Program Review

Bachelor of Science in Medical Technology

College of Health Professions

November 2008

MARSHALL UNIVERSITY
Marshall University

Date: November 2008

Program: Bachelor of Science in Medical Technology

Recommendation

Marshall University is obligated to recommend continuance or discontinuance of a program and to provide a brief rationale for the recommendation.

Recommendation Code (#):

1. Continuation of the program at the current level of activity; or

2. Continuation of the program with corrective action: Corrective action will apply to programs that have deficiencies that the program itself can address and correct. Progress report due by November 1 next academic year; or

3. Identification of the program for resource development: Resource development will apply to already viable programs that require additional resources from the Administration to help achieve their full potential. This designation is considered an investment in a viable program as opposed to addressing issues of a weak program. Progress report due by November 1 next academic year; or

4. Continuation of the program at the current level of activity, with the designation as a program of excellence (See Series 11 Statement from the Policy Commission); or

5. Discontinuation of the program (Procedures outlined in HEPC Administrative Bulletin 23).

Rationale for Recommendation: (Deans, please submit the rationale as a separate document. Beyond the College level, any office that disagrees with the previous recommendation must submit a separate rationale and append it to this document with appropriate signature.)

Recommendation: Signature of person preparing the report: Date:

Recommendation: Signature of Program Chair: Date:

Recommendation: Signature of Academic Dean: Date:

Recommendation: Signature of Chair, Academic Planning Committee: (Baccalaureate pgyms only) Date:

Recommendation: Signature of President, Faculty Senate/Chair, Graduate Council: Date:

Recommendation: Signature of the Provost and Senior Vice President for Academic Affairs: Date:

Recommendation: Signature of the President: Date:

Recommendation: Signature of Chair, Board of Governors: Date:
College/School Dean’s Recommendation

Deans, please indicate your recommendation and submit the rationale.

Recommendation:
Continuation of the program at the current level of activity.

Rationale:
The Department of Clinical Lab Sciences (CLS) provides a vitally important service to the regional healthcare system. The graduates of the program are highly skilled and are a vital resource in supporting diagnostic procedures critical to accurate interpretation of medical symptoms. The CLS department provides a career ladder to support development of professionals for laboratory settings. Starting with the 2 year Associates degree in Medical Laboratory Technician (MLT) progressing to the Bachelor of Science in Medical Technology (MT) students have the opportunity to develop both the knowledge base and technical skills necessary for a successful career. This Program Review is for the BS in Medical Technology degree which builds off of the foundation established with the MLT degree. These two degrees are directly linked with the coursework from the MLT forming the foundation for the MT.

The MT degree requires completion of the MLT degree and is considered a 2+2 program. This provides a career ladder option for students. Some students go directly from the MLT to the MT degree courses; others complete the MLT and go into the workforce and take MT courses part-time. The MT degree provides the foundation in scientific principals and diagnostic procedures in the classroom and teaching lab as well as clinical experience. The MT curriculum requires the students to take advanced science courses and to expand their knowledge and practice in medical technology.

Similar to the MLT degree, clinical experiences occur in regional health care facilities that have large clinical laboratories. The relationship with these facilities is essential to maintain this program and to keep enrollment at a viable level. When staffing declines in clinical facilities, some clinical directors respond by reducing the number of MT students that they are willing to accept for clinical rotations. The logical consequence of this response is fewer graduates that will lead to even greater problems with staffing. The Program Director has been successful in negotiating sufficient placements for students, but this external issue has the potential to impact enrollment levels.

CLS is in the third year searching for a qualified faculty member. This field has a 20% shortage of faculty nationwide, particularly faculty with doctoral degrees. The department has one senior full professor, one 4th year assistant professor and one temporary faculty member. Success in hiring additional permanent faculty will be an important factor for the department.

CLS has efforts underway to increase enrollment in the MT program. Discussions are underway with Southern West Virginia CTC to develop a 2+2 articulation agreement with their 2 yr. MLT program. This relationship has the potential to significantly increase the number of students in the MT program and will expand the number of MT graduates to help in staffing regional healthcare facilities as well as the southern region of WV.

The MT program is an important resource for the region and the faculty are successful in graduating qualified practitioners. This program requires in-depth training in clinical sites and a close partnership with clinical facilities. I recommend the program for continuation at the current level.

_______________________________________  ________________________
Signature of the Dean                  Date

4/21/08
Marshall University  
Program Review  

Program: Bachelor of Science in Medical Technology__________________  
College: College of Health Professions____________________________  
Date of Last Review: __2003______________________________________  

I PROGRAM DESCRIPTION  

The Associate Degree in Medical Laboratory Technology (MLT and the Bachelor’s Degree in Medical Technology (MT) are an integrated ladder curriculum following a 2+2 model. Students may choose to earn the associate degree only or to continue on and earn a bachelor’s degree.  

Medical Technologists (MTs) perform a variety of specialized tests in the clinical laboratory they provide information used by the physician to determine the extent and cause of disease. The tests performed by or supervised by the Medical Technologist are complete in such areas as hematology, blood banking, serology/immunology, clinical chemistry, microbiology (including parasitology and mycology) and urinalysis. The graduate Medical Technologist is prepared with the knowledge and abilities needed for certification by nationally recognized professional agencies. Certified Medical Technologists are accorded the status of professionals in the medical team. MTs often have supervisory responsibilities for each laboratory section and exercise independent judgment while evaluating the work of others.  

Most Medical Technologists are employed in hospital laboratories, while others find employment in physician offices, the armed forces, and state and federal health agencies. CLS MT graduates have also gone on to become physicians, dentists, physical therapists, health care computer specialists, hospital administrators, pharmaceutical salespersons, science teachers, college professors and attorneys.  

The results generated in the six areas listed above in the clinical laboratory provide physicians with 80% of the objective information needed to evaluate a patient’s health. Currently, there are over 1000 different analyses that can be performed on blood and body fluids. Although most areas of clinical laboratory are automated, the medical technologist is responsible for making crucial judgments on the accuracy of the results. The Medical Technologist also develops new techniques, evaluates the quality of laboratory instrumentation for
purchase, and oversees the overall laboratory quality control and quality assurance programs.

With the unique career ladder 2+2 curriculum, all students enrolled in the Medical Technology program have previous exposure to the areas of the clinical laboratory gained from their MLT practicum, which enriches their senior MT courses. Students in the junior year take additional pre-requisite courses in physics, organic chemistry and biology. During the second semester of the junior year, MT students begin an advanced CLS course, Clinical Immunology and Molecular Diagnostics, in preparation for their senior MT coursework. As part of the senior MT curriculum, students have advanced courses in clinical hematology, clinical chemistry, clinical microbiology, laboratory instrumentation and laboratory management, and diagnostic physiology. Students also participate in an advanced clinical practicum at affiliate hospitals, and also take a seminar course in which they analyze and present current peer reviewed literature in the field in each clinical area. MT students also take a senior capstone research course during their final semester in which they work in collaboration with CLS department faculty as well as clinical faculty at hospitals.

II ACCREDITATION INFORMATION

A The Medical Technology (MT) program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS)

Address: 5600 N River Rd
Suite 720
Rosemont, IL 60018

B In April 2006, The MT program was granted a regular five year accreditation (see attached copy of letter conferring accreditation).

C Accreditation status: Regular

D See attached scanned copy of the NAACLS Accreditation Report.

E In April 2006, the MT program at Marshall University was granted regular accreditation for five years. There were no deficiencies noted during the site visit.

F The most recent Self Study report is available upon request.
III PROGRAM STATEMENT on Adequacy, Viability, Necessity and Consistency with University/College Mission

A. ADEQUACY

1. Curriculum:

The MT Program requires that students have all of the courses for the MLT degree in the career ladder curriculum. In addition, students are required to have 8 hours of physics, 5-9 hours of organic chemistry and an additional advanced chemistry course (Analytical Chemistry or Biochemistry). Students must also take statistics, economics, international electives, multicultural electives and 29 hours of advanced clinical laboratory sciences courses which includes an advanced practicum experience. Students have the option of taking CHM 327, Introduction to Organic Chemistry, which is a single five hour course that includes a laboratory component or if students are planning to use the MT degree as a base for Medical School or Science Based Master’s programs, the CHM 355, Organic Chemistry I, CHM 356, Organic Chemistry II and CHM 361 Introduction to Organic Lab sequence is recommended (See Appendix I).

2. Faculty:

Currently there are two full time and one temporary full time faculty members in the Clinical Laboratory Sciences Department. One faculty member is tenured and holds the rank of full professor; one faculty member is on the tenure-track and holds the rank of assistant professor; one faculty member is temporary full time and holds the rank of instructor.

The two full time faculty members have attended state, regional, and/or national professional meetings within the past year; the temporary faculty member has plans to attend state and national professional meetings within the upcoming academic year. All three faculty members are certified as Medical Technologists by the American Society for Clinical Pathology (ASCP), which the national certifying agency for the profession.

The two full time faculty members have participated in providing publications to professional literature in the field, including articles and textbook chapters. Professor Fike has given presentations at the state and regional levels within the past two years and also volunteers to serve on a professional consumer response team that
answers questions that individuals have regarding the results of laboratory tests. Assistant Professor Perry is scheduled to give presentations at upcoming state and regional professional meetings in Fall 2008 and is currently pursuing a doctorate degree in education (See Appendix II for Detailed Faculty Data Sheets).

3. Students:

a. Entrance Standards:

Entry into the Medical Technology (MT) program involves completion of academic prerequisites with acceptable grades, application to the Clinical Laboratory Sciences (CLS) Department and competitive selection by an admission committee. Successful graduates from the MLT program at Marshall University are automatically eligible for admission into the MT program. Other applicants must be graduates from a NAACLS accredited MLT program, and may be required to take CLS 255, Clinical Laboratory Problems, or other Marshall University CLS coursework prior to acceptance into the MT program. These individuals are evaluated on a case by case basis.

Students currently in the Marshall University MLT program who plan on continuing to the MT program must notify the MT program director of these intentions by May 31 for entry into the Fall courses of the same year. All other students must apply for admission by completing and submitting a curriculum review form, two letters of reference and a letter of application to the MT Program Director between March 1 and May 31 for admission to the fall semester of the current year. Late applications are considered as class size permits. The number of class spaces is determined annually by the MT program director based upon available hospital clinical rotation sites. Marshall University MLT graduates receive first priority for available spaces in the MT class.

Additional qualified applicants are selected primarily based on academic performance, and a personal interview may be required with the MT program director. Curriculum review forms and sample letters of application are available in the CLS department or on the department website.
b. Entrance Abilities:

There is not a clear relationship between a student ACT score, SAT score, or GPA and the success rate in the MT program. Some students with lower GPAs may do well if he/she is highly motivated to succeed in the program. It is important that students meet prerequisite course guidelines for admission into the program as this is the best predictor of academic success. All students who are admitted to the MT program have completed an Associate Degree MLT program, and the majority of these students have been students in Marshall’s MLT program where their progress has already been monitored through both the didactic and clinical courses. Attrition rates are extremely low once a student enters the senior MT courses. Table 1 outlines average ACT and SAT scores as well as average high school GPAs of new freshmen students applying to the program. Tables 1 and 2 are the same as the ones for the MLT program, because there is not a separate set of entrance criteria for the MT program. Once students are admitted and successfully complete the MLT program, then students are automatically admitted to the MT program if they choose.

<table>
<thead>
<tr>
<th>Table 1: New Freshmen</th>
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<tbody>
<tr>
<td><strong>Year</strong></td>
</tr>
<tr>
<td>Fall 2003</td>
</tr>
<tr>
<td>Fall 2004</td>
</tr>
<tr>
<td>Fall 2005</td>
</tr>
<tr>
<td>Fall 2006</td>
</tr>
<tr>
<td>Fall 2007</td>
</tr>
</tbody>
</table>
The MT program also admits transfer students. **Table 2** outlines the average ACT scores, as well as high school and college GPAs.

**Table 2: New Transfers**

<table>
<thead>
<tr>
<th>Year</th>
<th>ACT Composite</th>
<th>SAT Verbal</th>
<th>SAT Math</th>
<th>HS GPA</th>
<th>College GPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall 2003</td>
<td>22.0 *(1)</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>3.09</td>
</tr>
<tr>
<td>Fall 2004</td>
<td>18.5 *(2)</td>
<td>NA</td>
<td>NA</td>
<td>3.27</td>
<td>2.73</td>
</tr>
<tr>
<td>Fall 2005</td>
<td>21.3 *(3)</td>
<td>NA</td>
<td>NA</td>
<td>3.10</td>
<td>2.68</td>
</tr>
<tr>
<td>Fall 2006</td>
<td>15.0 *(1)</td>
<td>NA</td>
<td>NA</td>
<td>3.07</td>
<td>1.61</td>
</tr>
<tr>
<td>Fall 2007</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

**c. Exit Abilities:**

Once an MT student has graduated from the program, their employment success rate is high. Students can take the national certification examination through the American Society for Clinical Pathology (ASCP), although not all states require this certification to practice as an MT. As a result, the rate at which Marshall University MT students take the MT registry examination is extremely sporadic. There are also other factors affecting certification examination for MT students such as the low number of students taking the examination, which were only a total of 13 students for the entire five year period and some MT graduates chose not to take the certification examination, because their place of employment did not require it. Most graduates of the MT program that did not pass the MT certification examination had passed the MLT certification examination which allowed them to be licensed to practice. Students that choose to take the examination immediately after graduation from the MT program have a much better pass rate than those who choose to wait months, or even years in some instances, after graduation from the MU MT program.

**Table 3** displays students average GPA for the five year period graduating with Bachelor of Science in Medical Technology. The overall five year average was 3.14, which coincides with the five year College of Health Professions average GPA of 3.13.
Table 3: Average GPA

<table>
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<tbody>
<tr>
<td>Average GPA</td>
<td>2.75</td>
<td>3.29</td>
<td>2.85</td>
<td>3.18</td>
<td>3.61</td>
</tr>
<tr>
<td># Graduates</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

There is a 100% job placement rate for all MT graduates seeking employment in the clinical laboratory, and most find jobs in the tri-state area. Students generally are employed within a month of graduation, and many are hired as laboratory technicians in training during their clinical practicum in the hospital. According to the U.S. Department of Labor Bureau of Labor Statistics Occupational Outlook Handbook for 2008-2009, MT jobs are projected to have a higher than average employment growth and excellent job opportunities. From 2006 to 2016 demand is expected to increase 12%.

4. Resources:

a. Financial:

The CLS department budget is supported entirely through university allocations and student fees. It is difficult to determine the exact funds used in the MT program since funds are combined for the MLT and MT programs. More introductory wet laboratory experiences are conducted at the MLT level as compared to the MT level that require increased purchase of supplies. The department budget has not been increased since the programs became university based. The current budget is approximately $13,000 and the CLS department does not have a secretary, but does get administrative support from an administrative assistant in the Dean’s office who is shared with two other College of Health Professions departments.

If the MT program was eliminated, and the MLT program was kept, there would be no financial savings. The introductory CLS courses would still have to be taught which would require the same number of faculty. The MT program at Marshall is unique in that it provides the first two years of education resulting in an associate degree in the 2+2 career ladder program. Many programs across the country market a 2+2 career ladder program, but this is generally for the Bachelor Degree only, with the final two years of the degree concentrating on Clinical Laboratory Science courses. With
the MLT program, the sophomore year consists of the introductory year CLS courses, and then result in an associate degree. The additional two years for the bachelor degree in Medical Technology consist of the junior year advanced general science courses, and the senior year advanced CLS courses.

The MLT to MT career ladder at Marshall provides excellent accessibility to higher education. Students have the opportunity to obtain an associate’s degree and begin working as an MLT, while at the same time, pursuing a bachelor’s degree through the same department with a seamless transfer of credits. This is a very appealing aspect of the program to many of the students in the tri-state and surrounding areas because 50-60% of students in the program work as an MLT while pursuing the bachelor’s degree in Medical Technology.

Since the majority of students who enter the MT program hope to find employment in the Tri-State region, not having this program would be detrimental to the future health care needs of the region. With the current shortage of Clinical Laboratory Professionals, and the projected future need for MTs, the elimination of this program would result in escalation of the shortage crisis for the region and the State of West Virginia. In West Virginia, the MT program at Marshall is one of only three in the state. Both the MLT and MT programs are the only ones in the western part of West Virginia. Recruiters for laboratories across the country contact the CLS department throughout each academic year regarding job vacancies for MLT and MT positions. Local hospitals such as St. Mary’s Medical Center, Cabell Huntington Hospital, Huntington VA Medical Center and Charleston Area Medical Center staff their laboratories with at least 60-70% Marshall graduates. There is an increasing trend of our program not being able to graduate students fast enough to meet the demands of the field.

New and more complex techniques are being added within hospital laboratories such as flow cytometry for the diagnosis of leukemia, and molecular diagnostics techniques for the diagnosis of inherited or microbiological diseases. This more complex variety of testing requires the skill of well trained MTs; the role of the MT is expanding and more laboratory professionals with this level of training are needed in the field.
b. **Facilities:**

The Clinical Laboratory Sciences Department is located on the third floor of the Science Building. There is one student laboratory/lecture room that is currently adequate for fifteen students; all student lecture and laboratory experiments take place in this room for both MLT and MT programs. The department has obtained several laboratory instruments used in the courses that are also stored in the classroom. There are two laboratory preparation rooms off of the main lecture/laboratory classroom which are adequate for the storage and preparation of laboratory exercises. The classroom is equipped with a computer with internet access as well as a projector for faculty and student presentations. For courses that have larger enrollment numbers such as the Introductory CLS 100 course, larger class spaces in Prichard and Harris Hall have been utilized. Satellite equipped classroom facilities are also available in Prichard Hall.

The CLS department has two free standing faculty offices and one office that contains a student resource area, copier, supplies and an adjoined department chair office. Each faculty office is equipped with a computer with internet access.

The John Deaver Drinko Library provides adequate library resources for MT students. Students in the MT program are required to access journal articles in the field as part of course requirements and access through medical/health databases is adequate. The CLS department also contains a small collection of journal articles that students can utilize for their studies.

5. **Assessment Information:**

a. **Principal Goals:** The BS in Medical Technology program has three primary goals: 1) Prepare graduates with attitudes, knowledge, and skills that prepare them for career entry into the clinical laboratory workforce as Medical Technologists (MT)/Clinical Laboratory Scientists (CLS), 2) Prepare graduates to continue learning advanced technical knowledge about human health and disease, and 3) Prepare graduates with knowledge and experience necessary for national certification as an MT/CLS. See the attached Chart I Assessment Summary.
b. **Improvements in Program Quality:** 1) Based on data from the student performance evaluations in senior clinical rotations and discussions with our clinical advisory committee, these evaluations are currently being reviewed for revision to aid in the clinical instructor to be able to more accurately assess each individual student.

2) After meeting with the clinical advisory committee, the content and task lists for the MT senior rotations are being reviewed and revised to better differentiate between MLT and MT designated tasks. Review of MLT tasks is also being reviewed to incorporate into the beginning of each MT rotation section.

3) Steps are currently being taken to advise students to take the national certification examination as soon after graduation as possible; possibilities are being explored regarding implementing this as a program completion requirement. As previously stated, not all hospitals require certification upon immediate employment, so many students wait to take the exam, and often their test scores are lower as a result.

c. **Graduate and Employer Satisfaction:** All students who apply for graduation for the Bachelor in Medical Technology are given a graduate survey; however, the response rate is has not been high. From the very few respondents, they were all very satisfied with the instruction and support that they received while in the MT program. One student had plans to attend Marshall University’s Medical School using the BS in Medical Technology as a base. Since our program is small, many of the students keep in touch with the department and are mainly employed at local hospitals after graduation. During clinical site visits at these hospitals, all employers are generally satisfied with the graduates of the Marshall University MT program, and often contact the department to inquire about the number of anticipated graduates each year. There is a 100% job placement rate for all MTs seeking employment in the field, and most are employed in the Tri-State region.

Each year on the University Assessment Day, Senior MT students are given an exit interview to gain feedback from them on various aspects of program quality. Some changes in didactic course content at the MT level and content in the MT rotations are being reviewed for revision due to information gained from these senior exit interviews.
Curriculum revisions to align content with changes in technology and methodology in the field are planned at the MT level, as well as more online options for working MLTs who wish to obtain the BS in Medical Technology.

d. **Office of Assessment Summary Reports:** Previous summary reports from the past five years are attached (See Scanned Documents).

6. **Previous Reviews:**

The previous program review recommended that the Bachelor in Medical Technology program be identified for further development by increasing faculty resources to expand into growing areas of molecular diagnostics; these designated additional resources were not received by the MT program. There were no deficiencies or recommendations from the committee.

7. **Strengths/Weaknesses:**

**Strengths:**

- The MLT-MT career-ladder model allows flexibility in the progression in the MT curriculum. Some students who would like to obtain a bachelor degree but need to work may continue the last two years of the program on a part-time basis. Students with clinical work experience as MLTs may request exemption for some of the MT clinical practicum; students are evaluated on a case-by-case basis.

- The CLS MT program has small class sizes that allow for optimal interaction between students and faculty in the department. The availability of the faculty for student assistance is excellent and many students are drawn to the program because of the smaller, more individualized class sizes.

- The clinical affiliates for the MT program are considered excellent and are very supportive of students in the program. Students gain a great deal of advanced clinical knowledge during their senior MT rotations experience. Clinical faculty at each site have a good working relationship with the MT Program Director and CLS faculty, and work well together to resolve any issues that arise.
• All faculty members are certified Medical Technologists, and have experience in the field that they enrich their courses with. Having experienced faculty allows for relevant changes to be made in curriculum and processes in the department to better reflect changes in the field.

• The teaching and office facilities in the CLS department are very good for the number of students enrolled in the program. The student lecture/laboratory room provides adequate space and there are accommodations for a student in a wheel chair. The laboratory is well equipped with proper safety equipment such as an emergency safety shower, eyewash station and fire extinguishers. The student lecture/laboratory is also equipped with a computer with internet access and projector that has been beneficial in bringing in the most current teaching resources into the classroom.

• The MT curriculum is strong in general science courses, which makes it an excellent bachelor degree program for entry into Medical School, or science-based Master’s degree programs such as Forensic Science.

Weaknesses:

• The clinical affiliates cannot accommodate as many students per site as they have in the past; this is mainly due to staffing shortages in each hospital laboratory, which leaves less available staff to work with MT students during rotations. The limited clinical placements do affect the number of students that can be admitted to the MT program. Plans are in place to approach new facilities to add as affiliates for the MT program, however, these facilities must perform a certain amount of advanced testing techniques to be an MT affiliate. Additional Special Topics practicum experiences are also being explored in molecular diagnostics and tissue transplantation procedures for the MT practicum. Plans are also underway to streamline the MT training process for all current affiliates, making it less cumbersome for hospital staff to work with MT students. Relationships are also being strengthened with current clinical affiliates, and the Program Director has strongly encouraged each site to accept a maximum number of students to aid in possibly filling their hospital laboratory staffing shortages with Marshall MT students in the future. Currently, students attend clinical...
rotations in the Spring of the year following the MT didactic courses, and are placed in facilities depending on site availability.

- Due to budget constraints and some lack of availability, much of the equipment in the student laboratory on campus is outdated, and is in need of replacement. It is important for students to have exposure to instrumentation before entering clinical rotations at the hospitals. The MT program has applied for equipment grants through Abbott Diagnostics for instrumentation for the past two years, and plans to continue applying every year, but has not been successful to date. A grant for $5000.00 was obtained in Spring of 2006 by the CLS department through the Huntington Clinical Foundation for Lipid Point-of-Care testing equipment. There are plans to begin replacing student microscopes that are twenty years old a few at a time per year using student fees; three new student microscopes have been purchased for this year. The MT program also relies on clinical affiliates to donate, or sell at a reduced rate, equipment that they are replacing with the latest models; a floor model chemistry analyzer was purchased with student fees during the 2007-08 academic year at a much discounted rate from St. Mary's Medical Center for student laboratory experiences. Additional equipment was donated from Thomas Memorial Hospital during the Fall 2008 semester for the student instrumentation laboratory.

B. VIABILITY

1. Articulation Agreements:

There are no articulation agreements for the MT program at this time; however, negotiations are currently under way with Southern West Virginia Community and Technical College in Logan, WV for career ladder articulation agreement with their MLT program.

2. Off-Campus/Distance Delivery Classes:

During Fall 2007, CLS 100, Introduction to Health Professions was offered at the Point Pleasant MOVC site to generate enrollment from the Point Pleasant area in the MLT to MT program. Discussions with the laboratory director from Pleasant Valley Hospital regarding the high degree of interest by phlebotomists in the MLT program initiated this off-campus course offering.
Unfortunately, only one person enrolled in the course, and then later dropped.

As part of the planned articulation agreement with Southern West Virginia Community and Technical College, there are plans to offer courses through distance delivery to the students in Logan, WV.

3. **Service Courses:**

Currently, CLS 100, Introduction to Health Professions, is a course that can be taken by non-CLS majors. In addition to MT students, other pre-health professions students can take this course. Guest lectures are given by the Dietetics and Communications Disorders Departments, as well as the School of Cytotechnology.

The Dietetics department requires their students to have a Biochemistry course as part of their curriculum, and an agreement was formed between with the CLS department to offer CLS 200, Clinical Biochemistry as an option to the Dietetics majors every Spring semester *(See Appendix IV).*

4. **Program Course Enrollment:**

Although the enrollment number may appear low compared to other university programs, the enrollment numbers for the MT program are comparable with other similar programs across the country. MT enrollment numbers at Marshall University are also very dependent on the enrollment numbers for the MLT program. Approximately half of students that are enrolled in the MLT program continue on to the MT program, therefore, maintaining a steady enrollment at the MLT level is vital. Currently, there are fifteen students enrolled in the MLT program, which is the largest class size in ten years for the program. It is projected that next year’s MT class size will be between 7-8 students from the Marshall University campus. With the possible addition of students from Southern West Virginia Community and Technical College through the planned articulation agreement, an additional 3-5 students could be added to the MT class per year.

*Appendix V* provides a summary of all courses taken in the MT program over the past five years.
5. **Program Enrollment:**

As evidenced in Appendix VI, the students that are newly admitted to the MT program each year do not necessarily reflect the number of students graduating from the MT program each year. This difference is mainly due to some students needing to complete between 3-9 hours of basic science courses required for graduation after completion of the senior year MT clinical rotations. Many students that enter the MT program already have a degree in Biology or have transferred from another major, and are not able to schedule their courses in the sequence outlined by the MT program. The students’ inability to follow the stated course sequence often requires them to complete additional courses such as Introduction to Organic Chemistry, Biochemistry or Physics after MT rotations due to scheduling conflicts. Because of this issue, the possibility of offering an alternating schedule option to students, where certain MT program classes are taught every other year for either junior or seniors, instead of just seniors is in the planning stages. An alternating schedule could also offer students greater flexibility in scheduling additional science courses in sequence and allow students who are newly admitted to the senior MT courses to also graduate at the completion of MT rotations of the same year.

A summary of program enrollment is provided in Appendix VI.

6. **Enrollment Projections:**

According to the U.S. Department of Labor Bureau of Labor Statistics Occupational Outlook Handbook for 2008-2009, MT jobs are projected to have a faster than average employment growth providing excellent job opportunities. From 2006 to 2016 there is also a projected 12% increase in demand for Medical Technologists nationwide. Due to the projected shortages in the field and availability of jobs, it is predicted that this will encourage more students to enter the program. Due to the large increase in the MLT class this Fall 2008 to 15 students, it is estimated that at least half of these students will continue to the MT program. It is a goal of the MT program to have between 6 and 8 students every year over the next five years.

C. NECESSITY:

1. **Advisory Committee:** (Self Study Report, pg 44) The advisory committee for the MT program is composed of the Marshall University MT program faculty members and clinical faculty members from all of the clinical sites. Currently there are three
clinical facilities that meet advanced testing requirements and are used for the clinical education in the MT program. There are one to ten clinical faculty members at any given facility. The committee meets once per academic year on Marshall University campus and there are normally 15 to 25 clinical faculty members in attendance. The clinical faculty members have a direct impact on the program. Problems with the clinical rotations, examination content and passage rates and other student issues are discussed and as well as possible solutions to problems. If there are any curriculum changes, this is discussed and the clinical faculty have an opportunity for input.

2. **Graduates:**

All students that graduate with an MT and seek employment find employment within one month. Most commonly, students are employed at local area hospitals such as St. Mary’s Medical Center, the Huntington Veteran’s Administration Medical Center, Cabell Huntington Hospital, Charleston Area Medical Center and Thomas Memorial Hospital. Due to the career ladder program, many of the MT graduates are already employed as MLTs; most local area hospitals are very accommodating in work schedules to allow MLT students to continue to the MT bachelor’s degree and recognize the importance of encouraging MLTs to do so.

According to the U.S. Department of Labor Bureau, the median national salary for MTs in May 2007 was $52,410; in May 2006, the median national salary was $49,700. Due to predicted shortages, salaries are expected to continue to rise.

3. **Job Placement:**

There is a 100% job placement rate for students graduating from the MT program that seek employment in the field. Many local hospitals, as well national agencies contact the MT program in search of graduates to fill positions. Vacancies in local hospitals are posted in the department for MT graduates. There is no need for Marshall MT graduates to use the university job placement services since positions are available in high numbers and graduates of the MT program in are in high demand. After graduation, students are encouraged to stay in contact with CLS faculty and since many of the graduates are employed at MT clinical sites, CLS faculty often visit with them face to face throughout each year.
D. CONSISTENCY WITH UNIVERSITY MISSION:

(Self Study Report, pgs 1-4) Part of the mission of Marshall University is to educate health personnel for the state of West Virginia and the Tri-State region. The MT program is providing health care providers. As previously mentioned, most MT graduates practice in the Tri-State region. Since the majority of the graduates received the clinical component of their education at local area hospitals, often these hospital vacancies are filled by Marshall University MT graduates.

The Clinical Laboratory Science Department MT Program does not have any unique relationships with other departments at Marshall. There are some shared courses that are taken with the nursing, dietetics, and communication disorders students including pre-requisites of human anatomy, human physiology, microbiology and general chemistry. The courses in the College of Health Professions are specific to their disciplines. With the advent of bioterrorism, there is cross discipline work being done for some healthcare providers; the first responders for some bioterrorist acts would be the healthcare providers. There would be interaction between nursing students and clinical laboratory students in this aspect. With microbes being released into the air, water or food sources, the MT would be a first responder in helping to identify the agent and what antibiotics may help. All other areas of the laboratory would also help in diagnosing disease progression in other types of bioterrorism such as chemical or radiation.
## Appendix I
### Required/Elective Course Work in the Program

**Degree Program:** Bachelor of Science in Medical Technology  
**Person responsible for the report:** Jennifer D. Perry MS MT(ASCP)

<table>
<thead>
<tr>
<th>Courses Required in Major (By Course Number and Title)</th>
<th>Total Required Hours</th>
<th>Elective Credit Required by the Major (By Course Number and Title)</th>
<th>Elective Hours</th>
<th>Related Fields Courses Required</th>
<th>Total Related Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLS 100 Introduction to Health Professions</td>
<td>1</td>
<td>ENG 101 English Composition I</td>
<td>3</td>
<td>BSC 227 Human Anatomy</td>
<td>4</td>
</tr>
<tr>
<td>CLS 110 Clinical Hematology</td>
<td>4</td>
<td>ENG 102 English Composition II</td>
<td>3</td>
<td>BSC 228 Human Physiology</td>
<td>4</td>
</tr>
<tr>
<td>CLS 200 Clinical Biochemistry</td>
<td>4</td>
<td>CMM 103 Fundamentals of Speech Communication</td>
<td>3</td>
<td>MTH 127 or MTH 130 College Algebra</td>
<td>3-4</td>
</tr>
<tr>
<td>CLS 210 Clinical Immunohematology</td>
<td>4</td>
<td>Communication</td>
<td>1</td>
<td>CHM 211 Principles of Chemistry I</td>
<td>3</td>
</tr>
<tr>
<td>CLS 220 Clinical Microbiology</td>
<td>4</td>
<td>UNI 101 New Student Seminar</td>
<td>1</td>
<td>CHM 217 Chemistry Lab I</td>
<td>2</td>
</tr>
<tr>
<td>CLS 255 Clinical Laboratory Problems</td>
<td>3</td>
<td>PSY 201 General Psychology</td>
<td>3</td>
<td>CHM 212 Principles of Chemistry II</td>
<td>3</td>
</tr>
<tr>
<td>CLS 270 Clinical Practicum Hematology</td>
<td>3</td>
<td>Electives (BSC 250 suggested as one; MTH 122 suggested if students continuing to BS in Medical Technology Program)</td>
<td>6</td>
<td>CHM 218 Chemistry Lab II</td>
<td>2</td>
</tr>
<tr>
<td>CLS 271 Clinical Practicum Clinical Chemistry</td>
<td>3</td>
<td>Internation Electives</td>
<td>6</td>
<td>PHY 201 Physics I</td>
<td>3</td>
</tr>
<tr>
<td>CLS 272 Clinical Practicum Blood Bank</td>
<td>3</td>
<td>Multicultural Electives</td>
<td>3</td>
<td>PHY 202 Physics Lab I</td>
<td>1</td>
</tr>
<tr>
<td>CLS 273 Clinical Practicum Microbiology</td>
<td>3</td>
<td></td>
<td>3</td>
<td>PHY 203 Physics II</td>
<td>3</td>
</tr>
<tr>
<td>CLS 310 Advanced Immunology and Molecular Diagnostics</td>
<td>3</td>
<td></td>
<td>3</td>
<td>PHY 204 Physics Lab II</td>
<td>1</td>
</tr>
<tr>
<td>CLS 410 Advanced Hematology and Transfusion Medicine</td>
<td>4</td>
<td></td>
<td>3</td>
<td>MTH 225 Statistics</td>
<td>3</td>
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<tr>
<td>CLS 421 Advanced Clinical Chemistry and Microbiology</td>
<td>4</td>
<td></td>
<td>3</td>
<td>ECON 200 Introduction to Economics</td>
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<tr>
<td>CLS 460 Clinical Laboratory Management and Supervision</td>
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<td></td>
<td>4</td>
<td>Chemistry Elective : CHM 345 Analytical Chemistry or CHM 365 Biochemistry</td>
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<tr>
<td>CLS 464 Laboratory Instrumentation</td>
<td>3</td>
<td></td>
<td></td>
<td>CHM 327 Introduction to Organic Chemistry or CHM 355 Organic Chemistry I</td>
<td>5-9</td>
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<tr>
<td>CLS 466 Diagnostic Physiology</td>
<td>2</td>
<td></td>
<td></td>
<td>CHM 356 Organic Chemistry II</td>
<td>3-4</td>
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<tr>
<td>CLS 468 Clinical Laboratory Research</td>
<td>2</td>
<td></td>
<td></td>
<td>CHM 361 Introduction to Organic Lab Biology Elective (300 or 400 level)</td>
<td>3-4</td>
</tr>
<tr>
<td>CLS 472 Advanced Practicum Hematology and Blood Bank</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>CLS 473 Advanced Practicum Chemistry and Microbiology</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CLS 499 Senior Seminar</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Total Hours</td>
<td>61</td>
<td></td>
<td>28</td>
<td></td>
<td>46-54</td>
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</tbody>
</table>

Professional society that may have influenced the program offering and/or requirements:  
American Society for Clinical Pathology (ASCP)  
American Society for Clinical Laboratory Sciences (ASCLS)  
National Accrediting Agency for Clinical Laboratory Sciences (NAACLS)
Appendix II
Faculty Data Sheet
(for the period of this review)

Name: Dorothy J. Fike
Rank: Professor

Status (Check one): Full-time X Part-time ___ Adjunct ___
Current MU Faculty: Yes X No ___

Highest Degree Earned: Master of Science Date Degree Received: August 1972
Conferred by: Cleveland State University

Area of Specialization: Biology (Research in Immunology)

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<thead>
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<th>Years non-teaching experience</th>
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<td>Years of employment other than Marshall</td>
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<tr>
<td>Years of employment at Marshall</td>
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<tr>
<td>Years of employment in higher education</td>
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</tr>
<tr>
<td>Years in service at Marshall during this period of review</td>
<td>13.5</td>
</tr>
</tbody>
</table>

List courses you taught during the final two years of this review. If you participated in a team-taught course, indicate each of them and what percentage of the course you taught. For each course include the year and semester taught (summer through spring), course number, course title and enrollment. (Expand the table as necessary)

<table>
<thead>
<tr>
<th>Year/Semester</th>
<th>Alpha Des. &amp; No.</th>
<th>Title</th>
<th>Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006/Fall</td>
<td>CLS 100</td>
<td>Introduction to Health Professions – taught 66% of course – team taught with Jennifer Perry</td>
<td>14</td>
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<tr>
<td>2006/Fall</td>
<td>CLS 110</td>
<td>Clinical Hematology</td>
<td>9</td>
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<tr>
<td>2006/Fall</td>
<td>CLS 285</td>
<td>Independent Study</td>
<td>1</td>
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<tr>
<td>2006/Fall</td>
<td>CLS 410</td>
<td>Advanced Hematology and Blood Bank</td>
<td>4</td>
</tr>
<tr>
<td>2006/Fall</td>
<td>CLS 460</td>
<td>Laboratory Management and Supervision</td>
<td>5</td>
</tr>
<tr>
<td>2007/Spring</td>
<td>CLS 210</td>
<td>Clinical Immunohematology</td>
<td>8</td>
</tr>
<tr>
<td>2007/Spring</td>
<td>CLS 310</td>
<td>Clinical Immunology and Molecular Diagnostics</td>
<td>4</td>
</tr>
<tr>
<td>2007/Spring</td>
<td>CLS 466</td>
<td>Diagnostic Physiology</td>
<td>4</td>
</tr>
<tr>
<td>2007/Spring</td>
<td>CLS 472 and 473</td>
<td>Advanced Clinical Practicum Hematology, Chemistry, Immunohematology, Microbiology – Coordinator for these</td>
<td>4</td>
</tr>
<tr>
<td>2007/Fall</td>
<td>CLS 100</td>
<td>Introduction to Health Professions</td>
<td>18</td>
</tr>
<tr>
<td>2007/Fall</td>
<td>CLS 110</td>
<td>Clinical Hematology</td>
<td>7</td>
</tr>
<tr>
<td>2007/Fall</td>
<td>CLS 410</td>
<td>Advanced Hematology and Blood Bank</td>
<td>3</td>
</tr>
<tr>
<td>2007/Fall</td>
<td>CLS 460</td>
<td>Laboratory Management and Supervision</td>
<td>5</td>
</tr>
<tr>
<td>2008/Spring</td>
<td>CLS 210</td>
<td>Clinical Immunohematology</td>
<td>7</td>
</tr>
<tr>
<td>2008/Spring</td>
<td>CLS 310</td>
<td>Clinical Immunology and Molecular Diagnostics</td>
<td>3</td>
</tr>
</tbody>
</table>
NOTE: Part-time adjunct faculty do not need to fill in the remainder of this document.

1) If your degree is not in your area of current assignment, please explain.
   Not applicable

(For each of the following sections, list only events during the period of this review and begin with the most recent activities.)

2) Activities that have enhanced your teaching and or research.
   - How to use Effective Learning Environments to Motivate and Engage Students, MU (8/15/07)
   - Preceptor Training: What’s My Role?, MU (4/5/07)
   - WAC re-certification workshop March 2007
   - Online Course Pedagogy, MU 10/29/06
   - Critical Thinking, MU (8/16/06)

3) Discipline-related books/papers published (provide a full citation).
   - Comeaux and Fike Instructor’s Guide Clinical Laboratory Hematology (Shirlyn B. McKenzie) 2003 Prentice Hall.

4) Papers presented at state, regional, national, or international conferences.
   Not applicable

5) Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended. List any panels on which you chaired or participated. List any offices you hold in professional organizations.

   Professional Organizations:
   - American Society for Clinical Laboratory Science (ASCLS) – member of national scientific assemblies & receive Hematology request for consensus regarding educational & practice procedures
   - American Society of Clinical Pathologists (ASCP)

   Meeting Attendance:
   - Clinical Laboratory Educator’s Conference, Savannah, Georgia – February 2008
   - WVCLMA, WVSCLS, WVSSAMT Annual Meeting, Flatwoods, WV - October 2007
   - Clinical Laboratory Educator’s Conference, Louisville, Kentucky – February 2007
   - Northeast Laboratory Conference, Portland, Maine – October 2006
   - WVCLMA, WVSCLS, WVSSAMT Annual Meeting, Flatwoods, WV – October 2006
   - ASCLS Annual Meeting – July 2006
   - WVCLMA, WVSCLS, WVSSAMT Annual Meeting, Flatwoods, WV – October 2005
   - ASCLS Annual Meeting – July 2005
   - WVCLMA, WVSCLS, WVSSAMT Annual Meeting, Flatwoods, WV – October 2004
   - ASCLS Annual Meeting, Los Angeles, CA – July 2004

6) Externally funded research grants and contracts you received.
   Not applicable

7) Awards/honors (including invitations to speak in your area of expertise) or special recognition.
   - “What can I Do with My Degree”, Tenth Annual Joint Meeting, WVCLMA, WVSCLS and WVSSAMT, October 19, 2007, Flatwoods, WV
   - “Beyond Lupus – Other Autoimmune Diseases”, Northeast Laboratory Conference, Portland, Maine, October 19, 2006
   - “Red Cell Antigens: What Function Do They Really Have?”, Northeast Laboratory Conference, Portland, Maine, October 18, 2006
   - Hypersensitivity Reactions”, Ninth Annual Joint Meeting, WVCLMA, WVSCLS and WVSSAMT, Flatwoods, WV, October 11, 2006
   - “What can I Do with My Degree”, Ninth Annual Joint Meeting, WVCLMA, WVSCLS and WVSSAMT, Flatwoods, WV, October 11, 2006
   - “Beyond Lupus – Other Autoimmune Diseases”, Eighth Annual Joint Meeting, WVCLMA, WVSCLS and WVSSAMT, Flatwoods, WV, October 14, 2005
   - Red Cell Antigens: What Function Do They Really Have?”, Seventh Joint Meeting, WVCLMA, WVSCLS and WVSSAMT, Flatwoods, WV, October 15, 2004
   - “Wet vs. Dry: Teaching Blood Bank Problem Solving Techniques” ASCLS Annual Meeting, Los Angeles, CA, July 2004

8) Community service as defined in the Greenbook.
   - Faculty Affairs Committee
   - Chair of International Committee
   - General Education Committee

4/21/08
Appendix II
Faculty Data Sheet
(for the period of this review)

Name: Jennifer D. Perry
Rank: Assistant Professor

Status (Check one): Full-time X Part-time Adjunct Current MU Faculty: Yes X No

Highest Degree Earned: Master of Science Date Degree Received: May 1999

Conferred by: Marshall University

Area of Specialization: Health Care Administration

Professional Registration/Licensure MT 195611/MLT 47319 Agency: ASCP

Years non-teaching experience 12
Years of employment other than Marshall 12
Years of employment at Marshall 3
Years of employment in higher education 3
Years in service at Marshall during this period of review 3

List courses you taught during the final two years of this review. If you participated in a team-taught course, indicate each of them and what percentage of the course you taught. For each course include the year and semester taught (summer through spring), course number, course title and enrollment. (Expand the table as necessary)

<table>
<thead>
<tr>
<th>Year/Semester</th>
<th>Alpha Des. &amp; No.</th>
<th>Title</th>
<th>Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006/Fall</td>
<td>CLS 200</td>
<td>Clinical Biochemistry Lecture</td>
<td>9</td>
</tr>
<tr>
<td>2006/Fall</td>
<td>CLS 100</td>
<td>Introduction to Health Professions – team taught with Professor Dorothy Fike – taught approx. 33% of course</td>
<td>14</td>
</tr>
<tr>
<td>2006/Fall</td>
<td>CLS 421</td>
<td>Advanced Clinical Chemistry and Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>2006/Fall</td>
<td>CLS 464</td>
<td>Laboratory Instrumentation</td>
<td>4</td>
</tr>
<tr>
<td>2006/Fall</td>
<td>CLS 270, 271, 272, 273</td>
<td>Clinical Practicum Hematology, Chemistry, Immunohematology, Microbiology – Coordinator for these</td>
<td>1</td>
</tr>
<tr>
<td>2007/Spring</td>
<td>CLS 200</td>
<td>Clinical Biochemistry Lecture</td>
<td>13</td>
</tr>
<tr>
<td>2007/Spring</td>
<td>CLS 220</td>
<td>Clinical Microbiology Lecture</td>
<td>8</td>
</tr>
<tr>
<td>2007/Spring</td>
<td>CLS 255</td>
<td>Clinical Laboratory Problems</td>
<td>8</td>
</tr>
<tr>
<td>2007/Spring</td>
<td>CLS 468</td>
<td>Clinical Laboratory Research</td>
<td>4</td>
</tr>
<tr>
<td>2007/Spring</td>
<td>CLS 499</td>
<td>Senior Seminar</td>
<td>4</td>
</tr>
<tr>
<td>2007/Summer</td>
<td>CLS 270, 271, 272, 273</td>
<td>Clinical Practicum Hematology, Chemistry, Immunohematology, Microbiology – Coordinator for these</td>
<td>6</td>
</tr>
<tr>
<td>2007/Fall</td>
<td>CLS 200</td>
<td>Clinical Biochemistry Lecture</td>
<td>7</td>
</tr>
<tr>
<td>2007/Fall</td>
<td>CLS 421</td>
<td>Advanced Clinical Chemistry and Microbiology Lecture</td>
<td>3</td>
</tr>
<tr>
<td>2007/Fall</td>
<td>CLS 464</td>
<td>Laboratory Instrumentation</td>
<td>3</td>
</tr>
<tr>
<td>2007/Fall</td>
<td>CLS 270, 271, 272, 273</td>
<td>Clinical Practicum Hematology, Chemistry, Immunohematology, Microbiology – Coordinator for these</td>
<td>2</td>
</tr>
<tr>
<td>2008/Spring</td>
<td>CLS 200</td>
<td>Clinical Biochemistry</td>
<td>7</td>
</tr>
<tr>
<td>2008/Spring</td>
<td>CLS 255</td>
<td>Clinical Laboratory Problems</td>
<td>7</td>
</tr>
</tbody>
</table>
NOTE: Part-time adjunct faculty do not need to fill in the remainder of this document.

1) If your degree is not in your area of current assignment, please explain.
   - Not applicable

(For each of the following sections, list only events during the period of this review and begin with the most recent activities.)

2) Activities that have enhanced your teaching and or research – attendance at the following meetings/workshops:
   - CBAR and the Chronic Care Model, Marshall University (4/21/08)
   - How to Use Effective Learning Environments to Motivate and Engage Students, Marshall University, (8/15/07)
   - Preceptor Training: What’s My Role?, Marshall University (4/5/07)
   - Common Myths About Assessment, Marshall University (4/4/07)
   - RealTime PCR, Webcast, Marshall University (11/2/06)
   - Online Course Pedagogy, Marshall University (10/29/06)
   - Selecting the Right BNP for Your Institution, Audioconference, Marshall University (10/11/06)
   - Critical Thinking, Marshall University (8/16/06)
   - Postanalytic Laboratory Errors: Cases, Concepts, and Interventions, Webcast, Marshall University (12/15/05)
   - Grantsmanship for New Researchers, Marshall University (9/18/05)

3) Discipline-related books/papers published (provide a full citation).

4) Papers presented at state, regional, national, or international conferences.
   - Not applicable

5) Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended. List any panels on which you chaired or participated. List any offices you hold in professional organizations.

   Educational Pursuits:
   - Currently pursuing Doctorate in Education Leadership with an emphasis in Higher Education Administration

   Professional Organizations:
   - American Society for Clinical Laboratory Science (ASCLS) – Board of Directors for WV Chapter – 2007-2008
   - American Society of Clinical Pathologists (ASCP) – MLT and MT member
   - American Association of Clinical Chemists (AACC) – 2002 member
   - Clinical Laboratory Management Association (CLMA) – Board of Directors for State Chapter 2003-2005; WV state meeting exhibitor Chairperson, 2004-2007; WV state meeting planning committee 2004-present

   Meeting Attendance:
   - Clinical Laboratory Educator’s Conference, Savannah, Georgia – February 2008
   - WVCLMA, WVSCLS, WVSSAMT Annual Meeting, Flatwoods, WV – October 2007
   - Clinical Laboratory Educator’s Conference, Louisville, Kentucky – February 2007
   - WVCLMA, WVSCLS, WVSSAMT Annual Meeting, Flatwoods, WV – October 2006
   - WVCLMA, WVSCLS, WVSSAMT Annual Meeting, Flatwoods, WV – October 2005

6) Externally funded research grants and contracts you received.
   - Huntington Clinical Foundation - $4891.00 – “Lipid Point of Care Testing Workshops as an Educational Tool for Marshall University College of Health Professions Students, April 2006

7) Awards/honors (including invitations to speak in your area of expertise) or special recognition.
   - “Good” and “Bad” Cholesterol – an Interactive Learning Workshop – presentation – College of Health Professions Go Red for Heart Health Activities, February 2007.

8) Community service as defined in the Greenbook.
   - CLS Department Scholarship Committee – Sept. 2005 – present
   - College of Health Professions Curriculum Committee – January 2006 – present
   - Wear Red For Heart Health Committee – January 2006 – present
   - Marshall University Faculty Senate – 2006 – present
   - Marshall University SCORES Committee – August 2006 – present
   - College of Health Professions Faculty Organization Secretary – 2006 -2008
   - CLS Faculty Search Committee – member 2007; chair 2007-2008
   - MCTC Clinical Assistant Faculty Search Committee – May 2007 – August 2007
   - College of Health Professions Online Learning Committee – August 2007 – present
   - Marshall University Graduate College Doctoral Seminar Planning Committee – March 2008 - present

4/21/08
Appendix II
Faculty Data Sheet
(for the period of this review)

Name: Thomas M. Stevens
Rank: Clinical Instructor

Status (Check one): Full-time _X_ Part-time___ Adjunct ___ Current MU Faculty: Yes _X_ No ___

Highest Degree Earned: _Bachelors of Science_____ Date Degree Received: December 2006 ___

Conferred by: _Marshall University_________________________

Area of Specialization: _Medical Technology_____________________

Professional Registration/Licensure ___04153412____ Agency: _ASCP_____________________

Years non-teaching experience ___________________________ 8 ______
Years of employment other than Marshall ______________________ 8 ______
Years of employment at Marshall _______________ 1.5 ______
Years of employment in higher education __________________________ 1.5 ______
Years in service at Marshall during this period of review __________________________ 1.5 ______

List courses you taught during the final two years of this review. If you participated in a team-taught course, indicate each of them and what percentage of the course you taught. For each course include the year and semester taught (summer through spring), course number, course title and enrollment. (Expand the table as necessary)

<table>
<thead>
<tr>
<th>Year/Semester</th>
<th>Alpha Des. &amp; No.</th>
<th>Title</th>
<th>Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spring 2007</td>
<td>CLS 200</td>
<td>Clinical Biochemistry LAB</td>
<td>13</td>
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<tr>
<td>Fall 2007</td>
<td>CLS 200</td>
<td>Clinical Biochemistry LAB</td>
<td>7</td>
</tr>
<tr>
<td>Fall 2007</td>
<td>CLS 421</td>
<td>Advanced Microbiology/Chemistry LAB</td>
<td>3</td>
</tr>
<tr>
<td>Fall 2007</td>
<td>CLS 110</td>
<td>Clinical Hematology Lab (50% team taught)</td>
<td>7</td>
</tr>
<tr>
<td>Spring 2008</td>
<td>CLS 220</td>
<td>Clinical Microbiology</td>
<td>7</td>
</tr>
<tr>
<td>Spring 2008</td>
<td>CLS 200</td>
<td>Clinical Biochemistry Lab</td>
<td>7</td>
</tr>
</tbody>
</table>

NOTE: Part-time adjunct faculty does not need to fill in the remainder of this document.

1) If your degree is not in your area of current assignment, please explain.
   - Not applicable

(For each of the following sections, list only events during the period of this review and begin with the most recent activities.)

2) Activities that have enhanced your teaching and or research.
   - Mycology – Fungal media Research Project, Marshall University & St. Mary’s Medical Center, Spring 2006

3) Discipline-related books/papers published (provide a full citation).
   - Not applicable

4) Papers presented at state, regional, national, or international conferences.
   - Not applicable
5) Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended. List any panels on which you chaired or participated. List any offices you hold in professional organizations.

Professional Organizations:
- American Society for Clinical Laboratory Science (ASCLS)
- American Society of Clinical Pathologists (ASCP) – MLT and MT member
- American Heart Association (CPR)

6) Externally funded research grants and contracts you received.
   - Not applicable

7) Awards/honors (including invitations to speak in your area of expertise) or special recognition.
   - Mary S. George Memorial Scholarship, Marshall University, May 2006
   - Research Scholars Award, Marshall University, May 2006

8) Community service as defined in the Greenbook.
   - Not applicable
# Appendix V
## Program Course Enrollment

<table>
<thead>
<tr>
<th>Course Number (e.g. 215*)</th>
<th>Course Name</th>
<th>Required/Elective</th>
<th>Year 1 2003-2004</th>
<th>Year 2 2004-2005</th>
<th>Year 3 2005-2006</th>
<th>Year 4 2006-2007</th>
<th>Year 5 2007-2008</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>Su</td>
<td>Fa</td>
<td>Sp</td>
<td>Su</td>
<td>Fa</td>
<td>Sp</td>
</tr>
<tr>
<td>CLS 410</td>
<td>Advanced Hematology and Transfusion Medicine</td>
<td>R</td>
<td>3</td>
<td></td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CLS 421</td>
<td>Advanced Clinical Chemistry and Microbiology</td>
<td>R</td>
<td>3</td>
<td></td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CLS 460</td>
<td>Clinical Laboratory Management and Supervision</td>
<td>R</td>
<td>3</td>
<td></td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CLS 464</td>
<td>Laboratory Instrumentation</td>
<td>R</td>
<td>3</td>
<td></td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CLS 310</td>
<td>Advanced Immunology and Molecular Diagnostics</td>
<td>R</td>
<td>5</td>
<td></td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CLS 466</td>
<td>Diagnostic Physiology</td>
<td>R</td>
<td>3</td>
<td></td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CLS 472</td>
<td>Advanced Practicum Hematology and Blood Bank</td>
<td>R</td>
<td>3</td>
<td></td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CLS 473</td>
<td>Advanced Practicum Chemistry and Microbiology</td>
<td>R</td>
<td>3</td>
<td></td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CLS 499</td>
<td>Senior Seminar</td>
<td>R</td>
<td>3</td>
<td></td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CLS 485</td>
<td>Independent Study</td>
<td>R</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CLS 468</td>
<td>Clinical Laboratory Research</td>
<td>R</td>
<td>3</td>
<td></td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CLS 482</td>
<td>Special Topics: International Health</td>
<td>E</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Note: If you listed courses in Appendix IV, do not list them again in this appendix.)

* Indicate all courses other than the service courses here. Please include all special topics courses offered as well as independent studies. When listing Independent studies, please list the **number of independent study students enrolled**, but **DO NOT** include individual names or the titles of the independent studies.

*Expand table as needed.*
## Appendix VI
### Program Enrollment

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>New Students Admitted (Pre-CLS)</td>
<td>10</td>
<td>12</td>
<td>14</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>New Students Admitted (BS in MT)</td>
<td></td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre – Clinical Laboratory Science Majors</td>
<td>25</td>
<td>26</td>
<td>22</td>
<td>11</td>
<td>15</td>
</tr>
<tr>
<td>BS in Medical Technology Majors</td>
<td>4</td>
<td>7</td>
<td>4</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td><strong>Grand Total of Students Enrolled in the Program</strong></td>
<td><strong>29</strong></td>
<td><strong>33</strong></td>
<td><strong>26</strong></td>
<td><strong>18</strong></td>
<td><strong>21</strong></td>
</tr>
<tr>
<td><strong>Graduates of the program</strong></td>
<td><strong>3</strong></td>
<td><strong>3</strong></td>
<td><strong>4</strong></td>
<td><strong>3</strong></td>
<td><strong>2</strong></td>
</tr>
</tbody>
</table>

*If known. This information is not completely accurate at this time, as students often do not declare a second major until the junior evaluation or the student has her/his primary major in another college.

**On occasion you may have a student enrolled in your program who is declaring your program as a 3rd major.

***If known. This information is not completely accurate at this time, as students often do not declare minors until the junior evaluation or senior application for graduation.
**Chart I Assessment Summary**

**Marshall University**

**Assessment of Student Outcomes: Component/Course/Program Level**

5 year summary

Component Area/Program/Discipline: _BS in Medical Technology_______________________

<table>
<thead>
<tr>
<th>Student Learning Outcomes</th>
<th>Assessment Measures (Tools)</th>
<th>Standards/Benchmark</th>
<th>Results/Analysis</th>
<th>Action Taken</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre-clinical Outcome:</strong> The student will demonstrate knowledge, skills and competencies that prepare them for entry into clinical practicum</td>
<td>Review of individual course grades in CLS 410, 421, 464 and 460 in the Fall semester preceding Spring clinical practicum</td>
<td>100% of students must achieve a minimum of 70% in all CLS courses in order to be eligible for clinical practicum</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td><strong>Clinical Practicum Outcome:</strong> The student will analyzer and interpret data that will prepare them for entry into the workforce as a Medical Technologist.</td>
<td>Practical examinations in each Clinical rotation section (CLS 472 and CLS 473)</td>
<td>100% of students must achieve a minimum of 70% on all practical examinations in all sections</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Case Study based Final Examinations in each clinical rotation section</td>
<td>100% of students have two attempts to achieve a minimum score of 70% on each final examination at the end of each clinical rotation section</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Performance Evaluations for each Clinical Rotation Section</td>
<td>100% of students must achieve a minimum evaluation of “satisfactory” on each area of the performance evaluation</td>
<td>100%</td>
<td>The Performance Evaluations were reviewed by the Clinical Advisory Committee and Program Director and are currently being revised to more clearly define student learning outcomes in each area</td>
<td></td>
</tr>
</tbody>
</table>
| American Society of Clinical Pathology Board of Registry (BOR) | 80% of students pass national board examination annually | 2003 – 100% (n=2)  
2004 – NA (n=0)  
2005 – 50% (n=4)  
2006 – 100% (n=3)  
2007 – 50% (n=4) | Given the extremely small number of students taking the examination, the passage rates are greatly affected by any student that fails. Overall for the five year period, the MU passage rate was 69.2% with only 13 students taking the exam; compared to the national average for the same period of 75.2% for 13,480 test takers. As stated in the body of the program review document, some students choose to not take the certification immediately upon graduation from the program, or at all, depending on whether or not their employer requires certification to practice. Students who delay taking the examination after graduation have a lower passing rate that those who do take the examination immediately after finishing the program. |
April 1, 2008

Jennifer Perry, Chair
Clinical Laboratory Sciences
COHP

Dear Jennifer,

The University Assessment Committee and I have completed our evaluation of the annual program assessment report for the BS in Medical Technology. This letter will provide feedback in the following manner. First, I will comment generally on each section of your report. Second, I will rate the following areas of the report on a four point scale (0 – 3, with 3 being the highest rating): student learning outcomes, assessment measures, and the feedback loop. Although I considered feedback from committee members, I made the final decision on ratings for all reports submitted. Third, I will offer suggestions for your consideration as you plan your assessment for the 2008-2009 academic year. Fourth, I will include my evaluation using the Primary Traits Analysis rubric and will include reviewers’ comments for your information.

General Comments

Your program goals pertaining to both instruction and curriculum and accreditation are good. However, your student learning outcomes are very general and are not all appropriate. For example, requiring students to participate in MT graduate interviews is not a learning outcome. Rather, the interview can be used as an indirect measure of student learning if the interview has questions appropriate to student learning outcomes. The second outcome should specify the competencies students need to engage in research. The first student learning outcome also should be more specific. What are the clinical specialties and what types of performance are measured? How do students demonstrate this performance? Do they evaluate, choose, compare/contrast, organize, plan, analyze, or interpret? Try to specify behaviors by using verbs such as these, which specify higher levels of learning. I advise avoiding the word “demonstrate” at all costs!

After you have developed a set of measurable student learning outcomes that emphasize higher levels of learning, you need to determine how you will assess each of these. Course grades are not appropriate assessment tools. The reason for this is that they are too holistic (each course should address more than one student learning outcome) and are influenced by factors, such as attendance, other than learning. The assessment measures listed for your second student learning outcome, i.e., practical exams, final exams, performance evaluations, and the BOR exam, are all appropriate ways to measure student learning outcomes. However, if you make your student learning outcomes more specific, you’ll want to specify specific questions from each of the exams and specific areas on the performance evaluations for each outcome. Your benchmarks are appropriate and you report results appropriately. Making student learning outcomes more specific may help you to determine student strengths and weaknesses more effectively.

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A State University of West Virginia • An Affirmative Action/Equal Opportunity Employer
Ratings for Student Learning Outcomes, Assessment Measures, and the Feedback Loop

Student Learning Outcomes = 1. This rating was given because you have identified student learning outcomes which describe student behaviors (although the last outcome did not describe student learning). To move to level 2, you should develop more specific outcomes that clearly specify what students will do to show mastery of the outcomes.

Assessment Measures = 3. This rating was given because the measures you've identified focus on real-world tasks and allow performance to be gauged over time. They will need to be further refined, however, as you refine your student learning outcomes. I also suggest developing a detailed scoring rubric for performance evaluations and essay exam questions.

Feedback Loop = 2. This rating was given because, although data were collected and reported last year, results are only beginning to be used to inform program changes. Developing student learning outcomes with greater specificity than those currently being used and analyzing data based on these outcomes should result in more efficiently using information about specific student strengths and weaknesses to make significant curricular changes that will directly improve student learning.

Suggestions to Consider as you plan your assessment strategies for the 2008-2009 academic year

One caution I have is that, as you specify your student learning outcomes, refine your assessment measures and develop detailed scoring rubrics, you not try to do everything at once. It is perfectly acceptable and encouraged to assess only a portion of your student learning outcomes each year. So, you may choose to do an in-depth assessment of the first two outcomes during year 1. If this is done using several assessment measures with detailed rubrics, you will be able to collect detailed data regarding the outcomes. These data should allow you to identify specific strengths and weaknesses regarding student learning (and hence, your program). Changes to strengthen these areas of learning can be implemented the following year, while you assess two more outcomes. This will allow you to assess all outcomes on a three-four year rotation and will give you sufficient time to allow curricular modifications to have an effect before the next assessment.

I appreciate the work you are doing to make your assessment stronger. If I can be of additional help, please do not hesitate to contact me at 62987 or at reynoldsrm@marshall.edu.

Sincerely,

Mary E. Reynolds
Interim Director of Assessment

C: Dr. Shortie McKinney, Dean, COHP
October 12, 2007

Dee Fike, Chair
Clinical Laboratory Science
COHP
Campus

Dear Dee,

The Subcommittee on Assessment Reports completed its review of your annual assessment report for the BS in Medical Laboratory Technology and I concur with their analysis.

The BS in Medical Laboratory Technology is performing at Level 1 in all areas: Learning Objectives, Assessment Measures, and the Feedback Loop.

In the area of Learning Objectives, Level 1 suggests that learning objectives were identified and describe student behaviors. In reading your report, I didn't feel that you really listed student learning objectives, but you did list student learning goals that described student behaviors. While you need the goals, I would suggest that you break these goals down into several measurable student learning objectives (outcomes). For example, what is one specific area of knowledge students must demonstrate in the pre-clinical portion of the program? You might say, "During the pre-clinical portion of the program, students will [using an action verb, describe the skill they must demonstrate]." The objectives you have in your report, e.g. "Clinical Practicum Student Achievement," are not student learning outcomes, but rather a combination of learning experiences (clinical practicum) and assessment measures (I assume that student performance is assessed in some way during their clinical practicum experiences). What competencies must students demonstrate during their clinical practicum experiences?

In the area of Assessment Measures, Level 1 suggests that measures were identified and that they relate to learning objectives. However, many of the measures you identified are not appropriate to measure student learning outcomes. These include grades and completion rates (which can be influenced by factors unrelated to learning). Licensure and other exams with national norms are appropriate, but you did not tie performance on these tests to measurable student learning outcomes. I was glad to see that you used student satisfaction surveys. These give the program good data, but remember that data from surveys is indirect in nature. These data measure students' perceptions, but are not direct measures of student learning.

In the area of the Feedback Loop, Level 1 suggests that data are being collected, but not interpreted or used for improvement in student learning. As mentioned in the previous paragraph, some of the data you reported give no useful information about student learning.

It is obvious to me that you put a good deal of time and effort into preparing this report. However, the report is focused more on program productivity, e.g. number of graduates, etc. than on student learning. It is important that you reflect on the most important competencies (learning outcomes) students must have when they complete this program and then think about how you
can accurately measure whether or not students achieve these competencies. Dr. Mary Beth Reynolds, the new Interim Director of Assessment, will be happy to help you in developing your assessment plan. She can be contacted at 62987 or at reynolm@marshall.edu.

Sincerely,

[Signature]

Frances S. Hensley
Associate Vice President for Academic Affairs

C: Dr. Shortie McKinney, Dean, COHP
Office of Program Review & Assessment

To: Dee Fike, Chair, CLS
From: Bob Edmunds, Coordinator for Program Review and Assessment
Date: October 17, 2005

Yearly Assessment Report for: BS Medical Technology

Thank you for submitting the Yearly Assessment Report for the program. Please use the information in this report to guide your assessment activities during AY 2005-2006.

The Yearly Assessment Report for documenting AY 2004-2005 assessment activities is due by October 3, 2005. If the program is scheduled for a program review during the 2005-6 academic year, the Program Review will suffice as the documentation of assessment activities and no separate report will be due.

Reviewer summary of yearly assessment report:
What follows is a brief critique of the report you submitted for the academic year 2003-2004. In most cases the report has been reviewed by 3 members of the University Assessment Committee.

<table>
<thead>
<tr>
<th>Yearly Assessment Report Critique</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. a. Program goals: Program goals were listed.</td>
</tr>
<tr>
<td>b. Learning outcomes and data collection: Learning outcomes listed; however, some were deemed to be not measurable and to not measure student academic achievement. Data were presented.</td>
</tr>
<tr>
<td>c. Results: Results were presented.</td>
</tr>
<tr>
<td>II. BOT Initiative #3: The program employs a board certified test to measure graduate competency.</td>
</tr>
<tr>
<td>III. Plans for current year: Work on accreditation for fall 2005</td>
</tr>
<tr>
<td>IV. Assistance needed: Survey</td>
</tr>
<tr>
<td>V. Lessons learned: MT is a highly skilled profession. More students need to apply.</td>
</tr>
</tbody>
</table>

Review of the Assessment Summary Chart “Marshall University: Assessment of Student Outcomes.”

This chart will help the program and the University Assessment Committee monitor a program’s patterns of evidence. Please remember that a program does not have to assess every outcome every year; however, within a 3-4 year period of time all program objectives must be evaluated, results analyzed, and actions taken (feedback loop) documented.

No assessment summary chart was present.

Efficacy of Assessment:

As Marshall approaches its ten year self-study by the North Central Association’s Higher Learning Commission, programs will be measured in terms of their efficacy of assessment. Programs are evaluated in terms of the development of measurable learning outcomes, the use of viable assessment measures, and the implementation of an effective feedback loop. The current report has been evaluated based on these categories. This year the report shows program scores from 2000-2001 to the present.
<table>
<thead>
<tr>
<th>Categories</th>
<th>Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Learning Outcomes</td>
<td>2</td>
</tr>
<tr>
<td>II. Assessment Measures</td>
<td>2</td>
</tr>
<tr>
<td>III. Feedback Loop</td>
<td>2</td>
</tr>
<tr>
<td>Total Overall Score:</td>
<td>6</td>
</tr>
<tr>
<td>Level of Implementation</td>
<td>2</td>
</tr>
</tbody>
</table>

**Score Ranges**

A score of 0 indicates minimum activity in the category.
A score of 1 indicates that a program is in the beginning stages of assessment.
A score of 2 indicates that a program is making progress toward implementing a viable assessment program.
A score of 3 indicates that a program is in the maturing stages of its assessment program.

**Levels of Implementation**

<table>
<thead>
<tr>
<th>Efficacy of Assessment</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A total overall score</td>
<td>Level 1: the program is in the beginning stages of its assessment of student academic achievement</td>
</tr>
<tr>
<td>between 0 and 3 indicates</td>
<td></td>
</tr>
<tr>
<td>A total overall score</td>
<td>Level 2: the program is making progress toward implementing a viable assessment program</td>
</tr>
<tr>
<td>between 4 and 6 indicates</td>
<td></td>
</tr>
<tr>
<td>A total overall score</td>
<td>Level 3: the program is in the maturing stages of continuous improvement of student academic achievement</td>
</tr>
<tr>
<td>between 7 and 9 indicates</td>
<td></td>
</tr>
</tbody>
</table>

The goal is to have the majority of our programs in level 3 by May 2006.

**Interpretation:**

Some of the objectives were interpreted as not being measures of student academic achievement or measurable. The use of a national test for the Assessment Measures is commendable. The program needs to improve the feedback loop to improve student performance.

**Recommendations:**

**General Comments:**

It is imperative that programs maintain a record of their assessment activities and have this information available for the NCA/HLC site committee if requested.

Thanks so much for continuing to aid Marshall in its ongoing assessment efforts.

**Enclosures**
Office of Program Review & Assessment

To: Prof. Dee Fike, Chair, Clinical Lab Sciences
From: Bob Edmunds, Coordinator for Program Review and Assessment
Date: July 7, 2004

Subject: Yearly Assessment Report, BS, Medical Technology

1. Thank you for submitting the Yearly Assessment Report for the program, BS MT. Please use the information in this report to guide your assessment activities during AY 2004-2005.

2. What follows is a brief critique of the report you submitted for the academic year 2002-2003.

| I. Principal Elements of the assessment plan | The principal elements of the plan were outlined both in the narrative section and the assessment summary chart. |
| Student outcomes | The student outcomes are listed, as well as program outcomes. Many of the outcomes represent program success, not student academic achievement. The Outcomes are the same as the AAS MLT. Should they be? |
| Assessment Tool or Approach/ Standards/Benchmark BOT Initiative #3 | The primary tool is the certification test. This test also serves for the BOT Initiative #3. |
| Results/Analysis: | 65-75% passes the national exam rate. Other students are continuing on into the bachelor’s program. Is this adequate? |
| Action Taken: | Faculty reviews the program on a continual basis. |
| Information on how assessment data is used to improve program quality (3 examples) | Some program changes have been made, notably the Blood Bank area. No results have been collected as of yet on the new certification test. |
| Chart | The chart is present. |


This chart will help the program and the University Assessment Committee monitor a program’s patterns of evidence. Please remember that you do not have to assess every outcome every year; however, within a 3-4 year period of time all program objectives must be evaluated, results analyzed, and actions taken (feedback loop) documented.

The chart is present and outlines the five student learning outcomes. Outcome one seems to be OK. This relates to licensure. Outcomes 2 & 3 are fairly general and don’t specifically relate to academic achievement. The assessment tool/method doesn’t seem to fit. The student is required to be academically prepared, but the assessment measure is “informal discussions with the clinical faculty at the clinical sites.” This doesn’t seem to give much detail about what ‘academic preparation’ is. Are there specific bodies of knowledge out there which BS MT students must know and how do you measure that?

With most of the objectives being met, the program has taken little formal action. However, over the past few years, several changes have been made. It will be interesting to see the new requirements from the accrediting agency and how this will impact the assessment program.

4. Efficacy of Assessment:

As Marshall approaches its ten year self—study by the North Central Association’s Higher Learning Commission, programs will be measured in terms of their efficacy of assessment. Programs are evaluated in terms of the development of measurable learning outcomes; the use of viable assessment measures and the implementation of an effective feedback loop. The current report has been evaluated.
based on these categories. Scores can range from 0-3 in each category. Overall total scores ranging from 1-3 indicate that the program is in the Beginning Stages of developing a viable assessment program. Overall scores ranging from 4-6 indicate that a program is making progress toward implementing a viable assessment program and overall scores ranging from 7-9 indicate that a program is in the maturing stages of continuous improvement. All programs should be in Level 2 (overall score 4-6) (Making progress toward implementing a viable assessment program) or Level 3 (overall score 7-9) (Maturing stages of continuous improvement) by May 2005.

<table>
<thead>
<tr>
<th>Scores:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Learning Outcomes</td>
<td>2</td>
</tr>
<tr>
<td>II. Assessment Measures</td>
<td>2</td>
</tr>
<tr>
<td>III. Feedback Loop</td>
<td>2</td>
</tr>
<tr>
<td>Overall Score:</td>
<td>6.3</td>
</tr>
</tbody>
</table>

Interpretation: The program has achieved an overall score of 6.3 which places it in Level 2 of the NCA/HLC levels of implementation. The program should revisit outcomes 2 and 3 to make them more specific as to specific student academic achievement. The program should revisit the assessment measures and develop more specific measures than 'informal discussions' with colleagues. Finally the program should develop a more effective feedback loop. The chart should become more informative.

5. Recommendations:
   In light of the review, how close are the learning outcomes aligned with the outcomes prescribed by the American Society for Clinical Pathology? If they are similar or the same, then probably nothing should be done; however, if not, then the program does need to revisit outcomes 2 and 3. The alignment should be evident in future reports. Is the passage rate adequate on the licensure exam?

   Finally, the yearly assessment update chart should become much more informative as to what is happening in the program. UAC will be assembling these charts as part of the assessment package for NCA/HLC for the site visit.

6. General Comments:
   It is imperative that programs keep a record of their assessment activities and have this information available for the NCA/HLC site committee if requested.

7. Thanks so much for continuing to aid Marshall in its ongoing assessment efforts.

Enclosures
April 7, 2006

Stephen J. Kopp, PhD
President
Marshall University
Office of the President
1 John Marshall Drive
Huntington, WV 25755

Dear President Kopp:

Enclosed is the NAACLS Board of Directors’ official accreditation award for your Clinical Laboratory Scientist/Medical Technologist program from the April 6, 2006 meeting.

The Board of Directors’ award is based on the continuing accreditation review process that included a site visit of your program on December 7-8, 2005.

Accreditation for your program will continue until April 30, 2011. As a result, your program will commence renewal of accreditation with submission of the Self-Study Report on June 4, 2010 and the scheduling of a site visit during Fall 2010. We provide this information to assist you in your program’s administrative and financial planning.

This letter and the accompanying award represent formal accreditation by NAACLS. The NAACLS Certificate of Accreditation will be forwarded to the Program Director.

Sincerely,

Shauna C. Anderson, PhD, MT(ASCP)C, CLS(NCA)
President, NAACLS Board of Directors

cc: Dorothy J. Fike, MS, MT(ASCP)SBB, CLS(NCA), Program Director
    Shortie McKinney, EdD, Dean, College of Health Professions

Enclosure: NAACLS Board of Directors’ Accreditation Award
NAACLS BOARD OF DIRECTORS’ ACCREDITATION AWARD

The Clinical Laboratory Scientist/Medical Technologist Program of Marshall University in Huntington, West Virginia, is recommended for Continuing Accreditation for five (5) years.

Dorothy J. Fike, MS, MT(ASCP)SBB, CLS(NCA), is recognized as the Program Director.

The following institutions are recognized as clinical affiliates of the program:

Charleston Area Medical Center  
Huntington VA Medical Center  
St. Mary’s Medical Center  
Cabell Huntington Hospital  
Charleston, WV  
Huntington, WV

Shanna C. Anderson  
President, NAACLS Board of Directors

Chief Executive Officer, NAACLS

April 6, 2006
February 17, 2006

Stephen J. Kopp, PhD
President
Marshall University
Office of the President
1 John Marshall Drive
Huntington, WV 25755

Dear President Kopp:

Enclosed is the Clinical Laboratory Sciences Programs Review Committee (CLSPRC) recommendation to the NAACLS Board of Directors concerning your Clinical Laboratory Scientist/Medical Technologist program's accreditation as decided at the February 2, 2006, meeting of the CLSPRC.

The CLSPRC recommendation is based on the continuing accreditation review process that included a site visit of your program on December 7-8, 2005.

Provided that the Board of Directors concurs with the CLSPRC recommendation, accreditation for your program will continue until April 30, 2011. As a result, your program will commence the continuing accreditation process with submission of the Self-Study Report on June 4, 2010, and the scheduling of a site visit during Fall 2010. We provide this information to assist you in your program's administrative and financial planning.

This letter does not represent a formal accreditation award by NAACLS. NAACLS will notify you of that award after the next Board of Directors Meeting in April 2006.

Sincerely,

John H. Landis, MS, MT(ASCP)
Chair, CLSPRC

cc: Dorothy J. Fike, MS, MT(ASCP)SBB, CLS(NCA), Program Director
    Shortie McKinney, EdD, Dean, College of Health Professions
THE FOLLOWING IS THE CLSPRC RECOMMENDATION FOR YOUR PROGRAM AS IT MAY APPEAR IN THE BOARD OF DIRECTORS' OFFICIAL ACCREDITATION AWARD:

The Clinical Laboratory Scientist/Medical Technologist Program of Marshall University in Huntington, West Virginia, is recommended for Continuing Accreditation for five (5) years.

Dorothy J. Fike, MS, MT(ASCP)SBB, CLS(NCA), is recognized as the Program Director.

The following institutions are recognized as clinical affiliates of the program:

Charleston Area Medical Center
Huntington VA Medical Center
St. Mary's Medical Center
Cabell Huntington Hospital

Charleston, WV
Huntington, WV
Huntington, WV

Chair, CLSPRC

Chief Executive Officer, NAACLS

February 2, 2006
December 22, 2005

Dorothy J. Fike, MS, MT(ASCP)SBB, CLS(NCA)
Program Director
Marshall University
Clinical Laboratory Science Department
1 John Marshall Drive
Huntington, WV 25755-2530

Dear Ms. Fike,

Enclosed is the Site Visit Report for your CLS/MT and CLT/MLT programs, which were received on December 22, 2005. We encourage you to share this report with members of your administration. Please review this report carefully and respond in writing to any errors or misunderstandings. It is necessary that your response and any additional documentation needed for clarification be received by January 9, 2006. This will allow your program to be considered at the February 2-3, 2006 meeting of the Clinical Laboratory Sciences Programs Review Committee (CLSPRC). Even if there are no corrections, we must have your concurrence in writing.

There are two remaining steps in the process before an official accreditation action is transmitted back to you:

1. The CLSPRC will review your program and formulate a recommendation. The committee will advise you of its recommendation in March 2006.

2. This recommendation will be received and acted upon by the Board of Directors at its April 6-7, 2006 meeting, with notification of your accreditation award sent to you in May 2006.

Please note that no recommendations are official until acted upon by the Board of Directors.

Also enclosed with this letter is an evaluation questionnaire, which we ask that you complete and return to NAACLS. This form is not considered a response to the Site Visit Report. The questionnaire is designed to evaluate two objectives of a site visit,
namely, assessing the quality of educational programs and making recommendations for improvement where needed.

Please e-mail confirmation of receipt to Edward Rotchford at erotchford@naacls.org. We appreciate your cooperation and hope that the site visit process was beneficial to you.

Sincerely,

Edward Rotchford
Program Coordinator - Program Services

cc: Gwen James-Oriaikh, Program Coordinator - Program Services

Enclosures · Site Visit Report · Post Site Visit Evaluation Form
SITE VISIT REPORT
Clinical Laboratory Scientist/Medical Technologist
2001 Standards

Name of Program: Marshall University

City, State: Huntington, West Virginia

Program Director: Dorothy (Dee) J. Fike, MT(ASCP), SBB, CLS(NCA)

I. SPONSORSHIP

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<thead>
<tr>
<th>CLINICAL AFFILIATES:</th>
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<tbody>
<tr>
<td>Affiliate Name</td>
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<tr>
<td>Cabell Huntington Hospital</td>
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<tr>
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<td>Huntington VA Medical Center</td>
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<tr>
<td>St. Mary's Medical Center</td>
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<tr>
<th>ACADEMIC AFFILIATES:</th>
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COMMENTS:
1. The sponsoring institution is accredited by recognized regional and/or national agencies. ☒YES ☐NO

The clinical and/or academic affiliates are accredited by recognized regional and/or national agencies. ☒YES ☐NO ☐NA

All provisions of the agreement(s) are active (current) with written documentation of the following items:

A. General:
   1. Reason for agreement ☐YES ☒NO
   2. Responsibilities of the academic facility ☐YES ☒NO
   3. Responsibilities of the clinical facility ☐YES ☒NO
   4. Joint responsibilities ☐YES ☒NO

B. Specific:
   1. Supervisory responsibilities for the students ☒YES ☐NO
   2. Student professional liability coverage ☐YES ☒NO
   3. Student health and safety policies ☐YES ☒NO
   4. Provision for renewal ☐YES ☒NO
   5. Termination clause providing for program completion of enrolled students ☐YES ☐NO

COMMENTS: **The site visit team reviewed all agreements as well as the concerns listed in the paper review. The program officials determined that the four affiliates listed are the current affiliates being used by the program. It is anticipated that others will be added in the near future. In reviewing the agreements, it was determined that the Cabell Huntington Hospital agreement is signed only by Marshall University representatives. Additionally, the agreements with Cabell Huntington Hospital, Charleston Medical Center, and St. Mary's Medical Center do not contain a termination clause. Administrative changes have created the confusion of the paper reviewer; The university has a new President and Dean of the College of Health Professions; during this transition, the College of Health Professions became the new title for the former College of Nursing and Health Professions.

2. The education program is established in a:
   ☑College or University
   ☐Hospital or Medical Center
   ☐Medical Laboratory
   ☐Medical school
   ☐Other institution or consortium that meets comparable standards for education in clinical laboratory sciences

COMMENTS:

3. The sponsoring institution assumes primary responsibility for:
   Planning curriculum ☒YES ☐NO
   Selecting course content ☒YES ☐NO
CLS/MT Site Visit Report (2001 Standards)

Coordinating classroom teaching
Coordinating applied education
Appointing faculty to the program
Receiving and processing applications for admission
Granting the baccalaureate or higher degree or certificate

 COMMENTS:

3A. The sponsoring institution is responsible for providing assurance that the activities assigned to students in the clinical setting are educational.

 COMMENTS:

3B. There is documented, active, ongoing communication between the sponsoring institution and the affiliate(s) to:
   Exchange information
   Coordinate the program

 COMMENTS:

II. RESOURCES

4. Personnel resources of the program support the number of students admitted.

 COMMENTS:

5A1. Program Director Faculty Fact Sheet is complete.

 COMMENTS:

5A2. The Program Director is responsible for program:
   Organization
   Administration
   Periodic review
   Planning
   Development
   Evaluation
   General effectiveness

 The program director has input into budget preparation.

 COMMENTS:
CLS/MT Site Visit Report (2001 Standards)

COMMENTS: ** Dean Shortie McKinney confirmed that the Program Director has input into budget preparation and management of funds allocated for the program. Although the program has experienced reduction in allocated funds due to budget shortfalls, the administration has been supportive of program needs. Recently funding for faculty during the summer for the Program Director and faculty (on 9 months contract) was provided. There was evidence on site that the Program Director is involved in budget preparation.

5A3. The program director's qualifications are:
   - Nationally certified clinical laboratory scientist/medical technologist (YES ☑ NO)
   - Master's or doctoral degree (YES ☑ NO)
   - At least three years of experience in clinical laboratory science education (YES ☑ NO)
   - Date approved by NAACLS: April, 2003

   Experiences in clinical laboratory science education include:
   - Teaching courses (YES ☑ NO)
   - Conducting and managing learning experiences (YES ☑ NO)
   - Evaluating student achievement (YES ☑ NO)
   - Providing input into curriculum development (YES ☑ NO)
   - Formulating policies and procedures (YES ☑ NO)
   - Evaluating program effectiveness (YES ☑ NO)

COMMENTS:

   The program director has knowledge of education and administration. (YES ☑ NO)

   The program director has knowledge of current accreditation and certification procedures. (YES ☑ NO)

COMMENTS:

5A4. The program director has a faculty appointment at the sponsoring institution or at each affiliated academic institution. (YES ☑ NO)

5B1. There is an advisory committee from the community of interest who have knowledge of clinical laboratory science education. (YES ☑ NO)

COMMENTS:

5B2. Advisory committee meeting minutes verify that it has input into any aspects of the program/curriculum that relate to its current relevancy and effectiveness. (YES ☑ NO)
CLSM/T Site Visit Report (2001 Standards)

COMMENTS:

6A. Faculty responsibilities include participation in:
   - Teaching courses  [YES/no]
   - Supervising applied laboratory learning experiences  [YES/no]
   - Evaluating student achievement  [YES/no]
   - Developing curriculum  [YES/no]
   - Formulating policy and procedures  [YES/no]
   - Evaluating program effectiveness  [YES/no]

COMMENTS: **Numerous Clinical Fact Shets were not complete. This information is identified under Standard 6C and again in the Areas of Concern at the end of the report.

6B. Faculty demonstrate adequate knowledge and proficiency in their content areas.
   Faculty demonstrate the ability to teach effectively at the appropriate level.  [YES/no]

COMMENTS:

6C. There is documentation of ongoing professional development to fulfill the instructional responsibilities of:
   - Didactic faculty  [YES/no]
   - Clinical faculty  [YES/no]

COMMENTS:
** Numerous Clinical Fact Sheets at the four affiliates lack documentation of all required information. The Missing information is identified below:

St. Marys Medical Center:
Kathy Gaskins: Certification number
Tammy Graham: Principal functions in the educational program
Linda Crowe: Certification number
Linda Lima: Principal functions in the educational program

Huntington VA Medical Center:
Teri Ruley: Certification number
Rebecca Clarkman: Certification number; year certified
Mildred Porter: Certification number
Charleston Area Medical Center:

Betty Shade: Certification number  
Christine Florence: Certification number  
Steve Bean: Certification number  
Donna Bane: Certification number; year certified  
Misty O’Connor: Certified by; certification number; year certified  
Shawn Farren: Proportion of time; certified by; certification number; year certified; continuing education  
Theresa Dillon: Certification number; continuing education*  
*This information may be on the back of the original sheet submitted but not photocopied to review materials  
Rosemary Bailey: Certification number; continuing education  
Patima Patel: Continuing education; certification number  
Amanda Williams: Certification number; continuing education  
Lester Workman: Certification number; continuing education  
Kathy Coleman: Certification number; continuing education  
David Martin: Certified by; certification number; year certified, continuing education  
Barbara Jean Sparks: Certification number; continuing education  
Melinda Taylor: Proportion of time; certified by; certification number; year certified, continuing education  
Charity Thompson: Certification number; continuing education  
Kellie Davis: Certification number

Cabel Huntington Hospital:

Judy Blevins: Certification number; continuing education  
Drenda Eagle: Certification number  
Peggy Neil: Certification number; principal functions, continuing education

7. Financial resources are adequate for the continued operation of the educational program. ☑YES ☐NO

The budget is institutionally approved, OR there is a written statement of continued financial support for the educational program from an executive officer of the sponsoring institution. ☑YES ☐NO

COMMENTS:
** Although there have been budget restrictions during recent years, site visitors find the financial resources to be adequate.

8A. The classrooms/lecture areas are adequate. The administrative offices are adequate. ☑YES ☐NO ☑YES ☐NO
CLSI/MT Site Visit Report (2001 Standards)

The clinical facilities are adequate. The student laboratories are adequate.

Student laboratories are equipped for safety. Clinical facilities are equipped for safety.

COMMENTS: ** Clinical space in the affiliates is adequate to support student learning. St. Mary’s Medical Center was visited and found to provide excellent training opportunities. Students expressed satisfaction with the clinical experiences received at the various affiliates as well.

8B. Students have access to modern equipment and supplies.

Students have experience with modern equipment and supplies.

COMMENTS:

8C. Students have access to information resources containing current editions of books, periodicals and other reference materials in contemporary formats related to all content areas of the curriculum.

COMMENTS:

8D. Adequate instructional resources are available to facilitate each student’s attainment of entry level competencies.

COMMENTS:

8E. Students have access to and experience with contemporary computer technology.

COMMENTS: Marshall University has excellent student computer facilities which are accessible 24 hours a day.

III CURRICULUM
9A. Instruction:
Follows a planned curriculum or sequence of courses that documents a structured curriculum
Includes applied (clinical/laboratory) education
Includes course schedules
Includes clinical significance and correlation
Has clearly written program goals and competencies
Has syllabi which include individual course goals and behavioral objectives.

Course objectives show progression to the level consistent with entry into the profession.

<table>
<thead>
<tr>
<th>Cognitive Objectives</th>
<th>Are present?</th>
<th>At the appropriate taxonomic level?</th>
<th>Contain measurable action verbs and outcomes?</th>
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<td>Education Techniques</td>
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### CLS/MT Site Visit Report (2001 Standards)

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<th>Fluids/Microscopy</th>
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Affective objectives are present  ☒ YES ☐ NO

9B. Instructional Areas:

1. Scientific content includes the following areas:
   - Anatomy/physiology
   - Immunology
   - Genetics/molecular biology
   - Microbiology
   - Organic/biochemistry
   - Statistics

   ☒ YES ☐ NO

2. Each area of the curriculum includes pre-analytical, analytical, and post analytical components of laboratory services.

   The curriculum includes:
   - Principles and methodologies
   - Performance of assays
   - Problem-solving/Troubleshooting
   - Interpretation of clinical procedures and results
   - Statistical approaches to data evaluation
   - Continuous assessment of laboratory services

   ☒ YES ☐ NO

3. Principles and practices of quality assurance/quality improvement

   ☒ YES ☐ NO

4. Application of safety and governmental regulations and standards

   ☒ YES ☐ NO

5. Principles of interpersonal and interdisciplinary communication and team-building skills

   ☒ YES ☐ NO

6. Principles and applications of ethics and professionalism

   ☒ YES ☐ NO

7. Education techniques and terminology

   ☒ YES ☐ NO

8. Knowledge of research design/practice

   ☒ YES ☐ NO

9. Concepts and principles of laboratory operations include:

   ☒ YES ☐ NO
a. critical pathways and clinical decision making
b. performance improvement
c. dynamics of healthcare delivery systems as they affect laboratory service
d. human resource management
e. financial management

9C. Learning Experiences:
Experiences are educational and balanced so that entry level competencies can be achieved

Instruction provides properly sequenced learning experiences

Learning experiences include appropriate:
  Instructional material
  Classroom presentations
  Discussions
  Demonstrations
  Laboratory sessions
  Supervised practice and experience

Experiences at different clinical sites are comparable and appropriate to enable all students to achieve entry level competencies.

Policies and processes by which students may perform service work are:
  Published
  Distributed to students
  Distributed to clinical affiliates

After demonstrating proficiency, students may be permitted to perform procedures under qualified supervision.

Objectives are present for any learning experiences outside of normally scheduled hours.

Service work by students in clinical settings outside of academic hours is non-compulsory.

COMMENTS: ** Affective objectives were reviewed on site and considered satisfactory.
Also, clinical rotation schedules were reviewed and students were interviewed to evaluate clinical schedules, especially for evidence of delineation of the two levels of learning and progression. Site visitc were satisfied that the two levels are distinct.

9D. Evaluations:

Written criteria for passing, failing and progression in the program are:
- Documented
- Given to each student at the time of entry into the program

<table>
<thead>
<tr>
<th>Evaluation of Cognitive Objectives</th>
<th>Evaluations are present?</th>
<th>Test items correlate with written objectives and competencies?</th>
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<tr>
<th>Evaluation of Psychomotor Objectives</th>
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### CLS/MT Site Visit Report (2001 Standards)

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Evaluation systems are employed frequently enough to:
- Provide students and faculty with timely indications of a student’s academic standing and progress
- Serve as a reliable indicator of the effectiveness of instruction and course design

Affective evaluations are present and correlate with written objectives.

**COMMENTS:** Written and practical exams in all areas were reviewed on site and deemed appropriate.

### IV. STUDENTS

10. Applicants and/or students are provided with a clear description of the program and its content

Announcements accurately reflect the program offered.

Current publications include:
- A. program mission statement
- B. program goals and competencies
- C. course objectives
- D. applied education assignments
- E. admission criteria both academic and non-academic
- F. a list of course descriptions
- G. names and academic rank or title of Program Director and faculty
- H. tuition and fees with refund policy
- I. causes for dismissal
- J. rules and regulations, including appeal procedures
- K. a listing of clinical facilities
CLS/MT Site Visit Report (2001 Standards)

L. essential functions

M. policies and procedures when applied experience cannot be guaranteed

☑ YES ☐ NO

☑ YES ☐ NO ☐ NA

COMMENTS: ** The Program Mission statement is published on the website and will be included in future new student publications.

11. Admissions policies and procedures are in accordance with the clearly defined and published practices of the institution

☑ YES ☐ NO

☑ YES ☐ NO

☑ YES ☐ NO

☑ YES ☐ NO

☑ YES ☐ NO

☑ YES ☐ NO

COMMENTS:

12. Rules and regulations governing acceptable personal and academic conduct for all academic and clinical settings are:

☑ YES ☐ NO

☑ YES ☐ NO

☑ YES ☐ NO

☑ YES ☐ NO

COMMENTS:

13. Student records are maintained according to federal and state regulations for:

☑ YES ☐ NO

☑ YES ☐ NO

☑ YES ☐ NO

☑ YES ☐ NO

Individual grades and credits for courses are recorded and permanently maintained by the sponsoring institution.

☑ YES ☐ NO

COMMENTS:

14. Students are informed of, and have access to the usual student health care services of the sponsoring institution.

☑ YES ☐ NO

The health and safety of students, faculty and patients associated with the educational activities are adequately safeguarded.

☑ YES ☐ NO
Emergency medical care is available for students while they are in attendance.

COMMENTS:

15. Guidance is available:
   To assist students in understanding and observing program policies and practices
   For advising on professional and career issues
   For providing counseling or referral for personal and financial problems that may interfere with progress in the program

Confidentiality and impartiality are maintained in dealing with student problems.

COMMENTS:

16. Appeals procedures:
   Are distributed to students upon entering the program.
   Include provisions for academic types of grievances.
   Include provisions for non-academic types of grievances.
   Include a mechanism for neutral evaluation that ensures due process and fair disposition.

COMMENTS: ** Provisions for non-academic grievances were addressed in the response to the paper review.

V. OPERATIONAL POLICIES

17A. Programmatic announcements accurately reflect the program offered.

Programmatic announcements include NAACLS' name, address and telephone number.

COMMENTS:

17B. Student recruitment and admission policies are non-discriminatory.

COMMENTS:

17C. Faculty recruitment and employment practices are non-discriminatory.
CLS/MT Site Visit Report (2001 Standards)

COMMENTS:

17D. Academic credits and costs are accurately stated, published and made known to all applicants.

COMMENTS:

17E. Policies and procedures for student withdrawal are published and made known to all applicants.

Policies and procedures for refunds of tuition and fees are published and made known to all applicants.

COMMENTS:

17F. If more than one level of clinical laboratory science program is offered by the same institution, the sponsoring institution demonstrates that each program is being conducted to assure appropriate instruction for the students at different educational levels.

COMMENTS:**Review of all materials determined that instruction at each level is appropriate.

17G. The program culminates in a baccalaureate degree or higher, or a certificate.

Granting of the degree/certificate is NOT contingent upon the students passing any type of external certification or licensure examination.

Academic standards for the program are acceptable to the institution that grants the degree.

COMMENTS:

17H. Records of formal student complaints and resolution are maintained.

COMMENTS:

17I. Program evaluation information is available to NAACLS.

COMMENTS:
VI. PROGRAM EVALUATION

18. The program has a documented, formal evaluation plan for continually and systematically reviewing the effectiveness of the program. □YES □NO

COMMENTS: ** No additional certification exam results were available on site. Site visitors talked with a representative group of students about the exam. Several had not taken the CLT/MLT exam but planned to take the CLS/MT exam upon completion of that phase of the program.

19. Outcomes measures from the last three active years are:
   documented
   analyzed
   used in program evaluation
   □NA

COMMENTS:

20. A review of graduation rates is:
   documented
   analyzed
   used in the program evaluation
   □NA

A review of employment rates is:
   documented
   analyzed
   used in the program evaluation
   □NA

COMMENTS:

21. The results of program evaluations are:
   documented
   reflected in ongoing curriculum development and program modification
   followed by an analysis of the effectiveness of any changes implemented
   □NA

COMMENTS:

(November 2003)
Important Notice

The site visit team does not have the authority to speak on behalf of nor bind NAACLS regarding a program's compliance with the Standards, nor can they predict accreditation actions. These responsibilities rest solely with the NAACLS Board of Directors, which has the exclusive right to determine whether or not accreditation is to be granted or continued.

NOTE: This page is compiled on the basis of information supplied to the site visit team by the program director and other officials. NAACLS makes no representation as to its accuracy. The responsibility for accuracy of the information provided to the team rests solely with the program director and other officials.

Areas of Strength:
* The CLS/MT and CLT/MLT programs at Marshall University have a dedicated faculty, a very supportive administration, and clinical affiliates which recognize the value that these two program provide to the service area and beyond.

* There are excellent instructional facilities and student support services on campus.

* Students and graduates are well satisfied with the Marshall University programs.

Areas of Concern: (List and detail by the appropriate Standards number)

Standard 1: The affiliation agreement with Cabell Huntington Hospital is not appropriately signed; only Marshall University representatives' signatures were on the agreement submitted. Additionally, only the agreement from the Huntington VA Medical Center contains a termination clause. Cabell Huntington Medical Center, Charleston Area Medical Center and St. Mary's Medical Center agreements do not contain a termination clause.
Standard 6C:

There were numerous Clinical Fact Sheets from clinical faculty in the four affiliates that are lacking documentation of required information. Missing information is identified below.

St. Marys Medical Center:

Kathy Gaskins: Certification number
Tammy Graham: Principal functions in the educational program
Linda Crowe: Certification number
Linda Lima: Principal functions in the educational program

Huntington VA Medical Center:

Teri Ruley: Certification number
Rebecca Clarkman: Certification number; year certified
Mildred Porter: Certification number

Charleston Area Medical Center:

Betty Shade: Certification number
Christine Florence: Certification number
Steve Bean: Certification number
Donna Bane: Certification number; year certified
Misty O'Connor: Certified by; certification number; year certified
Shawn Farren: Proportion of time; certified by; certification number; year certified;
continuing education
Theresa Dillon: Certification number; continuing education*
*This information may be on the back of the original sheet submitted but not photocopied to review materials
Rosemary Bailey: Certification number; continuing education
Patima Patel: Continuing education; certification number
Amanda Williams: Certification number; continuing education
Lester Workman: Certification number; continuing education
Kathy Coleman: Certification number; continuing education
David Martin: Certified by; certification number; year certified, continuing education
Barbara Jean Sparks: Certification number; continuing education
Melinda Taylor: Proportion of time; certified by; certification number; year certified,
education
Charity Thompson: Certification number; continuing education
Kellie Davis: Certification number
Cabel Huntington Hospital:

Judy Blevins: Certification number; continuing education
Drenda Eagle: Certification number
Peggy Neil: Certification number; principal functions, continuing education

Please comment on any **special circumstances** not previously mentioned:

None
**SIGNATURE PAGE**

***Please complete and attach as the last page of the Site Visit Report***

Please print or type the following information.

**City, State: Huntington, WV**

**Name of Program:** Marshall University

**Program Level:** CLS?MT

**Date:** December 8, 2005

<table>
<thead>
<tr>
<th>I. Team Coordinator:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name/Title:</strong></td>
<td>Mary Jean Rutherford, M Ed., MT(ASCP), SC</td>
</tr>
<tr>
<td><strong>Institution:</strong></td>
<td>Arkansas State University (retired), CLS/MT Program</td>
</tr>
<tr>
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<td><strong>City/State/Zip:</strong></td>
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<td><strong>Email:</strong></td>
<td><a href="mailto:rutherford145@comcast.net">rutherford145@comcast.net</a></td>
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<tr>
<td><strong>Name/Title:</strong></td>
<td>Nisi Zell, MT(ASCP), SH, CLS?NCA, EDS</td>
</tr>
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</tr>
<tr>
<td><strong>Telephone:</strong></td>
<td>912-264-7382 or 912-262-3340</td>
</tr>
<tr>
<td><strong>Email:</strong></td>
<td><a href="mailto:nzell@cgcc.net">nzell@cgcc.net</a></td>
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<td><strong>I concur with the Site Visit Report</strong></td>
<td>☑ Yes ☐ No</td>
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**Date:**

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**SIGNATURE PAGE**

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**Name of Program:** Marshall University  
**City, State:** Huntington, WV

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<td>I concur with the Site Visit Report: Yes</td>
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</table>

| Name/Title: Nici Zell EdS CLS(NCA), MT(ASCP) Sr. |
| Institution: Coastal Georgia Community College |
| Address: 3700 Altamaha Ave |
| City/State/Zip: Brunswick GA 31520 |
| Telephone: 912-264-7382 |
| Email: nzell@cgcc.edu |
| Signature: Nici Zell |
| Date: 12-8-005 |

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***Please complete and attach as the last page of the Site Visit Report***

Please print or type the following information.

Name of Program: **Marshall University**  
City, State: **Huntington, WV**

Program Level: **CLS/MT**  
Date: **12-8-05**

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I concur with the Site Visit Report: **X** Yes  
**No**

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