedures. The third part is the study and identification of cells in the diagnosis of diseases using cytologic techniques.

Hematology 1
The course deals with the study of fundamentals of blood as a tissue. It includes blood cell disorders, special haematology evaluation, quality control and quality assurance.

Hematology 2 Clinical Hematology

The course deals with the study of fundamentals of the pathophysiology and mechanism of coagulation and hemostasis, with emphasis on laboratory diagnostic procedures.

Analysis of Urine and Other Body Fluids (Clinical Microscopy)
The course deals with the study of the gross, chemical, and microscopic analyses of the different body fluids other than blood. It includes the importance of these body fluids to body processes, the principles of the analytical procedures, interpretation of results and clinical significance of the physiologically important substances found in these body fluids.

Clinical Chemistry 1
The course deals with the physiologically active soluble substances found in body fluids particularly blood. These involve the knowledge and the understanding of the basic concepts and principles of their metabolism, laboratory analyses and their diagnostic utility. The course also deals with instrumentation and evaluation of the accuracy and precision of the procedures using analytical techniques

Microbiology 1 Bacteriology
A course which deals with the study of the morphology and physiology of bacteria and their role in infection and immunity. Emphasis is made on their isolation, identification and susceptibility testing as an aid in laboratory diagnosis.

Parasitology
This course deals with the study of human parasites which are of medical importance especially those found in the Philippines. Emphasis is given in the morphology; epidemiology; pathogenicity; laboratory diagnosis of their specific diseases; distribution and life cycle as well as control and preventive measures against infection.

Medical Technology Laws and Bioethics
The course deals with the study of various laws related to the practice of Medical Technology in the Philippines primarily RA 005527. It also includes the study of professional ethics and Bioethics.
Bioethics deals with the study of Ethics in relation to health particularly and to human life generally. Its emphasis is on basic ethical principles, major bioethical principles and its application in health. It also includes the discussion of philosophical principles and virtues of health care providers.

Laboratory Management
This course deals with the study of basic concepts of management, planning organizing, leading, staffing, controlling as applied to a clinical laboratory set-up like quality assurance/ quality control; policy and procedure manuals; infection controls, etc.

Mycology and Virology (Microbiology II)
The course deals with the study of morphologic and biologic characteristics of fungal and viral agents of diseases. It also includes the study of laboratory diagnostic method;

modes of transmission, epidemiology; pathology; prevention and control of diseases caused by viruses and fungi.

Clinical Chemistry 3 (Endocrinology, Toxicology and Drug Testing)

This course deals with the study of the nature of endocrine glands with emphasis on the properties, functions and laboratory analyses of the various internal secretions. It also deals with the principles of drug disposition, specific drug groups and their classification, action, therapeutic drug monitoring and laboratory analyses of toxic substances and substances of abuse

Immunohematology (Blood Banking)

The course deals with the concepts and principles of different red cell antigen systems and the application of specific blood group antigens and antibodies to compatibility testing. It also deals with the entire blood donation process or transfusion medicine.