

# Program of Study: Diagnostic - Clinical Lab



This Program of Study may serve as a graduation guide for the next four plus years, along with other career planning and educational materials. Courses listed in this model may include recommended coursework and should be individualized to students' educational and career goals. Each graduation plan needs to meet minimum high school graduation requirements. Dual Enrollment courses can be high school academic and/or career technical education courses.

Secondary: Diagnostics – Clinical Lab					Postsecondary		
Course/Grade	Ninth	Tenth	Eleventh	Twelfth	TCC	Diploma or AAS	Bachelor of Science
<b>English</b>	9 <sup>th</sup> grade Lit/Composition	10 <sup>th</sup> grade Lit/Composition	American Lit/Composition	World Lit/Composition / British Lit	<b>Entrance or Exit Point</b> A Technical Certificate of Credit is not available in this technical skill area.  <i>To be prepared to apply for admission to the Clinical Lab Degree, be sure to pass the prerequisite courses outlined in the admissions requirements.</i>	<ul style="list-style-type: none"> <li>- Completion of Academic courses</li> <li>- BIOL 2113 Anatomy and Physiology with BIOL 2113 Lab I</li> <li>- BIOL 2114 Anatomy and Physiology with BIOL 2114 Lab II</li> <li>- CLBT 1010 Introduction to Clinical Laboratory Technology</li> <li>- CLBT 1030 Urinalysis/Body Fluids</li> <li>- CLBT 1040 Hematology/ Coagulation</li> <li>- CLBT 1050 Serology/ Immunology</li> <li>- CLBT 1060 Immunohematology</li> <li>- CLBT 1070 Clinical Chemistry</li> <li>- CLBT 1080 Microbiology</li> <li>- CLBT 2090 Clinical Urinalysis, Serology, and Pre-Analytic Specimen Process Practicum</li> <li>- CLBT 2100 Clinical Immunohematology Practicum</li> <li>- CLBT 2110 Clinical Hematology/Coagulation Practicum</li> <li>- CLBT 2130 Clinical Chemistry Practicum</li> <li>- CLBT 2120 Clinical Microbiology Practicum</li> <li>- CLBT 2200 CLT Certification Review</li> </ul>	<b>Entrance or Exit Point</b> The University System of Georgia offers students' higher education options at 30 institutions throughout the state, providing a wide range of academic programming including certificates and associate, baccalaureate, masters, doctoral and professional degrees.  <a href="https://apps.usg.edu/ords/f?p=118:1:0:::">https://apps.usg.edu/ords/f?p=118:1:0:::</a>
<b>Mathematics</b>	Coordinate Algebra / Algebra I	Analytic Geometry / Geometry	Advanced Algebra / Algebra II	Pre-calculus			
<b>Science</b>	Physical Science	Biology	Chemistry	Physics			
<b>Social Studies</b>	Psychology	World History	US History	Government (½ unit) Economics (½ unit)			
<b>Pathway Completer</b>	<b>Introduction to Healthcare Science</b>	<b>Essentials of Healthcare</b>	<b>Clinical Lab I</b>	Work-Based Learning, Youth Apprenticeship, or Capstone Project			
<b>Industry Recognized Credential (Pathway Completer)</b>		<a href="#">Visit the End of Pathway Assessment Page</a> (see note below)					
<b>Required/ Selective Electives</b>	Health & Personal Fitness (can be taken in grades 9-12)	Latin I	Latin II	AP Biology			
	<b>Modern Language/Latin</b> 2 units required for admissions to Georgia University System Colleges/Universities For a listing of Modern Language/Latin courses offered at your high school, please contact your advisor, counselor, or curriculum handbook.		<b>Other Electives</b> For a listing of other elective courses offered at your high school, please check with your advisor, counselor, or curriculum handbook.				

**NOTE:** Students have many options to **ENTER** and **EXIT** from their academic studies into the workforce. When a student graduates from high school, they are eligible to choose one of many **ENTRANCE POINT** options: **1.** Enroll in either a 2 or 4 year post-secondary program; **2.** Enroll in an apprenticeship program or the military; or **3.** Enter the workforce using technical skills learned in high school. When a student finishes a 2- or 4-year degree program, they may choose to **EXIT** and **1.** Enroll in an apprenticeship program or the military; **2.** Enroll in a professional university degree program; or **3.** Enter the workforce using technical skills learned.

## Diagnosics – Clinical Lab Career Pathway - Industry Credentialing for High School Students

Upon completion of sequenced courses in the Diagnostics – Clinical Lab Career Pathway, students are eligible to complete the Industry-Recognized student credential for fulfillment of the End of Pathway Assessment. Secondary students completing the Clinical Lab pathway will be able to sit for the National Industry Credentialed assessment offered on-line from NCHSE, and OKCareerTech. Once mastery is reached, students will receive recognition for completion and use this credential in conjunction with their job or continuing training. For specific assessment information, refer to: <http://bit.ly/GAHealthScience>

## Sample High Demand Careers in Georgia

Occupation Specialties	Level of Education Needed	Georgia Average Salary	Annual Average Openings in Georgia	2014 – 2024 Employment Outlook
Medical & Clinical Lab Technologists	Bachelor's Degree	\$58,776	219	High Demand, High Skill
Medical & Clinical Laboratory Technicians	Associate's Degree	\$38,166	248	High Demand, High Skill
Ophthalmic Medical Technologists	Postsecondary credentials	\$41,009	106	High Demand, High Skill
Medical & Health Services Managers	Bachelor's Degree	\$104,956	320	High Demand, High Skill

GDOL Labor Market Explorer

Go to GAfutures at [www.gafutures.org](http://www.gafutures.org) for more information about your education and career planning, including valuable financial information (grants and scholarships including HOPE Program, grants and loans, FAFSA, and CSS forms).

<b>Career Enhancement Opportunities</b>	<b>Career-Related Education Activities</b> <input type="checkbox"/> Career Awareness <input type="checkbox"/> Career Exploration <input type="checkbox"/> Instructional Related <input type="checkbox"/> Connecting <input type="checkbox"/> Work-Based Learning <ul style="list-style-type: none"> <li>• Employability Skill Dev.</li> <li>• Cooperative Education</li> <li>• Internship</li> <li>• Youth Apprenticeship</li> <li>• Clinicals</li> </ul>	<b>Postsecondary Options:</b> <ul style="list-style-type: none"> <li>• 4-Year Universities/Colleges</li> <li>• 2-Year Colleges</li> <li>• Technical Colleges</li> <li>• State Registered Apprenticeships</li> <li>• Special Purpose Schools</li> <li>• On-the-Job Training</li> <li>• Military</li> </ul>	<b>Earning Postsecondary Credits While in High School</b> A vital way to get ahead and realize you can pass college courses is by earning postsecondary credits as a high school student. Georgia offers a dual credit program titled Dual Enrollment. You need to talk with your parents, school counselor, or advisor about the proper courses to take each year in high school and dual credit. Students completing the course work in this Plan, will have earned/completed an Industry Credential, Technical Certificate of Credit (TCC), Associates of Applied Science Degree, and/or Bachelor's Degree.
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### Postsecondary Transition

- Students who will continue their education in a Program of Study at one of the University System of Georgia institutions should prepare to take the ACT or SAT for admissions. Tests for admissions may vary from institution to institution. Contact the selected institution for specific testing information. Additional admissions information can be found at Staying On Course. ([https://www.usg.edu/assets/student\\_affairs/documents/Staying\\_on\\_Course.pdf](https://www.usg.edu/assets/student_affairs/documents/Staying_on_Course.pdf))
- Students who will continue their education in a Program of Study at one of the Technical College System of Georgia institutions should prepare to complete a placement exam.
- Students who will continue their education and training in the US Military should take the ASVAB assessment.
- Students should utilize electronic college and career databases to select the most appropriate postsecondary opportunities to match their selected career field, including registered apprenticeships.
- Georgia's dual-credit programs have been combined into one program entitled Dual Enrollment, in which high school students may earn their high school course credits while taking college courses.

Related Pathway Occupations	Other Related Occupations
<ul style="list-style-type: none"> <li>• Medical Technologists</li> <li>• Medical &amp; Health Services Managers</li> <li>• Medical &amp; Clinical Laboratory Technicians</li> <li>• Medical Lab Assistants</li> </ul>	<ul style="list-style-type: none"> <li>• Clinical Chemistry Technologists</li> <li>• Immunology Technologists</li> <li>• Microbiology Technologists</li> <li>• Registered Nurses</li> <li>• Physicians</li> <li>• Physicians Assistants</li> <li>• Nuclear Medicine Technologists</li> </ul> <p style="text-align: right;">*ONET Online</p>

### Diagnostics - Clinical Lab Pathway Description

Students that successfully complete the Essentials of Healthcare course will also earn credit for the Science course Anatomy/ Physiology as an embedded credit. The grade earned in Essentials will be the same grade for Anatomy/Physiology.

The Diagnostic Services pathway provides career opportunities for persons with a strong interest in the initial phase of detecting health problems—the diagnostic phase. This phase includes procedures such as X-rays, fluoroscopies, sonograms, and clinical laboratory tests examining blood and other body fluids. Workers in this pathway discover “evidence” that physicians use to make correct diagnoses and administer appropriate treatment. Occupations are increasingly more varied because of complex new technology seeking to explain how the human body works.

Clinical laboratory testing is critical in the detection and diagnosis of disease. Laboratory personnel examine and analyze body fluids and cells using complex chemical, blood, immunologic, and, bacteriological tests. Technologists evaluate test results and monitor programs to ensure accuracy of tests. Technicians perform less complex tests using automated analyzers or tests in accordance with detailed instructions.

Entry into the field of diagnostic services includes education/training in hospitals, technical colleges, colleges and universities, and the Armed Forces. Two-year programs are the most prevalent avenues for entry-level jobs. With experience and additional education and training, advancement opportunities exist in department administration, hospital administration, research, or sales with equipment manufacturers. As the population grows and ages, employment is projected to grow faster than average due to the increasing demand for diagnostic services.

Medical laboratory technologists (also known as medical laboratory scientists) and medical laboratory technicians collect samples and perform the tests to analyze body fluids, tissue, and other substances. Workers in the medical laboratories, technicians and technologist will enjoy an 11%-15% growth in occupations between 2010-2020, which is about as fast as the average for all occupations. Medical technologists generally have a bachelor's degree, while technicians usually need an associate degree.