

2023

Student Handbook



Bachelor of Science in Medical Laboratory Science

Division of Clinical Laboratory
Science | Vera Z. Dwyer
College of Health Sciences

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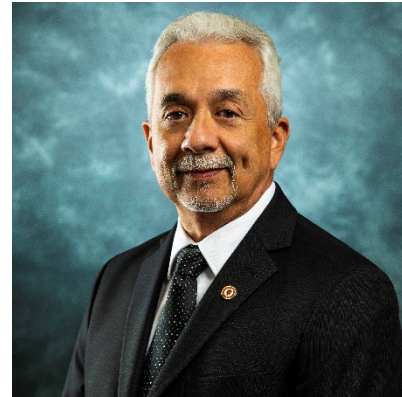
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Welcome from the Vera Z. Dwyer College of Health Sciences Dean

Welcome!

It is an honor to welcome you to the Medical Laboratory Sciences program in the Dwyer College of Health Sciences as you enter the health professions. Today marks a new beginning with new challenges and opportunities; make today the beginning of a path to a better you!

Graduates of our program serve the Michiana region, the rest of Indiana, the Midwest, and beyond. The Medical Laboratory Sciences program is establishing itself as a prime program graduating first rate professionals. A strong indication that you are surrounded by people who care about you is the fact that some of our faculty members are alumni of this program. You have the opportunity to reach your full potential with your daily investment in coursework and clinical practices together with our commitment to working with you. Each day may bring new challenges that will help you grow; make each day count!



As you progress in the program, you will make new friends while developing into a new health professional. We are confident you will always serve the community and your clients in a professional, respectful, and ethical manner.

We hope that you will find a lot of useful information in this handbook and that it answers most of your questions. Additionally, we encourage you to reach out to the faculty in the program and other individuals across campus if you need further support and/or resources.

Welcome again and congratulations on becoming part of the Medical Laboratory Sciences program and the Titan family at IU South Bend.

Jesús García-Martínez, MD, MSc, PhD, FASAHP
Dean, Vera Z. Dwyer College of Health Sciences
Professor of Health and Rehabilitation Sciences
Indiana University South Bend

Chapter 1: The Medical Laboratory Science Program

Introduction

Welcome to the Bachelor of Science in Medical Laboratory Science program at Indiana University South Bend. The Medical Laboratory Science program is part of the School of Applied Health Sciences, within the Vera Z. Dwyer College of Health Sciences. We are pleased that you have chosen to pursue your education in laboratory diagnostics with us! The faculty and staff of the Medical Laboratory Science program look forward to working with you and wish you much success in the pursuit of your educational goals.

To help you successfully achieve your goals we have created this handbook of program policies and procedures. This handbook has been constructed as a supplement to the Indiana University Code of Students Rights, Responsibilities, and Conduct and serves to bridge the overriding policies of the University with the policies of the Bachelor of Science in Medical Laboratory Science program. The policies and procedures outlined in this handbook are here to support your successful progress through the Medical Laboratory Science program. Students are responsible for all information in this handbook and should become familiar with its content. This handbook should serve as a resource during your time in the Medical Laboratory Science program. Please note that where the policy of a School/Program is more restrictive than those of the University, students are held to the more restrictive policy.

A copy of Indiana University Code of Student Rights, Responsibilities, and Conduct is provided to each student upon acceptance to the University. It may also be located at the [Indiana University Code of Student Rights, Responsibilities, and Conduct](#) webpage.

The Medical Laboratory Profession

The Medical Laboratory Scientist (MLS), also known as a Clinical Laboratory Scientist, is an integral member of the patient care team by providing diagnostic information required to identify and treat the cause of illness in patients. Formerly known as a Medical Technologist, the MLS has an aptitude for science, especially biology and chemistry, and appreciates the investigative and technical aspects of laboratory medicine. Laboratory professionals are devoted to detection and diagnosis through the analysis of blood, body fluids, and tissue. An MLS will perform hundreds of laboratory tests, for which the results are used by physicians to diagnose disease, identify the most appropriate medication and dosage, and monitor the response to treatment.

In a laboratory, a Medical Laboratory Scientist may work in a variety of areas including clinical chemistry, hematology, immunology, microbiology, and the blood bank. In clinical chemistry, tests are often performed on blood and other body fluids to determine the patient's levels of various enzymes, proteins, and hormones. Variation in these analytes is diagnostic of disease such as diabetes, cardiac abnormalities, and even organ failure. In hematology, blood is examined for indicators of inflammation and infection, as well as cancers such as lymphoma and leukemia. Blood is also tested for its ability or inability to clot appropriately, referred to as hemostasis. Diagnostic testing in immunology is often centered on infectious diseases, through the identification of the infecting agent or antibodies produced in the presence of such agent. The antibodies involved in autoimmune diseases, such as lupus and arthritis, are also identified in immunology. In microbiology, body fluids, tissues, and other biological specimens are examined and tested to identify microorganisms causing disease and determine effective treatment options. Microbiology testing examines bacterial, viral, fungal, and parasitic agents causing disease in humans. The blood bank may be one of the most critical areas for the health of a patient. Not only does the blood bank perform simple tests, such as determining a patient's blood type, the blood bank is also responsible for transfusion medicine, ensuring blood given to a patient is compatible and will not cause harm.

While the focus of the Bachelor of Science in Medical Laboratory Science program is the knowledge and skills needed to successfully work as a Medical Laboratory Scientist in a hospital or reference laboratory, there are a variety of career options available to individuals holding a Bachelor of Science in Medical Laboratory Science. Such aspirations include, but are not limited to, infection control, epidemiology, research, biotechnology, forensics, informatics, healthcare industry, healthcare administration, and professional services. Laboratory professionals may also seek advanced degrees, such as a Master of Science in Clinical/Medical Laboratory Science, clinical doctorate in Clinical Laboratory Science (DCLS), or even attend medical school.

The Division of Clinical Laboratory Science

The Division of Clinical Laboratory Science has been developed in accordance with the mission, vision, and values of Indiana University, Indiana University South Bend, and the Vera Z. Dwyer College of Health Sciences. In addition, the Bachelor of Science in Medical Laboratory Sciences was designed to meet the standards set by the National Accrediting Agency for Clinical Laboratory Science (NAACLS).

The Division of Clinical Laboratory Science at Indiana University South Bend offers students multiple routes by which to obtain a Bachelor of Science in Medical Laboratory Science. Students entering the professional phase of the program do so as a cohort that begins every spring semester.

- Students may enroll at Indiana University South Bend as a freshman, complete five semesters of courses described in the [degree map](#), and enter the professional phase of the program for their last three semesters.

- Students may transfer into Indiana University South Bend, complete any remaining pre-requisite courses that are required, then enter the professional phase of the program with the next cohort of students.
- Individuals holding a bachelor's degree in biology, chemistry, or a related science may seek admission directly into the professional phase of the program. Upon review of previous degree transcripts by the Program Director, and completion of any identified pre-requisite courses, the student will enter the professional phase of the program with the next cohort of students.
- Individuals holding an Associate of Science in Medical Laboratory Technician may apply to Indiana University South Bend as a MLT to CLS degree completion student.

Regardless of the route of entry that a student takes, all students will earn a Bachelor of Science in Medical Laboratory Science upon completion of all required coursework.

Philosophy of the Division of Clinical Laboratory Science

The faculty and staff of the Division of Clinical Laboratory Science believe that laboratory professionals are an integral member of the healthcare team, providing critical information for the accurate diagnosis, treatment, and monitoring the health of society. The curriculum is built upon the belief that authentic and active learning experiences are the most beneficial for students to apply their knowledge as effective laboratory professionals. Courses are designed to mirror didactic content with the ability to provide students with in-house, hands-on practical application in a student laboratory space that allows for practice and repetition.

The Division of Clinical Laboratory Science also recognizes the importance of partnering with regional laboratories for students to gain authentic learning in a clinical laboratory setting. Students complete clinical rotations, focusing on departments individually, to experience the day-to-day activities of a Medical Laboratory Scientist. Although not guaranteed, the Division of Clinical Laboratory Science strives to place students in clinical rotation experiences that will offer employment after graduation and supply professionals into the clinical laboratory community.

Division of Clinical Laboratory Science Mission Statement

The Division of Clinical Laboratory Science within the Vera Z. Dwyer College of Health Sciences is committed to educating healthcare professionals with skills in clinical, diagnostic, and therapeutic laboratory operations. The Division focuses on developing authentic and collaborative education experience that are diverse and inclusive to support interprofessional practice and encourages life-long learning.

Bachelor of Science in Medical Laboratory Science Mission Statement

The Bachelor of Science in Medical Laboratory Science strives for educational excellence in the field of laboratory medicine through engaging students with active

and authentic learning experiences while embracing diversity with a curriculum designed to promote intellectual growth, scholarship and creative activities for faculty and students, innovation in laboratory techniques, and continuing education. Graduates with a Bachelor of Science in Clinical Laboratory Science will increase the vitality of the economy as important members of the healthcare community.

Bachelor of Science in Medical Laboratory Science Vision Statement

The Bachelor of Science in Medical Laboratory Science program seeks to be recognized as the best source for well-educated Medical Laboratory Scientists in the community.

Division of Clinical Laboratory Science Faculty and Staff

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Division of Clinical Laboratory Science Advisory Board

Members of the regional laboratory science community and affiliated community health organizations contribute to the Indiana University South Bend Clinical Laboratory Science Advisory Board. The purpose of this advisory board is to connect the Clinical Laboratory Science faculty, staff, and students at Indiana University South Bend with valuable individuals and companies throughout the community. The charge of the advisory board is to provide input into the curriculum and to determine if the curriculum is relevant to the needs of the laboratory community and effective at producing medical laboratory professionals. This board meets at least annually at the Indiana University South Bend campus.

Current members include:

- Gina Arsenault, MS, MLS(ASCP), Laboratory Director, Memorial Hospital
- Michelle BonDurant, MT(ASCP) SBB^{CM}, Laboratory Director, Elkhart General Hospital
- Shareen Lee, Associate Director of Operations, LabCorp
- Leah Powell, MT(AMT), Laboratory Supervisor, Community Hospital of Bremen
- Susan Richeson, MJ, BSMT(ASCP), Administrative Director, St. Joseph Regional Medical Center – Mishawaka and Plymouth
- Jamie Starbuck, MBA, BS, M(ASCP), Spectrum Lakeland Health
- Jennifer Ulrich, MT(ASCP)^{CM}, Blood Bank Lead, La Porte Hospital
- Mary F. Youngs, MPA, MT(ASCP), Blood Bank Manager, South Bend Medical Foundation

NAACLS Accreditation

The Bachelor of Science in Medical Laboratory Science at Indiana University South Bend is an accredited Medical Laboratory Science training program proscribed by the National Accrediting Agency of Clinical Laboratory Science (NAACLS).

For more information on the NAACLS accreditation process please visit the [NAACLS webpage](#).

National Accrediting Agency for Clinical Laboratory Sciences (NAACLS)
5600 N. River Road, Suite 720
Rosemont, IL, 60018

Medical Laboratory Scientist Certification

Receipt of a Bachelor of Science in Medical Laboratory Science is not contingent upon students taking and/or passing any certification or licensure examination. However, graduates of this program are eligible and encouraged to take the Medical Laboratory Scientist certification examination given by the American Society of Clinical Pathology (ASCP) Board of Certification (BOC) through route 1. Upon passing this examination, individuals become nationally certified as a Medical Laboratory Scientist, MLS(ASCP)^{CM}.

Alternatively, graduates are eligible to take the Medical Laboratory Scientist certification examination given by American Medical Technology (AMT). Upon passing this examination, individuals become certified as a Medical Laboratory Scientist, MLS(AMT).

State Licensure Requirements

Some states require Medical Laboratory Scientists to be licensed in that state to work in medical or clinical laboratories. Indiana does not license Medical Laboratory Scientists. The Medical Laboratory Science program at Indiana University South Bend satisfies requirements for certification by the American Society for Clinical Pathology Board of Certification (ASCP BOC) and complies with the standards of accreditation established by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), but may not satisfy the licensing requirements for some states. In particular, our program may not satisfy the requirement for clinical training set by the states of New York and California. Students who intend on moving to a state that has licensure after completion of this program are encouraged to check with the requirements for state licensure and communicate with the Program Director before starting the program to make sure that the Indiana University South Bend curriculum will satisfy the requirements for licensure in that state.

Medical Laboratory Science Teaching Facilities

The Medical Laboratory Science program at Indiana University South Bend is housed in Vera Z. Dwyer Hall on the Indiana University South Bend campus. Dwyer Hall was remodeled in 2018 for the purpose of housing the Indiana University South Bend Student Health and Wellness Center, the offices of the federally qualified community health partner HealthLinc, and the academic programs in Medical Laboratory Science and Radiography. The radiography program has since relocated to another space on campus. The Medical Laboratory Science Program utilizes a dedicated classroom and student laboratory space that includes numerous instruments, equipment, and supplies to support hands-on learning of diagnostic techniques and methods.

Clinical Affiliation Facilities

Students enrolled in the Bachelor of Science in Medical Laboratory Science program attend clinical externship rotations prior to graduation for active learning, hands-on experiences. Clinical affiliation agreements are in place with the following clinical facilities.

Memorial Hospital 615 N. Michigan Street South Bend, IN 46601 Gina Arsenault, MS, MLS(ASCP)	St. Joseph Regional Medical Center 5215 Holy Cross Parkway Mishawaka, IN 46545 Susan Richeson, MJ, BSMT(ASCP)
Elkhart General Hospital 600 East Boulevard Elkhart, IN 46514 Michelle BonDurant, MT(ASCP) SBB ^{CM}	St. Joseph Regional Medical Center 1915 Lake Avenue Plymouth, IN 46563 Susan Richeson, MJ, BSMT(ASCP)
Community Hospital of Bremen 1020 High Road Bremen, IN 46506 Leah Powell, MT(AMT)	LabCorp 3575 Moreau Court South Bend, IN 46628 Lynette Smith,
Beacon Medical Group 900 I Street La Porte, IN 46350 Cheryl Sacks, MLS(ASCP)	Logansport Memorial Hospital 1101 Michigan Avenue Logansport, IN 46947 Julee Looker, MLS(ASCP), CHTS-PW
South Bend Medical Foundation 530 N. Lafayette Boulevard South Bend, IN 46601 Joyce Peterson-Miller, MT(ASCP)	Northwest Health – La Porte 1331 State Street La Porte, IN 46350 Jennifer Ulrich, MT(ASCP) ^{CM}
Spectrum Lakeland Health 1234 Napier Avenue St. Joseph, MI 49085 Jamie Starbuck, MBA, BS, M(ASCP)	South Bend Clinic 1945 Lincolnway East South Bend, IN 46615 Everett Barker, BS, MT(ASCP)
Dukes Memorial Hospital 275 W. 12 th Street Peru, IN 46970 Jordan Phillips, HT(ASCP)	Woodlawn Hospital 1400 E 9 th Street Rochester, IN 46975 Emily Schouten, MS, MLS(ASCP) ^{CM}

Kosciusko Community Hospital 2101 E. Dubois Drive Warsaw, IN 46580 Pam Arvesen, BS, MT(ASCP)	
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Chapter 2: Program Admission and Progression

Application Process

Students seeking admission to the Bachelor of Science in Medical Laboratory Science program should first apply and be accepted into Indiana University South Bend. Resources for applying to Indiana University South Bend may be found on the [Admissions webpage](#). There are multiple routes in which a student may seek admission into the Bachelor of Science in Medical Laboratory Science program. The route taken is dependent on the academic experience of the applicant.

Traditional Medical Laboratory Science Students

A “traditional” Medical Laboratory Science student is defined as one who will complete the professional phase of the Medical Laboratory Science program in the cohort model. This includes all students except for the MLT to CLS Degree Completion Students described following this section.

Students may enroll as a traditional Medical Laboratory Science student from a variety of experiences and backgrounds. Beginning the 2023-2024 academic year, individuals seeking acceptance into the Bachelor of Science in Medical Laboratory Science program will submit a formal application for admission. Student cohorts for the professional program begin every January (spring semester).

- Students who begin their education at Indiana University South Bend as freshmen, coded as a pre-Clinical Laboratory Science student, will complete all pre-requisite courses as described in the Medical Laboratory Science degree map. The student will be advised by the Vera Z. Dwyer College of Health Sciences Student Success Center during completion of these courses to ensure the student stays on target for completion. The semester prior to enrollment into the professional program, the student will submit a formal application for admission, as described in the application process.
- Students who have completed some courses at another institution, include other Indiana University campuses, will seek admission into Indiana University South Bend as a transfer student, declaring pre-Clinical Laboratory Science as their major. The student will be advised by the Vera Z. Dwyer College of Health Sciences Student Success Center to ensure completion of all pre-requisite courses required in the Medical Laboratory Science degree map. The semester prior to enrollment into the professional program, the student will submit a formal application for admission, as described in the application process.
- Individuals who hold a Bachelor of Science in Biology, Chemistry, or a related science may seek admission directly into the professional program. The individual should apply to Indiana University South Bend as a second-degree student,

declaring pre-Clinical Laboratory Science as their intended major. The individual will submit a formal application for admission, as described in the application process and request transcripts for all previous degrees submitted to Indiana University South Bend. After transcripts from previously received degrees are received into the institution, the Program Director will review the application to determine if the individual has completed all requirements for admission. If all requirements are completed, the individual's application will be assessed with all other student applications for admission. In the event additional classes are required prior to entry, the individual may reapply for admission with the next cohort.

- Individuals holding a bachelor's degree in another field may seek admission into the program. The individual should apply to Indiana University South Bend as a second-degree student, declaring pre-Clinical Laboratory Science as their intended major. The individual will submit a formal application for admission, as described in the application process and request transcripts for all previous degrees submitted to Indiana University South Bend. After transcripts from previously received degrees are received into the institution, the Program Director will review the application to determine any additional courses that must be taken prior to entry. This may include completion of multiple science courses if the previous degree is not from a science discipline. If all requirements are completed, the individual's application will be assessed with all other student applications for admission. In the event additional classes are required prior to entry, the individual may reapply for admission with the next cohort.

MLT to CLS Degree Completion Students

Individuals who hold an Associate of Science as Medical Laboratory Technicians and want to obtain a Bachelor of Science in Medical Laboratory Science may seek admission to the program through the MLT to CLS Degree Completion track. This track offers direct admission that occurs on a rolling basis once Medical Laboratory Technician designation is confirmed. The student will be advised by the Vera Z. Dwyer College of Health Sciences Student Success Center and the Medical Laboratory Science Program Director while completing required courses. For additional description of curriculum requirements, see the MLT to CLS Degree Curriculum section found in Chapter 4 of this handbook.

Institutional Fees

Students enrolled in the Bachelor of Science in Medical Laboratory Science degree program pay tuition rates established by Indiana University South Bend and reported on the [Tuition and Fees website](#). The structure of the traditional Medical Laboratory Science curriculum allows students the opportunity to take advantage of the campus wide banded tuition established for undergraduate course credit hour fees. Students enrolled in the MLT to CLS degree completion track have the ability to utilize the banded tuition, if the minimum number of credit hours are taken.

In addition to standard credit hour tuition fees, students may be assessed fees as prescribed by the institution, laboratory fees, practicum fees, and additional technology fees for hybrid and online courses. Fee rates are subject to change each academic year at the discretion of the university.

Essential Functions

Essential functions are the physical, intellectual, and behavioral requirements that a student must be able to demonstrate to successfully participate in the Bachelor of Science in Medical Laboratory Science program and become an effective employee. In compliance with the National Accrediting Agency for Clinical Laboratory Science (NAACLS), the essential functions for the Indian University South Bend Medical Laboratory Science program are defined here. Prospective students who are not sure they will be able to perform these essential functions should consult with the Medical Laboratory Science Program Director or Vera Z. Dwyer College of Health Sciences Student Success Center to discuss individual situations and receive further guidance

Visual and Perceptual Skills

A student in the Medical Laboratory Science program must possess sufficient visual skills to perform and interpret laboratory assays and receive non-verbal communication appropriately. Examples of visual skills include the ability to:

- Read calibration lines on pipettes and laboratory instruments that are one millimeter apart
- Characterize the color, clarity, and viscosity of biological specimens, reagents, or chemical reaction end products
- Discriminate color, shading, and fine structural differences of microscopic specimens using a clinical grade binocular microscope
- Read and interpret charts, graphs, and labels in print and video monitor
- Judge distance and depth accurately
- Have visual acuity corrected to 20/40 or better with the ability to accommodate at a distance of 10-20 feet

Motor, Physical Ability, Coordination, and Dexterity Skills

A student in the Medical Laboratory Science program must possess adequate motor skills to perform a variety of laboratory assays. Examples of manipulative skills include the ability to:

- Turn dials, press keypads, and move switches on laboratory instruments
- Grasp and release small objects (specimen tubes, pipette tips, pipettes, reagent vials, inoculating loops, etc.)
- Manipulate objects precisely and perform assays that require fine or gross motor skills using good hand-eye physical coordination, such as pipetting, measuring, and aliquoting liquids
- Safety handle flammable and hazardous chemicals, electrical, and infectious biological materials

- Perform precisely orchestrated procedures, such as isolating bacteria in microbiology by smoothly moving an inoculation loop over the surface of an agar culture plate without tearing the surface of the agar
- Utilize a computer keyboard and mouse to operate laboratory instruments and verify and transmit data
- Lift and move objects weighing 20 pounds
- Have normal tactile feeling that is sensitivity to heat, cold, pain, pressure, etc.
- Effectively and safely move from one location to another in such areas as clinical laboratories, patient rooms, treatment rooms, and elevators

Intellectual and Critical Thinking Skills

A student in the Medical Laboratory Science program must possess a range of intellectual skills that allows for mastery of a broad and complex body of knowledge that constitutes a medical laboratory science education. Examples of intellectual skills include the ability to:

- Read and comprehend written material
- Use critical thinking skills necessary for sufficient clinical judgment
- Follow directions and procedures accurately and completely
- Define problems, measure, calculate, analyze data, and implement solutions
- Use math to solve equations, convert units, and perform statistical analysis
- Exercise independent judgement
- Organize workspace and workflow
- Recognize potentially hazardous materials, equipment, or situations, and respond safely in order to minimize risk of injury to patients, coworkers, and self
- Communicate clearly in English (both orally and in writing) in a professional and tactful manner with patients, laboratory personnel, and other healthcare and non-healthcare coworkers
- Compare, analyze, accept criticism, and alter performance if necessary

Emotional Stability and Personal Temperament

A student in the Medical Laboratory Science program must possess sufficient emotional health to fully utilize intellectual ability, to exercise good judgment, to complete clinical responsibilities promptly, and to relate to patients, instructors, and colleagues with courtesy, and respect. Appropriate professional conduct includes the ability to:

- Fulfill commitments and be accountable for actions
- Demonstrate self-direct, self-correct, and responsibility for one's own learning and professional development
- Work both independently and collaboratively as a professional team member
- Make decisions, prioritize tasks, and work on multiple tasks simultaneously
- Be honest and forthright about error or uncertainty
- Maintain professional decorum and composure under the stress of didactic and clinical demands
- Show respect for cultural diversity in the classroom and clinical setting

- Exercise ethical judgement, integrity, honesty, dependability, patient confidentiality, and adhere to the academic and professional code of ethics
- Use sound judgement and decorum when in laboratory and work environment

Program Progression

Students will progress through the three semesters of the professional program as a cohort, completing all courses in a pre-determined order. During progression, students will be advised by faculty in the Division of Clinical Laboratory Science. While we hope to see all students complete the Bachelor of Science in Medical Laboratory Science program in the expected three semesters, we recognize that there are events that may prevent that from occurring. The following information available to assist students navigate their academic career in the event that unforeseen circumstances arise.

Withdrawal from Courses

Students enrolled in the Bachelor of Science in Medical Laboratory Science are expected to complete all coursework as part of their cohort class. However, circumstances may occur in which the student cannot complete the course(s), such as a medical emergency or other unexpected crisis. In these situations, the Program Director will work with the student directly to determine a plan of action for course and program completion, as courses cannot be offered outside of their normal structure or sequence, and this may interfere with the student's graduation date. All communications and planning will be forwarded to the Assistant Dean of Student Success for permanent placement in the student file.

In any situation that a student wishes to withdrawal from courses, they must adhere to the [Indiana University South Bend Withdrawal Requirements](#). Students are encouraged to speak with the Medical Laboratory Science Program Director prior to withdrawing from any courses.

Academic Leave of Absence

Students who wish to take an extended academic leave of absence should speak with the Medical Laboratory Science Program Director before doing so. Taking an academic leave of absence will impact the student's expected graduation date and may impact their ability to reenroll in the program courses upon returning.

Notifications of Opportunities for Improvement

Students enrolled in the Bachelor of Science in Medical Laboratory Science program are followed academically by faculty. As students progress through courses and the curriculum, there may be opportunities for success that are identified. In these instances, the faculty will adhere to the Opportunities for Success Documentation Policy (Appendix A).

In accordance with this policy, the student will be issued an alert form when a faculty member or clinical preceptor identifies an area in which improvement is needed. The alert form may be for didactic and laboratory courses (Appendix B) or clinical externship (Appendix C). When an alert form is issued, the student will meet with the

faculty (for class specific alerts) or the Program Director (for externship alerts) to discuss how the needed improvement will occur. At the end of the semester, or during described times of the semester, the issuer of the alert form will meet with the student and Program Director to determine if the requirements were met. Multiple alert forms for a course or evidence of no improvement will result in the creation of a success plan and possible grade reduction. Success plans may be developed at the course level (Appendix D) or program level (Appendix E). The initiation of a course level or program level success plan will place the student on academic probation. If a student does not successfully complete a plan of success, this may lead to dismissal from the program. All documents and plans will be forwarded to the Assistant Dean of Student Success for permanent placement in the student file.

Dismissal from the Medical Laboratory Science program

The dismissal of a student from the Medical Laboratory Science program will be initiated by the Program Director and reviewed by the School of Applied Health Sciences (SAHS) Council. The reason for dismissal from the program may be academic, behavioral, or regulatory. Students who wish to appeal a dismissal decision, they must submit the appeal request in writing to the Program Director and Assistant Dean of Student Success within five business days of notification of the decision, in accordance with DCHS policy AS-05-C. If a recommendation cannot be made, the student may appeal to the Dean of the College of Health Sciences.

Reinstatement to the Medical Laboratory Science Program

Students seeking reinstatement to the Medical Laboratory Science program must follow requirements outlined in the Student Reinstatement to the Medical Laboratory Science Program policy (Appendix F). Students must first be reinstated to Indiana University South Bend and the Vera Z. Dwyer College of Health Sciences, if dismissed from the University. Students who take a leave of absence do not need to apply with the University if they are in good academic standing. All reinstatement requests will be reviewed by the School of Applied Health Sciences Council and recommendations made to the Medical Laboratory Science Program Director. Students are encouraged to collaborate with the Assistant Dean of Student Success for support and direction with reinstatement requests.

Upon reinstatement, the student will enroll in a clinical reinstatement course to validate theory and clinical competencies. Students should be aware that this course is taken the semester prior to their official entry into the current cohort for degree completion.

Chapter 3: Resources for Student Success

Students are not expected to navigate their entire academic career all by themselves. Student success in the Bachelor of Science in Medical Laboratory Science program, at Indiana University South Bend, and college in general must be supported by the academic institution and educational program. Indiana University South Bend offers several resources to support students during their time on campus and beyond.

Vera Z. Dwyer College of Health Science Student Success Center

The Student Success Center for the Vera Z. Dwyer College of Health Sciences is located on the fourth floor of Northside Hall. The advisors and staff of the Student Success Center are knowledgeable and skilled in their abilities to counsel student throughout their journey at Indiana University South Bend. Whether it is a question regarding course planning, scholarships and financial assistance, or graduation process, the staff and advisors are available and willing to assist. Students may schedule an advising appointment using the Student Appointment Scheduler (SAS) app in the One.IU account.

Health and Wellness Center

The Indiana University South Bend Health and Wellness Center, located in Dwyer Hall, offers free or reduced rate services to Indiana University South Bend students, faculty and staff. Services for a nominal fee include physical exams, assessment of minor injuries and illness, routine health monitoring such as taking blood pressure, and answering health related questions. For a reasonable fee, lab services including Pap smears and cholesterol testing are offered. Hours vary by semester. Refer to the Daily Titan e-mail or bulletin boards around campus for announcements of health and wellness activities offered or call the Health & Wellness Center at 574-520-5557.

Indiana University South Bend Academic Affairs

The Indiana University South Bend Academic Affairs oversees several offices in support of students during their time at Indiana University South Bend.

Office of the Registrar

The [Office of the Registrar website](#) is a valuable resource for many things related to academics. At this site, students may find instructions for how to register for classes, see the academic calendar, calculate grades and GPA, view academic policies, peruse the schedule of classes, request transcripts, and review the Family Education Rights and Privacy Act (FERPA).

Office of Disability Support Services

The [Office of Disability Support Services](#) is committed to ensuring students with physical and learning disabilities are able to participate in, benefit from, and contribute to all university programs, services, and activities. Students who wish to utilize the services offered need to communicate with the Office of Disability Support Services to seek accommodations. Students who file for accommodations must submit letters from the Office of Disability Support Services to each faculty member teaching courses. This must occur each semester for every class enrolled.

Student Counseling Center

The [Student Counseling Center](#) is available to assist students with a variety of personal and emotional challenges. Individuals are available to assist with academic stress and time management; body image and eating disorders; diversity, equity, and inclusion; drug and alcohol addiction; emotional well-being; family and relationship stress; grief, loss, and trauma; intimate partner violence; sexual assault; and suicide prevention.

Academic Center for Excellence

The [Academic Center for Excellence](#) provides assistance and mentoring to help students master content and develop skills and strategies for academic success. While there are no Clinical Laboratory Science specific tutors available, the center offers support centers, such as the Writers' Room, that may benefit students as they complete the Bachelor of Science in Medical Laboratory Science courses.

Titan Success Center

The [Titan Success Center](#) is committed to the success of students during their academic career, from assistance with online courses and time keeping to FAFSA completion to emergency relief resources. The [Emergency Relief Fund](#) is available for students who need assistance for short-term needs like transportation, bills, food, and clothing. They also connect students to a variety of local resources for students.

Office of Veteran Student Services

The [Office of Veteran Student Services](#) seeks to support those who served our country during their academic career at Indiana University South Bend. The office is available to assist students and families with personal support and assistance with VA education benefits and the college experience.

Library

Indiana University South Bend is the home of the [Franklin D. Schurz Library](#) and the Dorothy J. Wiekamp Educational Resource Commons (WERC). The Schurz Library has six floors of literature and media resources, along with open computer spaces and quiet places for individual and group study. The library is often open for extended hours during the week of final exams. Whether onsite or online, the Schurz Library offers support to students with course and research needs. Medical Laboratory Science has

access to a [program subject guide](#) and a dedicated librarian, Rhonda Culbertson (rculbert@iusb.edu).

The [WERC](#) is located on the second floor of the Education & Arts Building and offers 3D printing, large format printing, laminating, binding, and die-cut making for all of your class project needs.

University Information Technology Services (UITS)

The [University Information Technology Services](#) (UITS) at Indiana University South Bend is available to support students with all IT needs. They are located in the Education & Arts building 1109 during business hours and online via chat. UITS maintains the Student Technology Centers, NetExpress stations, and printing stations around campus. Students may purchase gently used computer from UITS and check out hot spots for at home internet needs. Additionally, the [Knowledge Base](#) is a single location search for answers to IT questions.

COVID-19 Information and Resources

As the COVID-19 pandemic continues, science expands, and content is updated, students may find information on the [Indiana University COVID-19 Resource Page](#). Students may find links for reporting positive test results, receiving vaccine boosters, masking guidelines, and mitigation testing. Additionally, students are reminded that the Indiana University South Bend Student Health and Wellness offers testing and vaccines.

Course Instructor Evaluations

Students are invited and encouraged to complete course evaluations using the online Explorance Blue survey for each course enrolled in. This information is confidentially compiled, reported, and the feedback collected is used to improve course instruction. Your participation is highly valued and appreciated.

Chapter 4: Curriculum

Introduction

The Bachelor of Science in Medical Laboratory Science curriculum is designed with the goal of producing a well-rounded entry level professional in the medical or clinical laboratory sciences. This includes generalized knowledge in the following professional practice areas defined by the National Accrediting Agency for Clinical Laboratory Science (NAACLS):

- Application of safety and governmental regulations and standards as applied to clinical laboratory science;
- Principles and practices of professional conduct and the significance of continuing professional development;
- Communications sufficient to serve the needs of patients, the public and members of the health care team;
- Principles and practices of administration and supervision as applied to clinical laboratory science;
- Educational methodologies and terminology sufficient to train/educate users and providers of laboratory services;
- Principles and practices of clinical study design, implementation and dissemination of results.

In addition, these generalized professional practices, students who graduate with a Bachelor of Science in Medical Laboratory Science should have entry-level competency in content areas that with the *Entry Level Curriculum for Medical Laboratory Science, 2016 edition*, published by the American Society of Clinical Laboratory Science (ASCLS) and supportive to pass the ASCP BOC exam for Medical Laboratory Scientist certification.

Bachelor of Science in Medical Laboratory Science Educational Goals

Educational goals specific to the Bachelor of Science in Medical Laboratory Science include the following. These goals are in alignment with the expected entry-level knowledge as defined by NAACLS (see above) and referenced when developing course-learning outcomes.

- I. Provide student with extensive preparation to work as a Medical Laboratory Scientist (MLS).
- II. Address pre-analytical, analytical, and post-analytical components of laboratory services.
- III. Prepare students to perform diagnostic assays, use troubleshooting techniques, interpret results, and evaluate procedures.
- IV. Address quality assurance, quality improvement, and continuous assessment of laboratory services.

- V. Address the importance of safety and application of government regulations and standards in the clinical laboratory.
- VI. Foster growth through professional conduct and continuing professional development.

Traditional Medical Laboratory Science Curriculum

Students enrolled in the Bachelor of Science in Medical Laboratory Science as a traditional student (i.e. in a cohort) complete the following courses during their three semesters. Students must successfully complete all pre-requisite courses as defined in the [degree map](#) before beginning this portion.

<p>Spring Semester 1</p> <ul style="list-style-type: none"> • CLS-C405 Clinical Chemistry • CLS-C406 Diagnostic Methods • CLS-I407 Immunohematology and Transfusion Medicine • CLS-I408 Blood Bank Methods • CLS-L420 Urinalysis and Body Fluid Analysis • CLS-M403 Clinical Microbiology • CLS-M404 Microbiological Methods
<p>Fall Semester</p> <ul style="list-style-type: none"> • CLS-C407 Hematology • CLS-C408 Hematology Methods • CLS-C409 Hemostasis • CLS-I411 Clinical Immunodiagnostics • CLS-M411 Mycology and Parasitology • CLS-M413 Advanced Clinical Microbiology
<p>Spring Semester 2</p> <ul style="list-style-type: none"> • CLS-B399 Social and Behavioral Institutions – Clinical Laboratory Management • CLS-C415 Molecular Diagnostics and Special Chemistry • CLS-E401 General Externship I • CLS-E402 General Externship II • CLS-E403 General Externship III • CLS-E404 General Externship IV

*The order and timing of courses is subject to change.

MLT to CLS Degree Completion Curriculum

Students who enter the Bachelor of Science in Medical Laboratory Science possessing an Associate in Medical Laboratory Technician will automatically have 46 credits applied toward the 120 credits needed to complete the degree.

<p>General education courses, which may be transferred in from previous work, include:</p> <ul style="list-style-type: none"> • Writing (ENG-W131) • Oral communication (SPCH-S121) • Critical thinking (recommend 300/400 level) • Quantitative reasoning (recommend 300/400 level) • Contemporary social values • Extended literacies

Foundational science courses include:

- BIOL-L101 Introduction to Biological Sciences I Lecture and Laboratory
- BIOL-L102 Introduction to Biological Sciences II Lecture and Laboratory
- BIOL-L211 Molecular Biology
- Elective 300/400 level biology course
- CHEM-C105 Principles of Chemistry I
- CHEM-C125 Experimental Chemistry I
- CHEM-C106 Principles of Chemistry II
- CHEM-C126 Experimental Chemistry II

Clinical Laboratory Science specific courses include:

- CLS-B399 Behavioral and Social Institutions – Clinical Laboratory Management
- CLS-C415 Clinical Molecular Diagnostics and Special Chemistry
- CLS-I411 Clinical Immunodiagnostics
- CLS-M413 Advanced Clinical Microbiology

Additional 300/400 level courses from any department (Health Sciences, Biology, Chemistry, etc.) to ensure the student has:

1. At least 30 credit hours of 300/400 classes
2. A total of 120 credit hours (including those described in above sections)

*Courses and credit hour requirements may be subject to change.

Student Laboratory Courses

Students enrolled in the Bachelor of Science in Medical Laboratory Science complete in-house laboratory activities in a dedicated student laboratory classroom. These activities are included in several Clinical Laboratory Science courses including CLS-C406 Diagnostic Methods, CLS-C408 Hematology Methods, CLS-C415 Molecular Diagnostics and Special Chemistry, CLS-I408 Blood Bank Methods, CLS-L420 Urinalysis and Body Fluid Analysis, and CLS-M404 Microbiological Methods.

The Clinical Laboratory Science laboratory classroom, comprising Dwyer Hall Rooms 144, 144A, and 144B, is an approved Biosafety Level 2 (BSL-2) by the Indiana University Institutional Biosafety Committee (IBC) under protocol #SB-978. Student activities in the Clinical Laboratory Science laboratory classroom are currently restricted to teaching. Additional testing may occur in this facility under an approved Indiana University Revenue Producing Activity (RPA) #2885.

Laboratory Safety Regulations

Eating, drinking, smoking, or makeup application is not allowed in the laboratories. Protective clothing must be worn at all times while in the laboratory regardless of the activity being performed. Students are expected to follow all safety regulations both in the student laboratories as well as in the clinical laboratories. Failure to comply with laboratory safety regulations can lead to dismissal from the program.

Laboratory Attire

Students are expected to follow safety requirements related to attire in the student laboratory classroom and at clinical externship sites. Failure to abide by the following

rules will result in the student being dismissed from class for the day, receiving a zero for assignments, and possible further disciplinary action if the noncompliance continues.

- Students must wear fluid resistant laboratory coats (purchased by the student) for all student laboratory courses.
- Laboratory gloves, latex or nitrile, that are acceptable for working with blood and body fluids must be worn during laboratory activities that involve blood, body fluids, microorganisms, and chemicals. Activities where a student is simply observing stained slides using a microscope do not warrant the need for gloves.
- Legs must be covered to avoid skin contamination or injury from pathogens, chemicals, or reagents. Shorts and Capri pants are not allowed. Skirts and dresses are allowed if they cover the legs. Leggings and hosiery (nylons) are not recommended because chemicals or specimens, if spilled, can 'wick" and be held against the skin for prolonged periods of time, causing extensive exposure and/or injury.
- Shoes should be comfortable and must enclose the entire foot. Open toe, open heel, and sandals are not allowed in the student laboratory, even if socks are included.
- Hats with a brim that obscures the eyes are not allowed. Other headgear, including beanies, scarves, headbands, etc., may be worn as long as they do not pose a danger of being caught in equipment, contaminating or being contaminated with specimens/reagents, and are not distracting.
- Jewelry may be worn as long as it does not pose a danger of being caught in equipment, contaminating or being contaminated with specimens/reagents, and is not distracting.
- Long hair and beards must be tied back in such a way as to avoid contamination and interference with laboratory equipment and specimens.
- Sunglasses and other darkly tinted eyewear are not allowed.

Laboratory Safety Training

All students enrolled in the Bachelor of Science in Medical Laboratory Science program will complete laboratory safety training provided by Indiana University within the first week of their first semester. These safety training modules will be incorporated into a course as an assignment and will include:

- Biosafety Training
- Bloodborne Pathogens Training
- Laboratory Safety Training

Infectious Agent Exposure

Every specimen, real or fabricated, must be treated as though they potentially contain an infectious agent. It is not possible for the Medical Laboratory Science faculty to know every infectious agent that a student may be exposed to while working with specimens obtained from local laboratories.

The specimens utilized in CLS-M404 Microbiological Methods are fabricated from stock cultures of known bacteria and yeast. The following list includes the microorganisms that a student may be exposed to while completing laboratory activities in this class.

<i>Acinetobacter baumannii</i>	<i>Achromobacter xylosoxidans</i>	<i>Bacteroides fragilis</i>
<i>Bacillus</i> species	<i>Campylobacter jejuni</i>	<i>Candida albicans</i>
<i>Candida glabrata</i>	<i>Candida krusei</i>	<i>Candida parapsilosis</i>
<i>Capnocytophaga</i> species	<i>Clostridium perfringens</i>	Diphtheroids
<i>Elizabethkingia meningoseptica</i>	<i>Enterobacter hormachei</i>	<i>Enterococcus casseliflavus</i>
<i>Enterococcus faecalis</i>	<i>Enterococcus saccharolyticus</i>	<i>Escherichia coli</i>
<i>Escherichia coli</i> O157:H7	<i>Eubacterium</i> species	<i>Fusobacterium</i> species
<i>Gardnerella vaginalis</i>	<i>Haemophilus influenzae</i>	<i>Haemophilus parainfluenzae</i>
<i>Klebsiella oxytoca</i>	<i>Klebsiella pneumoniae</i>	<i>Kocuria kristinae</i>
<i>Listeria monocytogenes</i>	<i>Micrococcus luteus</i>	<i>Moraxella catarrhalis</i>
<i>Morganella morganii</i>	<i>Neisseria gonorrhoeae</i>	<i>Neisseria meningitidis</i>
<i>Ochrobactrum anthropi</i>	<i>Prevotella melaninogenica</i>	<i>Proteus mirabilis</i>
<i>Proteus vulgaris</i>	<i>Providencia rettgeri</i>	<i>Pseudomonas aeruginosa</i>
<i>Serratia marcescens</i>	<i>Shigella sonnei</i>	<i>Staphylococcus aureus</i>
<i>Staphylococcus epidermidis</i>	<i>Staphylococcus saprophyticus</i>	<i>Staphylococcus sciuri</i>
<i>Stenotrophomonas maltophilia</i>	<i>Streptococcus agalactiae</i>	<i>Streptococcus equi</i> spp. zooepidemicus
<i>Streptococcus pneumoniae</i>	<i>Streptococcus pyogenes</i>	<i>Streptococcus salivarius</i> spp. thermophilus
<i>Streptococcus thermophilus</i>		

Clinical Externship

Clinical externships are designed to expose students to the working environment of a clinical laboratory and to provide an opportunity for students to become familiar with instrumentation that is not available in the student laboratories. Students are expected to perform assigned tasks as designated by the clinical preceptor responsible for each specific clinical area, adhering to the suggested experiences included in the rotation evaluation form.

Activities performed during the clinical rotations range from observation to performance of testing on simulated specimens to performance of testing on actual patient specimens with supervision. The student can expect to observe the performance of tests at the beginning of the rotation experience with the progression to hands-on performance of testing as the student gains proficiency. Some of the highest complexity, most expensive, or higher biosafety level tests may be observational only, depending on the laboratory and the methodology. It is understood that not all clinical locations are able to perform the same testing as each other and some testing is performed in different departments depending on the structure of the clinical facility. Allowing for this variation, the rotation evaluation forms include overlap of testing and include a way to report "Testing not performed".

All students enrolled in the Bachelor of Science in Medical Laboratory Science program at Indiana University South Bend are guaranteed placement at a clinical site provided they have submitted all required documentation and are eligible academically to proceed to the clinical externship. Students are eligible to complete the clinical externship when they have completed all the pre-requisite Clinical Laboratory Science courses. If a situation occurs, with either the student or the clinical site, which prevents the student from continuing the clinical externship at the assigned clinical site, the program work with the student to complete the clinical externship at another site, as long as the student remains academically eligible to complete the clinical externship and the program.

Students will be required to participate in any orientation process required by each clinical site and abide by all policies and procedures of that site while they are on the premises. Failure to do so will result in dismissal from the assigned clinical externship and may result in failure of the particular clinical externship and possible dismissal from the Medical Laboratory Science program.

The student may be required to provide documentation of immunization history and up-to-date screening test for tuberculosis to the clinical site, if requested. It is the student's responsibility to provide this information and failure to submit documentation may result in the student not being able to complete their clinical externship at that site and delaying the progression of the student through the program.

Clinical Rotation Placement

Students will be requested to submit a list of three to four clinical affiliate sites listed in order of preference. Clinical rotation placement cannot be immediately guaranteed. However, the faculty overseeing the clinical externships, in consultation with the Program Director if needed, will place students in clinical locations to match preferences as close as possible. Clinical placements will depend on the availability of seats at the clinical site. Students may be expected to interview prior to placement and the clinical site may reserve the right to refuse students.

Clinical Rotation Schedule

Clinical sites are able to determine the order of rotations, as long as they do not conflict with campus semester and vacation schedules. Exceptions to this rule must be discussed and approved in advance by the Program Director and, depending on the variation requested, the Dean of the Vera Z. Dwyer College of Health Sciences or Executive Vice Chancellor of Academic Affairs.

Students will spend four days a week for 16 weeks at their clinical site. The four clinical externship courses (CLS-E401, CLS-E402, CLS-E403, and CLS-E404) are two credits each and correspond to a four-week block. To align with the structure of the clinical externship courses, experiences have been clustered into four categories. In general, these categories will include:

- Chemistry – chemistry, immunology, molecular diagnostics, phlebotomy, and specimen processing
- Hematology – hematology, hemostasis, urinalysis, body fluid analysis
- Microbiology – bacteriology, mycobacteriology, mycology, parasitology, and virology
- Blood bank – blood banking, transfusion services, and donor services

Service Work Policy

Service work is defined as performing the duties expected of an employee, who is paid to perform those tasks, as an unpaid student. Service work by students is not required nor permitted by the Medical Laboratory Science program. Students are present in the clinical laboratory during clinical externships to gain hands-on experience with the operation of the clinical laboratory. While learning and upon demonstrating proficiency, students may perform clinical tests under the supervision of an instructor who is a certified medical laboratory scientist. As such, students work on actual patient samples but at no time are they expected to, nor allowed to, perform service work without pay.

Students may obtain employment in the clinical laboratory in which they are completing clinical externship rotations. However, students and supervisors at the clinical site must make a distinction between the student's time in the laboratory as a student, who is learning and not being paid, and when the student becomes an employee, who is paid to work in the laboratory on tasks for which they have been specifically trained. Students should not be treated as employees during clinical externship rotation times. What students do outside the time during which they are expected to be learning in the clinical laboratory is beyond the scope of control of the program.

Grading Scale

All courses in the Medical Laboratory Science Program utilize the following grading scale. An **attainment of at least a C, or 73%, is required to successfully pass a clinical or didactic**

course. Failure to receive a final grade of “C” will require the student to retake the course and may impact progression and graduation.

The Medical Laboratory Science Grading Scale for didactic and clinical course work is:

100-97 = A+	89-87 = B+	79-77 = C+	69-67 = D+	59-below = F
96-93 = A	86-83 = B	76-73 = C	66-63 = D	
92-90 = A-	82-80 = B-	72-70 = C-	62-60 = D-	

The following grades are used in determining grade point averages throughout the program using the corresponding four (4) point system:

A+ = 4.0	B+ = 3.3	C+ = 2.3	D+ = 1.3	F = 0
A = 4.0	B = 3.0	C = 2.0	D = 1.0	I = Incomplete
A = 3.7	B- = 2.7	C- = 1.7	D- = 0.7	

Incomplete Grades

In accordance with Indiana University South Bend policy, a grade of incomplete (I) may be given to a student when a substantial amount of coursework (75%) is satisfactorily completed by the end of the semester. The grade of I is awarded only under circumstances of hardship, when it is unjust to hold the student to the time limits ordinarily fixed for completion of coursework. The grade is given only when the completed portion of the student's work is of passing quality. Students enrolled in the Bachelor of Science in Medical Laboratory Science must speak with the instructor of any course(s) for which the incomplete grade needs to be given and the Program Director.

A student must remove the incomplete grade within one calendar year from the date it is recorded or, if required by the instructor, a shorter period of time. If the student fails to remove the incomplete grade within the time allowed, the grade automatically changes to an F.

Final Grade Submission

In accordance with the guidelines established by the University Faculty Council, final grades are due to the Office of the Registrar 48 hours after final exams. Final course grades for clinical externships are submitted within 48 hours of the last externship day. All grades are reported in Canvas and can be found in SIS.

Grade Grievance

If a student wishes to dispute a final course grade, Indiana University South Bend has a [Grade Grievance Policy](#) to follow.

1. The student must discuss the matter with the faculty member who assigned the grade no later than the end of the next regular semester.
2. If the faculty member disagrees with the student's case for changing the grade, the student may appeal to the Medical Laboratory Science Program Director.

3. If the Program Director disagrees with the student's case for changing the grade, the student may appeal to the Dean of the College of Health Sciences.
4. If the faculty, Program Director, and Dean all disagree with the student's case for changing the grade, the student may appeal to the Academic Affairs Committee, who will make a recommendation to the Vice Chancellor for Academic Affairs.

Course Descriptions

CLS-B399 Human Behavior and Social Institutions – Clinical Laboratory Management

(3 cr.) This course provides an entry level understanding of the clinical laboratory management team responsibilities. Topics include general management theories, federal regulations and government organizations, financial management, operations management, human resources, and career success and development. Human behaviors and social interactions are further explored and applied in independent and group projects.

CLS-C405 Clinical Chemistry (3 cr.) Clinical Chemistry is one of the key disciplinary areas for entry-level competency as a Medical Laboratory Scientist. Students will examine the basic principles and practices used in the clinical chemistry laboratory including fundamental mathematics for laboratory measurements, analytical techniques, and clinical correlations. An emphasis will be placed on acid base balancing, lipid and protein identifications, enzymatic action, and their correlation with the endocrine system in clinical diagnostics.

CLS-C406 Diagnostic Methods (2 cr.) In conjunction with CLS-C405 Clinical Chemistry, students will be exposed to the basic and fundamental principles of contemporary medical laboratory diagnostic practice, through practical laboratories that present both the principle and procedure for basic and common diagnostic laboratory techniques conducted manually or with instrumentation.

CLS-C407 Hematology (3 cr.) Hematology is one of the key disciplinary areas for entry-level competency as a Medical Laboratory Scientist. Students will examine the foundational principles of routine hematology and identify peripheral blood and bone marrow cells at various stages of development through visual observation of stained slides. Components of the complete blood count are evaluated using manual and automated methods and correlated to hematologic diseases. Advanced topics in this course include hemoglobinopathies and the development of hematologic malignancy. Molecular, Immunological, and immunophenotyping techniques are examined in relation to widespread and well-established hematological disease profiles.

CLS-C408 Hematology Methods (2 cr.) In conjunction with CLS-C407 Hematology and CLS-C409 Hemostasis, students will be exposed to the basic and fundamental principles of contemporary medical laboratory hematology practice, through practical laboratory exercises that present both the principle and procedure for basic and common hematological laboratory techniques including red and white cell

differentiation, erythrocyte sedimentation, and traditional blood smear. Studies of coagulation are also included to provide an understanding of normal and abnormal hemostatic properties.

CLS-C409 Hemostasis (2 cr.) Students will examine principles of clinical hemostasis and mechanisms that lead to coagulation disorders. Laboratory testing will be applied to the diagnosis of normal status, hemorrhagic disorders, and thrombotic disorders. Antithrombotic therapies and their laboratory assessment will also be discussed.

CLS-C415 Clinical Molecular Diagnostics and Special Chemistry (3 cr.) P: CLS-C 405 and CLS-C 406. This course includes an introduction to the principles, methodologies, and applications of molecular biological procedures used in clinical laboratories. Emphasis is placed on the molecular biological procedures used in medical laboratory science, including those used in the molecular detection of infectious agents that cause human disease, human identification, the diagnosis of inherited diseases, the diagnosis of cancer, and the determination of risk factors for the development of cancer.

CLS-E401 General Externship I (2 cr.) P: Successful completion of CLS courses M403, M404, M411, M413, C405, C406, I407, I408, C407, C408, C409, and L420. The General Externship I is one of four externship (experiences) courses that occur during the senior year of study in the Medical Laboratory Science program at IU South Bend. During the clinical rotations, students receive hands-on knowledge and experience in all commonly practiced areas of clinical diagnostics including clinical chemistry, microbiology, immunohematology, hematology, hemostasis, immunology, urinalysis, and body fluid analysis. Students are placed in regional laboratory and hospital organizations, within a reasonable distance, and with consideration of student living and transportation needs. Placement are facilitated by the program director and faculty in collaboration with clinical partners with whom a current IU South Bend affiliation agreement has been established.

CLS-E402 General Externship II (2 cr.) P: Successful completion of CLS courses M403, M404, M411, M413, C405, C406, I407, I408, C407, C408, C409, and L420. The General Externship II is one of four externship (experiences) courses that occur during the senior year of study in the Medical Laboratory Science program at IU South Bend. During the clinical rotations, students receive hands-on knowledge and experience in all commonly practiced areas of clinical diagnostics including clinical chemistry, microbiology, immunohematology, hematology, hemostasis, immunology, urinalysis, and body fluid analysis. Students are placed in regional laboratory and hospital organizations, within a reasonable distance, and with consideration of student living and transportation needs. Placement are facilitated by the program director and faculty in collaboration with clinical partners with whom a current IU South Bend affiliation agreement has been established.

CLS-E403 General Externship III (2 cr.) P: Successful completion of CLS courses M403, M404, M411, M413, C405, C406, I407, I408, C407, C408, C409, and L420. The General Externship III is one of four externship (experiences) courses that occur during the senior

year of study in the Medical Laboratory Science program at IU South Bend. During the clinical rotations, students receive hands-on knowledge and experience in all commonly practiced areas of clinical diagnostics including clinical chemistry, microbiology, immunohematology, hematology, hemostasis, immunology, urinalysis, and body fluid analysis. Students are placed in regional laboratory and hospital organizations, within a reasonable distance, and with consideration of student living and transportation needs. Placement are facilitated by the program director and faculty in collaboration with clinical partners with whom a current IU South Bend affiliation agreement has been established.

CLS-E404 General Externship IV (2 cr.) P: Successful completion of CLS courses M403, M404, M411, M413, C405, C406, I407, I408, C407, C408, C409, and L420. The General Externship IV is one of four externship (experiences) courses that occur during the senior year of study in the Medical Laboratory Science program at IU South Bend. During the clinical rotations, students receive hands-on knowledge and experience in all commonly practiced areas of clinical diagnostics including clinical chemistry, microbiology, immunohematology, hematology, hemostasis, immunology, urinalysis, and body fluid analysis. Students are placed in regional laboratory and hospital organizations, within a reasonable distance, and with consideration of student living and transportation needs. Placement are facilitated by the program director and faculty in collaboration with clinical partners with whom a current IU South Bend affiliation agreement has been established.

CLS-E406 Supplemental Externship (1 – 2 cr.) P: Offered exclusively for students in the MLT to CLS Degree completion track. This practicum course is part of the MLT to CLS Degree completion program and is designed as an independent study experience for experienced MLT professionals who require additional training in selected laboratory practice. Students may complete 2 weeks (Monday – Friday) for 1 credit hour or 4 weeks (Monday – Friday) for 2 credit hours. This course will be taught as needed in all terms.

CLS-I407 Immunohematology and Transfusion Medicine (3 cr.) Immunohematology, also known as blood banking, is one of the key disciplinary areas for entry-level competency as a Medical Laboratory Scientist. This course is intended to provide the student with a foundation of the fundamentals of immunohematology. Focus is placed on red blood cell immunology as it relates to ABO/Rh typing procedures, antibody detection and identification techniques and compatibility testing. Hemolytic disease of the newborn, component therapy, transfusion reaction investigation, quality control and problem solving will be introduced. Blood donor program regulations will also be introduced.

CLS-I408 Blood Banking Methods (2 cr.) Taught in conjunction with CLS-I407 Immunohematology and Transfusion Medicine. This course provides practical laboratory experiences that are used for conducting diagnostic testing in the blood bank. Students will perform ABO/Rh typing, antibody screen and identification, crossmatching for

blood compatibility, and fetal screen testing. Real patient specimens are used to provide an authentic learning experience.

CLS-I411 Clinical Immunodiagnostics (3 cr.) Clinical immunodiagnostics is one of the key disciplinary areas for entry-level competency as a Medical Laboratory Scientist. Students study antigen and antibody interactions as biomarkers of disease and the use of antibodies as reagents in the detection of disease. Students examine the foundational principles of clinical immunology, flow cytometry, cancer immunology, and autoimmune disease including a focus on testing and diagnosis of common infectious diseases, autoimmune diseases, cancers, and transplant challenges.

CLS-L420 Urinalysis and Body Fluid Analysis (2 cr.) This course is foundational to the Clinical Laboratory Science curriculum. In this course, students analyze urine and other body fluids for cellular, chemical, and physiological changes. Students identify artifacts in urine and other body fluids through microscopic examination. Macroscopic, microscopic, and chemical analysis of urine and other body fluids is correlated with various disease states.

CLS-M403 Clinical Microbiology (3 cr.) Clinical microbiology is one of the key disciplinary areas for entry-level competency as a Medical Laboratory Scientist. In this course, students will examine principles of clinical microbiology and identify microorganisms by traditional biochemical methods, immunologic methods, and molecular methods. Topics also include specimen collection and processing, macroscopic and microscopic description of bacteria, bacterial identification, and disease correlation. Students will describe the epidemiology, pathology, and public health impact of disease caused by each microorganism discussed.

CLS-M404 Microbiological Methods (2 cr.) Taught in conjunction with CLS-M403 Clinical Microbiology, students will apply principles of clinical microbiology and identify microorganisms by traditional biochemical and serologic methods. Students will evaluate simulated specimens, plate specimens according to protocol, culture and identify aerobic and anaerobic bacteria macroscopically and microscopically, and perform manual and semi-automated methods for bacterial detection and identification. Antimicrobial susceptibility testing will be performed and interpreted using various methods.

CLS-M411 Mycology and Parasitology (2 cr.) P: CLS-M403 Clinical Microbiology and CLS-M404 Microbiology Methods. This course is an extension of the foundational knowledge gained in CLS-M403 Clinical Microbiology. In this course, students will examine principles of clinical mycology and parasitology and identify fungi and parasites using traditional, immunologic, and molecular methods. Students will be able to describe the epidemiology, pathology, and public health impact of disease caused by each fungus and parasite discussed.

CLS-M413 Advanced Clinical Microbiology (3 cr.) P: CLS-M403 Clinical Microbiology and CLS-M404 Microbiology Methods. This is an advanced clinical microbiology course in which students will have the opportunity to explore topics beyond those in a

foundational microbiology course. Students will expand their knowledge of antimicrobial resistance, learn about bioterrorism agents and their global impact, promote microbiology concepts beyond the laboratory setting, and broaden their knowledge in clinical virology.

CLS-N390 The Natural World (3 cr.) Explores an important scientific or technological issue in modern society. Applies scientific methods and interdisciplinary perspectives in an examination of the subject. Investigates the broader implications and ethical dimensions of scientific research and technological advancement.

- Variable title - Vaccines: Science and Society. This course examines the science behind vaccines and how they work in the body. Historical perspectives and current vaccination recommendations are offered while focusing on the most widely used vaccines in the United States. This course introduces students to the scientists and healthcare professionals involved with the research and development of vaccines, dissemination of vaccines to the community, and surveying of infectious diseases and vaccine use. The influence of vaccines and infectious diseases on societal beliefs is also discussed, from scientific and ethical perspectives.
- Variable title – Starting the Zombie Apocalypse. This course explores scientific and technical issues in modern society through the lens of a potential zombie apocalypse. In this course, we are going to compare the similarities and differences of biology (and immunology) between humans and zombies. Bacterial, viral, fungal, and parasitic agents of infectious diseases will be described and evaluated for their potential to create zombies. However, creating a zombie is not enough, it needs to spread to be effective. Applying scientific methods and interdisciplinary perspectives, you will explore disease development, transmission, progression, and prevention. You will also investigate the broader implications and ethical dimensions of scientific research and technological advancement. By the end of this course, you will be able to apply all of your knowledge and create the perfect zombie apocalypse.

Chapter 5: Student Expectations

Introduction

Students enrolled in the Bachelor of Science in Medical Laboratory Science program are completing a comprehensive curriculum within the Vera Z. Dwyer College of Health Sciences. Students are expected to adhere to the policies, procedures, and expectations of Indiana University, Indiana University South Bend, the Vera Z. Dwyer College of Health Sciences (DCHS), and the Division of Clinical Laboratory Sciences.

Academic Honestly

All Indiana University students are expected to demonstrate academic honesty and integrity in all courses and on all assignments. Academic dishonesty is the representation or attempt to represent another's work as one's own or participating actively in such falsification. Examples of academic dishonesty include, but are not limited to, plagiarism, cheating, and facilitating academic dishonesty.

Plagiarism is the act of intentionally using material, regardless of the source (other than material which is common knowledge), without acknowledging the source of that material. Some examples of plagiarism include but are not limited to: taking a table or figure or other information off a web site without saying where it came from; buying or using a paper that someone else wrote; or rephrasing materials without giving credit to the source.

Besides plagiarism, other behaviors are also considered to violate academic integrity. A few are listed as examples, but are not meant to be all-inclusive:

1. Permitting anyone to copy or duplicate your work.
2. Providing another student with answers during an exam or looking at another student's test paper during an exam.
3. Copying or downloading computer software without proper authorization.
4. Breaking into or using university/medical center owned computer files in an unauthorized manner.
5. Performing any course work (e.g., exams or assignments) of a web course for someone else or having someone other than yourself complete your web course work.
6. Submitting the same assignment with substantively the same content for a grade in two Clinical laboratory Science courses without permission from the instructors of both courses.
7. Using materials or answers hidden on one's person, personal effects, or electronic device that contains answers for an exam without the explicit approval of the course instructor.

Suspicious of academic dishonesty will be investigated by the course instructor and reported to the Program Director. Disciplinary actions may be imposed by the course instructor such as:

1. Having the student repeat the assignment
2. Giving a grade of F (zero points) on the assignment
3. Giving a grade of F in the course, resulting in a requirement to repeat the course and academic probation

The Program Director may also institute disciplinary actions, if warranted, such as:

1. A program-level success plan
2. Suspension from the Medical Laboratory Science program
3. Dismissal from the Medical Laboratory Science program

Attendance

As described in DCHS policy AS-11-A, students are expected to attend all lecture and laboratory classes. In the case of an absence, it is the responsibility of the student to speak with the instructor to receive any additional material provided during the class session and find out if any assignments are due. Students should also speak with a peer to receive information or notes from the class session.

Attendance may be monitored at the discretion of the instructor and may be taken into consideration when final grades are calculated. Students should review the syllabus for each course to determine if any specific attendance requirements are included and if attendance will be considered when calculating the final grade.

Cardiopulmonary Resuscitation (CPR)

As described in DCHS policy AS-16-B, all students enrolled in a program of the Vera Z. Dwyer College of Health Sciences must have CPR certification through the American Heart Associations (AHA) before they are allowed to participate in clinical experiences. CPR certification from the AHA is valid for two years and must be re-certified if expiration occurs before or during the clinical externship experience. Documentation of CPR certification must be on file in CastleBranch by the date indicated.

CastleBranch

The CastleBranch Bridges system is a document control software platform that is used by clinical programs in the Vera Z. Dwyer College of Health Sciences. All required documentation, include safety education, health records, and administrative forms will be submitted by the student into their CastleBranch account. The Medical Laboratory Science Program Director, Vera Z. Dwyer College of Health Science Student Success Center staff, and Student Health and Wellness staff will have access to student accounts to ensure documentation is submitted by the required date.

Cellular Phones

Students are required to place all cellular phones on a **silent mode** while in lecture. Cell phones are not allowed in the student or clinical laboratories for safety reasons. If a circumstance warrants the need of a cell phone in the laboratory, the student must (1) receive permission from the instructor and (2) keep the cell phone in a pocket inside of their lab coat. Students will not be excused from class to make phone calls unless it is an emergency. Students will **not** be allowed to use cellular phones during examinations unless approved by the instructor.

Classroom Etiquette

Collegial behavior is expected of all students attending courses in the Medical Laboratory Science program to maintain a respectful environment. Any student who is not demonstrating a professional or collegial behavior will be asked to leave the classroom and must meet with the instructor prior to the next class session. In the instance that disruptive behaviors continue, the Program Director will be informed and an Opportunity for Improvement Alert will be completed.

In accordance with Indiana University South Bend policy, children are not permitted in the classroom, laboratory, or clinical setting at any time.

As a courtesy, students are to request permission from the instructor if they wish to tape or digitally record the class session or lecture.

Confidentiality

As clinical students and future healthcare professionals, it is imperative that confidentiality is maintained in all clinical settings. The confidentiality policy, DCHS policy AS-13-C, is so significant that the guidelines are included here for your reference. Violation of these guidelines can result in disciplinary actions, failure of an assignment or course, and/or dismissal from the program.

1. All records, including originals and copies, should not be removed from their location.
2. Students granted record accesses are accountable for the protection of the record and its contents while in their possession on site and for the purpose of the site roles and responsibilities only.
3. Students accessing information from medical records shall follow the strict guidelines set forth by the setting (including providing written requests for review, keeping the materials in the setting, and reviewing the records in the area specified for this purpose).
4. It is prohibited to share the medical record with family, friends, and staff not directly involved in the patient's care.
5. Students are expected to keep the medical records accessible at all times for medical care purposes.

6. Photocopying, photographing, or printing off any part of the medical record for a student's purpose is strictly prohibited. Students cannot photocopy parts of the record for their learning purposes. Data cannot be saved to portable devices and laptops cannot be brought to the settings. Students are prohibited to take photographs of any document, patient record, site policy, treatment protocols, etc. with their cell phone or camera. Violations of this policy may result in immediate removal from the site, disciplinary actions, and/ or dismissal from the program.
7. When referring to patients in written work for schoolwork purposes, only initials are to be used. When possible, all identifying information should be kept to a minimum.
8. HIPAA guidelines are to be followed at all times as outlined by each setting and federal regulations.
9. Professional standards expect that students withhold discussing any patient situations and confidences outside the professional setting. Situations may only be discussed in private, for the purpose of learning, as instructed by the instructor. When discussing patients in the learning situation, confidentiality is to be maintained, including but not limited to personal identifiers such as name, email, address, gender, or others.
10. Students cannot share verbal, written, or photo information in public settings which includes face to face and / or social media platforms with patients, family members, or friends of the patient including personal e-mails. This includes photos / social media postings of the student at the site even if the patient or family members are not visible, to protect the site.

Criminal Background Check

In accordance with DCHS policy AS-07-C, students enrolled in the Bachelor of Science in Medical Laboratory Science program must submit a background check annually while in the professional phase of the program. Students receive information from the Vera Z. Dwyer College of Health Sciences Student Success Center regarding access and completion of the background check. The approved background check, compliant with IU policy PS-01, includes a criminal background and sex offender registry check within the last five years. Documentation of compliance with this requirement submitted by the student into their CastleBranch account.

Critical Behaviors

As defined in DCHS policy AS-25-A, there are critical behaviors that may lead to course failure and/or appropriate academic and disciplinary actions. Those critical behaviors are as follows.

1. Breach of client confidentiality.
2. Untruthfulness or misrepresentation of facts.
3. Cheating, including plagiarism.
4. Lack of professional attire and demeanor at any time in the clinical area.

5. Lack of prompt notification of appropriate persons when errors occur in the clinical area.
6. Consistent tardiness without notification of appropriate faculty and the clinical area.
7. Repeated lack of knowledge or inability to transfer knowledge from pre-requisite courses to current clinical situations.
8. Consistent demonstration of lack of respect for human dignity and the uniqueness of the client unrestricted by consideration of social or economic status, personal attributes or the nature of the health problem.

Drug Screen

In accordance with DCHS policy AS-09-B, students must take and pass an 11-panel urine drug screen prior to entry into clinical externships. Failure to pass the drug screen may impact a student's ability to begin clinical rotations and complete the Bachelor of Science in Medical Laboratory Science program. Documentation of drug screen testing must be submitted by the student into their CastleBranch account.

Students who are prescribed medication that will cause a positive test result must report that to the Indiana University South Bend Health and Wellness Center prior to taking a drug screen test. Likewise, if the test is completed at a different location, the student must report medication use prior to taking the test. Student completion of clinical externship rotations while on medications may occur, provided the Program Director is notified and approval is given by an accepted healthcare professional.

Funerals

Students are permitted three (3) days of bereavement (includes didactic and clinical days) leave for immediate family. Immediate family includes: great/grandmother & grandfather, grandmother, grandfather, mother, father, in-laws, legal guardians, brothers, sisters, sons, daughters and one (1) day bereavement for friends, aunts, uncles, nieces, and nephews. If additional time is needed, please seek approval from the Medical Laboratory Science Program Director. Students are asked to verify their absence by providing the Program Director with documentation.

Health Insurance

In accordance with DCHS policy AS-17-B, students enrolled in the Bachelor of Science in Medical Laboratory Science program are required to maintain personal health insurance coverage. In the event the student requires medical care during a clinical externship rotation, it is the responsibility of the student to cover the cost of treatment. Proof of personal health insurance must be submitted by the student into their CastleBranch account.

HIPAA Training

Students enrolled in the Bachelor of Science in Medical Laboratory Science program are required to complete HIPAA training prior to beginning clinical externship rotations. HIPAA training may be completed through [IU Expand](#). Documentation of completion must be submitted by the student into their CastleBranch account.

Immunizations

As described in DCHS policy AS-23-C, all students enrolled in the Bachelor of Science in Medical Laboratory Science program must submit proof of immunizations for the following:

- **Tetanus/Diphtheria (Td) or Tetanus/Diphtheria/acellular Pertussis (Tdap)** within 10 years
- **Measles/Mumps/Rubella** 2 doses unless born prior to 1957.
 - Rubella titer of 1:10
 - Rubeola titer of 1:11
 - Mumps titer of 1:10
- **Varicella (Chicken Pox)** 2 doses of varicella or 2 doses of ProQuad
 - Varicella titer of 1:10 or a written statement detailing approximate date of having the chicken pox.
- **Tuberculosis** TB screening requirements follow most current CDC guidelines. Potential methods to appropriately screen include TB skin (Mantoux) 2-step (for initial), TB (Mantoux) 1-step (for subsequent), Quantiferon Gold serum (if TB skin positive or previous BCG vaccination), or Chest X-Ray (previous TB infection, BCG vaccination or symptoms).
- **Influenza Immunization** Annually before December 1.
- **Hepatitis B Immunization** 3-dose vaccine series, with the first shot required before program due date unless the student is shown to be immune, the vaccine is contraindicated for medical reasons, or a declination is signed.
- **COVID-19** vaccination required of all Indiana University students prior to beginning course unless an exemption is submitted and approved.

Proof of all immunizations, declinations, and/or exemptions must be submitted by the students into their CastleBranch account. NOTE: Proof of immunizations may be requested by clinical affiliate sites and may influence the ability of a student to complete clinical externship rotations at that site.

Impaired Student

Indiana University South Bend and the Bachelor of Science in Medical Laboratory Science program have a zero-tolerance policy for alcohol and/or drug use, as defined in DCHS policy AS-21-B. If an instructor suspects that a student is impaired, the student will be removed from academic setting and report for testing at an identified location. Results of the test must be submitted to the Medical Laboratory Science Program

Director by the testing facility. The Program Director, in consultation with the School of Applied Health Sciences Council, will determine if any additional actions are needed.

Jury Duty

Students called for jury duty will be excused from clinical and/or didactic classes. In the event that it lasts longer than 3 days, students may be required to make-up missed course work and clinical externship time at the discretion of the Program Director. In the event that the student misses an abundance of clinical and didactic work, progression to the next semester may be affected.

Name Tag

Students enrolled in the Bachelor of Science in Medical Laboratory Science program must purchase an official Indiana University South Bend Medical Laboratory Science name tag. The name tag must be worn by the student while attending clinical externship rotations.

OSHA Training

Students enrolled in the Bachelor of Science in Medical Laboratory Science program are required to complete OSHA training prior to beginning clinical externship rotations. OSHA training may be completed through [IU Expand](#). Documentation of completion must be submitted by the student into their CastleBranch account.

Professional Conduct

Professionalism relates to the intellectual, ethical, behavioral and attitudinal attributes necessary to perform as a health care provider. The student will be expected to adhere to the following:

Attention

1. Demonstrate awareness of the importance of learning by asking pertinent questions, identifying areas of importance in clinical practice and reporting and recording those areas.
2. Avoid disruptive behavior in class, lab and rotations, such as talking or other activity interferes with effective teaching and learning.

Participation

1. Complete assigned work and prepare for class, laboratory, and rotations objectives prior to attending.
2. Participate in formal and informal discussions, answer questions, report on experiences, and volunteer for special tasks and research.
3. Initiate alteration in patient care techniques when appropriate via notification of instructors, nursing staff and physician.

Dependability and Appearance

1. Attend and be punctual and reliable in completing assignments with minimal instructor supervision.
2. Promote a professional demeanor by appropriate hygiene, grooming and attire.

Communication

1. Demonstrate a pleasant and positive attitude when dealing with patients and co-workers by greeting them by name, approaching them in a nonthreatening manner, and setting them at ease.
2. Explain procedures clearly to the patient.
3. Ask patients how they feel and solicit patient comments regarding the patient's overall condition and response to therapy.
4. Communicate clearly to staff and medical personnel regarding the patient status, utilizing appropriate charting, oral communication and the established chain of command.
5. Demonstrate a pleasant and positive attitude when dealing with co-workers, instructors, faculty, staff and medical personnel.

Organization

1. Display recognition of the importance of interpersonal relationships with students, faculty, staff and medical personnel by acting in a cordial and pleasant manner.
2. Work as a team with fellow students, instructors, nursing staff and the physician in providing patient care.
3. Organize work assignments effectively.
4. Collect information from appropriate resources.
5. Adapt techniques to overcome difficulties.
6. Devise or suggest new techniques welfare or patient or unit efficiency.

Safety

1. Verify identity of patients before initiating therapeutic action.
2. Interpret written information and verbal directions correctly.
3. Observe and report significant changes in patient's condition promptly to appropriate person(s).
4. Act to prevent accidents and injury to patients, personnel and self.
5. Transfer previously learned theory and skills to new/different patient situations.
6. Request help from faculty/staff when unsure.
7. Comply with hospital and university guidelines for performance.

Snow Days/Inclement Weather/Campus Closure

When inclement weather forces the closure of the Indiana University South Bend campus, all students are released from class and clinical externships. If a student is in a clinical rotation and Indiana University South Bend announces that it will close, they will be dismissed from clinical rotations at that time. Students who decide to stay at a

clinical rotation are doing so on a voluntary basis. Students are not required to make-up lost clinical time due to school closures. School closures are generally announced via the local news and through electronic communications from Indiana University South Bend.

Social Media

As defined in DCHS policy IT-04-B, students of the Vera Z. Dwyer College of Health Sciences must adhere to the following guidelines when using social media platforms as a student of Indiana University South Bend.

- Students have an ethical and legal obligation to maintain patient privacy and confidentiality at all times. Postings within social network sites are subject to the same professionalism standards as any other personal interactions. Statements made within online networks will be treated as if the statement was made verbally in a public place.
- Sharing of any patient-related data or images by electronic media is strictly prohibited. Students must not identify patients by name or post information that may lead to the identification of a patient. Limited access to postings through privacy policy setting is not sufficient to ensure privacy.
- When using electronic media, professional boundaries must be maintained at all times. Faculty, staff, and students have an obligation to establish, communicate, and enforce professional boundaries with patients in the online environment. One must use caution when having online social contact with patients or former patients. The fact that a patient may initiate contact does not permit the student to engage in a personal relationship.
- Do not violate copyrighted or trademarked materials. If you post content, photos or other media, you are acknowledging that you own or have the rights to use these items. IU and DCHS logos may not be used on any social media site without approval.
- Disclosure of information regarding course assignments or exams on social networks is a form of academic misconduct and students will be disciplined according to the procedures outlined in the Indiana University Code of Student Ethics.
- Students must be aware of and comply with IU and clinical sites policies regarding the use of computers, cameras, and other electronic devices in the clinical setting.

Students who violate these guidelines will be referred to the Medical Laboratory Science Program Director for disciplinary actions.

Style of Writing

In alignment with the academic programs of the Vera Z. Dwyer College of Health Sciences, the Bachelor of Science in Medical Laboratory Science program has adopted the [APA Style of Writing](#) for all formal writing assignments.

Appendix A

Opportunity for Success Documentation

Purpose

The purpose of this policy is to define the expectations for documentation for student success in the Medical Laboratory Sciences Program.

Policy

Per IU Policy, all students will be provided with due process and procedural fairness, to ensure equal protection for all students, and for the imposition of similar sanctions for similar acts of misconduct or opportunities for improvement. Students will be notified of opportunities for improvement when unsatisfactory progression towards course objectives and/or requirements and/or program goals, objectives, competencies, or supporting competencies occurs. Students will develop a personal plan for success.

Procedure

Level 1: Alert Form - Notification of Opportunity for Improvement

The goal of the Alert Form is to notify students as early as possible when their demonstrated behavior and outcomes are not consistent with progression towards course and/or program expectations. The document lists commonly identified areas for improvement. Additional areas may be outlined in the narrative portion of the document.

- When a faculty member identifies a student with an area(s) of concern, the faculty member will request a face-to-face meeting with the student to discuss the identified opportunity for success and complete an Alert Form. The faculty member can request the presence of the Program Director at any meeting.
- When a clinical preceptor identifies a student with an area(s) of concern, the clinical preceptor will meet with the CLS faculty member instructing the clinical externship course to discuss the concern(s). After meeting with the clinical preceptor, the faculty member will request a face-to-face meeting with the student to discuss the identified opportunity for success and complete an Alert Form. The faculty member can request the presence of the Program Director at any meeting.

Prior to the meeting, the faculty member will provide the student with the completed Alert Form for review. The student will complete the *Student Comments and Chosen Success Strategies* section prior to the meeting. During the meeting the student and faculty will discuss the opportunity for improvement and revise the Alert Form (if necessary). The student and faculty will sign the Alert Form once completed. An electronic copy of the completed form will be provided to the student and stored electronically. A corresponding entry will be made in the SER.

- Alert Form - Notification of Opportunity for Improvement in Didactic or Laboratory Course
- Faculty use this Alert Form to identify and document specific opportunities for improvement for a student enrolled in a specific didactic or laboratory course.
- Multiple receipts of an Alert Form or evidence of no improvement will lead to the creation of a student success plan and may correspond with course grade deduction or further disciplinary action.

Alert Form - Notification of Opportunity for Improvement in Clinical Externship

- Faculty and clinical preceptors use the Alert Form and document specific opportunities for improvement for a student while in a clinical externship rotation.
- Multiple receipts of an Alert Form or evidence of no improvement will lead to the creation of a student success plan and may correspond with clinical externship grade deduction or further disciplinary action. Please see grade reduction policy.

Level 2: Student Success Plan

A student success plan helps the student identify opportunities for improvement, clarify expectations, and develop an individualized plan for long-term success in meeting the expectations and outcomes of a course or program. The student will take ownership of the responsibility for achieving the desired outcomes for success. The faculty member will be a mentor and accountability facilitator in the plan for success. The student will be provided feedback regarding progress toward meeting identified goals.

Repeated receipt of the Alert Form with lack of evidence of improvement may lead to a course level or program level student success plan. A student success plan may be implemented with or without a prior Alert Form depending on the area identified for success.

Course Level Success Plan

- Any CLS faculty member may initiate a course level success plan. A course-level success plan addresses a single semester course. If a course level success plan is needed in a course taught by adjunct faculty, the adjunct faculty will obtain the help of the Program Director to develop the plan.
- Themes identified in a course level success plan could translate to a program level success plan if a pattern for the need of improvement for success is identified across multiple courses and/or semesters.

Program Level Success Plan

- Any CLS faculty member may initiate a program level success plan; however, the Program Director will hold responsibility for implementing the plan. A program level success plan is initiated if an opportunity for improvement for success

associated with meeting program goals, objectives, or competencies is identified or if a pattern is seen with course level success plans across courses or semesters.

- A program level success plan may be updated as the student identifies strategies for success and will continue into subsequent semesters and for the duration of the program when appropriate.

When a course level or program level student success plan is initiated, the faculty member or Program Director will request a face-to-face meeting with the student to discuss the identified opportunity for success and complete the student success plan. During the meeting, the faculty member or Program Director will provide the student with the completed course level or program level student success plan document for review.

Following the meeting, the student will complete the *Student Plan for Success* portion of the student success plan on or before the agreed due date. Once completed, the student and faculty member or Program Director will communicate to review, discuss, and revise the student plan for success, complete all areas of the form, and sign the agreed upon completed form. An electronic copy of the completed form is provided to the student and stored electronically. A corresponding entry will be made in the SER.

At the end of the course or semester, the faculty member or Program Director will meet with the student to discuss the final status of the student success plan.

- If the student success plan is at the course level, the faculty member will document if the student successfully completed the plan or not. Student success plans that are not successful will be referred to the Program Director for further review.
- If the student success plan is at the program level, the Program Director will evaluate and document the student's progress with the success plan.

If a student does not successfully complete a plan of success, this could lead to dismissal from the program.

- Dismissal actions are implemented upon decision of the School of Applied Health Sciences Student Council.
- The student may appeal a dismissal decision within five days of notification, in accordance with policy AS-05-C, published by the School of Applied Health Sciences.

Appendix B

Notification of Opportunity for Improvement in Didactic and Laboratory Courses

Faculty use this Notification of Opportunity for Improvement Form to identify and document specific opportunities for improvement that a student may be facing in a didactic or laboratory course. The items below are commonly identified areas for improvement. Additional student specific needs may be addressed in the comments section.

Student Name _____

Course _____ Semester/Year _____

Area for Improvement	Comments
Behavior/Accountability	
Late assignments	
Incomplete assignments	
Tardiness	
Absenteeism	
Difficulty with written work	
Difficulty following directions	
Lacks preparation for software, hardware, or class activities	
Professional Behavior	
Attitude/language	
Difficulty demonstrating ethical and professional behavior	
Lack of preparation	
Difficulty following appropriate chain of command	
Inappropriate dress/failure to follow uniform policy	
Difficulty functioning independently	

Difficulty accepting constructive criticism	
Communication	
Inappropriate interaction/online etiquette	
Delayed/lack of response to email	
Difficulty expressing self	
Inappropriate/incomplete documentation	
Critical Thinking	
Difficulty applying previously learned knowledge and skills	
Difficulty problem solving	
Difficulty evaluating self realistically	
Difficulty demonstrating logical thought processes	
Difficulty evaluating consequences of own actions	
Good Standing	
Difficulty displaying evidence of meeting or maintaining a minimum grade of C (2.0)	
Difficulty in meeting course objectives/competencies/requirements	
Difficulty in meeting program level competencies and outcomes	
Difficulty meeting Academic or Personal Conduct Expectations	
Other-provide details in narrative.	

Detailed objective narrative of observed behavior and contextual information (provide course objectives/competencies/policies if appropriate):

Faculty Recommended Success Strategies:
Student Comments and Success Strategy:

Faculty Signature _____ Date _____

By signing below, I am agreeing that:

I have met and discussed this concern with the faculty. I am aware of the opportunity for improvement and need for a personal plan for success. I also understand that this information will be placed in a confidential file for the purpose of tracking my progress throughout the remainder of the program. Repeated receipt of this form by a student with lack of evidence of improvement may lead to disciplinary consequences.

Student Signature _____ Date _____

Appendix C

Notification of Opportunity for Improvement in Clinical Externships

Faculty use this Notification of Opportunity for Improvement Form to identify and document specific opportunities for improvement a student may be facing while in clinical externship rotations. The items below are commonly identified areas for improvement. Additional student specific needs may be addressed in the comments section.

Student Name _____
 Course _____ Semester/Year _____
 Location _____ Department _____

Opportunity for Improvement	Comments
Following Protocol	
Failure to follow state and federal guidelines, regulations and recommendations (ex. HIPAA, OSHA, CLIA)	
Failure to follow IUSB or clinical site standards or policies	
Failure to follow clinical site schedule protocols/mismanagement of schedule	
Safe Clinical Practice	
Critical deficiencies in specimen management	
Critical deficiencies in PPE use	
Critical deficiencies in waste management	
Critical deficiencies in testing protocol	
Unacceptable use of clinical instrumentation	
Critical deficiencies in documentation	
Inability to communicate effectively and professionally	
Professionalism and Ethics	
Unethical practice and/or decision making	
Unprofessional and/or disrespectful behavior, attitude, language, or dress	
Lack of organized and/or thorough record keeping	
Repeated tardiness	
Early dismissal from scheduled rotation	
Unacceptable completion of responsibilities	
Lack of preparation	

Unacceptable clinical rotation time utilization and efficiency	
Difficulty following appropriate chain of command	
Critical Thinking and Self-reflection	
Difficulty displaying critical thinking and knowledge application in laboratory testing	
Difficulty problem solving	
Difficulty self-reflecting on performance and assuming responsibility for professional actions and care based on accepted theories, research, and accepted standard of care	
Difficulty evaluating consequences of own actions	
Good Standing	
Difficulty displaying evidence of meeting or maintaining a minimum grade of C (2.0) and/or passing	
Difficulty in providing evidence of progression towards meeting course objectives/competencies/requirements	
Difficulty in meeting course objectives/competencies/requirements	
Difficulty in meeting program level competencies and outcomes	
Difficulty meeting Academic or Personal Conduct Expectations	
Other-provide details in narrative.	

Detailed objective narrative of observed behavior and contextual information (list course objectives/competencies/policies if appropriate):

Faculty Recommended Success Strategies:

Student Comments and Success Strategy:

Faculty Signature _____ Date _____

By signing below, I am agreeing that:

I have met and discussed this concern with the faculty. I am aware of the opportunity for improvement and need for a personal plan for success. I also understand that this information will be placed in a confidential file for the purpose of tracking my progress throughout the remainder of the program. Repeated receipt of this form by a student with lack of evidence of improvement may lead to disciplinary consequences.

Student Signature _____ Date _____

Appendix D

Course Level Student Success Plan

The Course Level Student Success Plans helps the student identify opportunities for improvement, clarify expectations, and develop an individualized plan for long-term success in a course. The student will take ownership of the responsibility for achieving desired outcomes for success in the course. The faculty member will be a mentor and accountability facilitator in the plan for success. The faculty will provide feedback to the student regarding progress toward meeting course goals.

Student _____

Course _____

Faculty _____

Semester _____

Description of the opportunity for improvement (completed by faculty):

(Provide a clear objective description of observed behaviors and contextual information)

Competencies/instructional objectives/policy of concern (completed by faculty):

(Provide course competencies/instructional objectives and or policies related to the areas of concern; copy and paste from syllabus/handbook/clinic manual as appropriate)

Faculty provided suggestions for success (completed by faculty):

(Include suggested deadlines and suggested resources for improvement)

The above document was provided to the student for review following a face-to-face meeting to notify the student of the opportunity for improvement on _____.

The student is to return the completed document on or before _____.

My signature below indicates that I met with the instructor and I understand I must complete the document on or before the date above.

Student signature date

Faculty signature date

Student plan for success (completed by the student):

(Include clear benchmarks and deadlines, self-reflective strategies for improvement, outline how/when the instructor can support your strategies, and provide a plan for communication and follow-up.)

Student and faculty plan for communication and follow-up on the Course Level

Success Plan: (Completed together after the student plan for success is outlined)

My signature below indicates that I understand and agree to the plan for success outlined above and the following:

___ I must adhere to the identified plan and demonstrate **all** expected course competencies/ objectives successfully in order to succeed in this course; the inability to do so will result in failure of the course.

___ I understand that each course in the CLS program is essential to providing safe and competent patient care. Failure to successfully pass a course with a C or better could jeopardize my progression in the CLS program.

___ My success is my responsibility. My instructors are here to provide mentorship and support while holding each student equally accountable.

___ I have read, understand, and have had my questions about course and program level policy answered.

Student signature date

Faculty signature date

Appendix E

Program Level Student Success Plan

A Program Level Student Success Plans helps the student identify opportunities for improvement, clarify expectations, and develop an individualized plan for long-term success in the Medical Laboratory Science program. The student will take ownership of the responsibility for achieving desired outcomes for success for the duration of the program. The Program Director will be a mentor and be the accountability facilitator in the plan for success. The Program Director will provide regular feedback as appropriate to the student regarding progress towards program completion.

Student: _____

Semester Initiated: _____

Description of the opportunity for improvement (completed by Program Director):

Competencies/instructional objectives/policy of concern (completed by Program Director):

Program Director provided suggestions for success:

(Include suggested deadlines and suggested resources for improvement)

The above document was provided to the student for review following a face-to-face meeting to notify the student of the opportunity for improvement on _____.

The student is to return the completed document on or before _____.

My signature below indicates that I met with the Program Director and I understand that I must complete the document on or before the date above.

Student signature date

Director signature date

Student plan for success (completed by the student):

(Include clear benchmarks and deadlines, self-reflective strategies for improvement, outline how/when the Program Director can support your strategies and provide a plan for communication and follow-up.)

Student and Director plan for communication and follow-up on the Program Level Success Plan:

(Completed together after the student plan for success is outlined)

My signature below indicates that I understand and agree to the plan for success outlined above and the following:

___I must adhere to the identified plan and demonstrate **all** expected competencies/objectives successfully in order to complete the CLS program; the inability to do so will result in a change in progression status.

___It is my responsibility to discuss the terms of this document with each of my future faculty when appropriate to help facilitate my success.

___I understand that each course and requirement in the program is essential to providing safe and competent patient care. Failure to successfully pass a course with a C or better could jeopardize my progression in the CLS program.

___My success is my responsibility. My instructors are here to provide mentorship and support while holding each student equally accountable.

___I have read, understand, and have had my questions about course and program level policy answered.

Student Signature date

Faculty signature date

Appendix F

Student Reinstatement to the Medical Laboratory Science Program

Purpose

The purpose of this policy is to identify the process for students seeking reinstatement to the Medical Laboratory Science program in the School of Applied Health Sciences at Indiana University South Bend.

Policy

Students may request reinstatement into the Medical Laboratory Science (CLS) program by following the provided procedure. Student reinstatement decision will be based on academic standing, potential for progress toward the degree, availability of space and resources to support the additional student, and satisfactory completion of any conditions and/or faculty recommendations. Program documentation and materials submitted by the student will be used to make the determination.

Reinstatement to resume progression is dependent on space availability. If multiple students submit reinstatement requests for limited openings in the program, student overall GPA, program GPA, and programmatic success indicators will determine open position fulfillment. Programmatic success indicators are the identified skills and abilities related to the specific subjects of the CLS curriculum.

If denied reinstatement, the student may appeal according to the procedures outlined in the School of Applied Health Sciences Appeal Policy.

Procedure

Step 1: Reinstatement to the University

Students who have been dismissed from the University and wish to return must apply through the Office of Admission by the established due dates.

Students who take a leave of absence from the program, do not need to apply with the University so long as they are in good academic standing with the University. Students may contact the Office of Admission if they are not sure of their academic standing.

Step 2: Reinstatement Approval by the SAHS Council

Students who wish to be reinstated will be instructed by the MLS Program Director to submit the written reinstatement request and all supplemental documentation to the MLS Program Director established due dates. Students are encouraged to collaborate with the Assistant Dean for Student Success and Operations for reinstatement requests.

Deadline for documentation:

- To be reinstated for spring semester: October 1
- To be reinstated for fall semester: March 1

The School of Applied Health Sciences Council (SAHSC) will review the reinstatement request and supplemental documentation and make decisions based on the documentation provided. An appointed member of the SAHSC will provide notification of decision to the student, MLS Program Director, Assistant Dean for the School of Applied Health Sciences, and the Assistant Dean for Student Success and Operations at a minimum of two weeks prior to the start of the semester for which reinstatement was requested.

Required supplemental documentation:

- Reinstatement request letter from the student, including:
 - The reason for leaving the program.
 - A student generated action plan for successful completion of the program, that addresses factors resulting in dismissal or interruption in degree progress and outlines an individualized plan to meet the expectations and outcomes of the program.
- Records from the MLS Program Director, including:
 - Documents tied to course requirements and program learning outcomes.

Step 3: Validation of Theory and Clinical Competencies

All course objectives and skill competencies must be validated as outlined below before a student can re-enroll and continue matriculating through the MLS program to ensure safety and regulatory compliance. Validation course work must be completed with a passing grade of C or better. Skill assessment evaluations are subject to procedures defined in the Division of Clinical Laboratory Science Skill Assessment Grading Policy.

Upon readmission into the Medical Laboratory Science program, the student will enroll in a clinical reinstatement course. The credit hours for the course will vary, based on the need of the student. During this course, the student will meet with the Program Director to establish a timeline to complete validation of all required course objectives and skill competencies, prior to beginning the semester of re-entry.

An IUSB Division of Clinical Laboratory Science validation of theory and clinical competencies is permitted one time. An unsuccessful attempt of theory and clinical competencies validation will result in permanent dismissal from the Medical Laboratory Science program.

Validation of theory and clinical competencies will be based on courses completed and point at which re-entry is sought. Students must validate the courses that have been completed before continuing to subsequent courses in the MLS curriculum.

Step 4: Reinstatement in Clinical Sequence

Upon successful demonstration of academic and clinical competencies within the designated time, the student will be reinstated into the Medical Laboratory Science program to begin the remaining courses of the MLS curriculum. Documentation of the validation attempt will be stored in the student's academic file.