



COLLEGE OF PROFESSIONAL STUDIES

# CLINICAL LAB SCIENCE DIDACTIC CERTIFICATE

## Take the Critical Steps to Success

The Clinical Laboratory Science (CLS) Training Program is a full-time, post-baccalaureate, one-year educational program that prepares students to pursue a career in diagnostic laboratory medicine. This program is an internship in a clinical setting consisting of two components: a didactic component and a clinical practical training component. In the learning environments of National University and its clinical affiliates, participants acquire the academic knowledge, technical skills, and critical thinking experiences necessary to become proficient health care professionals. Participants put their scientific knowledge into practice and are prepared to perform laboratory procedures related to patient diagnosis and treatment. Upon successful completion of the Clinical Lab Science Didactic Certificate program, participants are awarded

the CLS Training Program Certificate and are prepared to take the California CLS licensing exam. Graduates are also eligible to take national certification exam.

### Program highlights:

- Learn the basic knowledge and technical ability essential to the practice of clinical laboratory science
- Understand how to interpret clinical significance, clinical procedures, and laboratory test data
- Gain the skills to comply with established laboratory safety regulations and regulations
- Exhibit analytical and critical thinking skills necessary to succeed in laboratory medicine

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## CLINICAL LAB SCIENCE DIDACTIC CERTIFICATE

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\*\*\*THIS PROGRAM IS CURRENTLY NOT ACCEPTING ENROLLMENTS\*\*\*

The Clinical Laboratory Science (CLS) Training Program is a full-time, post-baccalaureate one-year educational program that leads to a career in diagnostic laboratory medicine. This program is an internship in a clinical setting consisting of two components, a didactic component and a clinical practical training component. The lecture courses required for this program are offered through Extended Learning in special sessions to students accepted into the program. In the learning environments of National University and its clinical affiliates, participants acquire the academic knowledge, technical skills, and critical thinking experiences necessary to become proficient healthcare professionals. Participants put their scientific knowledge into practice and are prepared to perform laboratory procedures related to patient diagnosis and treatment. Upon successful completion of the program, participants are awarded the CLS Training Program Certificate and are prepared to take the California CLS licensing exam. Graduates are also eligible to take national certification exams.

### Application and Admission Procedure

Admission is by application only. A minimum science GPA of 2.75 is required. Transcripts from all schools attended must be provided along with 3 letters of recommendation. A resume and a one or two page letter of interest in CLS must accompany other application materials. Applications are obtained from the program director. Applications must be complete, and applicants must meet all minimum requirements to be considered for the program. The admission committee, comprised of the program director and faculty involved in the program, reviews all eligible applicants for admission into the program. Top applicants are contacted for a scheduled interview by the selection committee and the education coordinators from the clinical affiliates. A standardized set of questions is asked of all candidates and ample time is provided for the applicants to ask any questions that they may have regarding the program. Student applications are accepted by the program director in conjunction with the availability of clinical site placements. Unless otherwise specified by the program director, applications will be accepted starting in April of each year, with the application deadline being the 3rd week of May. Selected students are offered interviews in June. After the interviews, students are asked to rank order their clinical site preferences, and clinical sites are asked to rank order the interviewed candidates. The two lists are reconciled and offers of positions in the program at a specific training site are sent to accepted students shortly after the interview process. Students offered positions must confirm acceptance via email. Training starts in September. Work hours vary from section to section depending on the laboratory. Typical workdays begin at 7 or 7:30 AM and end at 3:30 or 4 PM. Students are not required to work weekends or holidays. Some clinical sites are able to offer supplemental employment and/or a stipend if so desired, but it is NOT required as part of the training.

### Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Demonstrate basic knowledge and technical ability essential to the practice of Clinical Laboratory Science.
- Interpret clinical significance, clinical procedures, and laboratory test data accurately.
- Apply principles and concepts of lab operations to clinical decision making.
- Comply with established laboratory safety regulations and regulations governing regulatory compliance related to lab/pathology services.
- Exhibit analytical and critical thinking skills necessary to succeed in laboratory medicine.
- Practice professionalism through ethical behavior and attitudes.

### Certificate Requirements

One of the following:

- A. A Bachelor of Science Degree in CLS, or
- B. A Bachelor of Science Degree in a related science that contains the following course work:
  - a. 18 semester or equivalent quarter hours of Biological Science with courses in Medical Microbiology, Hematology, and Immunology
  - b. 16 semester or equivalent quarter hours in Chemistry with courses in Analytical Chemistry (Quantitative Analysis) and Biochemistry
  - c. 3 semester or equivalent quarter hours in Physics including instruction in Principles of Light and Electricity
- C. A pending application to Laboratory Field Services for a Clinical Laboratory Scientist Trainee License (<https://www.cdph.ca.gov/Programs/OSPHLD/LFS/Pages/CLS-Trainee.aspx>). Final acceptance for admission to the program is contingent upon receiving this license.

D. A signed Statement of General Health form from the student's primary healthcare provider.

### Requirements for the Certificate

(8 courses; 36 quarter units)

- CLSX 6005X Microbiology Didactic Lectures  
*Prerequisite: CLS 405 with a minimum grade of A Completion of BS degree in Biological Science or Clinical Laboratory Science. Within the degree requirements, the student should have previously completed an Introductory Microbiology (with laboratory) and Clinical Microbiology.*
- CLSX 6010X Urinalysis Didactic Lectures  
*Recommended: Prior completion of: CLS 301 with a minimum grade of B. Trainees would benefit from having previously taken and completed Introduction to Chemistry (with laboratory), Introduction to Biochemistry, Organic Chemistry, Microbiology to include Parasitology.*
- CLSX 6020X Serology Didactic Lectures  
*Recommended: Prior completion of: CLS 305 with a minimum grade of B. Trainees would benefit from having previously taken and completed Introduction to Chemistry, Biochemistry, Organic Chemistry, Introduction to Immunology (if available).*
- CLSX 6030X Chemistry Didactic Lectures  
*Recommended: Prior completion of: CLS 301 with a minimum grade of B. Trainees would benefit from having previously taken and completed Introduction to Chemistry (with laboratory), Introduction to Biochemistry, Organic Chemistry, Analytical Chemistry, and Quantitative Analysis.*
- CLSX 6040x Hematology Didactic Lecture  
*Recommended: Prior completion of: CLS 410 with a minimum grade of B. Completion of BS degree in Biological Science or Clinical Laboratory Science. Within the degree requirements, the student should have previously completed an Introductory Hematology course to include laboratory or similar, and the CLS 410 Clinical Hematology.*
- CLSX 6050x Blood Bank Didactic Lectures  
*Recommended: Prior completion of: CLS 305 with a minimum grade of B. Students would benefit from having taken the upper-division CLS Biochemistry, CLS Immunology, and lower-division Chemistry, Organic Chemistry, Biochemistry, and Anatomy and Physiology.*
- CLSX 6060X Phlebotomy Didactic Lectures  
*Prerequisite: Must have completed BS degree in Clinical Laboratory Science and currently accepted and enrolled in the National University Clinical Laboratory Scientist training programs.*
- CLSX 6070X Lab. Mgmt. Didactic Lectures  
*Prerequisite: Must have completed BS degree in Clinical Laboratory Science and currently accepted and currently enrolled in affiliate National University Clinical Laboratory Scientist 52 weeks California State licensed training program.*