DEPARTMENT OF DIAGNOSTIC AND CLINICAL HEALTH SCIENCES

Hamed A. Benghuzzi, Ph.D., Professor and Chair

MISSION

The Department offers three academic programs. The clinical laboratory science (CLS) program offers a B.S. in CLS; the cytotechnology program offers a B.S. in cytotechnology; the clinical health sciences (CHS) program offers a master's and Ph.D. in CHS through the School of Graduate Studies in the Health Sciences.

CLINICAL LABORATORY SCIENCE PROGRAM

LaToya Richards, Ph.D., MT (ASCP), CLS (NCA), Program Director
William A. Rock, Jr., M.D., Medical Director

FACULTY

Professors:
William A. Rock, Jr., M.D.
Associate Professors:
Thomas Wiggers, M.S., H(ASCP), CLSp(H)
Assistant Professors
LaToya Richards, Ph.D., MT (ASCP)
Instructors:
Cheryl Drennan, B.S., MT(ASCP) LaToya Richards, Ph.D.
David Smith, B.S., MT(ASCP)
Judy Guthrie, B.S., MT(ASCP) Linda Smith, B.S., MT(ASCP)
Willis Hayes, B.S., MT(ASCP) Felecia Magee-Tardy, M.S., MT(ASCP)
Janet Liebl, B.S., MT(ASCP) Janice Trussell, B.S., MT(ASCP)
Cindy Milton, B.S., MT(ASCP) Keith Wilkins, B.S., MT(ASCP)
Pamela Moore, B.S., MT(ASCP) Renee Wilkins, B.S., MT(ASCP)
Teresa Preuss, B.S., MT(ASCP)
Clinical Instructors:
Bobby Braddy, B.S., MT(ASCP) Bobbie Sullivan, M.H.S., MT(ASCP)
Judy Heglin, B.S., MT(ASCP) Teresa Thomas, B.S., MT(ASCP)

ABOUT THE PROFESSION

Clinical laboratory science is a dynamic profession that is ever changing in terms of technology and professional expertise. The clinical laboratory scientist is a highly skilled scientist who functions in multiple roles. Some of these roles include performing and evaluating diagnostic laboratory procedures on body fluids, developing new diagnostic procedures, supervising biomedical research projects, providing technical expertise, consulting, managing clinical and research laboratory departments, and analyzing and implementing laboratory information systems. The major areas of interest in laboratory science are hematology, immunohematology (transfusion medicine), clinical microbiology, clinical chemistry, clinical immunology, body fluid analysis, and molecular diagnostics.

Career opportunities for the clinical laboratory scientist are readily available and include technical and management positions in hospitals and reference laboratories, research in biomedical companies, forensic medicine, public health, sales and marketing, private consulting, health care administration, and education.

As one of the fastest growing industries of the 21st century, biotechnology is developing

new diagnostic tests for clinical laboratories, research laboratories, forensic laboratories and the pharmaceutical industry. The skills of the molecular scientist are in great demand in the biotechnology industry. Molecular biology has developed more than any other science in the last ten years.
The certified molecular biologist works in clinical, research, forensic, and biotechnology laboratories. There is an exponential growth in opportunities in this field of study.

CLINICAL LABORATORY SCIENCE ADVANCED STANDING PROGRAM

I. Introduction
The Advanced Standing Program is designed to allow a Clinical Laboratory Technician/Medical Laboratory Technician (CLT/MLT) to receive credit for previous educational and professional experience and to earn a baccalaureate degree in clinical laboratory science from the University of Mississippi Medical Center through an online program.

II. Eligibility
The program is available to all students who meet the following requirements:
1) associate degree in Clinical Laboratory Technology or Medical Laboratory Technology from an accredited institution of higher learning;
2) certification as a CLT(NCA) or MLT(ASCP),
3) have a minimum of 58 semester hours of academic credit (exclusive of physical education, military science, dogmatic religion and vocational courses) from an accredited institution of higher learning,
4) currently practicing in a clinical laboratory as a generalist clinical laboratory technician,
5) have a minimum GPA of 2.5 on a 4.0 scale; and
6) complete the following minimum prerequisite requirements:

Required Courses*	Number of Courses
Zoology with Laboratory or Biology with Laboratory	1
Anatomy and Physiology	1
Microbiology with Laboratory	1
General Chemistry with Laboratory	2
Organic or Biochemistry with Laboratory	1
College Algebra	1
English Composition	2
Humanities	2
Social/Behavioral Science	1
Fine Arts	1
Electives**	

* Science survey courses designed for non-science majors are not acceptable for transfer credit.
** Additional as needed to total 58 semester hours.

III. Curriculum

Year 1
Fall Semester

CLS 311 Basic and Clinical Immunology	3
CLS 432 Advanced Hematology	4
Total	7

Spring Semester

CLS 310 Body Fluids Analysis	3
CLS 434 Advanced Clinical Chemistry	4
Total	7

Summer Session

CLS 327 Lab Operations	3
CLS 417 Management & Education in CLS	2
Total	5

Year 2
Fall Semester

CLS 405 Intro. to Molecular Diagnostics	3
CLS 433 Advanced Clinical Microbiology	4
Total	7

Spring Semester

CLS 430 Research in CLS	3
CLS 435 Advanced Immunohematology	4
Total	7

Summer Session

CLS 429 Clinical Correlations*	3
CLS 445 Clinical Rotations	6
Total	9

*24 hours Clinical Credit
Total 66

COURSE DESCRIPTIONS

CLS 310. BODY FLUID ANALYSIS. A lecture and laboratory study of the qualitative and quantitative changes in the renal system based on anatomical and physiological alteration. (3 semester hours.) (2-1-0)
CLS 311. BASIC AND CLINICAL IMMUNOLOGY. A lecture and laboratory study of the principles of in vivo and in vitro immunological responses and immunologic testing, theory, and practice in relation to disease in man. (3 semester hours.) (3-0-0)
CLS 327. LABORATORY OPERATIONS. A lecture study of laboratory math, basic statistics, and quality assurance programs in the clinical laboratory.. (3 semester hours) (3-0-0)
CLS 405. INTRODUCTION TO MOLECULAR DIAGNOSTICS. An introductory course in molecular terminology, the basic anatomy of a gene, the components of DNA and RNA, and the role of DNA and RNA in a cell. Principles of basic molecular techniques used in research and clinical laboratories will be introduced.. (3 semester hours) (3-0-0)
CLS 417. PRINCIPLES OF MANAGEMENT AND EDUCATION IN CLINICAL LABORATORY SCIENCES. An introduction to the principles of management and education as applied to the profession of clinical laboratory science. (2 semester hours.) (2-0-0)
CLS 429. CLINICAL CORRELATIONS. A capstone course of clinical laboratory sciences focusing on clinical diagnosis. (3 semester hours) (3-0-0)
CLS 430. RESEARCH IN CLINICAL LABORATORY SCIENCES. A research project addressing issues in clinical laboratory sciences. (TBA)
CLS 432. ADVANCED HEMATOLOGY. A study of the basic diagnostic procedures related to blood and blood forming organs combined with the study of blood cell abnormalities and disease processes. (4 semester hours) (4-0-0)
CLS 433. ADVANCED CLINICAL MICROBIOLOGY. A study of proper techniques for isolation and identification of pathological bacteria combined with fungal, viral, protozoan, and parasite identification. (4 semester hours) (4-0-0)
CLS 434. ADVANCED CLINICAL CHEMISTRY. A study of biological compounds and elements located in body fluids with an emphasis on isolation and identification techniques. (4 semester hours) (4-0-0)
CLS 435. ADVANCED IMMUNOHEMATOLOGY. A study of proper techniques, principles, and applications for blood transfusion practices. (4 semester hours) (4-0-0)
CLS 445. CLINICAL ROTATION. CLS advanced standing clinical education practicum in affiliated laboratories (6 semester hours) (0-0-6)

Contact:
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