



- PUBLIC
- INDEPENDENT

**NEW PROGRAM PROPOSAL FOR ROUTINE REVIEW**

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**Sponsoring Institution:**

**Program Title:** Medical Laboratory Technician

**Degree/Certificate:**

**If other, please list:**

**Options:**

**Delivery Site:** Moberly Area Community College, North Central Community College, State Fair Community College, Three Rivers College, and Mineral Area College.

**CIP Classification:** 51.1004

**Implementation Date:** 8/13/2018

**Is this a new off-site location?**  Yes  No

**If yes, is the new location within your institution's current CBHE-approved service region?**

*\*If no, public institutions should consult the comprehensive review process*

**Is this a collaborative program?**  Yes  No

*\*If yes, please complete the collaborative programs form on last page.*

**CERTIFICATIONS**

- The program is within the institution's CBHE approved mission. *(public only)*
- The program will be offered within the institution's CBHE approved service region. *(public only)*
- The program builds upon existing programs and faculty expertise
- The program does not unnecessarily duplicate an existing program in the geographically-applicable area.
- The program can be launched with minimal expense and falls within the institution's current operating budget. *(public only)*

**AUTHORIZATION**

|   |                        |          |
|---|------------------------|----------|
| Roger McMillian, Dean of Career and Technical Education | <i>Roger McMillian</i> | 5/8/2018 |
|---|------------------------|----------|

Name/Title of Institutional Officer

Signature

Date

**PROGRAM CHARACTERISTICS AND PERFORMANCE GOALS**

Although all of the following guidelines may not be applicable to the proposed program, please carefully consider the elements in each area and respond as completely as possible in the format below.

Quantification of performance goals should be included wherever possible.

**1. Student Preparation**

- Any special admissions procedures or student qualifications required for this program which exceed regular university admissions, standards, e.g., ACT score, completion of core curriculum, portfolio, personal interview, etc. Please note if no special preparation will be required. See attached Word document – Student Preparation.
- Characteristics of a specific population to be served, if applicable.  
N/A

**2. Faculty Characteristics**

- Any special requirements (degree status, training, etc.) for assignment of teaching for this degree/certificate. See attached Word document – Faculty Requirements.
- Estimated percentage of credit hours that will be assigned to full time faculty. Please use the term "full time faculty" (and not FTE) in your descriptions here. 100% of MLT credit hours will be assigned to full-time faculty. Percent for general education credit hours will vary across institutions.
- Expectations for professional activities, special student contact, teaching/learning innovation. Requirement: 36 Continuing Education Units (CEU) in Medical Laboratory Science (MLS) every three years.

**3. Enrollment Projections**

- Student FTE majoring in program by the end of five years. Projection: 30 students FTE majoring in the program by the end of five years.
- Percent of full time and part time enrollment by the end of five years. Projections: 100% full-time enrollment by the end of five years (One admitted, full-time enrollment is required).

**STUDENT ENROLLMENT PROJECTIONS**

| <b>YEAR</b>  | <b>1</b>  | <b>2</b>  | <b>3</b>  | <b>4</b>  | <b>5</b>  |
|--------------|-----------|-----------|-----------|-----------|-----------|
| Full Time    | 20        | 23        | 25        | 27        | 30        |
| Part Time    | 0         | 0         | 0         | 0         | 0         |
| <b>Total</b> | <b>20</b> | <b>23</b> | <b>25</b> | <b>27</b> | <b>30</b> |

#### 4. Student and Program Outcomes

- Number of graduates per annum at three and five years after implementation.

Projections: 20 graduates at year three and 24 graduates at year five after implementation.

- Special skills specific to the program.

Phlebotomy, clinical/technical skills, knowledge of laboratory procedures, and interpretation of lab results.

- Proportion of students who will achieve licensing, certification, or registration.

100% of graduates will get certified

- Performance on national and/or local assessments, e.g., percent of students scoring above the 50th percentile on normed tests; percent of students achieving minimal cut-scores on criterion-referenced tests. Include expected results on assessments of general education and on exit assessments in a particular discipline as well as the name of any nationally recognized assessments used.

>75% of students will score above 50<sup>th</sup> percentile on the America Society of Clinical Pathology (ASCP) exam.

- Placement rates in related fields, in other fields, unemployed.

>90% of program graduates will get employed in a related field.

- Transfer rates, continuous study.

15-20% of graduates will transfer to a four-year institution for continued study.

#### 5. Program Accreditation

- Institutional plans for accreditation, if applicable, including accrediting agency and timeline. If there are no plans to seek specialized accreditation, please provide rationale.

The Consortium received NAACLS accreditation on April 17, 2017.

#### 6. Program Structure

A. Total credits required for graduation: 62 (See attached Word document – Academic Map MLT.)

B. Residency requirements, if any:

N/A

C. General education: Total credits:

27

*Courses (specific courses OR distribution area and credits)*

| Course Number | Credits | Course Title        |
|---------------|---------|---------------------|
| BIO2600       | 5       | Human Anatomy w/Lab |

|                       |   |   |
|-----------------------|---|---|
| BIO2620               | 5 | Human Physiology w/Lab  |
| ENG1330               | 3 | English Composition I (or equivalent)   |
| POS1180               | 3 | US & State Constitution Requirement   |
| MAT1270 or Equivalent | 3 | Math Appropriate Pre-requisite for General Chemistry I                        |
| PHS1350               | 5 | General Chemistry I (or equivalent)   |
| PHI1420 or SOC1130    | 3 | Directed Electives (e.g., humanities, social/behavioral science, orientation) |
|                       |   |   |
|                       |   |   |
|                       |   |   |

D. Major requirements: Total credits: 35 (See attached Word document – Course Descriptions).

| Course Number | Credits | Course Title                         |
|---------------|---------|--------------------------------------|
| MLT1500       | 2       | Introduction to Lab Science Methods  |
| MLT2100       | 3       | Immunology                           |
| MLT2600       | 2       | Phlebotomy                           |
| MLT2500       | 5       | Hematology and Coagulation           |
| MLT2910       | 2       | Hematology and Coagulation Practicum |
| MLT2800       | 4       | Clinical Microbiology                |
| MLT2900       | 1       | Parasitology, Mycology and Virology  |
| MLT2700       | 5       | Immunoematology                      |
| MLT2200       | 5       | Clinical Chemistry and Urinalysis    |
| MLT2930       | 2       | Clinical Microbiology Practicum      |
| MLT2940       | 2       | Clinical Immunoematology Practicum   |
| MLT2920       | 2       | Clinical Chemistry Practicum         |
|               |         |                                      |
|               |         |                                      |
|               |         |                                      |
|               |         |                                      |

E. Free elective credits: 0  
(sum of C, D, and E should equal A)

F. Requirements for thesis, internship or other capstone experience:  
N/A

G. Any unique features such as interdepartmental cooperation:  
N/A

## 7. Need/Demand

Student demand

Market demand

Societal demand

I hereby certify that the institution has conducted research on the feasibility of the proposal and it is likely the program will be successful.

***On July 1, 2011, the Coordinating Board for Higher Education began provisionally approving all new programs with a subsequent review and consideration for full approval after five years.***

## COLLABORATIVE PROGRAMS

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- **Sponsoring Institution One:** Moberly Area Community College
- **Sponsoring Institution Two:** Three Rivers College
- **Other Collaborative Institutions:** North Central Missouri College, State Farm Community College and Mineral Area College
- **Length of Agreement:** Ongoing
- **Which institution(s) will have degree-granting authority?** All five cooperative partners in the Missouri Health Professions Consortium (MHPC) will have degree-granting authority. The MHPC partners include Moberly Area Community College, North Central Community College, State Farm Community College, Three Rivers College, and Mineral Area College.
- **Which institution(s) will have the authority for faculty hiring, course assignment, evaluation and reappointment decisions?** MACC will assume primary responsibility for the program. The Consortium will make decisions related to professional coursework. Each institution will have the authority to make its own decisions related to general education coursework.
- **What agreements exist to ensure that faculty from all participating institutions will be involved in decisions about the curriculum, admissions standards, exit requirements?**  
The Consortium submitted agreements addressing faculty participation in the decisions about curriculum, admissions standards, and exit requirements to National Accrediting Agency for Clinical Laboratory Sciences (NAACLS).
- **Which institution(s) will be responsible for academic and student-support services, e.g., registration, advising, library, academic assistance, financial aid, etc.?**  
Each member community college will be responsible for providing academic and student-support services at their "home" campus. The MHPC partners are listed above in question #1.
- **What agreements exist to ensure that the academic calendars of the participating institutions have been aligned as needed?**  
The alignment of academic calendars of the participating institutions was included in the agreements submitted to NAACLS.

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# The Missouri Health Professions Consortium

## Explanation of the Collaborative Program

The Missouri Health Professions Consortium (MHPC) is a joint agreement among five Missouri Community Colleges to deliver health professions programs to students located in the rural regions of Missouri.

The Consortium's proposed Medical Laboratory Technician program is a one plus one degree program with the first year designed to complete general education and science pre-requisite requirements, and the second year required to complete the professional coursework.

### Cooperative Partners in MHPC

1. Mineral Area College – Park Hills, MO
2. Moberly Area Community College – Moberly, MO
3. North Central Community College – Trenton, MO
4. State Fair Community College – Sedalia, MO
5. Three Rivers Community College – Poplar Bluff, MO

Moberly Area Community College (MACC) assumes primary responsibility for curriculum planning and selection of course content, in consultation with representatives of affiliating institutions. MACC and Three Rivers Community College already have accredited MLT programs, whereas the three other member community colleges do not currently offer an MLT program.

Professional coursework will be taught by full-time faculty at MACC and Three Rivers. The program will utilize distance education delivery for the didactic component, with live instruction being broadcast from a central location to each member college classroom. General education coursework will be taught by faculty at students' "home" campuses.

MACC's MLT Coordinator will serve as the Program Director. The Program Director will be responsible for the coordination of classroom teaching and supervised clinical experience in simulated as well as actual clinical facilities.





# The Missouri Health Professions Consortium

## Student Preparation

Special Admission Requirements for the Medical Laboratory Technician (MLT) Program

### Pre-Requisite Requirements

| Course Title  | Credits      |
|---|--------------|
| Human Anatomy w/Lab or Human Anatomy & Physiology I                                   | 4            |
| Human Physiology w/Lab or Human Anatomy & Physiology II                               | 4-5          |
| English Composition I (or equivalent)   | 3            |
| US & State Constitution Requirement   | 3            |
| Directed Electives (e.g., humanities, social/behavioral science, college orientation) | 3-4          |
| Math-Appropriate Pre-Requisite for General Chemistry I                                | 3            |
| General Chemistry I (or equivalent)   | 5            |
| <b>TOTAL</b>  | <b>25-27</b> |

**GPA Requirement:** Minimum core pre-requisite GPA of 2.5

**TEAS Test Requirement:** Minimum composite of 50th percentile

**References:** Must submit three references

**Background Check:** Must submit and pass a criminal background check

**Drug Screen:** Must submit and pass a drug screen





# The Missouri Health Professions Consortium

## Faculty Requirements

Special Requirements for Assignment of Teaching for the Medical Laboratory Technician AAS Degree

### NAACLS Requirements for Faculty and Staff

#### Program Director:

The program director must be a medical laboratory professional who:

- a. has an earned master's or doctoral degree;
- b. holds ASCP-BOC or ASCPi -BOC generalist certification as a Medical Laboratory Scientist/Medical Technologist.
- c. has three years of teaching experience;
- d. has knowledge of education methods and administration as well as current NAACLS accreditation procedures and certification procedures.

#### Didactic Instructor Appointments:

The program must have qualified faculty/instructors who hold appointments within the educational program.

The program must ensure and document ongoing professional development of the program faculty/instructors.

- a. Qualifications Faculty/instructors designated by the program must:
  - i. demonstrate adequate knowledge and proficiency in their content areas;
  - ii. demonstrate the ability to teach effectively at the appropriate level.



## The Missouri Health Professions Consortium

### Medical Laboratory Technician (MLT) Course Descriptions

**Immunology (3)** -- The course consists of the principles and theories of antigen and antibody reactions and the immune system as related to diagnostic serologic procedures.

**Intro to Lab Sciences (2)** -- This course orients the student to the concepts encompassed in the laboratory environment, to include safe specimen handling, testing procedures, reporting results, basic quality control, laboratory organization and professionalism.

**Hematology and Coagulation (5)** -- This course studies the cellular structures in blood, normal and abnormal cell development, alterations present in disease and the mechanisms of coagulation.

**Parasitology, Mycology and Virology (1)** -- This course introduces the student to parasites, fungus and viruses and their role in human health and disease.

**Phlebotomy (2)** -- This course covers various procedures in performing venipuncture and other specialized collection techniques in addition to laws and regulations for safe phlebotomy practices.

**Microbiology (4)** -- This course consists of the role of pathogenic bacteria and other microorganisms which will include bacterial culturing, differentiation and identification of human normal flora and disease-causing microorganisms.

**Immunochemistry (5)** -- This course consists of concepts, applications and discrepancies of blood group testing, screening and crossmatch procedures and identifying unexpected antibodies.

**Clinical Chemistry and Urinalysis (5)** -- This course introduces the student to methods of analysis of chemical components found in the human body, the testing methodologies for those constituents and the results as applied to normal and abnormal disease states.

**Hematology and Coagulation Practicum (2)** -- Supervised clinical practice coordinated by the Consortium, in the hematology lab of selected clinical affiliates.

**Clinical Chemistry Practicum (2)** -- Supervised clinical practice coordinated by the Consortium, in the clinical chemistry lab of selected clinical affiliates.

**Clinical Microbiology Practicum (2)** -- Supervised clinical practice coordinated by the Consortium, in the microbiology lab of selected clinical affiliates.

**Clinical Immunochemistry Practicum (2)** -- Supervised clinical practice coordinated by the Consortium, in the immunochemistry lab of selected clinical affiliates.



# The Missouri Health Professions Consortium

*Providing quality health education for rural Missourians*

## Medical Laboratory Technician (MLT) Program



### Academic Map

| Taken  | Course Title                          | Credits             |
|--|---------------------------------------|---------------------|
| <b>Pre-Professional Coursework</b>   |                                       |                     |
|  | Human Anatomy (or HAPI)               | 4                   |
|  | Human Physiology (or HAPII)           | 4-5                 |
|  | English Composition I (or equivalent) | 3                   |
|  | US & State Constitution Requirement   | 3                   |
|  | Directed Electives*                   | 3-4                 |
|  | Math**                                | 3                   |
|  | General Chemistry I (or equivalent)   | 5                   |
|  |                                       | <b>Total: 25-27</b> |
| <b>Fall: Professional Coursework Fall</b>  |                                       |                     |
|  | Introduction to Lab Science Methods   | 2                   |
|  | Immunology                            | 3                   |
|  | Phlebotomy                            | 2                   |
|  | Hematology and Coagulation            | 5                   |
|  | Hematology and Coagulation Practicum  | 2                   |
|  |                                       | <b>Total: 14</b>    |
| <b>Spring: Professional Coursework Spring</b>  |                                       |                     |
|  | Clinical Microbiology                 | 4                   |
|  | Parasitology, Mycology and Virology   | 1                   |
|  | Immunochemistry                       | 5                   |
|  | Clinical Chemistry and Urinalysis     | 5                   |
|  |                                       | <b>Total: 15</b>    |
| <b>Summer: Professional Coursework Summer</b>  |                                       |                     |
|  | Clinical Microbiology Practicum       | 2                   |
|  | Clinical Immunochemistry Practicum    | 2                   |
|  | Clinical Chemistry Practicum          | 2                   |
|  |                                       | <b>Total: 6</b>     |
| <b>Total Credit Hours to Completion: 60-62</b>   |                                       |                     |
| <p>*College Orientation and Humanities and/or Social or Behavioral Sciences courses (Introduction to Ethics and/or Sociology) recommended.<br/> **Required pre-requisite course for General Chemistry I recommended<br/> General education classes may be completed at colleges other than the MHPC partner community colleges. Transfer credit is determined by each MHPC partner community college and students should not presume that all general education courses taken at another college will transfer as the equivalent to MHPC partner college coursework.<br/> *****All information is subject to approval from the MDHE, HLC and NAACLS*****</p> |                                       |                     |