



# Clinical Laboratory Science

**Program:** Clinical Laboratory Science

**Program Code:**

CS

**Academic Area:**

Health Sciences

**Type:**

Associate in Science

**Campus:**

Fall River

**CIP Code:**

51.1004

## Program Goal Statement

Students completing the Clinical Laboratory Science (CLS) program curriculum are prepared to work in a modern clinical laboratory performing a wide range of laboratory procedures used in the detection, diagnosis, and treatment of disease and health maintenance. They develop academic and technical competence in the major areas of clinical laboratory practice—hematology, clinical chemistry, medical microbiology, and immunohematology.

Application review begins February 1.

## Program Information

- Students develop academic knowledge, clinical skills, and professional behavior through classroom, laboratory, and clinical experiences.
- Clinical Laboratory Science program courses are offered during the day.
- Phlebotomy is a required component of the Clinical Laboratory Science program.
- Once enrolled in the Clinical Laboratory Science program, students are required to complete all courses in the required sequence of instruction in order to integrate theoretical and clinical education.
- Students may substitute BIO 233 and BIO 234 for BIO 154.

## Program Benchmarks

### 2022 ASCP Certification Rates

Certification Exam Pass Rates	7/1/19- 6/30/ 2020	7/1/20- 6/30/ 2021	7/1/2021-6/30/ 2022
<b>A) Total # of Graduates</b>	6	10	7
<b>B) # who sat for the exam within first year of graduation</b>	5	6	4
<b>C) # who passed the exam within first year of graduation</b>	4	5	3
<b>Yearly Certification Pass Rate: (C/B)</b>	88%	83%	75%



<b>Three-Year Average Pass Rate (Total across "C" / Total Across "B")</b>			82%
<b>Graduation/Attrition Rates</b>			
<b>A) # who began the "final half" of the program</b>	6	10	7
<b>B) # who began the "final half" of the program but subsequently left (voluntarily or involuntarily)</b>	0	0	
<b>C) # who began the "final half" of the program but are still currently enrolled</b>	0	1	
<b>D) # who began the "final half" of the program during the given time period and have since graduated</b>	6	9	7
<b>Yearly Attrition Rate: (B/A)</b>	0	0	
<b>Yearly Graduation Rate: (D/A-C)</b>	100%	100%	100%
<b>Three-Year Average Graduation Rate: {total "D"/(total "A" - total "C")}</b>			100%
<b>Placement Rates</b>			
<b>A) Total # of Graduates</b>	6	10	7
<b>B) # that found employment (in the field or in a closely related field) and/or continued their education within one year of graduation</b>	6	10	7
<b>C) # that did neither listed above?</b>	0	0	0
<b>D) # that do you NOT have any information for</b>	0	0	0
<b>Yearly Average Placement Rate: (B)/(B+C)</b>	100%	100%	100%
<b>Three-Year Average Placement Rate: {Total "B"/ (Total "B"+ Total "C")}</b>			100%

## Program Accreditation

- The program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), 5600 North River Road, Suite 720, Rosemont, IL 60018. Telephone 773-714-8800.
- Graduates are eligible to take the national certification examination offered by the American Society of Clinical Pathology Board of Certification (ASCP-BOC). The granting of the degree is not contingent upon passing an external certification or licensure examination.

## Prior To Admission

- To be most successful, applicants must have completed math through high school algebra II, and high school level biology, and chemistry. (Biology and chemistry courses may be taken at Bristol before admission to the program.) Technological literacy is also important.
- Students are advised to complete two to four of the required general education courses, such as ENG 101, ENG 102, History awareness elective, PSY 101, MTH 119, and Humanities elective prior to program admission.
- Students must attend one mandatory health science admissions information session. <http://www.bristolcc.edu/getstartedatbristol/admissions/healthsciencesadmissionrequirements/healthscienceinformationsessions/>

## After Bristol Community College

- Many clinical laboratory technicians work in hospital laboratories; however, career opportunities are available in physician's offices, HMOs, biotechnology, veterinary clinics and reference, industrial, environmental, and military laboratories. The CLS degree provides a foundation that allows graduates to pursue medical education, sales, and computer careers. Many graduates pursue advanced degrees in Medical Laboratory Science and other medical fields.



- Bristol participates in the statewide MassTransfer program and has developed many program-to-program transfer articulation agreements which guarantee admission and credit transfer.
- For a complete listing of eligible MassTransfer programs and current Bristol Community College articulation agreements, visit the Transfer Affairs website at [www.Bristolcc.edu/transfer](http://www.Bristolcc.edu/transfer)

## Infused General Education Competencies

Ethical Dimensions, First-Year Experience, Multicultural Perspective, Oral Communication, Technical Literacy

## Special Requirements of the Program

### Admission Requirements

The Clinical Laboratory Science program is a competitive program with selective admission requirements. A limited number of students are admitted. Meeting minimal requirements does not guarantee admission. Successful candidates have excelled in high school and/or college science and math courses.

Applicants must have completed the following criteria (all coursework with a grade of "C" or greater) to be considered for admission to the Clinical Laboratory Science Program. Pre-admission courses must be completed prior to admission.

- High School Algebra II, demonstrated Intermediate Algebra II Competency, or college Algebra (Introductory Algebra excluded)
- Chemistry with laboratory (high school or college)
- Biology with laboratory (high school or college)
- Applicants applying directly from high school must demonstrate a GPA of 2.7 or higher.
- A GPA of 2.7 or higher is also required in the aforementioned pre-admission courses.

Applicants having earned a state-approved high school equivalency credential may alternatively meet these pre-admission criteria by earning a minimum of grade point average of 2.7 in the aforementioned pre-admission courses.

Students must complete all biology and chemistry courses required for admission within 7 years of the priority application deadline to the program.

Students are required to attend a Health Science Information Session.

Transcripts from attendance at other regionally accredited college/universities are required with submission of your admissions application. Please refer to the Admissions page within this catalog for further detail <https://catalog.bristolcc.edu/admissions>. Failure to comply with these requirements may result in your application not being reviewed for the program to which you applied.



## Requirements Upon Admission

Accepted applicants must comply with the Bristol Community College's health services requirements. This includes an physical examination, tetanus and tDap, measles, mumps, rubella, hepatitis B, and varicella (chicken pox) immunizations or titres results (blood test to prove immune status). Students must be fully vaccinated against Covid-19. If under the age of 21 you must also be tested for meningitis as of Fall 2018. TB testing is required each year. Students must carry personal health insurance, professional liability insurance, and have current CPR certification by the American Heart Association, Basic Life Support for Healthcare Providers or the American Red Cross CPR/AED for Professional Rescuers and Healthcare Providers. Certification must be active through your last semester at Bristol Community College.

Upon admission to the CLS Program, all students must undergo a Criminal Offender Record Information (CORI) check, a Sex Offender Registry Information (SORI) check, and a drug screen performed by a facility under contract with Bristol Community College. The fee for all screening is paid by the student. A positive CORI, SORI and/or drug screen may prevent students from working in contracted health facilities, which will prevent students from completing the program objectives. These checks are required due to potential unsupervised contact with children, the disabled, or the elderly during a clinical experience. Students found to have certain criminal convictions or pending criminal actions will be presumed ineligible for clinical placement. The College is authorized by the Commonwealth's Department of Criminal Justice to access CORI records. Sex Offender checks shall be performed pursuant to Massachusetts General Laws, Chapter 6, Sections 178C-178P.

For more information regarding the College's CORI/SORI check process, please contact the Human Resource Department at (774) 357-3142.

Please be advised that although Massachusetts law permits the use of medical marijuana and the possession, use, distribution and cultivation of marijuana in limited amounts, any possession, use, distribution or cultivation of marijuana remains prohibited under College policy pursuant to federal law. Further, any student who tests positive for marijuana will be ineligible for clinical placement. Please refer to the College's Student Handbook for the College's complete Marijuana Policy.

## Additional Costs

Students accepted into the program are responsible for associated costs such as uniforms, books, name tags, safety supplies, transportation to and from clinical assignments, drug screen and certification exam application fees.

## Grade Requirements

A minimum of "C" is required for BIO 154, BIO 239, CHM 115, CHM 116, and MTH 119 to provide the necessary foundation for MED courses. Students must pass all components of the MED courses (lecture and laboratory on campus and clinical practicum at the affiliate agency) with a minimum grade of "C." Students who do not achieve the minimum grade of "C" in the on campus lecture and laboratory components will not be allowed to progress to the clinical practicum.

Students who fail to attain a grade of "C" in each of the MED course components (lecture and laboratory on campus and clinical practicum at the affiliate agency) will receive a course grade no higher than a "D."



A student who fails to attain a minimum grade of "C" in the clinical practicum will receive a course grade no higher than a "D".

A student who is dismissed from the clinical practicum or receives an unsatisfactory clinical grade due to unprofessional behavior will receive a course grade no higher than a "D".

A student who receives an unsatisfactory clinical grade due to negligent or unsafe practice will receive a final course grade of "F".

Failure to achieve the required grade in MED courses may result in dismissal from the program.

Students are eligible to reapply to the program one time only through the Admissions Office.

## Clinical Affiliations

Placement in a clinical practicum is a full-time commitment and students should limit outside work obligations.

Transportation to clinical practicum sites is the responsibility of the students. Students should be prepared to travel an hour or more from campus. The availability of clinical practicums depends on the area healthcare providers' ability to accept students.

In some cases, practicums may be completed beyond the semester schedule. All related practicums must be completed within six months of completing the lecture/laboratory component of MED course. Students who exceed this time limit must demonstrate that they have maintained competency prior to placement.

## Essential Functions

The Clinical Laboratory Science program essential functions include certain cognitive, physical and behavioral abilities which are necessary to perform the duties of a professional Clinical Laboratory Technician.

In order to meet the course requirements, students must possess the following basic abilities:

- Cognitive ability sufficient to learn and use the body of knowledge necessary to meet the program curriculum requirements and attain career entry status in the profession.
- Physical ability, sufficient mobility, and motor coordination to safely collect and process patient specimens and perform laboratory testing procedures using a microscope, computer and various types of diagnostic instruments.
- Visual acuity sufficient to read and interpret test procedures, physician orders and test results, monitor instrument function, focus a microscope and differentiate colors.
- Hearing ability sufficient to respond to messages and requests from instructors, patients, physicians, and staff and to respond to equipment signals.
- Communication skills sufficient to allow for communication with instructors, staff, patients and physicians.
- Emotional stability sufficient to interact professionally with instructors, staff, patients, and physicians; respect patient confidentiality; use reasonable judgment; and accept responsibility for their actions.



## Degree Requirements

### General Courses

Course #	Title	Credits
BIO 154	Human Physiology	4
BIO 239	Elements of Microbiology	4
CHM 115	Health Science Chemistry I	4
CHM 116	Health Science Chemistry II	4
ENG 101	Composition I: College Writing	3
ENG 102	Composition II: Writing about Literature	3
MTH 119	Fundamental Statistics	3
PSY 101	General Psychology	3

### Elective Courses

Course #	Title	Credits
	Global and Historic Awareness Elective	3
	Human Expression Elective	3

### Program Courses

Course #	Title	Credits
MED 101	Introduction to Clinical Laboratory Science	3
MED 102	Urinalysis	3
MED 200	Hematology	5
MED 205	Immunology - Serology	4
MED 206	Medical Microbiology	6
MED 215	Immunoematology	5
MED 216	Medical Microbiology II	4
MED 217	Clinical Biochemistry	6

### Required Course Sequence - Fall Semester 1

Course #	Title	Credits
MED 101	Introduction to Clinical Laboratory Science	3
CHM 115	Health Science Chemistry I	4
BIO 154	Human Physiology	4
MTH 119	Fundamental Statistics	3
ENG 101	Composition I: College Writing	3
	Global and Historic Awareness Elective	3



## Required Course Sequence - Spring Semester 2

Course #	Title	Credits
MED 102	Urinalysis	3
CHM 116	Health Science Chemistry II	4
BIO 239	Elements of Microbiology	4
ENG 102	Composition II: Writing about Literature	3
PSY 101	General Psychology	3
	Human Expression Elective	3

## Required Course Sequence - Fall Semester 3

Course #	Title	Credits
MED 200	Hematology	5
MED 205	Immunology - Serology	4
MED 206	Medical Microbiology	6

## Required Course Sequence - Spring Semester 4

Course #	Title	Credits
MED 215	Immunoematology	5
MED 216	Medical Microbiology II	4
MED 217	Clinical Biochemistry	6
	<b>Total credits:</b>	<b>70</b>

## Category Descriptions

### Global and Historic Awareness Elective

Credits: 3

Choose one Global and Historic Awareness elective.

### Human Expression Elective

Credits: 3

Choose one Human Expression elective.