CLS 2080 Clinical Laboratory Science Seminar Cr. 1
Introduction to clinical laboratory sciences. Opportunities and responsibilities. Offered Fall, Winter.

CLS 2990 Pre-professional Directed Study Cr. 1-3
Independent study under faculty supervision. Offered Fall, Spring/Summer.

Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.

CLS 3020 Hematology Lecture and Laboratory Cr. 4
Basic study of blood-forming organs and components of blood; explanation of basic hematological procedures. Offered Yearly.

Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.

Course Material Fees: $75

CLS 3040 Immunohematology I Cr. 4
Introduction to principles of immunohematology and theory and practice of routine testing procedures employed in the clinical blood bank. Survey of the organization and operation of a blood bank. Offered Yearly.

Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.

Course Material Fees: $130

CLS 3080 Instrumentation Lecture and Laboratory Cr. 4
Introduction to fundamental laws of electronics, the theoretical basis of instrument design, and quality control in laboratory testing. Application of instrumental methods, including spectrophotometric, fluorometric, electroanalytical, and chromatographic methods to the clinical laboratory. Offered Fall.

Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.

Course Material Fees: $85

CLS 3100 Urine and Body Fluid Analysis Cr. 3
Specimen collection, preparation, and examination of urine and other body fluids such as spinal fluid, semen, and synovial fluid. Offered Yearly.

Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.

Course Material Fees: $85

CLS 3280 Clinical Chemistry Lecture and Laboratory Cr. 4
Methodologies and interpretations of results of clinical chemistry diagnostic tests. Offered Yearly.

Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.

Course Material Fees: $85

CLS 3330 Medical Terminology Cr. 1
Study of medical terms in a body system approach. Review of anatomy and physiology. Offered Every Term.

CLS 4000 Clinical Hematology Cr. 5
Theory and principles for evaluation of the quantity, morphology and function of cellular components of blood. Offered Every Term.

Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.

Course Material Fees: $36

CLS 4010 Clinical Chemistry Cr. 4
Biochemical analysis of blood and other body fluids to determine values of various chemical substances, using routine methods and automation. Offered Every Term.

Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.

Course Material Fees: $36

CLS 4020 Clinical Blood Bank Cr. 3
Theory and principles involving antigen-antibody reactions of blood. Obtaining, storage and preparation of whole blood or blood components for infusion. Offered Every Term.

Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.

Course Material Fees: $36

CLS 4030 Clinical Microbiology Cr. 5
Obtaining, culturing, identification and antibiotic sensitivity of microorganisms causing infection or infestation. Offered Every Term.

Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.

Course Material Fees: $36

CLS 4040 Laboratory Operations Cr. 3
Laboratory management issues and problems, with emphasis on the hospital setting. Includes professional conduct, management theory, interpersonal and technical skills, legal and regulatory issues, computers in laboratories, quality assessment and improvement, educational methodologies, and clinical study design. Offered Yearly.

Restriction(s): Enrollment limited to students with a class of Junior or Senior; enrollment limited to students in the BS in Clinical Lab Sciences or Bachelor of Health Science programs; enrollment limited to students in the Pharmacy and Health Sciences.

CLS 4210 Hemostasis Lecture and Laboratory Cr. 2
Lecture and laboratory course covering principles of hemostasis and assessment of hemostasis status. Performance and interpretation of diagnostic tests, along with problem solving and correlation of laboratory findings with disease states. Offered Fall.

Course Material Fees: $75

CLS 4230 Hematology II Cr. 3

Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.

Course Material Fees: $85

CLS 4240 Immunohematology II Cr. 3
Advanced immunohematology practices, including investigation and resolution of unusual serological conditions related to transfusion of blood and blood components, blood component processing and transfusion reaction investigation. Continuation of CLS 3040. Offered Fall.

Restriction(s): Enrollment limited to students in the BS in Clinical Lab Sciences or Bachelor of Health Science programs; enrollment limited to students in the Pharmacy and Health Sciences.

Course Material Fees: $65

CLS 4990 Professional Directed Study Cr. 1-8
Independent study under faculty supervision. Offered Every Term.

Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.

CLS 5500 Immunology and Serology Cr. 3
Lectures and studies; applications of immunology and serology in a lab setting, including relevance to human medicine. Offered Yearly.

Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
CLS 5510 Diagnostic Microbiology I Cr. 4
Lectures and laboratory course in diagnostic microbiology, with a focus on the fundamentals of clinical bacteriology, and human infectious diseases. Offered Winter.
Restriction(s): Enrollment limited to students in the BS in Clinical Lab Sciences or Bachelor of Health Science programs; enrollment limited to students in the Pharmacy and Health Sciences.
Course Material Fees: $140

CLS 5520 Diagnostic Microbiology II Cr. 4
Lecture and laboratory course in diagnostic microbiology with a focus on clinical virology, mycology, and parasitology. Offered Fall.
Restriction(s): Enrollment limited to students in the BS in Clinical Lab Sciences or Bachelor of Health Science programs; enrollment limited to students in the Pharmacy and Health Sciences.
Course Material Fees: $140

CLS 5530 Clinical Laboratory Science Simulation Laboratory Cr. 3
Application of previously acquired theory and techniques in a simulated clinical laboratory, with emphasis on work organization, correlation of results, management, decision-making, and quality assurance. Offered Spring/Summer.
Restriction(s): Enrollment limited to students in the BS in Clinical Lab Sciences or Bachelor of Health Science programs.
Course Material Fees: $100

CLS 5550 Molecular Diagnostics Cr. 3
Review of molecular biology principles applicable to current testing systems. Laboratory techniques to elucidate molecular structure and disease states, including DNA hybridization, agarose gel electrophoresis, southern and western blot techniques, DNA sequencing, PCR. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Clinical Laboratory Science or Laboratory Science; enrollment limited to students in the Pharmacy and Health Sciences.

CLS 5993 Writing Intensive Course in Clinical Laboratory Science Cr. 0
Satisfies General Education Requirement: Writing Intensive Competency
Disciplinary writing assignments under the direction of a faculty member. Course must be elected in conjunction with designated corequisite; see Schedule of Classes for corequisites available each term. Satisfies University General Education Writing Intensive Course in the Major requirement. Required for all majors. Offered Every Term.
Prerequisites: AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.