

Standards Correlations

Medical Laboratory Technology I (8377)

Task	SOL Correlations	HOSA Correlations
Demonstrating Personal Qualities and Abilities		
Demonstrate creativity and innovation.	English: 6.1, 6.3, 6.4, 6.6, 6.7, 6.9, 7.1, 7.3, 7.4, 7.6, 7.7, 7.9, 8.1, 8.3, 8.4, 8.6, 8.7, 8.9, 9.1, 9.5, 9.6, 9.8, 10.1, 10.5, 10.6, 10.8, 11.1, 11.5, 11.6, 11.8, 12.1, 12.5, 12.6, 12.8 History and Social Science: CE.1, CE.4, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WG.4, WHI.1, WHII.1 Mathematics: 6.1, 6.2, 6.3, 6.4, 6.5, 6.6, 6.7, 6.10, 6.11, 6.12, 7.2, 7.3, 7.8, 7.9, 8.2, 8.4, 8.6, 8.7, 8.11, 8.12, 8.17, 8.18, A.9, AFDA.3, AFDA.4, AFDA.5, AFDA.6, AFDA.7, AFDA.8, AII.9, COM.1, COM.3, COM.4, COM.5, COM.8, DM.7, DM.1*, DM.10, DM.2*, DM.3*, PS.3*, PS.4*, PS.7*, PS.9*, PS.10* Science: 6.1, BIO.1, CH.1, ES.1, LS.1, PS.1	
Demonstrate critical thinking and problem solving.	English: 6.1, 6.3, 6.4, 6.5, 6.6, 6.7, 6.9, 7.1, 7.3, 7.4, 7.5, 7.6, 7.7, 7.9, 8.1, 8.3, 8.4, 8.5, 8.6, 8.7, 8.9, 9.1, 9.5, 9.6, 9.8, 10.1, 10.5, 10.6, 10.8, 11.1, 11.5, 11.6, 11.8, 12.1, 12.5, 12.6, 12.8	

Task	SOL Correlations	HOSA Correlations
	History and Social Science: CE.1, CE.4, CE.11, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WG.4, WHI.1, WHII.1 Mathematics: 6.1, 6.2, 6.3, 6.4, 6.5, 6.6, 6.10, 6.11, 7.2, 7.3, 7.8, 7.12, 7.13, 8.2, 8.4, 8.8, 8.9, 8.10, 8.11, A.8, A.9, G.1, G.13, G.14, AFDA.3, AFDA.5, AFDA.8, AII.9, AII.10, AII.11, COM.1, COM.3, COM.4, COM.5, COM.8, DM.4, DM.7, DM.1*, DM.2*, DM.3*, DM.9*, PS.9*, PS.10* Science: 6.1, BIO.1, CH.1, ES.1, LS.1, PS.1	
Demonstrate initiative and self-direction.	English: 6.1, 6.4, 6.6, 6.7, 6.9, 7.1, 7.4, 7.6, 7.7, 7.9, 8.1, 8.4, 8.6, 8.7, 8.9, 9.1, 9.5, 9.6, 9.8, 10.1, 10.5, 10.6, 10.8, 11.1, 11.5, 11.6, 11.8, 12.1, 12.5, 12.6, 12.8 History and Social Science: CE.1, CE.4, CE.11, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1	
Demonstrate integrity.	English: 6.1, 7.1, 8.1, 9.1, 9.5, 10.1, 10.5, 11.1, 11.5, 12.1, 12.5 History and Social Science: CE.1, CE.3, CE.4, GOVT.1, GOVT.16, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1	
Demonstrate work ethic.	English: 6.1, 7.1, 8.1, 9.1, 10.1, 11.1, 12.1 History and Social Science: CE.1, CE.4, CE.14, GOVT.1, GOVT.16, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Science: CH.1	
Demonstrating Interpersonal Skills		

Task	SOL Correlations	HOSA Correlations
Demonstrate conflict-resolution skills.	English: 6.1, 6.2, 6.4, 6.6, 6.7, 6.9, 7.1, 7.2, 7.4, 7.6, 7.7, 7.9, 8.1, 8.2, 8.4, 8.6, 8.7, 8.9, 9.1, 10.1, 11.1, 12.1 History and Social Science: CE.1, CE.4, GOVT.1, USI.1, VUS.1	
Demonstrate listening and speaking skills.	English: 6.1, 6.2, 6.4, 6.6, 7.1, 7.2, 7.4, 7.6, 8.1, 8.2, 8.4, 8.6, 9.1, 10.1, 11.1, 12.1 History and Social Science: CE.1, CE.4, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1	
Demonstrate respect for diversity.	English: 6.1, 7.1, 8.1, 9.1, 10.1, 11.1, 12.1 History and Social Science: CE.1, CE.3, CE.4, GOVT.1, GOVT.16, USI.1, USII.1, USII.9, VUS.1, VUS.13, WG.1, WHI.1, WHII.1	
Demonstrate customer service skills.	English: 6.1, 6.4, 6.7, 7.1, 7.4, 7.7, 8.1, 8.4, 8.7, 9.1, 9.5, 9.6, 10.1, 10.5, 10.6, 11.1, 11.5, 11.6, 12.1, 12.5, 12.6 History and Social Science: CE.1, CE.4, GOVT.1, GOVT.16, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1	
Collaborate with team members	English: 6.1, 7.1, 8.1, 9.1, 10.1, 11.1, 12.1 History and Social Science: CE.1, CE.3, CE.4, GOVT.1, GOVT.16, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1	
Demonstrating Professional Competencies		
Demonstrate big-picture thinking.	English: 6.1, 6.4, 7.1, 7.4, 8.1, 8.4, 9.1, 9.5, 10.1, 10.5, 11.1, 11.5, 12.1, 12.5	

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	History and Social Science: CE.1, CE.4, CE.12, GOVT.1, GOVT.15, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1	
Demonstrate career- and life-management skills.	English: 6.1, 6.7, 7.1, 7.7, 8.1, 8.7, 9.1, 9.6, 10.1, 10.6, 11.1, 11.6, 12.1, 12.6 History and Social Science: CE.1, CE.4, CE.12, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Mathematics: 8.4	
Demonstrate continuous learning and adaptability.	English: 6.1, 6.4, 6.7, 6.9, 7.1, 7.4, 7.7, 7.9, 8.1, 8.4, 8.7, 8.9, 9.1, 9.5, 9.6, 9.8, 10.1, 10.5, 10.6, 10.8, 11.1, 11.5, 11.6, 11.8, 12.1, 12.5, 12.6, 12.8 History and Social Science: CE.1, CE.3, CE.4, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Science: BIO.1, CH.1, LS.1, PH.1, PH.4, PS.1	
Manage time and resources.	English: 6.1, 6.2, 6.4, 6.7, 6.9, 7.1, 7.2, 7.4, 7.7, 7.9, 8.1, 8.2, 8.4, 8.7, 8.9, 9.1, 9.5, 9.6, 9.8, 10.1, 10.5, 10.6, 10.8, 11.2, 11.5, 11.6, 11.8, 12.2, 12.5, 12.6, 12.8 History and Social Science: CE.1, CE.4, CE.11, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Mathematics: 6.10, 6.11, 6.12, 7.2, 7.3, 7.8, 7.9, 7.10, 7.11, 7.12, 7.13, 8.4, 8.11, 8.12, 8.13, 8.14, 8.17, 8.18, A.4, A.5, A.8, A.9, AFDA.3, AFDA.4, AFDA.5, AFDA.6, AFDA.7, AFDA.8, COM.1, COM.3, COM.5, COM.8	

Task	SOL Correlations	HOSA Correlations
Demonstrate information-literacy skills.	<p>English: 6.1, 6.2, 6.4, 6.6, 6.7, 6.9, 7.1, 7.2, 7.3, 7.4, 7.6, 7.7, 7.9, 8.1, 8.2, 8.3, 8.4, 8.6, 8.7, 8.9, 9.2, 9.5, 9.6, 9.8, 10.2, 10.5, 10.6, 10.8, 11.2, 11.5, 11.6, 11.8, 12.2, 12.5, 12.6, 12.8</p> <p>History and Social Science: CE.1, CE.4, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1</p> <p>Mathematics: 6.10, 6.11, 7.8, 7.9, 8.11, 8.12, A.8, A.9, AFDA.3, AFDA.4, AFDA.6, AFDA.7, AFDA.8, DM.8, PS.1*, PS.2*, PS.3*, PS.4*, PS.7*, PS.8*, PS.9*, PS.10*</p> <p>Science: 6.1, BIO.1, CH.1, ES.1, LS.1, PH.1, PS.1</p>	
Demonstrate an understanding of information security.	<p>English: 6.1, 6.2, 6.3, 6.4, 6.6, 6.7, 6.8, 6.9, 7.1, 7.2, 7.3, 7.4, 7.6, 7.7, 7.8, 7.9, 8.1, 8.2, 8.3, 8.4, 8.6, 8.7, 8.8, 8.9, 9.1, 9.2, 9.5, 9.6, 9.8, 10.1, 10.2, 10.5, 10.6, 10.8, 11.1, 11.2, 11.5, 11.6, 11.8, 12.1, 12.2, 12.5, 12.6, 12.8</p> <p>History and Social Science: CE.1, CE.4, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1</p> <p>Mathematics: COM.10</p>	
Maintain working knowledge of current information-technology (IT) systems.	<p>English: 6.1, 6.3, 6.4, 6.6, 6.9, 7.1, 7.3, 7.4, 7.6, 7.9, 8.1, 8.3, 8.4, 8.6, 8.9</p> <p>History and Social Science: CE.1, CE.4, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1</p>	

Task	SOL Correlations	HOSA Correlations
	Mathematics: 7.8, COM.1, COM.2, COM.7, COM.9, COM.10, COM.11, COM.16, COM.18, PS.17 Science: BIO.1, CH.1, ES.1, PH.1	
Demonstrate proficiency with technologies, tools, and machines common to a specific occupation.	History and Social Science: CE.1, CE.4, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Mathematics: 6.10, 6.11, 7.9, 8.4, A.7, A.8, A.9, AFDA.1, AFDA.3, AFDA.5, AII.4, AII.7, AII.9, COM.1, COM.7, COM.10, COM.11, COM.12, COM.16 Science: CH.1, ES.1, LS.1, PH.1, PS.1	
Apply mathematical skills to job-specific tasks.	English: 6.4, 6.6, 6.7, 7.4, 7.6, 7.7, 8.4, 8.6, 8.7, 9.5, 9.6, 10.5, 10.6, 11.5, 11.6, 12.5, 12.6 History and Social Science: CE.1, CE.4, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Mathematics: 6.1, 6.2, 6.5, 6.6, 6.12, 6.13, 6.14, 7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.8, 7.9, 7.11, 7.12, 7.13, 8.4, 8.5, 8.6, 8.8, 8.9, 8.10, 8.11, 8.12, 8.13, 8.14, 8.15, 8.16, 8.17, 8.18, A.1, A.3, A.4, A.5, A.7, A.8, A.9, AFDA.1, AFDA.3, AFDA.5, AFDA.8, AII.3, AII.7, AII.9, AII.10, COM.1, COM.7 Science: 6.1, BIO.1, CH.1, ES.1, LS.1, PH.1, PS.1	
Demonstrate professionalism.	English: 6.1, 7.1, 8.1, 9.1, 10.1, 11.1, 12.1 History and Social Science: CE.1, CE.4, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1	

Task	SOL Correlations	HOSA Correlations
Demonstrate reading and writing skills.	English: 6.1, 6.6, 6.7, 7.1, 7.6, 7.7, 8.1, 8.6, 8.7, 9.1, 9.5, 9.6, 9.7, 10.1, 10.5, 10.6, 10.7, 11.1, 11.5, 11.6, 11.7, 12.1, 12.5, 12.6, 12.7 History and Social Science: CE.1, CE.4, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Science: 6.1, PH.1, PS.1	
Demonstrate workplace safety.	English: 6.4, 7.4, 8.4, 9.5, 10.5, 11.5, 12.5 History and Social Science: CE.1, CE.4, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Science: CH.1	
Examining All Aspects of an Industry		
Examine aspects of planning within an industry/organization.	History and Social Science: GOVT.16	
Examine aspects of management within an industry/organization.		
Examine aspects of financial responsibility within an industry/organization.		
Examine technical and production skills required of workers within an industry/organization.		
Examine principles of technology that underlie an industry/organization.		
Examine labor issues related to an industry/organization.	History and Social Science: GOVT.16	
Examine community issues related to an industry/organization.	History and Social Science: GOVT.16	

Task	SOL Correlations	HOSA Correlations
Examine health, safety, and environmental issues related to an industry/organization.	History and Social Science: GOVT.16	
Addressing Elements of Student Life		
Identify the purposes and goals of the student organization.		
Explain the benefits and responsibilities of membership in the student organization as a student and in professional/civic organizations as an adult.		
Demonstrate leadership skills through participation in student organization activities, such as meetings, programs, and projects.		
Identify Internet safety issues and procedures for complying with acceptable use standards.		
Exploring Work-Based Learning		
Identify the types of work-based learning (WBL) opportunities.		
Reflect on lessons learned during the WBL experience.		
Explore career opportunities related to the WBL experience.		
Participate in a WBL experience, when appropriate.		
Exploring Foundations in Medical Laboratory Technology		

Task	SOL Correlations	HOSA Correlations
Explain the evolving roles of laboratory technology in medicine.	English: 11.5, 12.5	HOSA Bowl (HB)
Explain the importance of working within the scope of practice.	English: 11.5, 12.5	Biomedical Laboratory Science (BT)
Demonstrate technical writing.	English: 11.6, 11.7, 12.6, 12.7	Extemporaneous Writing (EW)
Explain the scientific method in context of course responsibilities.	English: 11.1, 11.5, 12.1, 12.5 History: WHI 5, WHII 4 Mathematics: AII.9, AII.10, AFDA.8, COM.8, COM.9, PS.1*, PS.2*, PS.3*, PS.4*, PS.8*, PS.9*, PS.10*, PS.11*, PS.15 Science: BIO.1	Creative Problem Solving (CPS)
Explain the importance of communication skills with other members of the healthcare team in medical laboratory technology.	English: 11.5, 12.5 History: Govt 16	Biomedical Laboratory Science (BT)
Examine professional ethical standards for medical laboratory personnel.	English: 11.5, 12.5	Medical Law and Ethics (MLE)
Perform a best-practices literature review.	English: 11.5, 12.5	Research Poster (RP)
Describe government, industry, and professional regulatory bodies pertaining to medical laboratory technology.	English: 11.5, 12.5 History: Govt 7, 8, 9, 15, 16	Biomedical Laboratory Science (BT)
Adhere to government, industry, and professional regulations pertaining to medical laboratory technology.	English: 11.8, 12.8 History: Govt 7, 8, 9, 15, 16	Biomedical Laboratory Science (BT)
Explain the concept of determining reference ranges in medical laboratory testing.	English: 11.5, 12.5 Mathematics: AFDA.7, AII.11, PS.16*	Biomedical Laboratory Science (BT)
Discuss the importance of laboratory records and documentation.	English: 11.1, 12.1	Biomedical Laboratory Science (BT) Medical Assisting (MA)

Task	SOL Correlations	HOSA Correlations
Discuss the importance of following policy and procedures regarding specimen collection, processing, and analysis.	English: 11.1, 12.1	Biomedical Laboratory Science (BT) Medical Assisting (MA)
Maintaining a Safe Environment		
Demonstrate techniques for infection control and prevention.	English: 11.5, 12.5 History: WHI 6, WHII 4	Biomedical Laboratory Science (BT)
Identify types of isolation.	English: 11.5, 12.5	Biomedical Laboratory Science (BT)
Describe the role of the Occupational Safety and Health Administration (OSHA) and the National Fire Protection Association (NFPA) in laboratory safety standards.	English: 11.5, 12.5 History: Govt 7, 8, 9, 15, 16	Biomedical Laboratory Science (BT)
Demonstrate use of Safety Data Sheets (SDSs).	English: 11.5, 12.5 Science: CH.1	Biomedical Laboratory Science (BT)
Follow institutional protocol and safety procedures.	English: 11.8, 12.8 History: Govt 7, 8, 9, 15, 16	Biomedical Laboratory Science (BT)
Identify first-aid situations, supplies, personal protective measures, emergency protection areas, and actions of a first responder.	English: 11.5, 12.5	CPR/First Aid (CPR)
Identify common laboratory hazards.	English: 11.5, 12.5 History: Govt 7, 8, 9, 15, 16 Science: CH.1	Biomedical Laboratory Science (BT)
Demonstrate the use of personal protective equipment (PPE).		Biomedical Laboratory Science (BT)
Demonstrate procedures for handling and disposing of infectious and/or hazardous materials.	English: 11.5, 12.5	Biomedical Laboratory Science (BT)

Task	SOL Correlations	HOSA Correlations
Maintain laboratory equipment, a clean work area, and a clean laboratory supply storage area.	English: 11.5, 12.5	Biomedical Laboratory Science (BT)
Performing Basic Laboratory Skills		
Compare various forms and grades of water used in the laboratory.	English: 11.5, 12.5	Biomedical Laboratory Science (BT)
Compare various grades of chemicals used in the laboratory, including their levels, qualities, and purposes.	English: 11.5, 12.5	Biomedical Laboratory Science (BT)
Demonstrate use of a compound microscope.	English: 11.5, 12.5 History: WHII 4 Science: BIO.1	Biomedical Laboratory Science (BT)
Practice aseptic techniques.	History: WHI 6, WHII 4	Biomedical Laboratory Science (BT)
Perform mathematical calculations and conversions.	History: WHI 3, 4, WHII 4 Mathematics: AII.3, AII.7, AII.9, AII.11, AFDA.1, AFDA.3, AFDA.4, AFDA.7, AFDA.8, PS.1*, PS.2*, PS.3*, PS.4*, PS.8*, PS.9*, PS.10*, PS.11*, PS.15, COM.1, COM.7, COM.9, COM.15	Medical Math (MM)
Demonstrate basic pipetting techniques.	Science: CH.1	Biomedical Laboratory Science (BT)
Demonstrate the process for making stock reagents and solutions.	English: 11.5, 12.5 Science: CH.1, CH.4	
Explain the importance of maintaining sterile reagents and equipment.	English: 11.5, 12.5	
Use basic weighing and measuring techniques.	English: 11.5, 12.5 Mathematics: AII.3 Science: CH.4	Biomedical Laboratory Science (BT)

Task	SOL Correlations	HOSA Correlations
Identify routine equipment maintenance needs.	English: 11.5, 12.5	Biomedical Laboratory Science (BT)
Maintaining Quality Assurance		
Demonstrate quality assurance and quality control techniques.	History: Govt 7, 8, 9, 15, 16	Biomedical Laboratory Science (BT)
Perform statistical analysis of data.	Mathematics: PS.1*, PS.2*, PS.3*, PS.4*	
Understanding the Basics of Specimen Collection		
Demonstrate communication skills with patients with various needs.		
Correlate basic human anatomy and physiology to specimen collection.	English: 11.5, 12.5 History: WHII 4 Science: BIO.4	Biomedical Laboratory Science (BT)
Interpret common abbreviations used in phlebotomy.	English: 11.5, 12.5	
Interpret basic medical laboratory terminology related to phlebotomy.	English: 11.5, 12.5	Medical Terminology (MT) Biomedical Laboratory Science (BT)
Explain the importance of accurate patient identification in specimen collection.	English: 11.5, 12.5	Medical Law and Ethics (MLE) Medical Assisting (MA)
Demonstrate safe positioning of patients during venipuncture.	English: 11.5, 12.5	Medical Assisting (MA)
Demonstrate specimen collection procedures appropriate to the patient (e.g., ethnicity, age, medical status, culture).	English: 11.5, 12.5	Biomedical Laboratory Science (BT) Medical Assisting (MA)
Explain the order of the draw (for tubes).	English: 11.5, 12.5	
Demonstrate blood collection, handling, and processing for venipuncture procedures.		

Task	SOL Correlations	HOSA Correlations
Understanding the Basics of Urinalysis		
Interpret common abbreviations used in urinalysis.	English: 11.5, 12.5	
Interpret basic medical laboratory terminology related to urinalysis.	English: 11.5, 12.5	Medical Terminology (MT) Biomedical Laboratory Science (BT)
Describe various collection methods.	English: 11.5, 12.5	Medical Assisting (MA) Biomedical Laboratory Science (BT)
Perform complete urinalysis.		
Interpret urinalysis test results.	English: 11.5, 12.5	
Understanding the Basics of Hematology		
Explain the process of hematopoiesis.		
Interpret common abbreviations used in hematology.	English: 11.5, 12.5	
Interpret basic medical laboratory terminology related to hematology.	English: 11.5, 12.5	Medical Terminology (MT) Biomedical Laboratory Science (BT)
Explain the components of a complete blood count (CBC).	English: 11.5, 12.5	Biomedical Laboratory Science (BT)
Explain point-of-care testing in relation to hematology.	English: 11.5, 12.5	Biomedical Laboratory Science (BT)
Describe additional procedures in the hematology department.	English: 11.5, 12.5	Biomedical Laboratory Science (BT)
Perform a peripheral blood-smear evaluation.	English: 11.5, 12.5	Biomedical Laboratory Science (BT)
Perform a microhematocrit.	English: 11.5, 12.5	Biomedical Laboratory Science (BT)

Task	SOL Correlations	HOSA Correlations
Interpret hematology test results.	English: 11.5, 12.5	Biomedical Laboratory Science (BT)
Understanding the Basics of Body Chemistry		
Review basic human anatomy and physiology in relation to body chemistry.	English: 11.5, 12.5 History: WHII 4 Science: BIO.4	Biomedical Laboratory Science (BT)
Interpret common abbreviations used in body chemistry.	English: 11.5, 12.5	
Interpret basic medical laboratory terminology related to body chemistry.	English: 11.5, 12.5 Science: BIO.3	Medical Terminology (MT) Biomedical Laboratory Science (BT)
Identify chemical constituents of the human body.	English: 11.5, 12.5 Science: BIO.2	Biomedical Laboratory Science (BT)
Explain point-of-care testing in relation to body chemistry.	English: 11.5, 12.5	Biomedical Laboratory Science (BT)
Explain the theory behind performing routine clinical chemistry procedures.	English: 11.5, 12.5	
Interpret body chemistry test results.	English: 11.5, 12.5	Biomedical Laboratory Science (BT)
Explain chemistry instrumentation.	English: 11.5, 12.5	Biomedical Laboratory Science (BT)