



## Program Assessment Report (PAR)

### Medical Laboratory Science (MLB) Baccalaureate Degree

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**ACADEMIC YEAR COVERED BY THIS REPORT:** 2021-2022

#### I. PROGRAM LEARNING OUTCOMES

The MLS program Learning Outcomes as listed in the catalog are • Demonstrate success in foundational courses including biology, chemistry, math and other Core courses to prepare for work in Medical Lab Science. • Describe how medical laboratories operate including safety practices, regulatory agencies and compliance, efficient lab management, application of statistical concepts, utilization of Quality Assurance programs and continuing education • Demonstrate competence in performance of lab procedures including pre-analytical, analytical and post-analytical components in major medical lab areas including Clinical Chemistry, Hematology/hemostasis, Immunology, Transfusion Services, Microbiology, Urinalysis & Body fluids. • Display communication skills necessary for interdisciplinary professionalism, as well as ethics regarding performing lab procedures and protecting patient information • Apply knowledge of lab values and critical thinking skills to accurately interpret patient lab data

#### II. PROCEDURES USED FOR ASSESSMENT

##### A. Direct Assessment

The MLS program utilizes several assessment tools annually to measure our Program Learning Outcomes. The MLS program also has elements with required reporting annually to maintain our Accreditation. The National Accrediting Agency for Clinical Laboratory Science (NAACLS) requires reporting on three Outcome Measures Graduation rates, Certification Pass rates and Placement rates. SPECIFIC -Program Outcomes We assess these outcomes on Surveys, Clinical rotation evaluations and competencies, Management course (MLB 4990) including Management Project and a Spring Comprehensive Exam. Demonstrate success in foundational courses including biology, chemistry, math and other Core courses to prepare for work in Medical Lab Science. -Entrance requirements to the program-must have C or better in Bio, Chem and Math courses Describe how medical laboratories operate including safety practices, regulatory agencies and

compliance, efficient lab management, application of statistical concepts, utilization of Quality Assurance programs and continuing education. -MLB 4990 course quizzes/exams, and the Management project Demonstrate competence in performance of lab procedures including pre-analytical, analytical and post-analytical components in major medical lab areas including Clinical Chemistry, Hematology/hemostasis, Immunology, Transfusion Services, Microbiology, Urinalysis & Body fluids. -Practicum courses "clinical rotations" include Competency lists/checkoffs and Final Evaluations of student by lab professionals (rubric) Display communication skills necessary for interdisciplinary professionalism, as well as ethics regarding performing lab procedures and protecting patient information -Management Project and presentation-MLB 4990 -case studies presented in advanced courses; -Ethics and HIPAA covered throughout program. Orientation class, MLB 4110 quiz 1 and in Lab operations course MLB 4990 GLOBAL- Program Outcomes as a whole

1. Graduation Rate represents the percent of students who progress into the second half of our program year and graduate. -The Program Director keeps records. Per NAACLS requirements, in May of each year we calculate the number of students that successfully completed the program divided by the number that started the program year and multiply by 100. Success (graduation) in the program is determined by course grades, Program-Inclusive Comprehensive exams, and Evaluations from Clinical Rotations (practicum courses) site liaison and/or rotation supervisor/trainer.
2. Certification Pass Rate defined as percent of students who pass the American Society of Clinical Pathology- Board of Certification exam (ASCP-BOC) within the first year of graduation. The MLS Program Director must pay for access the Program Director area of the ascp.org website to monitor the ASCP-BOC Program Performance Reports through the summer months (or until each student's exam results accounted for). Calculate the percent who have passed divided by the total number who sat for the exam. Students who fail the exam can sit for exam additional times, but it counts as passing for our outcomes only if they pass within one year of graduation from our program. Our rates are usually >90% passing the exam on their first attempt.
3. Placement Rate defined as the percent of graduates who report finding employment as an MLS, working in a closely related field, or continuing their education within one year of graduation. We ask the students to report obtained post-graduation employment during the last months of the program (informally, during MLB 4990 or MLB 4820). Most of the students report having employment secured during March-April before they even graduate. A Graduate Survey is also sent to the graduates in the fall after they have graduated. One of the questions asks them if they have found employment as an MLS, working in a closely related field, or if they are continuing their education. Per our accreditation any of these is considered "placement".
4. Annual MLS Employer survey is administered to our regional labs annually. They are the largest employers of our graduates and can provide valuable feedback on the competence of our program meeting the stated Learning Outcomes. (Note questions 15-16 on Employer survey)
5. Spring Comprehensive exam administered at completion of the program year. The Spring Comprehensive Exam- a Cumulative Final of the Clinical year- is administered each spring in MLB 4990 prior to graduation. Students must have knowledge and competence of all of the program outcomes to pass the seven sections of the exam. They must understand clinical lab tests and normal results and employ critical thinking to analyze and evaluate their appropriateness and correlate how the results relate to patient health and disease states.

## **B. Scoring of Student Work**

Demonstrate success in foundational courses including biology, chemistry, math and other Core courses to prepare for work in Medical Lab Science. (Entrance requirements to the program-must have C or better in Bio, Chem and Math courses) Describe how medical laboratories operate including safety practices, regulatory agencies and compliance, efficient lab management, application of statistical concepts, utilization of Quality Assurance programs and continuing education. (MLB 4990 course topics, Management project) Demonstrate competence in performance of lab procedures including pre-analytical, analytical and post-analytical components in major medical lab areas including Clinical Chemistry, Hematology/hemostasis, Immunology, Transfusion Services, Microbiology, Urinalysis & Body fluids. (Practicum courses (clinical rotations); Competency lists/checkoffs and Final Evaluations of student by lab professionals (rubric) ) Display communication skills necessary for interdisciplinary professionalism, as well as ethics regarding performing lab procedures and protecting patient information (Management Project and presentation-MLB 4990, Grading sheet/rubric) and (case studies presented in advanced courses; Evaluation rubric for Adv Chem) Graduation Rate Course grades are mostly scored by instructors using answer key and interpreting accuracy of answers to application questions. Comprehensive Exams are scored electronically using a scan-tron/scanning services at WSU.  $\text{Items correct/total questions} \times 100 = \%$  Certification Pass Rate The certification exams are administered at a Pearson Testing Center. They are Computer Adaptive Tests. ASCP-BOC is responsible for all aspects the certification exam procedure nationally and internationally. Placement Rate Students share their employment with us as they acquire it throughout the spring and we document it (individual meetings, student group time). The students also report their employment status during their Graduate Survey which is sent 5-6 months after graduation/completion of the program. Use of the survey generates a report of each question on the survey, so it gives a percent of employment.

## **C. Indirect Assessment**

Exit Survey is given to students on their last day of the program to give feedback to the program regarding accomplishment of Program level and each major content area learning objectives. It also asks for feedback on the program as a whole, including areas of improvement. Employer Survey is sent to our regional stakeholders, the medical lab directors, who hire our graduates each year. Questions include feedback on graduate level of competence upon entering the field, student level of professionalism, their feedback on our program meeting learning outcomes consistent with entry-level skills in the field. Students also fill out course evaluations for each course.

### III. ASSESSMENT RESULTS/INFORMATION:

1. Graduation Rate
2. Certification Pass Rate
3. Placement Rate
4. Exit Survey
5. Practicum/Rotation evaluations

1. Grad rate =92%, students successfully achieved course outcomes building to overall program level outcomes 2. Certification pass rate= 73% have passed with in within the first 7 months of graduation. Two more students are expected to re-take the Board of Certification exam within the next few months. 3. Placement rate=100%, - 11/11 graduates responded to emails and/or the graduate survey of employment as positive full time placement in the field of Medical Lab Science. 4. Students responded to our Exit Evaluation (n=10) with a 4.3 or higher out of 5 for our courses meeting instructional content needs and their preparedness for all major areas of their Clinical Rotation/practicum experiences. 10/10 agreed that instructional and physical resources were sufficient. 10/10 answered yes they would take the program again. 5. Evaluations of the students at their rotations were overall very good with nearly all of them scoring 90+% on their evaluations which is evidence of their meeting the program learning outcomes.

Students are achieving the program learning outcomes 14/15 students passed the certification exam on their first attempt. (93% pass rate on first attempt) One student failed the first attempt, but passed the exam one month later. According to our accrediting agency we have 100% pass rate within one year of graduation. With 2020 abruptly changing to no face to face contact, it was more difficult to have our normal group meetings where we get this information. It was more difficult to gather contact information for the long term follow up. Results available from the Graduate Survey were 80% (but was a low number of surveys returned). Further discussions with students from follow up emails, socially distanced visits, and their classmate group texts we were able to determine this rate of 93% to be more accurate this year. Some of the labs had less hiring than usual during the spring of 2020 due to furloughs in the lab because of pandemic regulations stopping non-essential surgeries, visits to doctors and labs, etc.

### IV. ACTIONS TO IMPROVE STUDENT LEARNING

The Advisory Committee Meeting consists of our affiliated Lab Directors/Managers meets annually in January/Feb. ASCP-BOC pass rate and relevant redacted certification reports are shared with them, their feedback of the program is shared, and they review/renew their affiliation with the MLS program and agree to take a certain number of our students for clinical rotations for the upcoming academic year. The Program Director shares course evals with instructors. \*Improvements based on last year's Strategies for Improvement \*Update Student Exit Survey to include the specific Program Learning Outcomes as listed in catalog- Strategy; Updated the Exit Survey to include those outcomes. That will be used this spring when the current cohort completes the program. \*Annual fall MLS campus faculty group meeting discussed the Graduation, Placement and BOC

pass rates; We had one student fail 2 fall classes and had to leave the program. We had a small cohort for 21-22 likely due to COVID. 11 of the 12 students who started the program completed it. Placement rate was 100% The BOC pass rate was unusually low. This cohort of students had to deal with the brunt of the pandemic online learning and we feel that they just didn't know how to study the same way as past cohorts. \*Strategy for improvement: We were concerned that the advanced Hematology class has a lot of very difficult content as determined by student feedback. I met with the basic and advanced hematology instructors and a small bit of Advanced Heme content was placed in Basic Heme to slightly reduce the amount of content students must learn in the advanced heme course. We also reviewed together the ASCP Board of Certification guidelines for the Hematology content and found that we do need to continue to cover all the content that we do.

## **V. SUPPORTING DOCUMENTS**

Additional documentation, when provided, is stored in the internal Academic Program Assessment of Student Learning SharePoint site.