**Instructional Unit – Program Review**

**2017-18**

**Part 1: - Program Overview**

**Program Name: Medical Laboratory Technology - Major Code C242**

**Program Mission and Description:** The mission of the Medical Laboratory Technology Program at Jefferson State Community College is to promote and maintain standards of quality for the services and the environment necessary for students to achieve their educational goals and to enhance the social, cognitive, and professional skills required for entry level employment as medical laboratory technicians (MLTs) in the healthcare community.

The Program mission is consistent with the College “Statement of Philosophy and Purpose” published in the Jefferson State Community College Catalog and Student Handbook

The Medical Laboratory Technology Program at Jefferson State Community College is under the auspices of the Center for Professional, Career and Technical Education.

The Medical Laboratory Technology Program at Jefferson State Community College was established in 1967. It is the oldest associate degree program in Alabama and one of the oldest in the nation, with graduates numbering over seven-hundred. Many graduates are employed in various clinical settings across the metropolitan area of Birmingham and around the state of Alabama. A number have earned advanced degrees and are now working as Medical Laboratory Scientist.

The MLT program has maintained NAACLS accreditation since inception of the program and most currently was accredited in 2014 with a 7-year award. Our next accreditation cycle will be in 2021.

**Program Admission and Awards:** This is a limited admission program with an enrollment cap of 18-20 students admitted twice a year each summer and fall semesters. The introductory MLT classes MLT 100 and 131 resulting in phlebotomy certification is taught every semester with the summer and fall classes designated for MLT admission and the spring semester open to the public. Currently, off campus clinical placement is not adequate to support increased enrollment.

The healthcare industry depends on the ability of trained phlebotomist for the collection of blood samples used for the diagnosis of disease. In April 2016, the Phlebotomy Short Certificate was approved by the Alabama Community College System. This has standardized the phlebotomy clinical rotation for all students. It will allow the MLT graduate to become more marketable in the smaller settings such as doctors’ offices, clinics and rural hospitals where this skill is typically part of the job description. The Short – Term Certificate program will allow a stackable credential within our department so that students may obtain employment in the field while completing the AAS degree.

Students successfully completing MLT 100 and MLT 131 are eligible to sit for the National Healthcareer Association (NHA) Phlebotomy Certification examination. With the addition of PSY 200 and additional general elective from MLT 111 or MLT 151 the student will also be eligible for the Short Certificate in Medical Laboratory Technology with and emphasis in Phlebotomy. Most students continue to receive the AAS in Medical Laboratory Technology.

**Program Demographics:** Please complete the following chart for your area (this data can be found on the IE website or by contacting [ie@jeffstateonline.com](mailto:ie@jeffstateonline.com)

|  |  |  |  |
| --- | --- | --- | --- |
| **Category** | **Student Totals (3yrs)** | | |
|  | **2015-16** | **2016-17** | **2017-18** |
| Total Students | 73 | 34 | 57 |
| Number of Male | 58 | 5 | 7 |
| Number of Female | 15 | 29 | 50 |
| Age 18-25 | 26 | 13 | 29 |
| Age 26-40 | 35 | 20 | 23 |
| Age 41+ | 12 | 1 | 5 |
| African American Students | 25 | 13 | 20 |
| Asian Students | 6 | 2 | 3 |
| Caucasian Students | 37 | 18 | 33 |
| Hispanic Students | 1 | 1 | 1 |

**Mode of Delivery:** The MLT program is only offered at the Jefferson campus in Birmingham. Due to designated lab space needed we do not anticipate expansion to the other campus locations in the near future. The course-work is delivered primarily face-to-face with a on campus student lab experience required for most courses. Some of the introductory classes are delivered as online lectures with campus student laboratory experiences. The Clinical component of the last semester can take place at several affiliates located throughout the central Alabama region.

**Program/Department Goals:**

Medical Laboratory Technicians are competent in:

1. Collecting, processing, and analyzing biological specimens and other substances
2. Performing analytical tests of body fluids, cells, and other substances
3. Recognizing factors that affect procedures and results, and taking appropriate actions within predetermined limits when corrections are indicated
4. Performing and monitoring quality control within predetermined limits; performing preventive and corrective maintenance of equipment and instruments or referring to appropriate sources for repairs
5. Applying principles of safety.
6. Demonstrating professional conduct and interpersonal communication skills with patients, laboratory personnel, other health care professionals, and with the public
7. Recognizing the responsibilities of other laboratory and health-care personnel and interacting with them with respect for their jobs and patient care
8. Applying basic scientific principles in learning new techniques and procedures
9. Relating laboratory findings to common disease processes
10. Establishing and maintaining continuing education as a function of growth and maintenance of professional competence.

**Program Outcomes**

The MLT Program at Jefferson State will:

* 70% of students admitted to the MLT program will complete the program as technically competent individuals ready to enter the laboratory workforce.
* Graduates will take either the ASCP BOC national certification exam with a pass rate at or above the national average of 75%.
* Within six months of graduation, 70% of graduates seeking employment in the laboratory field will be employed.
* Employers and graduates returning surveys will report 85% satisfaction with educational preparation.

**Student Learning Outcomes**

Medical laboratory technicians will be prepared and proficient in skills that are necessary for them to function as part of the healthcare team, recognizing the responsibilities of other laboratory and health care personnel and interacting with them with respect for their jobs and patient care. These skills are reflected in the following student learning outcomes. Upon completion of Jefferson State’s Clinical Laboratory Technology program, the Associate Degree graduates will:

1. Demonstrate knowledge in laboratory safety, bloodborne pathogens, HIPAA, hazardous communication, and other laboratory standards necessary to protect themselves and the patients they serve.

2. Demonstrate professional conduct and interpersonal communication skills with patients, laboratory personnel, other health care professionals, and with the public.

3. Perform analytical tests including quality control on biological specimens; including collecting and processing biological specimens for analysis.

4. Relate laboratory findings to common disease processes.

5. Recognize and act upon individual needs for continuing education as a function of growth and maintenance of professional competence

**Program/Department Outcomes Achievement:** Please provide a detailed account of the achievement of each Program/Department Goal (above). Your report should be comprehensive in nature and include data (numbers, success rates) for the past three years. If you have incorporated the changes cited in a previous Program Review, please cite that. Clearly link the Student Learning Outcomes in each course to the Program/Department outcomes. Also, please include your three years of assessment data at the END of this report.

**2018 NAACLS Annual Survey Results**

Certification Pass Rates-ASCP

NAACLS BENCHMARK FOR ASCP-BOC PASS RATES: Three years consecutive results of pass rates demonstrating an average of at least 75%

|  |  |  |  |
| --- | --- | --- | --- |
|  | **For students who graduated between 7/1/15-6/30/16** | **For students who graduated between 7/1/16-6/30/17** | **For students who graduated between 7/1/17-6/30/18** |
| **A) Total # of Graduates** | **16** | **19** | **23** |
| **B) # who sat for the exam within first year of graduation** | **11** | **18** | **14** |
| **C) # who passes the exam within the first year of graduation** | **9** | **13** | **10** |
| **Yearly Certification Pass Rate Percentage: (C/B) x 100** | **82** | **72** | **71** |

**Three-year Average Certification Pass Rate Percentage :( total number of students across row C divided by the total number of students across row B) x 100 = 74%**

This is slightly below the NAACLS benchmark but per NAACLS standard I still have several students taking the exam and I anticipate meeting benchmark.

Graduation/Attrition Rates

NAACLS BENCHMARK FOR GRADUATION RATES: Three years consecutive results of pass rates demonstrating an average of at least 70%\*\* of students who have begun the final half of the program go on to successfully graduate from the program as calculated by the most recent three-year period.

\*\* The final half is determined to be the 3rd semester upon admission to the MLT program

|  |  |  |  |
| --- | --- | --- | --- |
|  | For students slated to graduate between 7/1/15-6/30/16 | For students slated to graduate between 7/1/16-6/30/17 | For students slated to graduate between 7/1/17-6/30/18 |
| A) # who began the “final half” of the program | 17 | 22 | 25 |
| B) # who began the “final half” of the program but subsequently left (voluntary or involuntary) | 1 | 3 | 2 |
| C) # who began the “final Half” of the program but are still currently enrolled | 0 | 0 | 0 |
| D) # who began the “final Half” of the program during the given time period and have since graduates | 16 | 19 | 23 |
| Yearly Attrition Rate Percentage: (B/A) x 100 | 6 | 14 | 8 |
| Yearly Graduation Rate Percentage: [D/(A-C)] x100 | 94 | 86 | 92 |

**Three-Year Average Graduation Rate Percentage: = [total number of students across row D] / [(total number of students across Row A) – (total number of students across Row C)],**

**x 100 = 91%**

Placement Rates

NAACLS BENCHMARK FOR PLACEMENT RATES: Three years consecutive results of students finding employment in the field demonstrating an average of at least 70%as calculated by the most recent three-year period.

|  |  |  |  |
| --- | --- | --- | --- |
|  | For students who graduated between 7/1/16-6/30/16 | For students who graduated between 7/1/16-6/30/17 | For students who graduated between 7/1/17-6/30/18 |
| A) Total # of graduates | 16 | 19 | 23 |
| B) # who found employment (in the field or in a closely related field) and/or continued their education within one year of graduation | 14 | 16 | 22 |
| C) # who did neither of the above | 2 | 1 | 0 |
| D) # for which you do NOT have any information | 0 | 2 | 1 |
| Yearly Average Placement Rate Percentage:  [B/(B+C)] x100 | 88 | 94 | 96 |

**Three Year Average Placement Rate Percentage: = [total number of students across Row B] / [(total number of students across Row B) + (total number of students across Row C)] x100 = 95%**

**Part 2: Program/Department Change**

**Program/Department Goal Changes:** No changes have been made this reporting cycle in the mission statement or departmental goals**.** Minor MLT course revisions are made each year resulting from our yearly program analysis and changes are reported to the advisory committee and documented on the institutional resources website.

**Course Student Learning Outcome Changes:** The most current program change that was made resulted from ASCP BOC scores falling under the NAACLS benchmark. In the NAACLS Action Report we proposed to change the MLT 293 Seminar class from the online format back to a face to face meeting on campus each week. BOC exam scores during the 2019 reporting period will hopefully reflect an increase in our ASCP-BOC testing scores.

**Program Faculty**- The MLT Full time faculty has remained constant since early 2000’s with 1 program coordinator/instructor and 1 clinical coordinator/instructor. During this reporting period we have 6 adjuncts available to help as needed for both lecture and lab instruction. Analysis from the class climate surveys for both full-time instructors showed that 100% of respondents scored all questions on the survey either strongly agree or agree. The two new MLT part-time hires were evaluated positively on their first semester this fall. Only one adjunct instructor was evaluated negatively and due to the resequencing of the MLT program will no longer be responsible for the two classes that had previously been assigned. This instructor has been mentored by both full-time faculty to no improvements seen by observation or evaluation and contributed to the phasing out of this instructor

**Classroom/Laboratory/Equipment** – Our MLT classroom and designated laboratory space has been fully renovated with instructional technology added in 2018 to complete the project. The equipment needs are more than adequate, and we are given the opportunity to make improvements in our equipment each year with funding. The supply budget for expendable supplies continues to meet our needs

**Clinical Practicum Experiences** – Clinical practicum experiences continue to be a challenge for the MLT program. Each semester we are finding more difficult to place students in a clinical practicum, especially in a micro and blood bank rotation. Currently, we have approximately 14 clinical sites in the Birmingham and surrounding counties but due to employee shortages, equipment and computer system installs, competition from other MLT/MLS programs we continue to struggle. Currently we are using the summer semester to either start a rotation early prior to fall clinical semester or finish a spring clinical semester due to the inability to place a student. We are exploring some additional clinical opportunities with both the UAB system and Veterans hospitals and hope they can accommodate a student every fall semester.

**Analysis of employer survey data** – Our 2016-17 employer survey was mailed to 14 known employers of MLT graduates with multiple graduates employed for a total of 9 graduates surveyed or 86% of the graduating class. 7/14 employer surveys were returned for a 50% response rate. Of these responding 6/7 or 86% of employers responded goo or higher on the survey questions using a 4-point scale. This met our department benchmark of 85%. The following weaknesses were listed as comments on employer surveys

1. Students less willing to take on responsibility

2. Need more students to fill the employment need in the area

3. Some students seemed to be just pushed through and are not prepared for rotation

Suggestions for preparing students better for employment

1. Attendance, Punctuality following all rules and attentiveness to detail

2. Keep involved with affiliations and up-to date on employment needs

3. Need technical basic skills in addition to theory

4. Before reporting for a section ask students to review and prep

5. ability to multi-task

6. work as a team

7. Increase confidence in knowledge to make informed decisions

8. additional training needed for manual diffs

As a response we have made several changes in the seminar class to address employer suggestions. We have also made slight curriculum adjustments in MLT core content to address comments and these changes are listed in the MLT 2017-18 program assessment document

**Analysis of trends in the field or industry** – As in all healthcare professions we are now feeling the effects of attrition due to retirement. Currently each of the major employment systems in the Birmingham and surrounding area have multiple jobs open for MLTs. Our graduates are typically hired at the facility where they have been placed for clinicals. The demand for increasing admission numbers to the program may be warranted however, our inability to provide clinical placement and completion of the degree their final semester continues to hold us back. The faculty and advisory committee members continue to discuss options at meetings and as a result we continue to investigate additional clinical opportunities.

**Analysis of the strengths of the program-** There are many strengths in the Medical Laboratory technology program. One of the most important strengths of the program is the faculty, both full-time and adjunct. Both full-time employees hold advanced degrees with one earning the EdD in Higher Education. All faculty have had or have direct hands-on clinical experience which benefits the student with real world application. The faculty have and continue to have excellent relationships with the area hospitals. This relationship helps us to secure biological samples for use in our on-campus labs, helps to secure donated items, and benefits our students in their job search. Another important strength of the program is our reputation. Based on this reputation, our students are sought after and generally well received when placing them for clinical practicums or post-graduation employment

**Analysis of the weaknesses of the program** – The biggest weakness currently is clinical placement of students and acquiring additional clinical affiliates. Even though the need is tremendous in this field, employers are still hesitant to take a student during times when employment shortages are increasing, or new instruments are being installed which as a result may compromise patient care. Understanding this valid reasoning still limits the number of students we can admit and is instrumental on program growth. Moving forward we will be checking at online options and bringing some clinical hours back on the campus if recommended by employers and advisory committee. At this time we will maintain our status quo.

**Part 3: Evidence of Staff Participation in Program Review**

**Faculty Demographics**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **# Employees** | **Avg. Years on Staff** | **Credit hours** | | |
|  |  |  | **F- 49 total** | **SP – 42**  **total** | **SU- 32**  **total** |
| **Full-Time** | **2** | **17.5** | **30=60%** | **34 = 80%** | **24= 75%** |
| **Part-time** | **4-5** | **8 years** | **19= 40%** | **8 = 20%** | **8= 25%** |

**Faculty/staff participation:** Each full and part-time faculty are responsible for gathering data and reporting statistics for each of the outcomes listed for review in the courses they are teaching. This data is turned in to the program coordinator and compiled into the Program Assessment document required by the College.The program conducts a yearly instructors meeting to discuss course evaluations and program changes.

**Advisory committee minutes (if applicable) and list of members**: The Advisory Committee was responsible for helping the Clinical Coordinator edit the clinical evaluation packets as well as instrumental in revamping the MLT 293 seminar class and the MLT 161 Laboratory simulation. Results from program revisions will be assessed during the 2018-19 assessment period.

2018-19 MLT Advisory Committee Members

Name Company

Kadambari Naik- Children’s Hospital

Gisele Baskin Children’s Hospital

Kim Bogan St. Vincent’s Hospital

Brandi Carver Southern Lab Partners

Penny Vance Colburn- Committee Chair UAB Medical West

Christopher Garrett Brookwood Baptist Health, Princeton

Valerie Hatch Brookwood Baptist Health, Shelby

Nancy McLendon Grandview Medical Center

Kassandra Moton Lab Corp/Brookwood

Linda Simmons American Red Cross

Kathy Scott Brookwood Baptist Health, Jasper

Dawn Taylor Cooper Green Mercy Health Services

Ricky Triplet Coosa Valley Medical Center

Currie Beeson MT(ASCP) Brookwood Baptist Health, Shelby

Kelley Hall MT(ASCP)SBB St. Vincent’s Hospital