

Standards Correlations

Medical Laboratory Technology II (8378)

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,	

Task	SOL Correlations	HOSA Correlations
	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, 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	

Task	SOL Correlations	HOSA Correlations
	Science: CH.1	
Demonstrating Interpersonal Skills		
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		

Task	SOL Correlations	HOSA Correlations
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 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,	

Task	SOL Correlations	HOSA Correlations
	AFDA.6, AFDA.7, AFDA.8, COM.1, COM.3, COM.5, COM.8	
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.	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	

Task	SOL Correlations	HOSA Correlations
	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: 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	

Task	SOL Correlations	HOSA Correlations
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	
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.		

Task	SOL Correlations	HOSA Correlations
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	
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.		

Task	SOL Correlations	HOSA Correlations
Participate in a WBL experience, when appropriate.		
Applying the Principles of Hemostasis/Coagulation		
Describe basic human anatomy and physiology in relation to hemostasis/coagulation.	English: 12.5 History: WHII 4 Science: BIO.4	HOSA Bowl (HB) Biomedical Laboratory Science (BT)
Interpret common abbreviations related to hemostasis/coagulation.	English: 12.5	
Interpret basic medical laboratory terminology related to hemostasis/coagulation.	English: 12.5	Medical Terminology (MT) Biomedical Laboratory Science (BT)
Explain the concepts of hemostasis/coagulation and fibrinolysis.	English: 12.5	Biomedical Laboratory Science (BT)
Explain the use of prothrombin time (PT) and activated partial thromboplastin time (APTT) testing.	English: 12.5	
Correlate abnormal hemostasis/coagulation laboratory results with disease processes.	English: 12.5	
Understanding the Basics of Immunology/Serology		
Describe basic human anatomy and physiology in relation to immunology/serology.	English: 12.5 History: WHII 4 Science: BIO.4	Biomedical Laboratory Science (BT)
Interpret common abbreviations used in immunology/serology.	English: 12.5	
Interpret basic medical laboratory terminology related to immunology/serology.	English: 12.5	Medical Terminology (MT) Biomedical Laboratory Science (BT)

Task	SOL Correlations	HOSA Correlations
Explain the host immune response to foreign substances.	English: 12.5	Biomedical Laboratory Science (BT)
Describe common immunological tests.	English: 12.5	
Perform an enzyme immunoassay.		
Correlate abnormal immunological/serological laboratory results with disease processes.	English: 12.5	
Performing Basic Microbiology Skills		
Describe basic human anatomy and physiology in relation to microbiology.	English: 12.5 Science: BIO.4, BIO.3	HOSA Bowl (HB) Biomedical Laboratory Science (BT)
Interpret common abbreviations used in microbiology.	English: 12.5	
Interpret basic medical laboratory terminology related to microbiology.	English: 12.5	Medical Terminology (MT) Biomedical Laboratory Science (BT)
Explain the importance of collection requirements for the various specimens used in microbiological studies.	English: 12.5	Biomedical Laboratory Science (BT)
Perform microscopy and Gram stain preparation.	English: 12.5	Biomedical Laboratory Science (BT)
Identify classifications of microorganisms based on cell wall structure.	English: 12.5 History: WHII 4	Biomedical Laboratory Science (BT)
Explain the concept of a pure and/or isolative culture.	English: 12.5	Biomedical Laboratory Science (BT)
Perform inoculation of patient specimen.	English: 12.5	
Perform isolation or subculture of microbes.		
Explain the basic concepts of antibiotics and their classes.	English: 12.5	Biomedical Laboratory Science (BT)

Task	SOL Correlations	HOSA Correlations
Explain the concept of antibiotic susceptibility testing.	English: 12.5	
Describe basic identification techniques used to differentiate bacteria.	English: 12.5 History: WHII 4 Science: BIO.4	Biomedical Laboratory Science (BT)
Explain the causes and significance of methicillin-resistant Staphylococcus aureus (MRSA) and other antibiotic-resistant organisms.	English: 12.5	Biomedical Laboratory Science (BT)
Explain the basic characteristics of the most common yeast/fungi encountered in the clinical lab.	English: 12.5	Biomedical Laboratory Science (BT)
Explain the basic characteristics of the most common parasites encountered in the clinical lab.	English: 12.5	
Understanding the Basics of Immunohematology/Transfusion Services		
Describe basic human anatomy and physiology in relation to immunohematology/transfusion.	English: 12.5 History: WHII 4 Science: BIO.4	HOSA Bowl (HB) Biomedical Laboratory Science (BT)
Interpret common abbreviations used in immunohematology/transfusion services.	English: 12.5	
Interpret basic medical laboratory terminology related to immunohematology/transfusion services.	English: 12.5	Medical Terminology (MT) Biomedical Laboratory Science (BT)
Explain how each blood group is identified.	English: 12.5 History: WHII 4	Biomedical Laboratory Science (BT)
Perform or simulate an antigen and antibody reaction in transfusion medicine.		Biomedical Laboratory Science (BT)

Task	SOL Correlations	HOSA Correlations
Explain the various red blood cell components and derivatives used for transfusion.	English: 12.5 History: WHII 4	Biomedical Laboratory Science (BT)
Explain compatibility testing of blood.	English: 12.5	Biomedical Laboratory Science (BT)
Explain legal and medical ramifications of potential errors in immunohematology and transfusion services, as well as potential consequences.	English: 12.5 History: Govt 7, 8, 9, 15, 16	Medical Law and Ethics (MLE)
Understanding the Basics of Molecular Diagnostics		
Describe basic human anatomy and physiology in relation to molecular diagnostics.	English: 12.5 History: WHII 4 Science: BIO.3, BIO.5	Biomedical Laboratory Science (BT)
Interpret common abbreviations used in molecular diagnostics.	English: 12.5	
Interpret basic medical laboratory terminology related to molecular diagnostics.	English: 12.5	Medical Terminology (MT) Biomedical Laboratory Science (BT)
Explain the advantages, disadvantages, and uses of molecular diagnostics.	English: 12.5	Biomedical Laboratory Science (BT)
Perform polymerase chain reaction (PCR) testing.	English: 12.5	
Research innovations in genetic manipulation (e.g., CRISPR).	English: 12.5, 12.8	
Exploring Professional Choices		
Explain the importance of a professional demeanor on the part of all healthcare professionals.	English: 12.5 History: Govt 16	Medical Law and Ethics (MLE)

Task	SOL Correlations	HOSA Correlations
Demonstrate the importance of confidentiality in the medical laboratory technology field.	History: Govt 7, 8, 9, 15, 16	Medical Law and Ethics (MLE)
Describe employment-related tests and background checks in the medical laboratory technology field.	English: 12.5	
Research career paths in medical laboratory technology, to include the levels of education and job opportunities applicable within each pathway.	English: 12.5, 12.8 History: Govt 16	Health Career Display (HCD) Biomedical Laboratory Science (BT)
Describe credentialing in the medical laboratory technology profession.	English: 12.5	Biomedical Laboratory Science (BT)
Explain the importance of professional development for medical laboratory technology professionals.	English: 12.5	Biomedical Laboratory Science (BT)
Describing the Opioid Crisis		
Describe the history and current state of the opioid crisis in the United States.	English: 12.5	
Describe the history and current state of the opioid crisis in Virginia.	English: 12.5, 12.8	
Define the pharmacological components and common uses of opioids.	English: 12.3, 12.8	
Examining Key Factors of Drug Addiction		
Examine the science of addiction.	English: 12.5	
Explain prevention and early intervention strategies.	English: 12.5, 12.8	
Identify addiction and its behavioral elements, as defined by the Diagnostic and Statistical Manual of Mental Disorders (DSM-5).	English: 12.5	

Task	SOL Correlations	HOSA Correlations
Describe the treatment models of addiction therapy.	English: 12.5	
Describe the medication management antidote used to prevent fatal opioid overdoses.	English: 12.5, 12.8	
Understanding Pain Management Protocols		
Explain the science of physiological and mental pain.	English: 12.3, 12.5	
Describe the diagnostic tools used in developing pain management plans.	English: 12.5	
Describe pain treatment options available to various populations of patients.	English: 12.5, 12.8	
Describe the effects of opioid dependency on the human body systems.	English: 12.5	
Explain the mechanism and physical effects of opioids on the human body.	English: 12.5	
Explain the use of opioids in practice settings, the role of opioids in pain management, and risk factors associated with the use of the medication.	English: 12.5	
Describe the withdrawal and tapering side effects of opioid use.	English: 12.5	
Describe storage and disposal options for opioids.	English: 12.5, 12.8	
Explain community resources for education about opioid use.	English: 12.5	
Working with Patients and Caregivers		
Describe key communication topics involving opioids for patients.	English: 12.5	
Describe communication topics for caregivers and family members.	English: 12.5	