ZANE STATE COLLEGE
ZSC

Medical Laboratory Technician Program

Prospective Student Information

The program is designed to allow students to acquire the skills to function as an entry-level practitioner in the clinical laboratory setting. Students study math, biology, chemistry, communication, and laboratory related course work to prepare them for their role as a laboratory professional. Information about the program course requirements, admission criteria, and essential functions is attached.

Application Deadline: January 19, 2017 at 5:00 p.m.

FACULTY:

Laura Geiger, MBA, MT(ASCP)
Office: HSH 325L
Phone: 740.588.1228
lgeiger@zanestate.edu

The MLT Program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS)
5600 N. River Road, Suite 720
Rosemont, IL 60018-5119
773.714.8880
www.naacls.org

HEALTH PROGRAMS APPLICATION COVER PAGE

Name: _____

Address: _____

_____

Phone #: _____

E-Mail: _____

Student ID #: _____

Programs Applying For:

- Applicants are required to indicate a minimum of two and a maximum of three programs/degrees, ordered according to your preference as number 1, 2, or 3.
    - o Consideration for program admission will be based on the order of the program preference you indicate.

_____ Health Information Management (HIMT)

_____ Medical Assisting (MEDA)

_____ Medical Laboratory Technician (MLTP) Selective Program

_____ Occupational Therapy Assistant (OTAP) Selective Program

_____ Physical Therapist Assistant (PTHA) Selective Program

_____ Radiologic Technology (RADT) Selective Program

_____ Sport and Fitness Management (SFMT)

_____ I do not desire to apply to a second Health program, but will pursue the ASCH or ASCI transfer degree.

Completed folders may be submitted in one of two ways:

Mailed to:
Zane State College/Health Science Hall
1555 Newark Rd
Zanesville, OH 43701

or dropped off in the reception area of
Health Science Hall, H325

COMMON HEALTH PROGRAMS APPLICATION CHECKLIST

- **PUT YOUR NAME, ADDRESS, AND STUDENT ID# ON THE FRONT OF THE FOLDER**
- **Folders must be three-pronged – not three ringed.**
- **Please include and complete this checklist as the second page of your application folder.**
- **You will need to place all items in numbered page protectors, and include one tab divider for each program to which you are applying. Label these dividers with the four letter program code indicated on the Application Cover Page. The tab(s) is/are to be placed after Page 8 from the list below.**

☐	Page 1	Health Programs Application Cover Page
☐	Page 2	Common Health Programs Application Checklist (this page)
☐	Page 3	Evidence of application to and/or acceptance to the College. Clearly indicate your name and Zane State College Student ID number on this document. (e.g. Acceptance letter, copy of Student ID card, Z-Online document)
☐	Page 4	Official transcripts from <u>all other</u> colleges you have attended. These should be in sealed envelopes from the institution and should include grades through the end of fall semester prior to application. Unofficial Zane State College transcripts that include current GPA are acceptable.
☐	Page 5	Copy of transfer credit awarded by Zane State College for courses taken at other institutions. Please submit your transcripts to our Registrar's Office well in advance of the application deadline so that there is ample time for them to be reviewed.
☐	Page 6	Accuplacer scores if you have not previously completed college-level math and English with a grade of "C" or better.
☐	Page 7	Copy of ACT scores and/or Health Occupations Aptitude Exam score. Required for MLTP, OTAP, PTHA, and RADT.
☐	Page 8	Evidence of readiness for or completion of BIOL 2400/2410 by indicating the following: ____ I have taken an high school level advanced biology or anatomy and physiology in the past three years and passed it with a "C" or higher. ____ I have taken college level anatomy and physiology in the past five years and passed both lecture and lab sections with a "C" or higher. This course, if taken at another institution, has been approved for transfer credit by the Zane State College Registrar's Office. ____ I have taken college-level A&P greater than 5 years ago and understand that I will be required to retake and successfully complete both lecture and lab sections with a "C" better. ____ I have taken BIOL 1210 and passed it with a "C" or better. ____ I am scheduled to take BIOL 1210 _____ semester.

NOTE: No page should be left blank. If the item required on a page is not applicable to you, please provide a brief explanation as to why it does not pertain to you on the appropriate page.

Program Specific Requirements: Following Page 8, place your program specific documents behind the appropriately labeled tab divider. Each document should be in a numbered page protector. They are to be in the order specified in the program specific requirements checklist.

- **Sample application folders are available for review in the One Stop, Cambridge Campus, and Health Science Hall reception area.**

Medical Laboratory Technician Program
GENERAL INFORMATION

Laboratory medicine may be a good career field for you, If:

- You have a strong interest in science and particularly enjoy anatomy and physiology.
- You would prefer to work in a lab behind a microscope over interacting with patients.
- You enjoy solving mysteries or finding answers to the unknown.
- You like a challenge and are responsible.
- You work well under pressure.

What is a laboratory professional?

Laboratory personnel examine and analyze body fluids, and cells. They look for bacteria, parasites, and other microorganisms; analyze the chemical content of fluids; match blood for transfusions; and test for drug levels in the blood that show how a patient is responding to treatment. Technicians also prepare specimens for examination, count cells, and look for abnormal cells in blood and body fluids. They use microscopes, cell counters, and other high-tech laboratory equipment. They also use automated equipment and computerized instruments to test specimens. After testing and examining a specimen, they analyze the results and relay them to physicians.

Why is laboratory medicine important?

Have you ever wondered who conducts the detailed laboratory testing for your annual exam, such as cholesterol and glucose levels, and analyzes the results? Or who conducts specialized testing for genetic disorders like sickle cell disease? How about those who identify an antibiotic resistant infection like Methicillin Resistant Staphylococcus aureus (MRSA) and determine which antibiotic is required to save someone's life? Well, if you thought that it was your physician, or perhaps a nurse or someone else you see at your doctor's office or in the hospital, you would be incorrect.

Medical laboratory professionals provide up to 70 percent of patients' laboratory testing to physicians so they can provide an accurate diagnosis and treatment plan, according to a 2002 study in *Clinical Leadership and Management Review* titled "The Value of the Laboratory Professional in the Continuum of Care." In that study, author Rodney Forsman, Administrative Director Emeritus of the Mayo Clinic Medical Laboratories and President of the Clinical Laboratory Management Association, stated that 94 percent of the objective medical data in the patient record comes from the laboratory professionals.

Doctors rely on laboratory test results to make informed patient diagnoses. Patient history along with physical signs and symptoms are vital, but most diagnoses need confirmation that only laboratory tests can provide. The laboratory professionals also contribute to wellness testing, guiding treatment, and monitoring patient progress. As a laboratory professional, you will play a huge role in the processing and analysis of laboratory samples. In turn, you largely influence the reliability and credibility of laboratory data as well as the accuracy of patient diagnoses and the quality of care that patients receive.

Are medical laboratory technicians in demand?

The job demand for Medical Laboratory Technicians is predicted to increase 22 percent between 2012-2022 twice that of other occupations according to the US Bureau of Labor Statistics, www.bls.gov. Recently, the Medical Laboratory Technician was ranked 13th in the “Best Jobs 2012” column written by US News and World Report. The strong predicted job market and the favorable salary ranges make this field an excellence career choice.

What is the career ladder for a laboratory professional?
The certified Medical Laboratory Technician can further their education at various universities throughout the country. After the completion of a Bachelor's Degree the graduate will be eligible to sit for the ASCP National Certification Exam to be then recognized as a Medical Laboratory Scientist. Further education tracks would include Master's of Science, Master's of Education, Pathologist's Assistant among many others. Local colleges offering Bachelor's degree completion programs are Muskingum University(online), The Ohio State University, University of Cincinnati(online), and Marshall University(online).

What are essential functions?
It is critical that individuals performing laboratory testing are proficient. This requires that students meet certain educational and technical standards that have been set by American Society for Clinical Laboratory Science (ASCLS), American Association of Clinical Pathologists (ASCP), American with Disabilities Act (PL101-336), and National Accrediting Agency for Clinical Laboratory Sciences (NAACLS). All students applying for admission to the Medical Laboratory Technician Program must be able to meet the essential functions as outlined by these organizations or request reasonable accommodations. These essential functions include a sound intellect; good motor skills; effective communication skills; visual acuity; professional skills; and hold sound psychological health and stability. A more detailed list of these essential functions is included in this packet. Please review this list and determine your ability to meet these entry requirements.

To learn more about the MLT program, you may e-mail or call to make an appointment to speak with one of the instructors. Other informative websites about the laboratory profession include the following:

- **www.ascp.org** **www.naacls.org**
- **www.ascls.org** **www.bls.gov**

Please be aware that we are able to accept only 20 students into the MLT courses, which begin each fall semester. The program will consider all applications until 20 students have been accepted even after the common application deadline has passed. The minimum requirements for acceptance to the MLT program are as follows:

- **GPA of 2.5 in either high school or college courses (at least 2 semesters/sessions), whichever is most recent**
- **ACT score of 20 or HOAE score of 40**
- **Placement into ENGL1500**
- **Satisfactory completion (C or better), of the following courses by the end of Summer Session 2017:**
  - **CHEM 1010***
  - **BIOL 1210***
  - **MATH 1240**
  - **BMCA 1010, 1020, or 1050**

  ***High school courses (Chemistry and/or Advanced HS Biology course) may fulfill these requirements as long as have been taken within the past 2 years. Please make an appointment or email the program director if you have questions regarding this statement. A copy of your HS transcript will be necessary for consideration.**

If you have been accepted to Zane State College but have not yet met the requirements for the MLT program, you may enroll in the ASHC (Associate of Science, Health Concentration) program. This curriculum allows you to complete courses pertaining to the MLT degree as well as other health technologies offered at Zane State College. Demonstration of academic success in these courses will enhance your application to the MLT program. Please contact an advisor in the Zane State College One Stop for Student Success, 740-588-5000, or Amanda Goldsmith, ASHC advisor, at 740-588-4191 if you wish to enroll in the ASHC curriculum.

PLEASE READ: All MLT students will be required to complete a BCI background check between their first and second year. According to various sections of the Ohio law, persons convicted of certain felonies and misdemeanors may be refused clinical placement and/or employment by healthcare facilities. If you would like more information about specific charges please contact the Program Director as soon as possible.

Zane State College Medical Laboratory Technician Program current clinical affiliates

Genesis Healthcare, Zanesville, Ohio
Southeastern Ohio Regional Medical Center, Cambridge, Ohio
Fairfield Medical Center, Lancaster, Ohio
Nationwide Children's Hospital, Columbus, Ohio
Ohio Valley Medical Center, Wheeling, WV
Licking Memorial Healthcare, Newark, Ohio
University Hospitals-Samaritan Regional, Ashland, Ohio
Ohio Health-Riverside Methodist, Columbus, Ohio

The National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) requires that at least one current outcomes measure be included in the program's published materials. The following information includes three outcome measures that are reported to NAACLS as part of annual report submissions.

Zane State College
Medical Laboratory Program Outcomes
Classes of 2013-2015

American Society of Clinical Pathology exam pass rates

Year	Class of 2013	Class of 2014	Class of 2015
Total number of first-time exam takers	**4**	**9**	**5**
Total number of first-time exam takers who passed	**4**	**9**	**5**
Zane State ASCP certification pass rate	**100%**	**100%**	**100%**
National average ASCP pass rate	**79%**	**78%**	**83%**

Zane State College graduation rates

Year	Class of 2013	Class of 2014	Class of 2015
Total number of students that started the **final half** of the program	**5**	**9**	**5**
Total number of students that graduated	**4**	**9**	**5**
Zane State Graduation rate	**80%**	**100%**	**100%**

Zane State College job placement rates

Year	Class of 2013	Class of 2014	Class of 2015
Total number of program graduates	**4**	**9**	**5**
Total number of graduates that found employment or continued their education within six months	**4**	**9**	**5**
Zane State graduate placement rate	**100%**	**100%**	**100%**

Essential Functions Required of Medical Laboratory Technician Students

I. Observational Requirements

The MLTP student must be able to:

- Observe laboratory demonstrations in which biological (i.e., body fluids, culture materials, tissue sections, and cellular specimens) are tested for their biochemical, hematological, immunological, and histochemical components.
- Characterize the color, odor, clarity, and viscosity of biological specimens, reagents, or chemical reaction products.
- Employ a clinical grade binocular microscope to discriminate among fine structural and color (hue, shading, and intensity) differences of microscopic specimens.
- Read and comprehend text, numbers, and graphs displayed in print and on a video monitor.

II. Movement Requirements

The MLTP student must be able to

- Move freely and safely about a laboratory.
- Reach laboratory benchtops and shelves, patients lying in hospital beds or patients seated in specimen collection furniture.
- Travel to numerous clinical laboratory sites for practical experience
- Perform moderately taxing continuous physical work, often requiring prolonged sitting, over several hours.
- Maneuver phlebotomy and culture acquisition equipment to safely collect valid laboratory samples.
- Control laboratory equipment (i.e. pipettes, inoculating loops, test tubes) and adjust instruments to perform laboratory procedures.
- Use an electronic keyboard to operate laboratory instruments and to calculate, record, evaluate, and transmit laboratory information.

III. Communicate Requirements

The MLTP student must be able to:

- Read and comprehend technical and professional materials (i.e. textbooks, magazine and journal articles, handbooks, and instruction manuals).
- Follow verbal and written instructions in order to correctly and independently perform laboratory test procedures.
- Clearly instruct patients prior to specimen collection.
- Effectively, confidentially, and sensitively converse with patients regarding laboratory tests.
- Communicate with faculty members, fellow students, staff, and other health care professionals verbally and in a recorded format (writing, typing, graphics, or telecommunication).
- Independently prepare papers, prepare laboratory reports, and take paper, computer, and laboratory practical examinations.

IV. Intellectual Requirements

The MLTP student must:

- Possess intellectual skills: comprehension, measurement, mathematical calculation, reasoning, integration, analysis, comparison, self-expression, and criticism.
- Be able to exercise sufficient judgment to recognize and correct performance deviations.

V. Behavioral Requirements

The MLTP student must:

- Be able to manage the use of time and be able to systemize actions in order to complete professional and technical tasks within realistic constraints.
- Possess the emotional health necessary to effectively employ intellect and exercise appropriate judgment.
- Be able to provide professional and technical services while experiencing the stresses of task-related uncertainty (i.e. ambiguous test ordering, ambivalent test interpretation), emergent demands (i.e. "stat" test orders), and a distraction environment (i.e. high noise levels, crowding, complex visual stimuli).
- Be flexible and creative and adapt to professional and technical change.
- Recognize potentially hazardous materials, equipment, and situations and proceed safely in order to minimize risk of injury to patients, self, and nearby individuals.
- Adapt to working with unpleasant biological specimens.
- Support and promote the activities of fellow students and of health care professionals. Promotion of peers helps furnish a team approach to learning, task completion, problem solving, and patient care.
- Be honest, compassionate, ethical, and responsible. The student must be forthright about errors or uncertainty. The student must be able to critically evaluate his or her own performance, accept constructive criticism, and look for ways to improve (i.e. participate in enriched educational activities). The student must be able to evaluate the performance of fellow students and tactfully offer constructive comments.

(Essential functions as listed in *Clinical Laboratory Science* Vol. 9, No. 1 Jan/Feb 1996)

I have reviewed the essential functions and feel that I can meet all requirements.

_____ _____

Signature Date

_____

Printed Name

HEALTH ALERT

MEDA, MLTP, OTAP, PTHA, RADT

ENTERING STUDENTS

Federal legislative action through the Occupational Safety and Health Act (OSHA) now mandates that facilities employing individuals who come in contact with hazardous and infectious materials, i.e., body fluids such as blood, semen, vaginal secretions, cerebrospinal fluid, pleural fluid, synovial fluid, peritoneal fluid, amniotic fluid, saliva, or any fluid contaminated with blood must offer their employees Hepatitis B immunization.

While Zane State College does not fall under OSHA regulations, most of the clinical affiliates for the above identified programs do and must comply with the law. Students are not employees of the hospitals or clinical affiliates. Therefore, these facilities are not required to provide the immunization for students but they can limit the college's access to their facilities if students are perceived to be at risk and without appropriate opportunity for immunization.

Consequently, ALL STUDENTS ENTERING MEDA, MLTP, OTAP, PTHA, or RADT, MUST ACQUIRE THE HEPATITIS B IMMUNIZATION SERIES OF THREE INJECTIONS (OVER A SIX MONTH PERIOD). New students in these programs must provide the college with documentation of the first Hepatitis B injection no later than August 1, of the entering year. Entering students who fail to provide the appropriate documentation by the designated timeline will be withdrawn from their programs and their places will be given to alternates. Current freshmen students who fail to comply with this requirement will be unable to register for technical courses and, hence, unable to complete their programs. Students failing to complete the series of three injections will be unable to register and/or complete their programs.

ALL COSTS ASSOCIATED WITH MEETING THE HEALTH/IMMUNIZATION REQUIREMENTS OF HEALTH PROGRAMS ARE THE SOLE RESPONSIBILITY OF THE STUDENT. Students should <u>not</u> begin Hepatitis B immunization until they have been <u>fully accepted</u> into the program of choice. Notification of acceptance into your program will be official when coming from the following faculty:

MEDA (Medical Assisting) – Shay Brooks
MLTP (Medical Laboratory Technology) – Laura Geiger
OTAP (Occupational Therapy Assistant) - Mary Arnold
PTHA (Physical Therapist Assistant) – Lori Wahl
RADT (Radiologic Technology) – Lauren Huffman

O:Hsfaculty/Health/\HE-ALERT.doc
Revised: May 2012

Medical Laboratory Technician Program – Application Checklist

The MLT program is a selective program that admits only 20 students per year due to a limited number of clinical sites available. To be considered for the class starting in Fall 2017 you must complete all of the following and submit appropriate documentation to the program director by **January 7, 2017 at 5:00 p.m. Occasionally, applications will be taken after this deadline.** Contact the Program Director for more information.

Place this checklist after the tab divider labeled MLTP. Include ALL applicable materials in your application folder in the order they are listed.

☐	MLTP Page 1	Medical Laboratory Technician Program Application Checklist (this page) to ensure you have included all items.
☐	MLTP Page 2	Evidence of successful completion (grade C or better) of advanced high school general chemistry course or CHEM 1010 within the last two years. A typed and signed statement regarding when and where this was accomplished should be included as page 2.
☐	MLTP Page 3	Evidence of computer literacy (completion of BMCA 1010, 1020 or 1050). Include a note that indicates where to locate this information on your official transcript.
☐	MLTP Page 4	Evidence of successful completion of MATH 1240 or higher. Include a note that indicates where to locate this information on your official transcript.
☐	MLTP Page 5	Include a self-composed research paper regarding the profession of a Medical Laboratory Technician. This requirement is meant to encourage each applicant to research the profession before applying to the program. Please utilize the websites included on page 5 of this packet to help guide you. You may add additional information regarding life experience at the conclusion of the paper. This paper should be a least two pages double spaced, and referenced as needed.
☐	MLTP Page 6	Review the Essential Functions of MLT Students sign and date the form documenting that you feel you meet these requirements. (See pages 7 & 8 in the information packet.)
*Students officially accepted into the MLTP program are required to obtain a physical, Hepatitis B, and a TB skin test at their own expense. This form can be obtained from the Health Science Hall Receptionist or the MLT Program Director.		

ZANE STATE COLLEGE

ZSC

Medical Laboratory Program (MLTP)
Course of Study 2016-2017

First Semester I (Fall)

Course ID	Course Name	T/B/G	Credits	Ck off
BIOL 2400	Anatomy and Physiology I	G	3	
BIOL 2410	Anatomy and Physiology I Lab	G	1	
CHEM 1210	General Chemistry I	G	4	
ENGL 1500	Composition I	G	3	
FYEX 1010	First Year Success Strategies	G	1	
MLTP 1000	Introduction to Medical Laboratory Science	T	2	
	Total:		14	

Second Semester I (Spring)

Course ID	Course Name	T/B/G	Credits	Ck off
BIOL 2420	Anatomy and Physiology II	G	3	
BIOL 2430	Anatomy and Physiology II Lab	G	1	
CHEM 1220	General Chemistry II	G	4	
MLTP 1100	Clinical Hematology I	T	3	
MLTP 1200	Clinical Immunology	T	2	
	*Social & Behavioral Science Elective	G	3	
	Total:		16	

Summer Session I

Course ID	Course Name	T/B/G	Credits	Ck off
BIOL 2010	General Microbiology	G	3	
MATH 2270	Statistics	G	3	
	*Communication Elective	G	3	
	* English Elective	G	3	
	Total:		9	

Curriculum Summary: General (G)/ Basic (B) = 32 Hours Technical (T) = 33 Hours Total Curriculum Hours= 65

Third Semester II (Fall)

Course ID	Course Name	T/B/G	Credits	Ck off
MLTP 2000	Clinical Body Fluids	T	2	
MLTP 2100	Clinical Hematology II	T	3	
MLTP 2200	Clinical Chemistry	T	4	
MLTP 2300	Clinical Microbiology	T	4	
MLTP 2400	Clinical Immunohematology	T	3	
	Total:		16	

Fourth Semester II (Spring)

Course ID	Course Name	T/B/G	Credits	Ck off
MLTP 2500	DP 1: Clinical Chemistry	T	2	
MLTP 2510	DP 2: Clinical Immunohematology	T	2	
MLTP 2520	DP 3: Clinical Hematology & Coag	T	2	
MLTP 2530	DP 4: Clinical Micro & Immunology	T	2	
MLTP 2600	Medical Lab Tech Seminar	T	2	
	*Arts & Humanities Elective	G	3	
	Total:		13	

Summer Session II

Course ID	Course Name	T/B/G	Credits	Ck off
	Total:		0	

NOTE: Students must complete the computer literacy requirement in order to graduate which may be met through competency testing or completion of a program specific computer course. Refer to the degree audit and consult with the program advisor for the appropriate course(s) that meet the computer literacy requirement.

***ADDITIONAL INFORMATION ON REVERSE**

Medical Laboratory Program (MLTP)
Course of Study 2016-2017
Page 2

Arts & Humanities Electives		
HUMS 1020	Critical Thinking	3
PHIL 1020	Introduction to Ethics	3

Social & Behavioral Science Electives		
POLS 1010	American National Gvt.	3
PSYC 1010	Introduction to Psychology	3
SOCI 1010	Introduction to Sociology	3

Communication Electives		
COMM 1220	Interpersonal Communication	3
COMM 2610	Public Speaking	3

English Electives		
ENGL 2500	Composition II	3
ENGL 2800	Technical Writing	3