

# GRADUATE CERTIFICATE IN CLINICAL LABORATORY SCIENCE

Advisors: Coleman, Kazarian, Silverman

## Program Scope

The SF State Clinical Laboratory Science (CLS) Internship Certificate program provides students with the theoretical and practical skills necessary to work in hospitals, clinics, or biomedical research environments. The program prepares students at the post-baccalaureate level to take the national board examination for certification as Clinical Laboratory Scientists. In addition, the program is fully accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) and meets the educational standards required for licensure as a CLS by the California State Department of Health, Laboratory Field Services (LFS). The program seeks to develop critical thinking skills for clinical and administrative decision making in the complex and ever-changing healthcare environment.

## Career Outlook

Clinical laboratory scientists are employed in healthcare settings such as medical laboratories within large medical centers, community hospitals, public health, clinics, and private industry. Excellent employment opportunities exist in research and development, medical informational technology, laboratory administration, and education.

## Admission to Program

Requirements are:

- Earned bachelor's degree from a regionally accredited university in related science major of microbiology, biology or equivalent. Students with international degrees should check the CLS website for more information (<http://cls.sfsu.edu>).
- Overall GPA of at least 3.0 or GPA of at least 3.0 in last 60 units (90 quarter) (3.0 GPA).
- International students must score at least 80 on the internet-based TOEFL, or a 550 on the paper-based test with a Test of Written English (TWE) of at least 4.
- Science course preparation to include courses in hematology, immunology, medical microbiology, quantitative chemistry analysis, biochemistry, physics, and college-level mathematics.
- Eligibility for a trainee license from the State of California Department of Health, Laboratory Field Services.
- Completion of the application form, which includes three letters of reference.
- Proof of health insurance
- Background checks may be required.

## Curriculum

The CLS program consists of

1. a 16-week semester of didactic and laboratory work and
2. a 40-week off-campus internship at affiliated clinical laboratory sites.

Students enroll for 18 units for the pre-clinical semester. For the 40-week off-campus portion, students enroll in a combination of regular university sessions and special sessions through the College of Extended Learning.

## First Semester

Code	Title	Units
CLS 701	Clinical Chemistry and Urinalysis	4
CLS 706	Contemporary Clinical Science Issues	2
CLS 731	Clinical Hematology and Laboratory Application	4
CLS 753	Clinical Microbiology for the Clinical Laboratory Science Intern	4
CLS 790	Clinical Serology and Immunohematology	4

**Total Units First Semester: 18**

## Subsequent 40 Weeks

Code	Title	Units
CLS 702	Clinical Laboratory Science Internship I (4 units taken twice)	8
CLS 705	Clinical Laboratory Science Internship II (3 units taken twice)	6
CLS 709	Clinical Laboratory Science Internship III	3
CLS 707	CLS Bridge to Clinical Practice	3

**Total Units Subsequent 40 Weeks: 20**

**Total Units for Entire Program: 38**

## English Proficiency Requirement Level One

Students complete a proctored essay at the time of their application interview. If necessary, remediation will be fulfilled by successful completion of SCI 614 or equivalent course.

## Level Two

Successful completion of written professional documents as required for a leadership role in professional environments.