

HEALTH SCIENCES DEPARTMENT

STEPHANIE'S DEPARTMENT

Medical Lab Technician AAS

Addition of alternate clinical classes for online delivery of program

Students in the face-to-face delivery of the program will continue to take the following courses:

MLT 280	Clinical practicum I	8 credits
MLT 294	Clinical Practicum II	3.5 credits
	TOTAL CLINICAL CR.	11 credits

Students that will be taking the program online will be taking the following classes to meet the Clinical practicum requirements

MLT XXX	Chemistry Practicum	2 credits
MLT XXX	Hematology Practicum	2.5 credits
MLT XXX	Immunohematology Practicum	2.5 credits
MLT XXX	Microbiology Practicum	2.5 credits
MLT XXX	Urinalysis Specimen Collection Practicum	1.5 credits
	TOTAL CLINICAL CR.	11 credits

All other courses will remain the same. Syllabi are attached

Extended Program:

Term	Course	Credits
First fall, first half	MLT-111 Fundamentals of Lab Science	4.0
First fall, second half	BIO-168 Human A&P I	4.0
First spring, first half	MLT-133 Erythrocyte Hematology	3.0
First spring, second half	BIO-173 Human A&P II	4.0
First summer, first half	HSC-113 Medical Terminology	2.0
Second fall, first half	MLT-120 Urinalysis	3.0
Second fall, second half	CHM-112 Intro to Chem	4.0
Second spring, first half	MLT-234 Leukocyte Hematology	4.0
Second spring, second half	BIO-186 Microbiology	4.0
Second summer, first half	MLT-241 Clinical Microbiology	4.0
Second summer, second half	MLT-250 Parasitology & Mycology	2.0
Third fall, first half	ENG-105 Composition I	3.0
Third fall, second half	MLT-??? Clinical Practicum 1A (UA/Phleb)	1.0 1.5
Third fall, second half	MLT-??? Clinical Practicum 1B. (Micro)	2.0 2.5
Third spring, first half	PSY-111 Intro to Psych	3.0
Third spring, second half	MLT-171 Immunology	3.0
Third spring, second half	MLT-241 Clinical Chem I	4.5
Third summer, first half	MLT-260 Immunochemistry	4.0
Third summer, second half	MLT-??? Clinical Practicum 2A (BB)	3.0 4.5
Fourth fall, first half	MLT-??? Clinical Practicum 2B (Heme & Chem)	4.5 2.5
Fourth fall, first half	MLT-253 Clinical Chem II	2.0
Fourth fall, second half	MLT-298 Clinical Seminar & Review	2.5

Option #1 – Accelerated program, online students and face-to-face students not at clinical at the same time

Prerequisite semester – spring and summer before joining program

Term	Course	Credits
Prerequisite spring first half	BIO-168 Human Anatomy & Physiology I	4.0
Prerequisite spring first half	HSC-113 Medical Terminology	2.0
Prerequisite spring second half	CHM-112 Intro to Chem	4.0
Prerequisite spring second half	BIO-173 Human Anatomy & Physiology II	4.0
Prerequisite summer first half	ENG-105 Composition I	3.0
Prerequisite summer first half	PSY-111 Introduction to Psychology	3.0
	Total credits	20.0

Term	Course	Credits
First fall, first half	MLT-111 Fundamentals of Lab Science	4.0
First fall, first half	MLT-120 Urinalysis	3.0
First fall, second half	BIO-186 Microbiology	4.0
First fall, second half	MLT-??? Clinical Practicum 1A (UA & Phlebotomy = 80 hrs.)	1.0
	Total Credits	12.0

Term	Course	Credits
First spring, first half	MLT-133 Erythrocyte Hematology	3.0
First spring, first half	MLT-234 Leukocyte Hematology	4.0
First spring, second half	MLT-171 Immunology & Serology	3.0
First spring, second half	MLT-240 Clinical Chemistry I	4.5
	Total Credits	14.5

Term	Course	Credits
First summer, first half	MLT-260 Immunohematology	4.0
First summer, first half	MLT-250 Clinical Microbiology	4.0
First summer, second half	MLT-253 Parasitology & Mycology	2.0
First summer, second half	MLT-??? Clinical Practicum 1B)BB = 160 hrs.)	3.0?
	Total Credits	13.0

Term	Course	Credits
Second fall, first half	MLT-??? Clinical Practicum 2A (Heme & Chem = 280 hrs.)	4.5?
Second fall, first half	MLT-241 Clinical Chem II	2.0
Second fall, second half	MLT-??? Clinical Practicum 2B (Micro = 160 hrs.)	3.0?
Second fall, second half	MLT-298 Clinical Seminar & Review	2.5
	Total Credits	12.0

Clinical practicum schedule: calculated by using F2F schedule which goes for a set amount of weeks, 4 days per week, 8 hours per day.

UA/Phlebotomy – 2 weeks x 4 days = 8 days, 64 hours

***add another week to this class to account for the review week F2F students have so:*

UA/Phlebotomy – 3 weeks x 4 days = 12 days, 96 hours

UA + Phlebotomy = Clinical Practicum 1A → 12 days/96 hours total in 8 weeks

Blood Bank – 5 weeks = 20 days, 160 hours

**minus 1 day for Juneteenth = 19 days, 152 hours*

Blood Bank/Immunology Rotation = Clinical Practicum 1B → 19 days/152 hours total in 8 weeks

Hematology – 5 weeks (x4 days) = 20 days, 160 hours

Chemistry – 4 weeks (x4 days) = 16 days, 128 hours

**minus 1 day for Easter = 15 days, 120 hours*

Hematology + Chemistry Rotation = Clinical Practicum 2A → 35 days/280 hours total in 8 weeks

.Microbiology – 5 weeks = 20 days, 160 hours

Microbiology Rotation = Clinical Practicum 2B → 20days/160 hours total in 8 weeks

Total clinical practicum days online students = 86 days, 688 hours – cannot include college breaks (current F2F schedule amounts to **86 days 688 hours** – this schedule includes college breaks)



Course Name: Clinical Practicum 1A

Course Number: MLT-???

Course Department: CTE

Course Term: Fall 2025

Last Revised by Department: Fall 2024

Total Semester Hour(s) Credit: 1.0

Total Contact Hours per Semester:

Lecture: N/A Lab: N/A Clinical: 64 contact hours Internship/Practicum: N/A

Catalog Description: Students rotate through urinalysis and specimen collection, practicing patient interaction, specimen collection, processing, and testing of urinalysis and other body fluids. Classroom knowledge is applied directly in clinical practicum.

Pre-requisites and/or Co-requisites: Prerequisites: Successful completion of MLT-111 Fundamentals of Laboratory Science and MLT-120 Urinalysis.

Textbook(s) Required:

Quick Review Cards by Polansky, F.A. Davis. 2nd Edition. (ISBN: 978-0803629561)

Access Code: N/A

Required Materials: Microsoft Surface Go or other personal device to be used for assessments and assignment submission, Internet access, 3-ring binder (1.5 – 2 inch is ideal), calculator, face mask and face shield as needed.

Suggested Materials: Notebook, note cards, blank paper, and highlighters.

Course Fees: N/A

Institutional Outcomes:

Critical Thinking: The ability to dissect a multitude of incoming information, sorting the pertinent from the irrelevant, in order to analyze, evaluate, synthesize, or apply the information to a defensible conclusion.

Effective Communication: Information, thoughts, feelings, attitudes, or beliefs transferred either verbally or nonverbally through a medium in which the intended meaning is clearly and correctly understood by the recipient with the expectation of feedback.

Personal Responsibility: Initiative to consistently meet or exceed stated expectations over time.

STEMM Department Outcomes:

- Students will apply science, technology, engineering, and mathematics in contexts that make connections between school, community, and work, enabling them to compete in the current and future economy.
- Students will possess the skills needed to be gainfully employed in their chosen career path.
- Students will demonstrate competency in the skills needed to satisfy their educational goals.

Program Outcomes:

1. Demonstrate entry level knowledge and skill in modern clinical laboratory science.
2. Collect and process biological specimens and perform analytical tests on body fluids, cells, and products.
3. Monitor quality control through understanding of basic laboratory statistics, recognize affected results, and take appropriate actions.
4. Perform preventive and corrective maintenance of equipment and instruments or refer to appropriate sources for repairs.
5. Recognize the responsibilities of other laboratory and health care personnel and interact with them with respect for their position and patient care.
6. Relate laboratory findings to common disease processes.

Student Learning Outcomes:

- Collect and handle specimens properly for testing.
- Assess specimen quality and perform corrective actions for inadequate samples.
- Accurately log and label specimens.
- Enter laboratory data and test results precisely in the lab information system.
- Apply safe techniques when handling and disposing of infectious materials.
- Exhibit professional conduct in all interactions.

At the end of the clinical rotation, the student should be able to:

Urinalysis Rotation Clinical Objectives:

- Describe types of urine specimens and the diagnostic use for each type.
- Follow guidelines for the proper storage, labeling and handling of urine specimens.
- Describe collection techniques employed to obtain types of urine specimens.
- Demonstrate safe techniques in the handling and disposal of infectious materials.
- Record and monitor quality control for procedures and instruments in the urinalysis department.
- Demonstrate an understanding of daily maintenance routines and corrective actions, if necessary.
- Correlate urine color and clarity with substances that can indicate a pathologic process.
- Describe the chemical principles employed to measure the substances detected by reagent strips.
- Recite the significance of positive results for substances detected by reagent strips.
- Differentiate between pathologic and non-pathologic formed elements detected in urinary sediment.
- Describe the screening techniques used in the urinalysis department to detect metabolic disorders.
- Apply clinical phlebotomy theory to the proper collection of capillary and venous blood specimens.

Phlebotomy Rotation Clinical Objectives:

- Demonstrate proper patient identification
- Choose correct tube for testing
- Select appropriate PPE
- Perform venipuncture
- Perform dermal puncture
- Properly dispose of biohazards
- Transport specimen to the lab in a timely manner
- Correctly process and store specimens

Affective Clinical Site Student Clinical Objectives:

- Maintain a good attendance and punctuality record by:
 - Arriving on time
 - Beginning work promptly
 - Informing the instructor when leaving the area
 - Staying late when necessary to complete an assigned procedure
 - Limiting lunch/coffee breaks to their allotted time
- Cooperate with other personnel by:

- Maintaining a pleasant, professional attitude
- Functioning well in a teacher/student setting
- Showing respect and understanding of cultural diversity
- Leaving the work area clean and neat
- Replenishing supplies and reagents
- Using reagents and supplies with economic discretion
- Demonstrates a professional attitude and ethical responsibility by:
 - Being alert, attentive and paying attention to details
 - Completing the required assignment
 - Finding work to keep busy when instructor is unavailable
 - Showing empathy and respect for patients of all ages and cultural backgrounds
 - Taking appropriate actions to correct errors or resolve conflict.
 - Maintaining professional composure
 - Handling and labeling specimens and materials appropriately and with accuracy
- Utilizes constructive criticism by:
 - Responding to suggestions and constructive criticism in a positive manner
 - Admitting to errors/mistakes and take steps to correct future errors
- Maintain a professional appearance.
- Adapt to a changing environment by:
 - Asking relevant questions
 - Following written procedures
 - Showing consistent attention to detail
 - Displaying confidence after instruction
 - Handling equipment appropriately and performing proper maintenance
- Following universal precautions and lab safety regulations

CHAT GPT

Course Name: Clinical Practicum 1A

Course Number: MLT-???

Course Department: Career and Technical Education

Course Term: Fall 2025

Last Revised by Department: Fall 2024

Total Semester Hour(s) Credit: 1.0

Total Contact Hours per Semester:

- **Lecture:** N/A
- **Lab:** N/A
- **Clinical:** 64 contact hours
- **Internship/Practicum:** N/A

Catalog Description:

In this clinical practicum, students rotate through the urinalysis and specimen collection departments, gaining hands-on experience in patient interaction, specimen collection, processing, and testing of urinalysis and other body fluids. Classroom knowledge is directly applied in the clinical setting.

Pre-requisites and/or Co-requisites:

- **Prerequisites:** Successful completion of MLT-111 Fundamentals of Laboratory Science and MLT-120 Urinalysis.
- **Corequisite:** None.

Textbook(s) Required:

- **Quick Review Cards** by Polansky, 2nd Edition, F.A. Davis. (ISBN: 978-0803629561)

Required Materials:

- Microsoft Surface Go or another personal device for assessments and assignment submission
- Internet access
- 3-ring binder (1.5 – 2-inch recommended)
- Calculator
- Face mask and face shield as required

Suggested Materials:

- Notebook, note cards, blank paper, and highlighters

Course Fees:

N/A

Institutional Outcomes:

- **Critical Thinking:** Ability to analyze, evaluate, synthesize, and apply information to reach a defensible conclusion.
 - **Effective Communication:** Transfer of information in a clear and understandable manner, with feedback expected.
 - **Personal Responsibility:** Consistently meeting or exceeding expectations.
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STEMM Department Outcomes:

- Apply science, technology, engineering, and mathematics to real-world contexts, connecting school, community, and work, to succeed in the current and future economy.
 - Develop the skills needed to be employable in the chosen career path.
 - Demonstrate competency in skills necessary to achieve educational goals.
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Program Outcomes:

1. Demonstrate entry-level knowledge and skills in modern clinical laboratory science.
 2. Collect and process biological specimens and perform analytical tests on body fluids, cells, and products.
 3. Monitor quality control by understanding laboratory statistics, recognizing affected results, and taking appropriate actions.
 4. Perform preventive and corrective maintenance on equipment or refer for repairs when necessary.
 5. Interact with laboratory and healthcare personnel with respect, recognizing their responsibilities in patient care.
 6. Relate laboratory findings to common disease processes.
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Student Learning Outcomes:

- Collect and handle specimens properly for testing.
 - Assess specimen quality and take corrective actions for inadequate samples.
 - Accurately log and label specimens.
 - Enter laboratory data and test results in the laboratory information system with precision.
 - Apply safe techniques when handling and disposing of infectious materials.
 - Exhibit professional conduct in all interactions.
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Clinical Rotation Objectives:**Urinalysis Rotation Objectives:**

- Describe the types of urine specimens and their diagnostic uses.
- Follow proper procedures for storing, labeling, and handling urine specimens.
- Explain various collection techniques for urine specimens.
- Demonstrate safe handling and disposal of infectious materials.
- Record and monitor quality control for urinalysis procedures and instruments.
- Understand daily maintenance routines and perform corrective actions as needed.

- Correlate urine color and clarity with substances that may indicate pathology.
- Explain the chemical principles used in reagent strips and interpret positive results.
- Differentiate between pathological and non-pathological formed elements in urinary sediment.
- Identify screening techniques used in urinalysis to detect metabolic disorders.
- Apply phlebotomy theory to proper blood specimen collection (both capillary and venous).

Phlebotomy Rotation Objectives:

- Properly identify patients before specimen collection.
- Choose the correct tube for testing.
- Select and use appropriate personal protective equipment (PPE).
- Perform venipuncture and dermal puncture safely.
- Dispose of biohazards properly.
- Transport specimens to the laboratory promptly.
- Correctly process and store specimens.

Affective Clinical Objectives:

- **Attendance and Punctuality:**
 - Arrive on time and begin work promptly.
 - Inform the instructor when leaving the area.
 - Stay late to complete assigned tasks when necessary.
 - Limit breaks to their allotted time.
- **Cooperation with Personnel:**
 - Maintain a professional and positive attitude.
 - Function well in a teacher/student setting.
 - Respect and understand cultural diversity.
 - Leave work areas clean and well-stocked.
 - Use reagents and supplies economically.
- **Professional Attitude and Ethical Responsibility:**
 - Stay alert and attentive, paying attention to detail.
 - Complete required assignments and find work when needed.
 - Show empathy and respect for patients of all ages and cultural backgrounds.
 - Take corrective actions to resolve errors and conflicts.
 - Handle specimens and materials with accuracy and care.
- **Response to Constructive Criticism:**
 - Respond positively to suggestions and constructive criticism.
 - Acknowledge errors and work to correct them.
- **Adaptability and Professionalism:**
 - Ask relevant questions and follow written procedures.
 - Demonstrate confidence after instruction.
 - Handle and maintain equipment properly.
 - Follow universal precautions and lab safety regulations.



Course Name: Clinical Practicum 1B
Course Number: MLT-???
Course Department: Career and Technical Education
Course Term: Summer 2026
Last Revised by Department: Fall 2024
Total Semester Hour(s) Credit: 3.0
Total Contact Hours per Semester:

Lecture: N/A Lab: N/A Clinical: 160 contact hours Internship/Practicum: N/A

Catalog Description: Students rotate through the blood bank and immunology departments of the lab, practicing testing, quality control, calibration, preventative maintenance, and corrective action. CLIA-waived and non-waived testing are performed in the immunology department. Manual and automated blood bank testing are included. Classroom knowledge is applied directly in clinical practicum.

Pre-requisites and/or Co-requisites:

- Prerequisites: Successful completion of MLT-171 Immunology & Serology

Textbook(s) Required:

Quick Review Cards by Polansky, F.A. Davis. 2nd Edition. (ISBN: 978-0803629561)

Access Code: N/A

Required Materials: Microsoft Surface Go or other personal device to be used for assessments and assignment submission, Internet access, 3-ring binder (1.5 – 2 inch is ideal), calculator, face mask and face shield as needed.

Suggested Materials: Notebook, note cards, blank paper, and highlighters.

Course Fees: N/A

Institutional Outcomes:

Critical Thinking: The ability to dissect a multitude of incoming information, sorting the pertinent from the irrelevant, in order to analyze, evaluate, synthesize, or apply the information to a defensible conclusion.

Effective Communication: Information, thoughts, feelings, attitudes, or beliefs transferred either verbally or nonverbally through a medium in which the intended meaning is clearly and correctly understood by the recipient with the expectation of feedback.

Personal Responsibility: Initiative to consistently meet or exceed stated expectations over time.

STEMM Department Outcomes:

- Students will apply science, technology, engineering, and mathematics in contexts that make connections between school, community, and work, enabling them to compete in the current and future economy.
- Students will possess the skills needed to be gainfully employed in their chosen career path.
- Students will demonstrate competency in the skills needed to satisfy their educational goals.

Program Outcomes:

1. Demonstrate entry level knowledge and skill in modern clinical laboratory science.
2. Collect and process biological specimens and perform analytical tests on body fluids, cells, and products.
3. Monitor quality control through understanding of basic laboratory statistics, recognize affected results, and take appropriate actions.
4. Perform preventive and corrective maintenance of equipment and instruments or refer to appropriate sources for repairs.
5. Recognize the responsibilities of other laboratory and health care personnel and interact with them with respect for their position and patient care.
6. Relate laboratory findings to common disease processes.

Student Learning Outcomes:

- Demonstrate knowledge of preanalytic, analytic, and post analytical phases of testing in the blood bank department.
- Perform compatibility testing for transfusion including ABO/Rh typing, antibody screening, identification, and selection of appropriate blood product.
- Analyze blood bank results using critical thinking skills to troubleshoot when needed.
- Perform quality control, calibration, preventative maintenance, and corrective action on automated blood bank analyzers if applicable.
- Demonstrate accurate record keeping and reporting.
- Apply safe techniques when handling and disposing of infectious materials.
- Exhibit professional conduct in all interactions.

At the end of the clinical rotation, the student should be able to:

Blood Bank/Immunology Rotation Student Clinical Objectives:

- Demonstrate performance of proper guidelines for collection, labeling and storage of blood specimens used in blood bank/immunology testing, and take necessary actions if specimens are unacceptable.
- Demonstrate performance of laboratory policies for record keeping and reporting, including reading and grading agglutination reactions and hemolysis.
- Perform antiglobulin testing including the direct and indirect antiglobulin test.
- Interpret antibody reactions in a reagent red blood cell panel.
- Identify compatible and incompatible crossmatch reactions and the necessary steps in the resolution of incompatibilities.
- Properly select group specific and nongroup specific blood when necessary.
- List indications and contraindications to transfusion with various blood components.
- Discuss preparation, use, labeling, storage temperature, and shelf life for the following components:
 - a. Whole blood
 - b. Red blood cells
 - c. Leukocyte-reduced red blood cells
 - d. Saline washed red blood cells
 - e. Frozen, thawed deglycerolized red blood cells
 - f. Fresh frozen plasma
 - g. Cryoprecipitate
 - h. Platelets
 - i. Granulocytes
- Recognize signs and symptoms of various types of transfusion reactions.
- State the steps that must be taken by the blood bank when a transfusion reaction is suspected.

- Perform antenatal and postnatal tests for detection and treatment of hemolytic disease of the newborn.
- Demonstrate proper procedures when receiving and shipping blood and blood components, issuing blood and blood components and preparing blood and blood components for infusion in adults and infants.
- Perform daily, weekly and quarterly quality control on reagents, and perform routine maintenance on blood bank equipment.
- Perform immunology and serology assays using a variety of techniques.
- Manage quality control for procedures and instruments in the immunohematology/immunology laboratory and know what corrective actions would need to be taken when established limits are exceeded.

Affective Clinical Objectives:

- Maintain a good attendance and punctuality record by:
 - Arriving on time
 - Beginning work promptly
 - Informing the instructor when leaving the area
 - Staying late when necessary to complete an assigned procedure
 - Limiting lunch/coffee breaks to their allotted time
- Cooperate with other personnel by:
 - Maintaining a pleasant, professional attitude
 - Functioning well in a teacher/student setting
 - Showing respect and understanding of cultural diversity
 - Leaving the work area clean and neat
 - Replenishing supplies and reagents
 - Using reagents and supplies with economic discretion
- Demonstrates a professional attitude and ethical responsibility by:
 - Being alert, attentive and paying attention to details
 - Completing the required assignment
 - Finding work to keep busy when instructor is unavailable
 - Showing empathy and respect for patients of all ages and cultural backgrounds
 - Taking appropriate actions to correct errors or resolve conflict.
 - Maintaining professional composure
 - Handling and labeling specimens and materials appropriately and with accuracy
- Utilizes constructive criticism by:
 - Responding to suggestions and constructive criticism in a positive manner
 - Admitting to errors/mistakes and take steps to correct future errors
- Maintain a professional appearance.
- Adapt to a changing environment by:
 - Asking relevant questions

- Following written procedures
- Showing consistent attention to detail
- Displaying confidence after instruction
- Handling equipment appropriately and performing proper maintenance
- Following universal precautions and lab safety regulations

CHAT GPT

Course Name: Clinical Practicum 1B

Course Number: MLT-???

Course Department: Career and Technical Education

Course Term: Summer 2026

Last Revised by Department: Fall 2024

Total Semester Hour(s) Credit: 3.0

Total Contact Hours per Semester:

- **Lecture:** N/A
- **Lab:** N/A
- **Clinical:** 160 contact hours
- **Internship/Practicum:** N/A

Catalog Description

This course provides students with hands-on experience through rotations in the blood bank and immunology departments of a clinical laboratory. Students will practice performing testing, quality control, calibration, preventive maintenance, and corrective actions. CLIA-waived and non-waived testing are conducted in the immunology department. Both manual and automated blood bank testing techniques will be covered. Classroom knowledge is directly applied in the clinical practicum setting.

Prerequisites and/or Co-requisites

- **Prerequisites:** Successful completion of MLT-171 Immunology & Serology

Required Textbook(s)

- *Quick Review Cards* by Polansky, F.A. Davis, 2nd Edition (ISBN: 978-0803629561)
- **Access Code:** N/A

Required Materials

- Microsoft Surface Go or other personal device for assessments and assignment submissions
- Internet access
- 3-ring binder (1.5 – 2 inches recommended)
- Calculator
- Face mask and face shield (as needed)

Suggested Materials

- Notebook, note cards, blank paper, highlighters

Course Fees

- N/A
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Institutional Outcomes

- **Critical Thinking:** Ability to analyze, evaluate, synthesize, and apply information to reach a defensible conclusion.
 - **Effective Communication:** Ability to clearly and accurately transfer information, thoughts, and beliefs, ensuring the intended meaning is understood by the recipient with feedback.
 - **Personal Responsibility:** Demonstrating initiative to meet or exceed expectations consistently over time.
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STEMM Department Outcomes

- Apply science, technology, engineering, and mathematics in ways that connect school, community, and work to remain competitive in the economy.
 - Possess the necessary skills for gainful employment in the chosen career path.
 - Demonstrate competency in skills required to meet educational and career goals.
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Program Outcomes

1. Demonstrate entry-level knowledge and skills in modern clinical laboratory science.
 2. Collect and process biological specimens and perform analytical tests on body fluids, cells, and products.
 3. Monitor quality control, recognize affected results, and take corrective actions based on an understanding of basic laboratory statistics.
 4. Perform preventive and corrective maintenance of laboratory equipment and instruments or refer to appropriate sources for repairs.
 5. Interact with other laboratory and health care personnel with respect and understanding of their roles in patient care.
 6. Relate laboratory findings to common disease processes.
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Student Learning Outcomes

- Demonstrate knowledge of the preanalytic, analytic, and postanalytic phases of testing in blood bank and immunology.
 - Perform compatibility testing for transfusion, including ABO/Rh typing, antibody screening, and blood product selection.
 - Analyze blood bank results using critical thinking skills and troubleshoot when necessary.
 - Perform quality control, calibration, preventive maintenance, and corrective action on automated blood bank analyzers (if applicable).
 - Maintain accurate records and reports.
 - Apply safe techniques in the handling and disposal of infectious materials.
 - Exhibit professional conduct in all interactions.
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Clinical Rotation Objectives

Blood Bank/Immunology Rotation

- Demonstrate correct collection, labeling, and storage techniques for blood specimens used in blood bank/immunology testing and take necessary actions if specimens are deemed unacceptable.
- Follow laboratory policies for record-keeping and reporting, including reading and grading agglutination reactions and hemolysis.
- Perform antiglobulin testing (direct and indirect).
- Interpret antibody reactions in a reagent red blood cell panel.
- Identify compatible and incompatible crossmatch reactions and resolve incompatibilities.
- Select appropriate blood products (group-specific and non-group-specific).
- List indications and contraindications for transfusion of various blood components.
- Discuss preparation, use, labeling, storage temperature, and shelf life for various blood components, such as whole blood, red blood cells, platelets, cryoprecipitate, and others.
- Recognize signs and symptoms of transfusion reactions and outline steps to take when a transfusion reaction is suspected.
- Perform antenatal and postnatal tests for hemolytic disease of the newborn.
- Demonstrate procedures for receiving and shipping blood and blood components, and preparing these components for infusion.
- Perform daily, weekly, and quarterly quality control on reagents, as well as routine maintenance on blood bank equipment.
- Perform immunology and serology assays using various techniques.
- Manage quality control for procedures and instruments in immunohematology/immunology, and know what corrective actions to take when limits are exceeded.

Affective Clinical Objectives

- **Attendance and Punctuality:**
 - Arrive on time and begin work promptly.
 - Inform the instructor when leaving the area and stay late when necessary.
 - Limit lunch/coffee breaks to allotted time.
- **Cooperation with Personnel:**
 - Maintain a pleasant, professional attitude.
 - Work well in a teacher/student setting.
 - Respect and understand cultural diversity.
 - Keep the work area clean, neat, and organized.
 - Use reagents and supplies efficiently.
- **Professionalism and Ethical Responsibility:**
 - Be alert, attentive, and detail-oriented.
 - Complete required assignments and seek additional work when needed.
 - Show empathy and respect for patients of all ages and cultural backgrounds.

- Take appropriate actions to correct errors or resolve conflicts.
- Maintain professional composure and appearance.
- Handle specimens and materials accurately.
- **Utilizing Constructive Criticism:**
 - Respond positively to suggestions and constructive feedback.
 - Acknowledge mistakes and take steps to avoid future errors.
- **Adaptability:**
 - Ask relevant questions and follow written procedures.
 - Display attention to detail and confidence after instruction.
 - Handle equipment properly and perform maintenance as needed.
 - Adhere to universal precautions and lab safety regulations.



Course Name: Clinical Practicum 2B
Course Number: MLT-???
Course Department: Career and Technical Education
Course Term: Fall 2026
Last Revised by Department: Fall 2024
Total Semester Hour(s) Credit: 3.0
Total Contact Hours per Semester:

Lecture: N/A Lab: N/A Clinical: 160 contact hours Internship/Practicum: N/A

Catalog Description: Students rotate through the microbiology department of the lab, practicing testing, quality control, calibration, preventative maintenance, and corrective action. CLIA-waived microbiology tests and gram stains are performed in the microbiology department. Manual and automated microbiology testing is included. Classroom knowledge is applied directly in clinical practicum.

Pre-requisites and/or Co-requisites:

- Prerequisites: Successful completion of BIO-186 Microbiology
- Corequisite: MLT-253 Parasitology & Mycology

Textbook(s) Required:

Quick Review Cards by Polansky. F.A. Davis. 2nd Edition. (ISBN: 978-0803629561)

Access Code: N/A

Required Materials: Microsoft Surface Go or other personal device to be used for assessments and assignment submission, Internet access, 3-ring binder (1.5 – 2 inch is ideal), calculator, face mask and face shield as needed.

Suggested Materials: Notebook, note cards, blank paper, and highlighters.

Course Fees: N/A

Institutional Outcomes:

Critical Thinking: The ability to dissect a multitude of incoming information, sorting the pertinent from the irrelevant, in order to analyze, evaluate, synthesize, or apply the information to a defensible conclusion.

Effective Communication: Information, thoughts, feelings, attitudes, or beliefs transferred either verbally or nonverbally through a medium in which the intended meaning is clearly and correctly understood by the recipient with the expectation of feedback.

Personal Responsibility: Initiative to consistently meet or exceed stated expectations over time.

STEMM Department Outcomes:

- Students will apply science, technology, engineering, and mathematics in contexts that make connections between school, community, and work, enabling them to compete in the current and future economy.
- Students will possess the skills needed to be gainfully employed in their chosen career path.
- Students will demonstrate competency in the skills needed to satisfy their educational goals.

Program Outcomes:

1. Demonstrate entry level knowledge and skill in modern clinical laboratory science.
2. Collect and process biological specimens and perform analytical tests on body fluids, cells, and products.
3. Monitor quality control through understanding of basic laboratory statistics, recognize affected results, and take appropriate actions.
4. Perform preventive and corrective maintenance of equipment and instruments or refer to appropriate sources for repairs.
5. Recognize the responsibilities of other laboratory and health care personnel and interact with them with respect for their position and patient care.
6. Relate laboratory findings to common disease processes.

Student Learning Outcomes:

- Demonstrate knowledge of preanalytic, analytic, and post analytical phases of testing in the microbiology department.
- Identify proper specimens and methods of collection for microbiology testing
- Explain quality control procedures for reagents, ID systems, media and equipment according to organisms and frequency of testing
- Perform and correctly interpret the results of microbiology tests.
- Demonstrate accurate record keeping and reporting.
- Apply safe techniques when handling and disposing of infectious materials.
- Exhibit professional conduct in all interactions.

At the end of the clinical rotation, the student should be able to:

Microbiology Rotation Student Clinical Objectives:

- A. Explain the proper collection, transport and identification of microbiology specimens.
- B. List the criteria for rejecting specimens and corrective action to avoid such specimens.
- C. Demonstrate performance of lab procedures for record keeping and reporting of significant results.
- D. Demonstrate safe technique for disposing of infectious material according to lab procedure.
- E. Explain the quality control procedures for reagents, ID systems, media and equipment according to organisms and frequency of testing; how to evaluate the results of the QC and what action should be taken when values are not within established limits.
- F. Perform and correctly interpret the results of staining procedures such as gram stain, acid fast stain, etc.
- G. Demonstrate the proper inoculation and isolation procedures according to media, temperature, and atmosphere for each type of specimen submitted for microbiological analysis.
- H. Recognize the colony characteristics of normal flora and pathogens from each type of body-site specimen submitted for analysis.
- I. Discuss what colony counts are significant in midstream clean catch vs. catheterized urine specimens from urology and non-urology patients.
- J. Identify significant isolates from specimens containing normal flora or skin contaminants and specimens from sterile areas using laboratory flowcharts and methodology.
- K. Perform antibiotic susceptibility testing on pure culture isolates.
- L. Report culture and sensitivity results to a licensed care provider.
- M. List the medically significant species of mycobacterium.
- N. List the media used in the isolation and cultivation of mycobacteria.

- O. Perform, interpret and explain the results of acid fast stains.
- P. Explain the methodology and perform the digestion and concentration procedures on mycobacterium cultures.
- Q. Classify the mycobacterium into Runyon groups according to growth rate and pigmentation.
- R. Identify and define the structures found on Kodachrome slides of yeast and molds.
- S. Describe, inoculate and interpret the media: SAB, mycoseal, cornmeal agar, potato dextrose agar and germ test tube medium.
- T. Explain, perform and properly interpret the following stains for fungi: Gram, India ink, KOH preparation and Lactophenol cotton blue.
- U. Describe the collection procedure, plating procedure and incubation of blood, urine, CSF, sputum and skin scrapings for culture.
- V. Discuss and perform a microscopic examination (when available) using a saline, iodine, trichrome and iron hematoxylin stain.
- W. Identify parasites from available clinical resources.

Affective Clinical Objectives:

- Maintain a good attendance and punctuality record by:
 - Arriving on time
 - Beginning work promptly
 - Informing the instructor when leaving the area
 - Staying late when necessary to complete an assigned procedure
 - Limiting lunch/coffee breaks to their allotted time
- Cooperate with other personnel by:
 - Maintaining a pleasant, professional attitude
 - Functioning well in a teacher/student setting
 - Showing respect and understanding of cultural diversity
 - Leaving the work area clean and neat
 - Replenishing supplies and reagents
 - Using reagents and supplies with economic discretion
- Demonstrates a professional attitude and ethical responsibility by:
 - Being alert, attentive and paying attention to details
 - Completing the required assignment
 - Finding work to keep busy when instructor is unavailable
 - Showing empathy and respect for patients of all ages and cultural backgrounds
 - Taking appropriate actions to correct errors or resolve conflict.
 - Maintaining professional composure
 - Handling and labeling specimens and materials appropriately and with accuracy
- Utilizes constructive criticism by:
 - Responding to suggestions and constructive criticism in a positive manner

- Admitting to errors/mistakes and take steps to correct future errors
- Maintain a professional appearance.
- Adapt to a changing environment by:
 - Asking relevant questions
 - Following written procedures
 - Showing consistent attention to detail
 - Displaying confidence after instruction
 - Handling equipment appropriately and performing proper maintenance
- Following universal precautions and lab safety regulations

Chat GPT

Course Name: Clinical Practicum 2B

Course Number: MLT-???

Course Department: Career and Technical Education

Course Term: Fall 2026

Last Revised by Department: Fall 2024

Total Semester Hour(s) Credit: 3.0

Total Contact Hours per Semester:

- **Lecture:** N/A
 - **Lab:** N/A
 - **Clinical:** 160 contact hours
 - **Internship/Practicum:** N/A
-

Catalog Description:

This clinical practicum provides students the opportunity to rotate through the microbiology department, focusing on practical skills such as testing, quality control, calibration, preventive maintenance, and corrective actions. Students will engage in both CLIA-waived microbiology tests and gram stains. Manual and automated microbiological testing will be incorporated, and classroom knowledge will be directly applied in the clinical setting.

Pre-requisites and/or Co-requisites:

- **Prerequisites:** Successful completion of BIO-186 Microbiology
 - **Corequisite:** MLT-253 Parasitology & Mycology
-

Textbook(s) Required:

- *Quick Review Cards* by Polansky, F.A. Davis, 2nd Edition. (ISBN: 978-0803629561)

Access Code: N/A

Required Materials:

- Microsoft Surface Go or a similar personal device for assessments and assignment submission
- Internet access
- 3-ring binder (1.5 – 2-inch is ideal)
- Calculator
- Face mask and face shield (as needed)

Suggested Materials:

- Notebook
 - Note cards
 - Blank paper
 - Highlighters
-

Course Fees: N/A

Institutional Outcomes:

- **Critical Thinking:** The ability to analyze, evaluate, synthesize, or apply information to arrive at defensible conclusions.
 - **Effective Communication:** The ability to transfer information, thoughts, and attitudes clearly and correctly through verbal or nonverbal mediums.
 - **Personal Responsibility:** Consistently meeting or exceeding expectations over time.
-

STEMM Department Outcomes:

- Apply science, technology, engineering, and mathematics in contexts that bridge school, community, and the workforce, preparing students to compete in the economy.
 - Possess the necessary skills to gain employment in their chosen field.
 - Demonstrate competency in skills required to achieve educational goals.
-

Program Outcomes:

1. Demonstrate entry-level knowledge and skills in modern clinical laboratory science.
 2. Collect and process biological specimens and perform analytical tests on body fluids, cells, and products.
 3. Monitor and evaluate quality control, recognize results discrepancies, and take appropriate corrective actions.
 4. Perform preventive and corrective maintenance on laboratory equipment or refer to proper sources for repairs.
 5. Work collaboratively with laboratory and healthcare personnel while maintaining respect for their roles and patient care.
 6. Relate laboratory findings to common disease processes.
-

Student Learning Outcomes:

- Demonstrate understanding of the pre-analytic, analytic, and post-analytic phases of microbiology testing.
 - Identify proper specimens and collection methods for microbiological testing.
 - Explain quality control procedures for reagents, ID systems, media, and equipment.
 - Perform and interpret microbiological tests accurately.
 - Demonstrate accurate record-keeping and reporting.
 - Apply safe techniques when handling and disposing of infectious materials.
 - Exhibit professional conduct in all clinical interactions.
-

Clinical Rotation Student Objectives:**Microbiology Rotation:**

- Properly collect, transport, and identify microbiology specimens.
- Identify criteria for rejecting specimens and take corrective actions.
- Record and report significant results accurately.
- Safely dispose of infectious materials following laboratory procedures.

- Evaluate quality control results for reagents, ID systems, media, and equipment; take corrective action when needed.
- Perform and interpret results from staining procedures (e.g., gram stain, acid-fast stain).
- Conduct proper inoculation and isolation procedures based on specimen type and media.
- Recognize colony characteristics of normal flora versus pathogens from different body-site specimens.
- Understand and apply proper methods for determining the significance of colony counts in urine specimens.
- Identify significant isolates from specimens containing normal flora, skin contaminants, or from sterile sites.
- Perform antibiotic susceptibility testing on isolates.
- Report culture and sensitivity results accurately to healthcare providers.
- List and recognize the medically significant species of mycobacterium.
- Perform and interpret acid-fast stains and related procedures for mycobacteria.
- Understand the classification of mycobacterium into Runyon groups based on growth rate and pigmentation.
- Perform and interpret fungal stains (e.g., Gram, India ink, KOH, Lactophenol cotton blue).
- Demonstrate proficiency in identifying and interpreting parasitic infections, using available clinical resources.

Affective Clinical Objectives:

- **Attendance and Punctuality:**
 - Arrive on time and begin work promptly.
 - Inform the instructor when leaving the work area.
 - Stay late if necessary to complete procedures.
 - Adhere to designated break times.
- **Cooperation:**
 - Maintain a positive, professional attitude.
 - Work well in a teacher-student environment.
 - Show respect and understanding of cultural diversity.
 - Keep the work area neat and replenish supplies as needed.
 - Use resources efficiently and economically.
- **Professional Conduct and Responsibility:**
 - Pay attention to details and complete all assignments.
 - Find tasks to stay busy during downtime.
 - Show empathy and respect for patients.
 - Handle errors responsibly and take corrective action.
 - Demonstrate professionalism in all interactions.
 - Maintain a professional appearance.
- **Adaptability:**
 - Ask relevant questions and follow written procedures.

- Show consistent attention to detail and confidence after instruction.
 - Handle equipment appropriately and perform maintenance as required.
- **Safety and Lab Regulations:**
 - Adhere to universal precautions and lab safety regulations.



Course Name: Clinical Practicum 2B
Course Number: MLT-???
Course Department: Career and Technical Education
Course Term: Fall 2026
Last Revised by Department: Fall 2024
Total Semester Hour(s) Credit: 3.0
Total Contact Hours per Semester:

Lecture: N/A Lab: N/A Clinical: 160 contact hours Internship/Practicum: N/A

Catalog Description: Students rotate through the microbiology department of the lab, practicing testing, quality control, calibration, preventative maintenance, and corrective action. CLIA-waived microbiology tests and gram stains are performed in the microbiology department. Manual and automated microbiology testing is included. Classroom knowledge is applied directly in clinical practicum.

Pre-requisites and/or Co-requisites:

- Prerequisites: Successful completion of BIO-186 Microbiology
- Corequisite: MLT-253 Parasitology & Mycology

Textbook(s) Required:

Quick Review Cards by Polansky, F.A. Davis. 2nd Edition. (ISBN: 978-0803629561)

Access Code: N/A

Required Materials: Microsoft Surface Go or other personal device to be used for assessments and assignment submission, Internet access, 3-ring binder (1.5 – 2 inch is ideal), calculator, face mask and face shield as needed.

Suggested Materials: Notebook, note cards, blank paper, and highlighters.

Course Fees: N/A

Institutional Outcomes:

Critical Thinking: The ability to dissect a multitude of incoming information, sorting the pertinent from the irrelevant, in order to analyze, evaluate, synthesize, or apply the information to a defensible conclusion.

Effective Communication: Information, thoughts, feelings, attitudes, or beliefs transferred either verbally or nonverbally through a medium in which the intended meaning is clearly and correctly understood by the recipient with the expectation of feedback.

Personal Responsibility: Initiative to consistently meet or exceed stated expectations over time.

STEMM Department Outcomes:

- Students will apply science, technology, engineering, and mathematics in contexts that make connections between school, community, and work, enabling them to compete in the current and future economy.
- Students will possess the skills needed to be gainfully employed in their chosen career path.
- Students will demonstrate competency in the skills needed to satisfy their educational goals.

Program Outcomes:

1. Demonstrate entry level knowledge and skill in modern clinical laboratory science.
2. Collect and process biological specimens and perform analytical tests on body fluids, cells, and products.
3. Monitor quality control through understanding of basic laboratory statistics, recognize affected results, and take appropriate actions.
4. Perform preventive and corrective maintenance of equipment and instruments or refer to appropriate sources for repairs.
5. Recognize the responsibilities of other laboratory and health care personnel and interact with them with respect for their position and patient care.
6. Relate laboratory findings to common disease processes.

Student Learning Outcomes:

- Demonstrate knowledge of preanalytic, analytic, and post analytical phases of testing in the microbiology department.
- Identify proper specimens and methods of collection for microbiology testing
- Explain quality control procedures for reagents, ID systems, media and equipment according to organisms and frequency of testing
- Perform and correctly interpret the results of microbiology tests.
- Demonstrate accurate record keeping and reporting.
- Apply safe techniques when handling and disposing of infectious materials.
- Exhibit professional conduct in all interactions.

At the end of the clinical rotation, the student should be able to:

Microbiology Rotation Student Clinical Objectives:

- A. Explain the proper collection, transport and identification of microbiology specimens.
- B. List the criteria for rejecting specimens and corrective action to avoid such specimens.
- C. Demonstrate performance of lab procedures for record keeping and reporting of significant results.
- D. Demonstrate safe technique for disposing of infectious material according to lab procedure.
- E. Explain the quality control procedures for reagents, ID systems, media and equipment according to organisms and frequency of testing; how to evaluate the results of the QC and what action should be taken when values are not within established limits.
- F. Perform and correctly interpret the results of staining procedures such as gram stain, acid fast stain, etc.
- G. Demonstrate the proper inoculation and isolation procedures according to media, temperature, and atmosphere for each type of specimen submitted for microbiological analysis.
- H. Recognize the colony characteristics of normal flora and pathogens from each type of body-site specimen submitted for analysis.
- I. Discuss what colony counts are significant in midstream clean catch vs. catheterized urine specimens from urology and non-urology patients.
- J. Identify significant isolates from specimens containing normal flora or skin contaminants and specimens from sterile areas using laboratory flowcharts and methodology.
- K. Perform antibiotic susceptibility testing on pure culture isolates.
- L. Report culture and sensitivity results to a licensed care provider.
- M. List the medically significant species of mycobacterium.
- N. List the media used in the isolation and cultivation of mycobacteria.

- O. Perform, interpret and explain the results of acid fast stains.
- P. Explain the methodology and perform the digestion and concentration procedures on mycobacterium cultures.
- Q. Classify the mycobacterium into Runyon groups according to growth rate and pigmentation.
- R. Identify and define the structures found on Kodachrome slides of yeast and molds.
- S. Describe, inoculate and interpret the media: SAB, mycoseal, cornmeal agar, potato dextrose agar and germ test tube medium.
- T. Explain, perform and properly interpret the following stains for fungi: Gram, India ink, KOH preparation and Lactophenol cotton blue.
- U. Describe the collection procedure, plating procedure and incubation of blood, urine, CSF, sputum and skin scrapings for culture.
- V. Discuss and perform a microscopic examination (when available) using a saline, iodine, trichrome and iron hematoxylin stain.
- W. Identify parasites from available clinical resources.

Affective Clinical Objectives:

- Maintain a good attendance and punctuality record by:
 - Arriving on time
 - Beginning work promptly
 - Informing the instructor when leaving the area
 - Staying late when necessary to complete an assigned procedure
 - Limiting lunch/coffee breaks to their allotted time
- Cooperate with other personnel by:
 - Maintaining a pleasant, professional attitude
 - Functioning well in a teacher/student setting
 - Showing respect and understanding of cultural diversity
 - Leaving the work area clean and neat
 - Replenishing supplies and reagents
 - Using reagents and supplies with economic discretion
- Demonstrates a professional attitude and ethical responsibility by:
 - Being alert, attentive and paying attention to details
 - Completing the required assignment
 - Finding work to keep busy when instructor is unavailable
 - Showing empathy and respect for patients of all ages and cultural backgrounds
 - Taking appropriate actions to correct errors or resolve conflict.
 - Maintaining professional composure
 - Handling and labeling specimens and materials appropriately and with accuracy
- Utilizes constructive criticism by:
 - Responding to suggestions and constructive criticism in a positive manner

- Admitting to errors/mistakes and take steps to correct future errors
- Maintain a professional appearance.
- Adapt to a changing environment by:
 - Asking relevant questions
 - Following written procedures
 - Showing consistent attention to detail
 - Displaying confidence after instruction
 - Handling equipment appropriately and performing proper maintenance
- Following universal precautions and lab safety regulations

Chat GPT

Course Name: Clinical Practicum 2B

Course Number: MLT-???

Course Department: Career and Technical Education

Course Term: Fall 2026

Last Revised by Department: Fall 2024

Total Semester Hour(s) Credit: 3.0

Total Contact Hours per Semester:

- **Lecture:** N/A
 - **Lab:** N/A
 - **Clinical:** 160 contact hours
 - **Internship/Practicum:** N/A
-

Catalog Description:

This clinical practicum provides students the opportunity to rotate through the microbiology department, focusing on practical skills such as testing, quality control, calibration, preventive maintenance, and corrective actions. Students will engage in both CLIA-waived microbiology tests and gram stains. Manual and automated microbiological testing will be incorporated, and classroom knowledge will be directly applied in the clinical setting.

Pre-requisites and/or Co-requisites:

- **Prerequisites:** Successful completion of BIO-186 Microbiology
 - **Corequisite:** MLT-253 Parasitology & Mycology
-

Textbook(s) Required:

- *Quick Review Cards* by Polansky, F.A. Davis, 2nd Edition. (ISBN: 978-0803629561)

Access Code: N/A

Required Materials:

- Microsoft Surface Go or a similar personal device for assessments and assignment submission
- Internet access
- 3-ring binder (1.5 – 2-inch is ideal)
- Calculator
- Face mask and face shield (as needed)

Suggested Materials:

- Notebook
 - Note cards
 - Blank paper
 - Highlighters
-

Course Fees: N/A

Institutional Outcomes:

- **Critical Thinking:** The ability to analyze, evaluate, synthesize, or apply information to arrive at defensible conclusions.
 - **Effective Communication:** The ability to transfer information, thoughts, and attitudes clearly and correctly through verbal or nonverbal mediums.
 - **Personal Responsibility:** Consistently meeting or exceeding expectations over time.
-

STEMM Department Outcomes:

- Apply science, technology, engineering, and mathematics in contexts that bridge school, community, and the workforce, preparing students to compete in the economy.
 - Possess the necessary skills to gain employment in their chosen field.
 - Demonstrate competency in skills required to achieve educational goals.
-

Program Outcomes:

1. Demonstrate entry-level knowledge and skills in modern clinical laboratory science.
 2. Collect and process biological specimens and perform analytical tests on body fluids, cells, and products.
 3. Monitor and evaluate quality control, recognize results discrepancies, and take appropriate corrective actions.
 4. Perform preventive and corrective maintenance on laboratory equipment or refer to proper sources for repairs.
 5. Work collaboratively with laboratory and healthcare personnel while maintaining respect for their roles and patient care.
 6. Relate laboratory findings to common disease processes.
-

Student Learning Outcomes:

- Demonstrate understanding of the pre-analytic, analytic, and post-analytic phases of microbiology testing.
 - Identify proper specimens and collection methods for microbiological testing.
 - Explain quality control procedures for reagents, ID systems, media, and equipment.
 - Perform and interpret microbiological tests accurately.
 - Demonstrate accurate record-keeping and reporting.
 - Apply safe techniques when handling and disposing of infectious materials.
 - Exhibit professional conduct in all clinical interactions.
-

Clinical Rotation Student Objectives:

Microbiology Rotation:

- Properly collect, transport, and identify microbiology specimens.
- Identify criteria for rejecting specimens and take corrective actions.
- Record and report significant results accurately.
- Safely dispose of infectious materials following laboratory procedures.

- Evaluate quality control results for reagents, ID systems, media, and equipment; take corrective action when needed.
- Perform and interpret results from staining procedures (e.g., gram stain, acid-fast stain).
- Conduct proper inoculation and isolation procedures based on specimen type and media.
- Recognize colony characteristics of normal flora versus pathogens from different body-site specimens.
- Understand and apply proper methods for determining the significance of colony counts in urine specimens.
- Identify significant isolates from specimens containing normal flora, skin contaminants, or from sterile sites.
- Perform antibiotic susceptibility testing on isolates.
- Report culture and sensitivity results accurately to healthcare providers.
- List and recognize the medically significant species of mycobacterium.
- Perform and interpret acid-fast stains and related procedures for mycobacteria.
- Understand the classification of mycobacterium into Runyon groups based on growth rate and pigmentation.
- Perform and interpret fungal stains (e.g., Gram, India ink, KOH, Lactophenol cotton blue).
- Demonstrate proficiency in identifying and interpreting parasitic infections, using available clinical resources.

Affective Clinical Objectives:

- **Attendance and Punctuality:**
 - Arrive on time and begin work promptly.
 - Inform the instructor when leaving the work area.
 - Stay late if necessary to complete procedures.
 - Adhere to designated break times.
- **Cooperation:**
 - Maintain a positive, professional attitude.
 - Work well in a teacher-student environment.
 - Show respect and understanding of cultural diversity.
 - Keep the work area neat and replenish supplies as needed.
 - Use resources efficiently and economically.
- **Professional Conduct and Responsibility:**
 - Pay attention to details and complete all assignments.
 - Find tasks to stay busy during downtime.
 - Show empathy and respect for patients.
 - Handle errors responsibly and take corrective action.
 - Demonstrate professionalism in all interactions.
 - Maintain a professional appearance.
- **Adaptability:**
 - Ask relevant questions and follow written procedures.

- Show consistent attention to detail and confidence after instruction.
 - Handle equipment appropriately and perform maintenance as required.
- **Safety and Lab Regulations:**
 - Adhere to universal precautions and lab safety regulations.

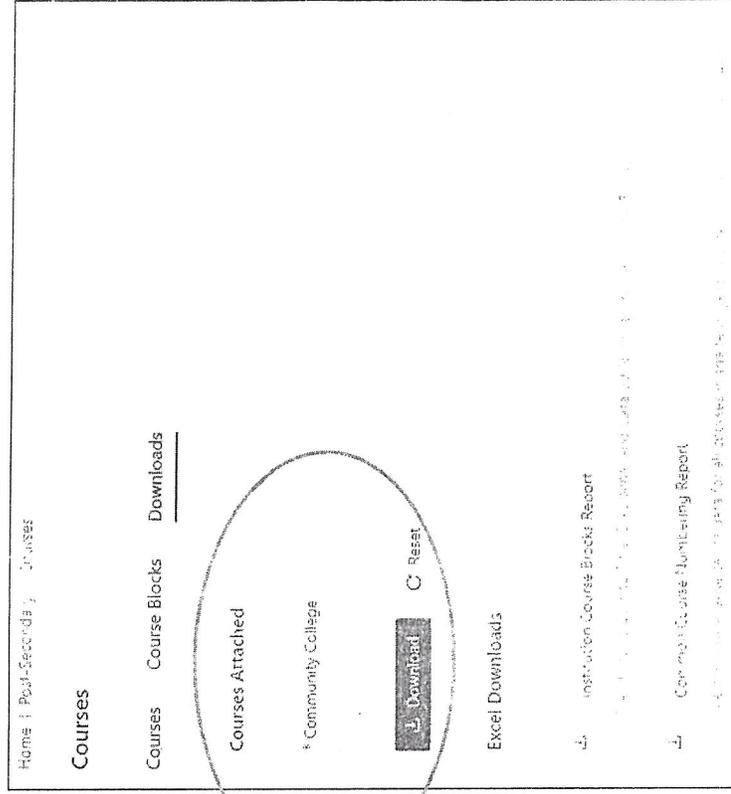
Curriculum Meeting

WBL Courses - New WBL Definition

- **WBL100 through WBL109 - Exploring Careers**
 - 14 community colleges are offering these courses
 - Replace with:
 - SDV130 - Career Exploration
 - SDV131 - Career Exploration
 - Another SDV course
- **WBL110 - Employability Skills**
 - 14 community colleges are offering this course
 - Replace with:
 - SDV125 - Workplace Readiness
 - SDV135 - Job Seeking Skills
 - Another SDV course
 - Create a new employability skills SDV course
- **WBL150 through WBL159 - Job Shadowing**
 - 10 community colleges are offering these courses
 - Replace with:
 - SDV143 - Career Exploration II
 - Another SDV course
 - Create a new job shadowing SDV course

No - not offered

To see which programs have these WBL courses, download the Courses Attached report in STICS.



Career and Technical Education
2024FA Curriculum Changes
INDUSTRIAL TECHNOLOGY DEPARTMENT
JUSTIN'S DEPARTMENT

Welding DIPLOMA

ADD: WEL XXX Intro to Welding Blueprint Reading 2 credits
WEL XXX GMAW Lab 2 credits

DROP: WEL 316 Pipe Welding II 2 credits
MFG 256 Intro to Lathe 2 credits
WEL 214 Advanced Fabrication 2 credits

DEGREE CREDITS: Drops from 34 to 32 credits

WELDING DIPLOMA									
First Semester		Credits				Contact Hours			
	Course Number and Name	TTL	LEC	LAB	INTERN	TTL	LEC	LAB	INTER
	WEL 107 Welding Technology Fundamentals	2	1	1	0	45	15	30	0
	WEL 298 Thermal Cutting and Welding	1	0.5	0.5	0	22.5	7.5	15	0
NEW	Intro to Welding Blueprint Reading	2	2	0	0	30	30	0	0
	WEL 181 Intro to GMAW	2	1	1	0	45	15	30	0
NEW	GMAW Lab	2	0	2	0	60	0	60	0
	WEL 170 Intro to SMAW	2	1	1	0	45	15	30	0
	WEL 190 Intro to GTAW	2	1	1	0	45	15	30	0
	WEL 213 Fab. Layout	2	1	1	0	45	15	30	0
	TOTALS	15	7.5	7.5	0	337.5	112.5	225	0
Second Semester		Credits				Contact Hours			
	Course Number and Name	TTL	LEC	LAB	INTERN	TTL	LEC	LAB	INTER
	WEL 196 Adv. GTAW	2	1	1	0	45	15	30	0
	WEL 214 Adv. Fab. Layout	2	1	1	0	45	15	30	0
	WEL 178 Adv. GMAW	2	1	1	0	45	15	30	0
	WEL 171 Adv. SMAW	2	1	1	0	45	15	30	0
	MAT 743 Tech Math	3	3	0	0	45	45	0	0
	MFG 266 Intro to Mill	2	1	1	0	45	15	30	0
	WEL 110 Welding Bluprint Reading	2	2	0	0	30	30	0	0
	WEL 301 Pipe Welding	2	1	1	0	45	15	30	0
	TOTALS	17	11	6	0	165	105	60	0
PROGRAM TOTALS		32	18.5	13.5	0	502.5	217.5	285	0

WEL XXX Gas Metal Arc Welding Laboratory

Course Description:

This course is used in conjunction with the Gas Metal Arc Welding (WEL-181) course, to become more proficient in the welding field. Students will practice the theory and safe operations of gas metal arc welding equipment through repetition of welds and increase the arc welding time necessary to complete the welding lab. Students will also employ different techniques for a variety of different materials. This course will help students refine their critical thinking skills in the shop as they develop their hands-on welding techniques, which will benefit the student in future welding careers.

Course Objectives

- A. The student will be acquainted with the GMAW welding machine and operation.
- B. The student will be familiar with welding on aluminum.
- C. The student will be familiar with welding on Stainless Steel.
- D. The student will be familiar with welding on with the Flux Core Welding Operation.
- E. Employ the proper use and maintenance of hand tools.
- F. Identify the correct setting for different types of metal transfers
- G. Identify the correct Work and Travel angles for different types of joints.
- H. Identify the correct direction of travel for different types of materials.

WEL XXX Intro to Welding Blueprint Reading

Course Description:

This course is one of a two-semester sequence. This course will prepare the student with the basic understanding of blueprint knowledge and skills needed for an entry-level welding position. Where students will become capable of understanding and communicating symbol representations that are used in the welding trades. Students in this course will gain literacy in print terminology which is a skill that is beneficial in many technical careers in the welding industry. The course will also help students refine their critical thinking skills through in-class labs that provide hands-on activities that help explain the lecture material. This course will also help students make life decisions by understanding technical drawings.

Course Objectives

- A. Read and interpret machine and welding drawings.
- B. The ability to identify different types of line types associated with the welding industry.
- C. Select dimensions and amount of information required to produce a product acceptable to industry standards.
- D. The ability to determine the steps necessary to build a product associated with the welding industry.
- E. Design a working sketch using symbolic information and projection techniques to convey information.
- F. Identify the symbols, dimensions, and line types associated with the welding industry.

G. The ability to select the amount of information required to produce a product acceptable to welding standards.

BUSINESS DEPARTMENT

NEALE'S DEPARTMENT

Fire Science

ADD: BIO 168 Human Anatomy and Physiology 4 credits
 HSC 113 Medical Terminology 2 credits

DROP: FIR 180 Chemistry of Hazardous Materials 3 credits
 FIR 124 Legal Aspects of Emergency Services 3 credits
 WBL 100 Exploring Careers 1 credits

DEGREE CREDITS: Drops from 61.5 to 60.5 credit

FIRE SCIENCE AAS

First Semester		Credits				Contact Hours			
Course Number and Name	TTL	LEC	LAB	INTERN	TTL	LEC	LAB	INTER	
FIR 127 Fire Behavior and Combustion	3	3	0	0	45	45	0	0	
FIR 170 Fundamentals of Firefighting I	6	3	3	0	135	45	90	0	
FIR 213 Principles of Emergency Services	3	3		0	45	45	0	0	
BIO 168 Human Anatomy and Physiology	4	3	1	0	75	45	30	0	
TOTALS	16	12	4	0	300	180	120	0	
Second Semester		Credits				Contact Hours			
Course Number and Name	TTL	LEC	LAB	INTERN	TTL	LEC	LAB	INTER	
FIR 154 Fundamentals of Firefighting II	4.5	3	1.5	0	90	45	45	0	
EMS 200 Emergency Medical Technician	8	7	0.5	0.5	150	105	15	30	
HSC 113 Medical Terminology	2	2	0	0	30	30	0	0	
TOTALS	14.5	12	2	0.5	270	180	60	30	
Third Semester		Credits				Contact Hours			
Course Number and Name	TTL	LEC	LAB	INTERN	TTL	LEC	LAB	INTER	
FIR 124 Building Construction	3	3	0	0	45	45	0	0	
FIR 156 Fundamentals of Firefighting III	3	0	3	0	90	0	90	0	
FIR 221 Fire Prevention	3	3	0	0	45	45	0	0	
FIR 161 Math for Firefighters or Math Elective	3	3	0	0	45	45	0	0	
General Education Elective	3	3	0	0	45	45	0	0	
TOTALS	15	12	3	0	270	180	90	0	
Fourth Semester		Credits				Contact Hours			
Course Number and Name	TTL	LEC	LAB	INTERN	TTL	LEC	LAB	INTER	
FIR 152 Fire Protection Systems	3	3	0	0	45	45	0	0	
FIR 159 Fundamentals of Firefighting IV	3	0	3	0	90	0	90	0	
FIR 400 Fire & Emergency Svcs Safety & Survi	3	3	0	0	45	45	0	0	
PSY 111 Introduction to Psychology	3	3	0	0	45	45	0	0	
Communication Elective	3	3	0	0	45	45	0	0	
TOTALS	15	12	3	0	270	180	90	0	
AAA TOTALS	60.5	48	12	0.5	1110	720	360	30	

Digital Arts AAA

ADD:	EDU 111	Technology for Creativity and Collaboration	3 credits
	PHT 230	Advanced Portraiture	3 credits
	PHT 254	Business of Photography	3 credits
	ANI 105	Intro to Animation	3 credits
	PHT 200	Professional Practices and File Management	3 credits (NEW CLASS)
	MMS 111	Video Production 1	3 credits
	PHT 201	Professional Certifications in Digital Arts	3 credits (NEW CLASS)
	ART 945	Digital Arts Capstone	3 credits (NEW CLASS)
		Communications Elective	3 credits
			27 credits
DROP:	SMM 170	Social Media Campaigns	3 credits
	WBL 100	Exploring Careers	1 credit
	MMS 172	Video Production	2 credits
	MUS 332	Intro to Music Technology	3 credits or
	MKT 131	Socia Media Marketing	
	GRA 176	Layout Design I	3 credits
	MMS 171	Audio Production	2 credits
	BUS 130	Intro to Entrepreneurship	3 credits
	CAD 315	Computational Design	2 credits or
	CSC 110	Intro to Computers	
	CIS 299	Word Press	3 credits
	PSY 111	Intro to Psychology	3 credits
	SPC 122	Interpersonal Communication	3 credits
			28 credits

DEGREE CREDITS: Increases from 60 to 61 credits

DIGITAL ARTS AAA / PHOTOGRAPHY DIPLOMA

First Semester		Credits				Contact Hours			
	Course Number and Name	TTL	LEC	LAB	INTERN	TTL	LEC	LAB	INTER
	EDU 111 Technology for Creativity and Collabor	3	3	0	0	45	45	0	0
	ART 184 Photography	3	2	1	0	60	30	30	0
	CIS 265 Photoshop I	3	3	0	0	45	45	0	0
	ART 120 2D Design	3	2	1	0	60	30	30	0
	BUS 112 Business Math	3	3	0	0	45	45	0	0
	WBL 107 Exploring Careers	1	1	0	0	15	15	0	0
	TOTALS	16	14	2	0	270	210	60	0
Second Semester		Credits				Contact Hours			
	Course Number and Name	TTL	LEC	LAB	INTERN	TTL	LEC	LAB	INTER
	ART 115 Graphic Design	3	2	1	0	60	30	30	0
	PHT 230 Advanced Portaiture OR	3	2	1	0	60	30	30	0
	SMM 170 Social Media Campaigns								
	PHT 233 Commerical Photography	3	1	2	0	75	15	60	0
	PHT 106 Intro to Image Editing	3	3	0	0	45	45	0	0
	Communications Elective	3	3		0	45	45	0	0
	TOTALS	15	11	4	0	45	45	0	0
	DIPLOMA TOTALS	31	25	6	0	315	255	60	0
Third Semester		Credits				Contact Hours			
	Course Number and Name	TTL	LEC	LAB	INTERN	TTL	LEC	LAB	INTER
	CIS 352 Video Editing	3	3	0	0	45	45	0	0
	PHT 254 Business of Photography OR	3	3	0	0	45	45	0	0
	BUS 130 Intro to Entrepreneurship								
	ANI 105 Intro to Animation	3	1	2	0	75	15	60	0
	CIS 254 Basic Multimedia Design	2	1	1	0	45	15	30	0
NEW	PHT 200 Professional Practices and File Manag	3	3	0	0	45	45	0	0
	MKT 131 Social Media Marketing								
	WBL 147 Workplace Project Based Learning	2	0	0	2	120	0	0	120
	TOTALS	16	11	3	2	375	165	90	120
Fourth Semester		Credits				Contact Hours			
	Course Number and Name	TTL	LEC	LAB	INTERN	TTL	LEC	LAB	INTER
	MMS 111 Video Production	3	1	2	0	75	15	60	0
NEW	PHT 201 Professional Certifications in Digital ,	3	3	0	0	45	45	0	0
	CAD 260 Algorithmic Design OR	2	2	0	0	30	30	0	0
	MMS 171 Audio Productions								
NEW	ART 945 Digital Arts Capstone OR	3	2	1	0	60	30	30	0
	GRA 176 Layout Design								
	ART 116 Graphic Design II	3	2	1	0	60	30	30	0
	TOTALS	14	10	4	0	60	30	30	0
	AAA TOTALS	61	46	13	2	750	450	180	120

New Courses – Descriptions and Outcomes

ART 945 Digital Arts Capstone

Course Description:

The Digital Arts Capstone is the culminating course for students in the Digital Arts program, designed to integrate and showcase the skills and knowledge acquired throughout their studies. Students will focus on creating a professional portfolio that reflects their expertise in digital design, photography, video, and interactive media. Emphasis will be placed on refining personal branding, honing their unique creative style and process, preparing for employment opportunities, and producing polished work that aligns with industry standards.

In this course, students will complete real-world projects, participate in portfolio reviews with industry professionals, and receive constructive feedback to enhance their creative and technical abilities. Students will also have the opportunity to deeply explore and articulate their individual artistic vision, ensuring their portfolio authentically represents their strengths and personal style. The capstone includes a portfolio day event where students present their work to potential employers and collaborators.

By the end of the course, students will have a comprehensive, professional portfolio and the confidence to transition into the competitive digital arts industry, ready to pursue roles such as graphic designers, photographers, videographers, and more. This course ensures graduates are equipped to achieve their career goals and thrive as creative professionals.

Course Objectives for Digital Arts Capstone

1. Develop a Professional Portfolio

Create a comprehensive portfolio showcasing expertise in digital design, photography, video, and interactive media, ensuring alignment with industry standards and personal career goals.

2. Refine Personal Branding

Establish a polished personal brand that effectively communicates individual strengths, style, and professional identity, incorporating feedback from peers and industry professionals.

3. Demonstrate Real-World Project Competence

Complete real-world projects that highlight technical and creative skills, showcasing the ability to meet client needs and industry expectations in diverse digital arts disciplines.

4. Prepare for Industry Engagement

Participate in portfolio reviews and a portfolio day event, presenting work to potential employers and collaborators with confidence, professionalism, and effective communication skills.

PHT 201 Professional Certifications in Digital Arts

Course Description:

This course prepares students to earn industry-recognized certifications that validate their skills in digital arts and enhance their professional credentials. Focusing on software mastery and technical expertise, students will gain hands-on experience with industry-standard tools, such as Adobe Creative Cloud applications, while building a portfolio of work that demonstrates their proficiency. The curriculum emphasizes the certification process, including test preparation, practical applications of software tools, and strategies for meeting industry requirements. Students will work through real-world scenarios to develop the confidence and competence needed to apply their skills in professional settings.

By the end of the course, students will have obtained valuable certifications and/or micro-credentials, elevating their resumes and better positioning them for competitive roles in graphic design, photography, video production, and other digital arts careers. This course ensures students are equipped to meet the demands of today's rapidly evolving creative industries.

Course Objectives for Professional Certifications in Digital Arts

1. Master Industry-Standard Software

Develop advanced skills in Adobe Creative Cloud applications and other digital tools, preparing for certification exams and showcasing technical proficiency in the Digital Arts.

2. Earn Industry-Recognized Certifications

Successfully obtain certifications and/or micro-credentials that validate expertise in digital arts software, enhancing professional credentials and career opportunities.

3. Apply Knowledge to Real-World Scenarios

Complete projects and exercises that simulate industry scenarios, demonstrating the ability to solve practical challenges and produce professional-quality work.

4. Build a Certification-Ready Portfolio

Create a portfolio of work that not only reflects software mastery but also aligns with industry standards, showcasing creativity and technical expertise to potential employers

PHT 200 Professional Practices and File Management

Course Description:

This course is designed to prepare students for professional success in the digital arts and photography industries by focusing on essential practices and efficient file management techniques. Students will learn how to organize, save, and share digital assets across various platforms, ensuring consistency and professionalism in their work. The course emphasizes industry-standard workflows for graphic design, photography, and video production, equipping students with the tools to meet real-world business and creative demands.

Topics include file preparation for print and digital media, maintaining organized project archives, and managing collaborative workflows. Students will also explore best practices in client communication, project documentation, and integrating branding and marketing strategies into their work.

By the end of the course, students will have developed the technical and professional expertise to manage complex projects, deliver high-quality results, and navigate the fast-paced demands of the digital arts industry with confidence.

Course Objectives for Professional Practices and File Management

1. Master File Organization and Management

Develop proficiency in organizing, saving, and archiving digital assets using industry-standard practices to ensure consistency, accessibility, and efficient workflows across various platforms.

2. Prepare and Deliver Digital Assets

Learn to prepare files for both print and digital media by adhering to professional standards in resolution, color profiles, and file formats, ensuring high-quality deliverables for clients and collaborators.

3. Enhance Client and Team Communication

Cultivate effective communication strategies for client interactions, project documentation, and team collaboration, integrating professional etiquette and clear documentation into creative processes.

4. Integrate Branding and Marketing Strategies

Apply branding and marketing principles to digital projects, aligning visual assets with business goals while maintaining professionalism in presentation and delivery

Digital Media Productions AAS

DROP: WBL 107 Exploring Careers 1 credit

DEGREE CREDITS: Drops from 63 to 62 credits

Photography AAS

Program will be cancelled after graduating current students during 2025-26 academic year.

Business AAS

BUS 161 - Human Relations

Student Learning Outcomes and Objectives:

1. Understand Core Human Relations Skills
 - a. Develop a personal philosophy of human relations by identifying, practicing, and evaluating strategies to improve interpersonal behavior, organizational performance, and overall workplace happiness.
2. Analyze and Apply Personality and Stress Management Theories
 - a. Explain the relationship between personality traits, stress management, and workplace effectiveness, and apply strategies to manage stress and improve personal performance.
3. Exhibit Ethical and Value-Based Decision-Making
 - a. Articulate ethical principles and demonstrate the ability to resolve conflicts and dilemmas through informed and culturally competent decision-making processes.
4. Communicate Effectively Across Organizational Levels
 - a. Demonstrate effective communication strategies that enhance collaboration and leadership within diverse teams, including feedback, emotional regulation, and conflict resolution.
5. Develop Leadership and Motivation Strategies
 - a. Apply leadership theories and motivation techniques to foster trust, enhance performance, and achieve organizational goals.
6. Evaluate Organizational Dynamics and Diversity Practices
 - a. Assess the impact of organizational culture, diversity, and inclusion on human relations and decision-making and propose solutions to enhance equity and team performance in global settings.
7. Integrate Networking and Negotiation Skills
 - a. Master networking, negotiations, and relationship-building steps to manage professional interactions and effectively achieve workplace objectives.

BUS 114 - Workplace Communications

Student Learning Outcomes and Objectives:

1. Develop Effective Communication Skills

- a. Students can craft professional written and oral messages tailored to specific audiences, purposes, and contexts.
2. Apply Business Writing Principles
 - a. Students will use planning, drafting, revising, and proofreading strategies to create clear, concise, and impactful business documents.
3. Utilize Nonverbal and Visual Communication
 - a. Students will integrate nonverbal cues and visual aids effectively to enhance the clarity and impact of their messages.
4. Demonstrate Interpersonal Communication Skills
 - a. Students will exhibit active listening, empathy, and collaboration in diverse professional settings.
5. Adapt Communication for Multicultural and Global Audiences
 - a. Students will assess and adapt their communication styles to respect cultural diversity and international business contexts.
6. Deliver Effective Presentations
 - a. Students will prepare and deliver professional presentations with confidence, organization, and appropriate use of technology.
7. Respond to Organizational Challenges
 - a. Students will create communication strategies to address negative news, crises, and conflict in professional environments.
8. Engage in Career Communication
 - a. Students will create compelling résumés, cover letters, and interview responses that align with their professional goals.

Computer Programming Languages Certificate

Current Program of Study

First Semester

- CSC-142 – Computer Science (4 credit hours)
- CIS-189 – Python (3 credit hours)

Second Semester

- CSC-153 – Data Structures (4 credit hours)
- CIS-172 – Java (4 credit hours)

Third Semester

- CIS-198 – JavaScript (3 credit hours)
- CIS-332 – DataBases (3 credit hours)

Proposed Program of Study

First Semester

- CSC-142 – Computer Science (4 credit hours)
- CIS-189 – Python (3 credit hours)
- MAT-127 – College Algebra & Trigonometry (5 credit hours)
- SPC-112 – Public Speaking (3 credit hours)

Total for Semester = 15 credit hours

Second Semester

- CSC-153 – Data Structures (4 credit hours)
- CIS-332 - DataBases (3 credit hours)
- CSC-160 – Software Design & Development (4 credit hours)
- MAT-150 – Discrete Math (3 credit hours)

Total for Semester = 14 credit hours

Veterinary Technician Program

Curriculum Changes for 2025-2026

The following classes have been proposed to be removed from the curriculum:

AGS113 Survey of the Animal Industries
BIO112- Intro to Biology/General Biology as a pre-requisite
AGV 160 Anesthesia/Surgical Assistance
CHM 112 Intro to Chemistry
AGS 319 Animal Nutrition
AGS 242 Animal Health
WBL 201 Practicum
AGV 148 Small Animal Care

The following courses were proposed to be added to the curriculum:

AGV 121 Veterinary Medical Terminology
AGV 216 Avian, Exotics, and Small Mammals
AGV 267 Dosage Calculations
AGV 161 Animal Nursing I
AGV 134 Clinical Pathology II
AGV 162 Animal Nursing II
AGV 170 Veterinary Anesthesiology
AGV 185 Veterinary Surgical Assisting
AGV 239 VTNE Review and Preparation

The reasoning behind these changes are to better prepare students for success in veterinary medicine and best prepare them for their board examinations. The current schedule does not meet the CVTEA education standards. These courses need to be implemented for both freshman and sophomore students beginning Fall 2025. The order of the existing courses have changed and are attached. The sophomore students will have a slightly modified schedule to include AGV235 and AGV146 as required by the board. These changes were recommended, reviewed, and approved by the advisory board.

The sophomore schedule next fall will be similar to:

Fall Sophomores (2025):

AGV 162 Animal Nursing II

AGV 170 Veterinary Anesthesiology

CSC 110 Intro to Computers

AGV 235 Clinical Pathology and Microbiology

AGV 146 Large Animal Care

Spring Sophomores (2026):

AGV 182 Diagnostic Imaging

AGV 185 Veterinary Surgical Assisting

AGV 239 VTNE Review

AGV 134 Clinical Pathology II

Psychology or Science Elective

CURRENT

Veterinary Technician Program of Study					
		Credits	Contact Hours		
First Semester		Hours	LEC	LAB	WBL
AGS 113	Survey of the Animal Industry	3	45	0	0
AGV 103	Introduction to Veterinary Science	3	30	30	0
AGV 104	Vet Tech Anatomy & Physiology I	3	30	30	0
WBL 101	Exploring Careers: Agriculture, Food, and Natural Resources	1	15	0	0
BIO 105	Introductory Biology (1)	4	45	30	0
OR BIO 112 /113	General Biology I /General Biology II (1)				
	TOTALS:	14	210	120	0
		Credits	Contact Hours		
Second Semester		Hours	LEC	LAB	WBL
AGV 108	Vet Tech Anatomy & Physiology II	3	30	30	0
AGV 140	Veterinary Pharmacology	3	45	0	0
AGV 148	Small Animal Care	3	30	30	0
SPC 122	Interpersonal Communications (1,4)	3	30	0	0
AGV 158	Veterinary Law and Ethics	3	45	0	0
	TOTALS:	15	180	60	0
		Credits	Contact Hours		
Summer Semester 1		Hours	LEC	LAB	WBL
WBL 201	Internship: Agriculture, Food, and Natural Resources	3	0	0	180

Veterinary Technician Program of Study					
		Credits	Contact Hours		
Third Semester		Hours	LEC	LAB	WBL
AGS 160	Anesthesia/Surgical Assistance	4	45	30	0
AGV 146	Large Animal Care	3	30	30	0
CHM 112	Intro to Chemistry (1)	4	45	30	0
OR CHM 165	General Chemistry I				
AGS 319	Animal Nutrition	3	45	0	0
	TOTALS:	14	165	90	0
		Credits	Contact Hours		
Fourth Semester		Hours	LEC	LAB	WBL
AGV 182	Diagnostic Imaging	3	30	30	0
AGS 242	Animal Health	3	45	0	0
BLK 008	Soc Sci/Humanities (1,4)	3	45	0	0
AGV 235	Clinical Pathology and Microbiology	4	45	30	0
	TOTALS:	13	165	60	0
		Credits	Contact Hours		
Summer Semester 2		Hours	LEC	LAB	WBL
WBL 301	Internship: Agriculture, Food, and Natural Resources	3	0	0	180
	TOTALS:	3	0	0	180
	PROGRAM TOTALS:	60	720	330	360

¹ Required general education course.

⁴ May be substituted with a course from the same category on the General Education Course List.

Proposed

Veterinary Technician

First Semester

Courses taken Term 1 of the Veterinary Technician Program

AGV 121 Veterinary Medical Terminology	
AGV 103 Introduction to Veterinary Science	
AGV 104 Veterinary Anatomy and Physiology	
AGV 216 Avian, Exotics, and Small Mammals	
WBL 101 Exploring Careers: Agriculture, Food, and Natural Resources	1-3
AGV 267 Dosage Calculations	

Second Semester

Courses taken Term 2 of the Veterinary Technician Program

AGV 108 Veterinary Anatomy and Physiology II	
AGV 146 Large Animal Care	
AGV 161 Animal Nursing I	
AGV 235 Clinical Pathology and Microbiology	
SPC 101 Fundamentals of Oral Communication	3

Summer Session

Courses for term 3 (summer) of the veterinary technician program

WBL 301 Internship: Agriculture, Food, and Natural Resources	1-5
[Before] Humanities Elective	3

Third Semester

Courses for Term 4 of the Veterinary Technician Program

AGV 134 Clinical Pathology II	
AGV 140 Veterinary Pharmacology	
AGV 162 Animal Nursing II	
AGV 170 Veterinary Anesthesiology	
CSC 110 Introduction to Computers	3

Fourth Semester

Courses for term 5 of the Veterinary Technician Program

AGV 158 Veterinary Law and Ethics	
AGV 182 Diagnostic Imaging	
AGV 185 Veterinary Surgical Assisting	
AGV 239 VTNE Review and Preparation	
[Before] Psychology or Science Elective	3-4