



## **Instructional Program Review Summary 2003-2004**

Instructional Area: **Workforce**

Department: **Health Sciences**

Discipline: **Medical Laboratory Technology**

**March 1, 2004**

## Instructional Program Review Summary

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NOTE: An external reviewer should not be required to refer to the documentation notebook to understand the Instructional Program Review

Summary. Rather, data should be clearly cited in the summary so that the reviewer can easily find the source documents if needed.

### **EXECUTIVE SUMMARY**

Use the following guidelines to provide a concise overview/summary of the program review contained in this report.

Write a brief description of the goals and objectives of the discipline.

**Program Mission - The Medical Laboratory Technology Program of Austin Community College will be an exemplary program graduating highly qualified individuals to fill the employment needs of clinical laboratories and providing the fundamentals of the medical laboratory profession to those wishing to continue on with their education. The Program will continue to be committed to serving students and the medical laboratory community through guidance, excellent academic instruction and professional training utilizing traditional and innovative means while understanding the cultural diversity of individuals, maintaining a student - centered philosophy, striving to make wise use of community and educational resources and materials, continuing an ongoing process of self-evaluation and self-renewal, and maintaining an outstanding accreditation rating.**

**Ongoing Goals - The Program will:**

- 1. Review data from ongoing program evaluation sources and utilize pertinent information to make needed changes.**
- 2. Continue to build a base of applicants for both Medical Laboratory Technology and Phlebotomy Technician programs.**
- 3. Provide qualified graduates who will be employed and their employers will be satisfied with their training.**
- 4. Encourage graduates to view education as a life-long process.**
- 5. Actively pursue additional funding and release time for continuing education of faculty.**
- 6. Continue to budget for the replacement of aging equipment.**
- 7. Continually update course materials, testing methods, and instrumentation to reflect new technology and current medical laboratory practices.**
- 8. Expand use of resource personnel from the community to provide valuable real-world ideas and experiences to better prepare students for employment.**

9. Periodically reevaluate current articulation agreements with area colleges and universities and revise as needed.

10. Assess and appropriately respond to the staffing and educational needs of the area medical laboratory community.

11. Investigate alternate delivery method(s) of course material to service the wider range of potential applicants as well as additional laboratory employers.

Overview of how the program review was conducted. The Program review is the result of meetings/conversations and input from members of the MLT Program's full-time and adjunct faculty, staff, Advisory Committee including graduates and current students.

#### Summary of findings:

Progress on previous program review recommendations.

1 Previous recommendation: Develop a marketing plan to promote the program, specifically targeting plentiful job opportunities, to recruit more applicants. Action Plan 1 Develop a strong advertising plan. Action Plan 2 Promote Medical Laboratory Technology at the highschool level, including presentations to health occupations classes, career fairs and offering tours.

1 Progress: Due to budgetary constraints, advertising for the MLT Program has been limited to posting of flyers in the biology and chemistry areas of the major campuses, posting of Program information in the course schedules and on at least one occasion an ad in the Statesman. MLT Program Chair and faculty take every opportunity to share information concerning the MLT and Phlebotomy Technician programs at information sessions of Capital Idea and as guest speakers at high schools, through offering services at health fairs and in the Intro to Health Professions course.

2 Previous recommendation: Devise a systematic plan of continuing education for faculty and curriculum development, including upgrades and instructional innovation. Action Plan: Establish proactive calendar for CE and curriculum development, including request for release time and funding.

2 Progress: Due to reduction in travel, the continuing education opportunities for MLT faculty have, for the most part, been limited to the offerings at ACC. MLT faculty attend in-house offerings for CE as they can. Most useful have been those offerings aiding in the development of on-line courses. Professional CE opportunities for MLT faculty are

obtained through attendance at the Texas state convention for the profession. Faculty are able to obtain release time and limited funding to attend these sessions.

3 Previous recommendation: Develop Tech-Prep articulations with local school districts. Action Plans: 1 Establish criteria to offer Introduction to Clinical Laboratory Science in area high schools. 2 Initiate discussions with Health Occupations faculty to offer this course. 3 Solicit funding from the Capital Area Tech -Prep Consortium to support offering this course in area high schools.

3 Progress: Most of this is done or underway.

4 Previous recommendation: Strengthen ties with the Biotechnology Program Action Plans 1 Develop a crosswalk of competencies to outline articulation between Medical Laboratory Technology and Biotechnology. 2 Share resources, including instructional space and faculty.

4 Progress 1 The Crosswalk of the curriculums has been completed. Upon completion of the MLT curriculum, a graduate can obtain the BioTech certificate with 3 of the BITC courses. 2 Sharing of instructional space will begin during the next year as Phase 2 Health Sciences building is completed

Program strengths. The Medical Laboratory Technology has very dedicated knowledgeable faculty, a great nationally accredited program. Students are motivated team workers and area laboratory employers provide quality clinical experiences. Graduates take and are successful on the national examinations.

Areas for improvement.

1. Continue to find ways of marketing the Program to a wider pool of applicants.
2. Improve communication with prospective and current students as well as inter-departmental communication and communication with College administration.
3. Update curriculum content and improve instructional design and delivery.
4. Develop a greater pool of qualified adjunct faculty.
5. Hire an additional faculty member to provide release to current faculty for the revisions to Program curriculum/content as well as to assist in development and management of additional clinical sites and students in clinicals. Initial and special focus to be on area of clinical microbiology.
6. Continue to seek ways of providing continuing education opportunities for Program faculty...
7. Continue to improve relationships with area high schools offering health sciences courses.
8. Maintain an open line of discussion with the Biotechnology faculty.

Key planning issues.

1. Obtaining new / additional funding.
2. Obtaining adequate release time to make quality improvements in Program curriculum, content and delivery.
3. Preparing for future on-line delivery to local as well as distance education students.
3. Preparing for Program relocation from the RVS campus to the new Health Sciences building, phase 2 at EVC.

Conclusions: What are the major conclusions regarding the present state of the program?

The Medical Laboratory Technology program must continue to develop a larger pool of qualified applicants, qualified adjunct / full time faculty, as well as willing quality clinical affiliates to expand the services of the Program. Adequate financial, clinical and other support must be obtained to allow faculty time and opportunity to make changes needed for new and improved delivery of medical laboratory technology education to serve the Austin area employers and beyond.

Recommend future directions for the program based on this review:

- Expand services
- Maintain services
- Reduce services
- Close program

Recommendations: Summarize the self-study's recommended actions for improving the quality of the program.

Expanded Program services are needed to recruit qualified applicants from Austin and the surrounding areas to serve employers of medical laboratory technologists. Adequately trained faculty, time, funding, and clinical support are needed to expand desperately needed program services.

### SELF-STUDY TEAM PARTICIPANTS

List the names of people who participated in the review and their association with your program.

Name **Terry Kotrla**       ACC Faculty       Industry Representative   
Student

Name **Carolyn A. Ragland**       ACC Faculty       Industry Representative  
 Student

Name **Cecile Sanders**       ACC Faculty       Industry Representative  
 Student

Name **Dale Dingley**       ACC Faculty       Industry Representative   
Student

Name **Deborah Barton**       ACC Faculty       Industry Representative  
 Student

Name **Yvonne VanDyke**       ACC Faculty       Industry Representative  
 Student

Name       ACC Faculty       Industry Representative  Student

Name       ACC Faculty       Industry Representative  Student

Name       ACC Faculty       Industry Representative  Student

### PROGRAM DESCRIPTION

Provide a brief description of the overall history, major developments and current objectives for your program (limit to 500 words).

The Medical Laboratory Technology program was envisioned in the late 1970s when Dr. Brady Vardemann was the Dean of Nursing and Health Technologies. There was a big need for training for various allied health careers in the Austin area, especially at a time when Austin was rapidly growing and health care needs increasing. Dr. Vardemann worked with the then President, Dr. Cecil Groves, to develop programs in Med. Lab, Paramedicine, Occupational Therapy Assistant, and Physical Therapist Assistant. The first two accepted students in the fall of 1980; MLT had a huge class of five students starting! OTA and PTA accepted their first classes in 1981.

The MLT and Paramedic programs were initially located in the old Student Nurses Dormitory, located immediately behind the old Brackenridge Hospital. Both of these structures are now gone, replaced by the

Brackenridge Children's Hospital. MLT was located in the basement of that building, with a laboratory about the size of a large walk-in closet. It could only hold about 5 students at a time, so, in subsequent years of the program, several sections of lab had to be scheduled.

Space became a real issue and the College decided to request the use of space in the old Brackenridge Hospital from the City of Austin. That permission was granted, and the program moved into the old surgical suite in 1982. Unfortunately, the time in that facility was short, because the City then decided to demolish the old Hospital to make way for the Children's Hospital. All ACC health sciences programs had to move! At that time, it was a buyer's market in Austin real estate, and the ACC BOT was dabbling in real estate to buy cheap and sell high. As part of that endeavor, it had purchased the old Austin Country Club, now the Riverside Campus. The BOT never intended to use the old Country Club as a campus - it was only a real estate investment. However, because of the notice of eviction from the City, the Board decided to move all health sciences to the old Country Club in early 1984.

Cecile Sanders was hired in mid-summer, 1980, to start the program in the fall of that year!! She was the sole faculty member until the next year, whereupon another full-time faculty member was hired. Cecile remained as department head for many years, until she was named Dean of Health Sciences in the early 1990s. Carolyn Ragland, longtime MLT faculty member, was named department head in 1995.

Throughout all these moves, enrollment in the MLT program was stable, averaging about 12 to 15 students per class. Support for the program has always been strong and graduates highly sought.

### STRENGTHS, WEAKNESSES, OPPORTUNITIES, THREATS (SWOT)

List the names of people who participated in the SWOT and their association with your program.

Name Carolyn A. Ragland, FT                       ACC Faculty                       Industry  
Representative                       Student

Name Terry Kotrla, FT                       ACC Faculty                       Industry Representative  
 Student

Name Dale Dingley, MLT Adjunct                       ACC Faculty                       Industry  
Representative                       Student

Name Lou Caruana, MLT Adjunct  ACC Faculty  Industry  
Representative  Student

Name Maria Washington, MLT graduate  ACC Faculty  Industry  
Representative  Student

Name Laura Cantu, Susanne Calhoon, Lynn Cameron, Louise Johnston, Terry  
Southwell, & Laura Hinson  ACC Faculty  Industry Representative  
 Student

Name Becky Heine, Keri Ebner, & Rebecca Espinosa  ACC  
Faculty  Industry Representative  Student

Summarize the findings of the SWOT analysis. Focus on the top 5 or 6 issues and answer the following questions:

**Strengths:** In what does your program excel?

1. Dedicated, caring, qualified and knowledgeable faculty that work to prepare students for the "real world".
2. Great Program structure that provides a lot of one-on-one teaching in the laboratory and with adequate time for taking tests (in the Testing Center).
3. NAACLS, nationally accredited Program with sound curriculum that allows graduates to take national examinations, and be successful. Curriculum materials printed and on-line.
4. Students are motivated to be prepared, productive team workers.
5. Program partners with area laboratory employers to provide quality clinical experiences for students.

**Weaknesses:** What are the aspects of your program, which, if not addressed, will impede the area's future?

1. Due to low a low class enrollment and high drop-out rate, only one graduate last year.
2. Need additional / newer equipment such as microscopes, replacement hematology and microbiology slides.
3. Teachers are overextended and don't have a lot of time put aside for students.
4. Clinical sites not always available due to staffing and rotation dates do not follow class instruction.
5. No evening / night classes.
6. Not enough students know about the field; need to lure well-qualified applicants.

**Opportunities:** What factors does your program need to take advantage of in order to enhance the quality of the area?

1. Area job market results in added demand for 'educated' employees.
2. Downturn in high tech industry could mean more applicants with education / skills to be applied to Program degree.

3. Many current practitioners preparing for retirement, meaning even more jobs.
4. Aging population will need more lab tests.
5. Emerging health threats including SARS, West Nile, Anthrax, Biological Health scares will increase demand for well trained laboratory personnel.
6. Possibility of government grant money and stipends coming available to assist in luring new students into the medical lab area.
7. Hope of salary increase due to chronic staffing shortage.

**Threats:** What are the external factors that could negatively impact your program's future?

1. Currently low pay rates relative to other health care fields with similar or even easier educational requirements.
2. Government cuts in Medicare, Medicaid, and poor reimbursement means budget cuts for labs.
3. Little or no publicity means very few outside people know of the importance of the profession and the service it provides physicians in making /supporting diagnoses. Similarly, insufficient publicity through newspaper articles / ads for ACC MLT Program.
4. College budget cuts.
5. Although they are verbally supportive, sometimes staff at clinical sites are often overworked and hesitant to agree to train students.

Discuss changes from the program's previous SWOT analysis.

**Strengths:**

Many of the currently identified strengths were also identified in the previous SWOT process, such as dedicated faculty, dedicated clinical faculty, strong curriculum and articulation agreements.

Previous strength: having the Dean of Health Sciences as a faculty member has somewhat changed. Cecile Sanders remains a highly valued adjunct faculty member, however she retired as Dean of Health Sciences.

**Weaknesses:**

Some of the previously identified weaknesses have been resolved.

Example 1 -

Previous weakness: Due to high cost and rapidly changing technology, students get limited exposure to medical laboratory instrumentation in the areas of hematology, chemistry and microbiology...

Current solution: The MLT Program is currently making better use of its clinical affiliates who have allowed students, with instructor supervision, to tour and briefly utilize modern hematology equipment for example.

Example 2 -

Previous weakness: Lack of adequate full-time faculty which prevents the current faculty from implementing enrollment increasing strategies such as distance education and innovative recruitment tactics...and another previous identified weaknesses.... Lack of an organized system to adequately advertise and promote Medical Laboratory Technology, Clinical Assistant, and Phlebotomy

Technician programs... and Lack of support in the marketing area to promote and recruit students for the Medical Laboratory Technology, Clinical Assistant, and Phlebotomy Technician programs.

Although there has been increased assistance from ACC's Marketing Department, the overall basis for these previously identified weakness are still a problem. Lack of full-time faculty limits ability of current faculty to spend time on intense recruiting measures, and lack of large student population prevents justification for new full-time faculty.

#### Example 3

##### Previous weakness

Lack of a separate lecture/laboratory area to allow simultaneous instruction / use of both areas.

This has been resolved, here at RVS, building D.

#### Example 4

##### Previous weakness

Lack of release time for faculty to learn and make use of advanced instructional tools and techniques to improve instruction as well as preventing faculty from converting courses to an online (DE) format.

MLT faculty continue to strive to provide instruction utilizing a mix of conventional and advanced instructional tools. MLT faculty are dedicated to preparing the coursework for distance education presentation. We are currently working with three other MLT programs, in applying for a VCT grant, to make MLT education available through the internet. The ACC MLT program is taking the leadership roll in this process.

#### Opportunities

The MLT faculty has worked to make the best use of the previously identified opportunities. In deed, the conversion to WECM curriculum has helped in the development of the online MLT curriculum. We are getting closer to offering MLT courses through distance education, and even offered the Phlebotomy Technician courses as DE this semester. Unfortunately the course did not make.

MLT faculty will continue to make the best use of opportunities to improve the promotion and presentation of the Medical Laboratory Technology and Phlebotomy Technician

#### Threats

Many of the previously identified threats still plague the Program. An abbreviated list of those that are still relevant is included below with comments following.

...A frequent turn-over and shortage of laboratory staff in clinical affiliates threatens the Program's ability to place students for clinical experience in rotations providing consistent quality..... Still a problem.

...The decreasing number of qualified applicants entering the MLT program...

We are seeing more and more applicants, but certainly more recruiting is needed.

...The low wages offered to MLT graduates negatively impacts the potential for recruitment of students.... This is probably the most likely cause for the problem.

...The lack of technology and distance education offerings causing the program to lose out on potential students. ... MLT faculty are very focused on this area.

...The never ending and constantly increasing demands made on faculty time and energy to maintain the Program. Faculty have so little time to make improvements in curriculum, prepare and provide excellent learning opportunities for students in laboratory and clinical settings... This threat identified in the previous SWOT obviously continues. There is very little time to improve curriculum, take care of the needs of current students as well as the other items listed in the 1999 SWOT.

## ANALYSIS

### [a] Relevance of the program to College mission and desired ends

#### Mission:

Review the program's purpose statement. Verify that the statement is current and accurate and reflects the mission of the college as a whole or update the purpose statement.

The Self-Study team reviewed the program purpose statement and found (select one):

The purpose statement is current, accurate, and reflects the mission of the college.

The purpose statement was revised as shown below:

#### Desired Ends (Board Policy A-2. Intended Outcomes)

How well does the program support the intended outcomes of the college by providing "service-area adults with the postsecondary and higher education they need and can use for productive useful lives?"

The National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) accredited Medical Laboratory Technology Program of Austin Community College provides students excellent opportunity to develop and refine skills sought after by area medical laboratory employers through its sound curriculum, highly qualified and caring faculty, and excellent clinical affiliates. The Program continues to be committed to serving students and the medical laboratory community through guidance, excellent academic instruction and professional training utilizing traditional and innovative means while understanding the cultural

diversity of individuals, maintaining a student - centered philosophy, striving to make wise use of community and educational resources and materials, continuing an ongoing process of self-evaluation and self-renewal, and maintaining an outstanding accreditation rating. While continuing to serve the traditional student, the Program also offers educational services to service-area medical technologists and technicians who wish to review the fundamentals of the medical laboratory profession as a means of continuing with their education.

In what ways does the program demonstrate an open, responsible exchange of ideas?

The ACC MLT program actively solicits information from local employers, the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), current students, Program graduates, colleagues and associates through:

Annual advisory committee meeting

Maintenance of national accreditation through NAACLS

College course and faculty evaluations

MLT course evaluations

Graduate questionnaires

Employer questionnaires

Results of graduate scores on the national certification exam

This information is analyzed and used to improve the MLT Program. The national agency that accredits MLT programs, NAACLS, also requires this information as part of program performance review. The ACC MLT Program recently underwent re-accreditation which required writing a self-study documenting the quality of the program and a site visit. The MLT program received the maximum allowable time of accreditation, seven years.

In the Fall of 2002 the MLT program received a TIF "Closing the Gaps" grant to work in collaboration with three other MLT programs to begin preparing the MLT courses for online presentation. The Program is hoping to continue this collaboration by obtaining a Virtual College of Texas (VCT) grant with a goal of putting the curriculum online to meet the needs of under-served populations in rural areas. The planned outcome of the grant is to place the entire MLT curriculum online so that individuals who do not have access to an MLT program can take the entire curriculum online and be granted the associate degree in medical laboratory technology and become eligible for the national registries. ACC Program faculty has taken, and will continue to take, the leadership roll in the development of the on-line courses.

The MLT program will continue to collaborate with all stake-holders associated with the program to guide change for improving all aspects of the curriculum. Incorporating technology into our training will allow us to make our Program available in ways never imagined and to serve a wider variety of students who would otherwise be unable to attend due to time and/or distance.

In what ways does the program provide an open door to educational potential?

Like all Health Sciences programs, the MLT program has an admissions process requiring students to complete an application, attend an orientation session (or be individually advised), and upon admission provide proof of immunization & be negative for active tuberculosis. All potential applicants are given opportunity to be counseled by a Program faculty member during which they are advised to complete as many of the non-MLT courses as is possible prior to actually entering into the Program to assist in insuring their success. When there are more applicants than Program positions, those individuals with the most coursework successfully completed area given first opportunity to enter.

In what ways does the program take targeted action to address internal needs within available resources?

MLT faculty and staff are conservative when ordering expensive reagents and supplies. We are blessed with having a nearby distributor of reagents and supplies who will discount most of the items ordered. This same supplier occasionally donates short dated and other supplies, thereby reducing the amount that must be ordered. Also, the MLT faculty have a wonderful relationship with the clinical affiliates which also make donations of out-dating reagents and supplies. In addition, an area supplier of laboratory supplies occasionally makes donations.

In what ways does the program demonstrate a commitment to integrity and exemplary standards?

The ACC MLT program is fully accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) receiving the maximum accreditation of seven years on October 31, 2002. To assist in remaining current with changes in the accreditation agency, Program faculty volunteer their services as NAACLS committee members, paper reviewers and site visitors.

The MLT Program requires student success in both the didactic and laboratory portions of its courses and requires a minimum of 75% for a letter grade of "C". All course work in the degree plan must be at "C" or better to be applied to the degree. Students who appear to struggle are counseled to determine what assistance, if any, can be provided them. If the student remains unsuccessful in the course but still interested in the profession, they are allowed an additional opportunity to repeat the course when it is next

taught. The student must complete the course successfully at that time to continue with the Program.

In what ways does the program demonstrate personal and professional ownership that generates accountability?

The Program Chair has been with the ACC MLT Program for over 22 years. The full-time faculty member has been in the Program's service for 19 years. Throughout that time many many changes have taken place, but personal and professional commitment has always been strong.

### **[b] Responsiveness to community needs and satisfaction of community demand**

In what ways does the program address a verifiable need for the student, community, and society?

The website, America's Career InfoNet sites data from the Bureau of Labor Statics, Occupational Employment Statistics Survey, Texas Workforce Commission, Labor Market Information and Other Data indicating a positive 18% need in medical and clinical laboratory technicians from the year 2000 to 2010. The average annual job openings due to growth and net replacement for Texas is 460 jobs.

The MLT Program remains responsive to community need and actively participates in all College sanctioned student recruitment activities including participation in tours, Capital Idea recruiting events, etc.

The Medical Laboratory Technology program regularly receives flyers/posters, phone calls and emails from employers and employment agencies seeking qualified graduates for positions.

Describe the results of the program's most recent assessment of community need.

Austin, and central Texas area employers of medical laboratory technicians are in frequent contact with the MLT Program faculty inquiring about the availability of graduates.

MLT Advisory Committee members also keep Program faculty apprised of the need for skilled and certified laboratory workers.

How do the program's five-year enrollment trends compare with those of the College overall?

Enrollment in medical laboratory technology programs nationwide has been going through a slump. During much of this time, the ACC MLT Program also saw some reduction in applicants, but not as severe as many other associate degree medical laboratory technology and baccalaureate degree medical technology programs. However during the years when Austin's economy was most active and well supported by the computer chip industry, the Program saw

a more substantial reduction in the numbers of applications, losing many potential applicants to the higher paying jobs in the computer industry.

Most recently the Program has experienced an increased interest by applicants, effectively doubling the MLT program enrollment. Throughout this time the Phlebotomy Technician program's numbers have steadily increased.

**[c] Accessibility to students and identification of unnecessary barriers**

Analyze when and where courses are offered (by campus, time of day, mode of delivery).

Fall semester: six sections of MLT courses taught; two at CYP, four at RVS. All are morning sections and by classroom/laboratory delivery.

Spring semester: six sections of MLT courses taught; all at RVS campus, morning sections and by regular classroom / laboratory delivery.

Summer semester: four sections of MLT courses taught; one at CYP and three at RVS, morning sections and by regular classroom / laboratory delivery.

List the number of sections taught (by location).

Fall semester: six sections of MLT courses taught; two at CYP, four at RVS.

Spring semester: six sections of MLT courses taught; all at RVS campus.

Summer semester: four sections of MLT courses taught; one at CYP and three at RVS.

List the number of sections closed or canceled per course.

None.

How does each of the five-year demographic trends (gender, ethnicity, age group) for this program compare to the overall college trend? (List the source of your information.)

Information in this area obtained from Program records, the ACC Fact Book and OIE website information. Other than the gender distribution, the MLT Program demographics seem to be similar to the overall College trends and especially to the trends seen at the Riverside Campus.

Gender: College: 45% male; Program 18.2% male

College: 55% female; Program 81.8% female

Program Ethnicity:

44.0% White

23.4% Hispanic

18.4% Black

9.4% Asian / Pacific Islander

0 % Am Indian / Alaskan Native

2.6% Other

Age: Although the Program has had students as young as 17 and as old as @ 62, the average age of the MLT student during the 1999 - 2003 time period was 31.1 years.

Identify any unnecessary barriers to students, especially those who are educationally disadvantaged and not well served by other colleges.

None noted at this time. Through completion of pre-requisite and progress on co-requisite courses, educationally disadvantaged students have opportunity to improve study skills needed for MLT program courses.

**[d] Student outcomes including participation and successful-completion rates**

How do course completion rates (A-B-C-D rates) for courses within this program compare to College norms?

No MLT courses are included in Table 6, the Courses with Non-Mastery Rates Above College Average in Fall 2001.

The MLT Program requires students to pass with a 75% average, both the lecture and laboratory component of its courses for normal progression through the Program. Using this criteria of determining success in coursework, a composite analysis of grades from MLT courses from 1999 - 2003 indicates 89.1% of students obtained a letter grade of "A, B, or C", while 10.8 % had grades of "D, F, or W". It should be noted that occasionally students enroll into one of the Program's open-enrollment courses, such as MLAB 1201 - Introduction to Clinical Laboratory Sciences and after a week of so, decide this is not the appropriate course of study for them.

Graduation rate for the Program calculated from classes of 1999 - 2003 is 73.6%. Most withdrawals from the Program occur early, during the first two semesters. A variety of reasons have been recorded by the Program for a student leaving a course or withdrawing from the Program. About half of those reasons are due to failure. Other example reasons include: personal problems that have nothing to do with the quality of instruction, withdrawing to take job in chip-making, getting accepted into nursing / radiology programs, and need to take a job for support of family. On several occasions, the student confirms acceptance into the Program, but fails to complete the registration process and no longer has a valid means of being contacted. Occasionally a student will indicate that they needed to get better prepared academically or financially, and there have been several cases of an unexpected health problems that prevents the student from continuing in the Program. On several occasions the program has lost, or nearly lost, students who were closer to graduation due to personal and financial problems. If at all possible, the Program faculty work with the individual to provide more flexible & creative scheduling, extra tutoring etc. to assist the student in meeting their professional goals.

Sophomore level students must take and pass the Mock Registry Examination (soon to be called the Practice Certification) administered by the MLT Program faculty as part of the criteria for successful completion of their final clinical course. The composite of the classes from 1999 - 2003 is 80% success rate for passing this test at the first taking. Those who are not successful, must retake the test after reviewing. All students receive a breakdown of their scores indicating where their strong areas are and what areas they need to review more.

One third to one half of the Program graduates return to school to further their education. While a few enter other health sciences programs at ACC and a couple are doctors, many transfer to four year colleges / universities to remain in the medical technology professional area. The medical technology / clinical laboratory sciences programs at University of Texas - Galveston, University of Texas - San Antonio, University of Texas - Pan Am, and Southwest Texas State University have all had success with Austin Community College MLT graduates.

Success rate on the major national certifier examination, the MLT (ASCP) is very high. Many classes have 100% pass rate. For the time period between 1996 - 2002, the Program passrate is 94.0 %. Occasionally there will be a student who, for various reasons, chooses not to take the exam. They are not included in the data.

With rare exceptions, graduates of the ACC MLT Program who seek employment in the medical laboratory profession obtain jobs. The program faculty are aware of several graduates who reported not obtaining jobs. All but one of these occasions were due to limitations of the graduates in taking available positions offered at times not compatible with the individual's schedule.

What are the program completion or graduation rates (compared to intent as well as overall) for this program?

The ACC average withdrawal rate for 2001 is stated as 22.5%. The MLT Program rate at that time period is 25%. During the timeperiod between 1999 - 2003, completion rate for all individuals demonstrating intent was 70.7%. The data does not include students in the Phlebotomy Technician courses.

How do withdrawal rates for courses compare to College norms?

Withdrawal rates for MLT courses are slightly higher than College norms. Reasons often cited are usually due to loss of financial or home support. Program faculty counsel early-on with students who are at risk of failing courses, often providing them additional opportunities to demonstrate competence. Ultimately, students who find themselves in failing or near failing situations withdraw rather than receive the failing grade.

What do the results of the program's student learning outcomes assessments (departmental final exams, exit tests, standardized tests, etc.) indicate about the program?

The MLT program has a very challenging curriculum but faculty's experience and dedication as well as excellent clinical site instruction very well prepares graduates to be successful in certification exams, obtaining employment, and / or continuing education in medical technology or other related area.

**[e] Measures of program quality and educational value added**

- **Academic Standards**

What are the processes and procedures that the department uses to maintain academic standards and achieve consistency within the department?

The Medical Laboratory Technology program of Austin Community College is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), 8410 West Bryn Mawr, Suite 670, Chicago, Illinois 60631: (773) 714-8880. Accreditation by this organization assures students that they will be provided with a quality education in laboratory medicine. This organization sets the national standard for medical laboratory education. A very comprehensive review of the program's curriculum, faculty, resources, clinical faculty and facilities, student admissions, student fair practices and evaluations is done.

- **Curriculum**

What procedures are used to assure that the curriculum is current and adequately meets the needs of students?

As stated above, NAACLS program review includes evaluation of the curriculum. In addition the Program solicits input from clinical faculty, area employers, and Advisory Committee members.

Are learning outcomes defined for courses and the program?  Yes  No

Are course texts up-to-date?.  Yes  No

Are course and program listings in the ACC Catalog up-to-date?  Yes  No

Do all courses have up-to-date syllabi on file?  Yes  No

Evaluate the use of instructional resources (including those in the library).

All of the MLT courses have a Blackboard component. For some courses the Blackboard is used primarily as means of classroom support and communication tool, but for most courses it is a vital link through which the student prints their lecture and lab assignments, receive guidance and tutorials, click to outside links, take quizzes and course examinations then receive feedback of their performance. In addition students prepare research papers and case studies using the web and periodicals found in the RVS library. Additional copies of current periodicals are kept available for student use in the MLT classroom area. Videos from the library or the from the Programs' resources are also used in instruction. Additionally, on site computer tutorials are used to accompany classroom / lab assignments.

Evaluate the extent to which technology impacts the mode of instruction, including the number of courses and sections taught via distance learning.

The Program is moving to put the entire MLT curriculum on-line using the Blackboard platform. The MLT faculty look forward to offering courses via distance learning.

Evaluate the extent to which instruction is focused on problem solving, active learning, and work-based elements.

Problem solving, active learning, and work-based elements are extensively addressed through case study workups, course wet labs and associated study questions, computer tutorials with quizzes, and activities in clinical rotations.

List below the current discipline-specific courses within the program and the date of the latest review.

Course MLAB 1201	Date of Last Review	Jan. 2004
Course MLAB 1315, 1227, & 1235	Date of Last Review	Aug. 2003
Course MLAB 1211, 2431, & 1331	Date of Last Review	Dec. 2003
Course MLAB 2360&2434	Date of Last Review	Summer 2003
Course MLAB 2401 - Clinical Chemistry	Date of Last Review	Aug. 2003
Course MLAB 2361 & 2362 - Clinical II & III	Date of Last Review	Aug. 2003

- **Faculty**

Do all faculty teaching in the program meet SACS requirements?

Yes  No (if no, please explain)

What is the ethnic diversity of the faculty?

Two full time female faculty, two adjunct female faculty, two adjunct male faculty; all are white. No precise evaluation of ethnic diversity of clinical faculty has been performed.

What evidence is there that faculty are staying current in their respective disciplines and instructional methodologies?

All full and adjunct MLT faculty maintain current professional certifications, participate in ACC and professional continuing education activities and are active in their professional organizations, all of which require professional continuing education. All MLT faculty were evaluated by NAACLS during the Program's recent re-accreditation process. Several of the MLT faculty are currently employed at area hospital facilities.

What recognition has been given to faculty within the last year?

Terry Kotrla has been appointed to the NAACLS Program Approval Review Committee (PARC).

Describe professional development activities in which program faculty participate.

BlackBoard training (all components), Hot Potatoes Quiz Training, DreamWeaver, and other ACC professional development classes have been

taken by both full time faculty and at least one of the adjunct faculty. Another adjunct faculty has participated in various ACC professional development activities including some Blackboard training sessions. The remaining two adjunct faculty receive outside professional development opportunities.

What percent (and the total number) of faculty participate in formal professional development activities on a regular basis?

100% (2 full time; 4 adjunct)

Describe the types of discipline-related professional development activities offered.

Workshops on various aspects of medical laboratory technology; workshops on training at the bench.

What percent of sections do full-time faculty teach?

Although some of the data provided to the make this determination is flawed, full-time faculty teach approximately 76% of the sections.

What percent of contact hours do full-time faculty teach?

Although some of the data provided to the make this determination is flawed, full-time faculty teach approximately 84.5% of the contact hours.

Are student evaluations of instruction within acceptable range?  Yes  No

To what extent are alternative modes of instruction incorporated into classes?

To varying degrees of usage, all Program courses have a Blackboard component. As explained earlier, sometimes the component is more extensive than others.

- **Student Satisfaction**

Do student course evaluations demonstrate satisfaction with courses?

Yes  No

**[f] Adequacy of program resources and efficiency of resource use**

Describe the overall adequacy of resources (human, technological and capital, facilities, and fiscal) available to the program for providing effective program delivery and outcomes.

Based on current budget, program utilizes resources extremely well. Current level of supplies and capital equipment are minimally adequate, the Program could greatly benefit with increased support and procurement of modern medical laboratory equipment.

What is the ratio of full-time to adjunct faculty (by course and for the program overall)?

	Full-time / Adjunct
PLAB 1223 & 1166 - Phlebotomy Technician	1 / 0
MLAB 1201 - Intro to Clinical Laboratory Science	0 / 1
MLAB 1315 - Hematology	0 / 1
MLAB 1227 - Coagulation	0 / 1
MLAB 1235 - Serology	1 / 0
MLAB 1211 - Urinalysis / Body Fluids	1 / 0
MLAB 2431 - Immunohematology	1 / 0
MLAB 1331 - Parasitology / Mycology	0 / 1
MLAB 2434 - Microbiology	0 / 1
MLAB 2360 - Clinical I	1 / 0
MLAB 2401 - Clinical Chemistry	1 / 0
MLAB 2361 - Clinical II & MLAB 2362 - Clinical III are assigned and managed by the two full-time Program faculty, however students are often immediately supervised by clinical faculty.	

Of the 106 sections taught over the 1999 - 2003 timeperiod, 81 or 76.4% of them were taught by the Program's full-time faculty and 23.6% taught by adjunct faculty.

How up-to-date is the equipment used by the program? Much of the equipment used by the Program is more than 10 years old and bears minimal resemblance to what is used in clinical practice.

Identify possibilities for improving the efficiency of the program's use of resources.

Based on current budget, program utilizes resources extremely well. Remodeling of the classroom and laboratory area allowed for better utilization of space and resources. The program is looking forward to relocation into the new Health Sciences building currently under construction at the Eastview Campus.

**[g] Comparison of program performance, price, and enrollment with that of alternate local suppliers**

How is the program competitive with similar programs offered by other institutions or schools in the service area in terms of performance, cost to students, and enrollments?

AUSTIN COMMUNITY COLLEGE is the sole provider of the associate degree medical laboratory technicians. There are no other medical laboratory technology programs in the ACC service area.

**[h] Direct and indirect program-related revenues and costs to the College**

Identify the major sources of revenue for the program, including grants, partnerships, etc.

At this time, the source of revenue for the program is through student tuition & fees, state reimbursement, and local property taxes.

Compare program costs to those of other ACC programs.

The cost of the MLT program is similar to other health related and many other workforce programs. Much of the increased costs are inherently due to the high cost of any medical-related piece of equipment or associated supplies. Costs could be reduced through an increase in lab fees and / or requiring students to purchase some of the medical supplies.

The Medical Laboratory Technology program serves the Austin area medical community and the public, and functions well within the College's vision of providing access and educational excellence and serving students and community and within the mission of providing vocational / technical programs leading to a degree.

Compare the program's actual expenditures to the approved program budget for the previous two years.

The MLT program's budget information reflects several areas of fluctuations over the past four years. Until 2001, the salary of the Dean of Health Science was paid from the MLT program. Upon her retirement, the F-T Faculty Salaries decreased, however the Adjunct Salaries were increased. Accreditation fee fluctuations are due to the MLT program having gone through the re-accreditation process.

All funds are used for the operation of the department in support of the Medical Laboratory Technology, Phlebotomy Technician, and Clinical Laboratory Assistant programs

**TRANSFER or WORKFORCE AREA-SPECIFIC INFORMATION**

**Only Workforce Programs complete the items below.**

Report/status from latest external accrediting agency visit

As per the letter sent to ACC President, Dr. Richard Fonte on October 8, 2002, the National Accrediting Agency (NAACLS) Board of Directors awarded the ACC MLT program continued accreditation until October 31, 2009. This is the maximum length of accreditation awarded.

When was the most recent program revision?

Effective Fall 2004, an additional laboratory hour was added to the Urinalysis/Body Fluids, Immunohematology, and Serology courses to provide students additional opportunities to learn and improve laboratory skills.

Number of declared majors intending to complete a program who complete degree/certificate requirements within 6 years

Review of the THECM - 2003 Program Profile for MLT indicates that there were 75 declared majors and 5 graduates. This is misleading, as the Program uses its Program applications as a means of making initial contact with applicants for the purposes of counseling, degree planning and nurturing the applicant, and the Program did not have 75 applications.

Average number of semesters it takes for students to gain degree/credential. Once admitted into the fall class, the average student would need 5 consecutive semesters to complete the Program. A well prepared highschool graduate with no college credit would need an additional 2-4 semesters of college course preparation prior to entering the MLT Program to reduce semester by semester course load increasing the likelihood of success and quality of experiences.

Number of graduates within the last three years  
fourteen graduates

Demographics of graduates

four black women

five hispanic women

one white man

four white women

Percent of graduates who are employed within one year of graduation.

By program records, approximately 60% - 70% of graduates are employed within one year of graduation. By itself this data is somewhat misleading as it does not account for about 25 - 40 % of the program graduates who choose to continue with their education at a college or university. There is a continuing need for trained medical laboratory personnel, and with few exceptions, ACC MLT graduates who actively seek employment in the field are able to obtain it.

What evidence exists that program completers (or near completers) are successful on the job? What, if available, are their beginning salaries?

The MLT program periodically surveys the area employers of its graduates. The survey is directed to the immediate supervisor of the graduate. The survey asks for level of satisfaction in a number of areas including: technical knowledge, organizational ability, work quality & quantity, ability to follow instructions, etc. A similar form requesting this information is periodically distributed to the ACC MLT Program's Advisory Committee as many of the members are representatives of the area MLT employers. This was most recently done at the October 2003 Advisory Committee meeting. The results obtained at that time are reflective of results obtained in previous surveys. Using the standard five (5) point scale of 'Excellent -- Very Poor', all results were 'Average' or above with the majority in the 'Excellent' to 'Good' boxes.

The form provides opportunity for noting observations and an area for comments. Only one responder gave a negative evaluation in the area addressing testing of body fluids, and also in the area addressing performing maintenance on equipment. Another suggestion for improvement is in the area of phone skills and how to deal with upset patients, doctors, etc. Although this was only one responder, the Program faculty will consider further evaluating these areas.

There were many positive responses and comments made as well. Also included was a series of comments by one employer indicating that their facility did not hire new graduates with no previous work experience, but did hire ACC MLT new graduates if they had done a clinical rotation at the facility.

Percent of employers indicating satisfaction with graduates.

Approximately 95% of employers give very satisfactory reviews of the ACC MLT graduates and the Program. Rarely is there a negative mark or comment made on the Employer Survey distributed to area employers of graduates. On the occasions when a negative remark has been made, comments reflected that problems were usually due to an individual graduate's personality.

Discuss the most recent results of Focus Group or internal survey of employers. The most recent internal survey of employers occurred as part of the 2003 Advisory Committee meeting. As stated previously, the employers of ACC MLT graduates are satisfied with the quality and performance of the Program's graduates. The ratings of personal and technical skills, and level of education are with very rare exception in the 'Excellent' to 'Average' range with the majority being 'Excellent' to 'Good'.

Comments on areas to improve include: .. need more exposure to people skills, communication, teamwork, phone skills, how to deal with upset people & dealing with different personalities. Another suggestion is to continue to have discussion between clinical and program faculty to maintain relevance of curriculum. The faculty will discuss how to address these concerns.

Comments on areas we excel include: ... "feel that ACC MLT graduates are very well prepared and are a great asset to the Austin area" ... "technically well prepared" ... "very well prepared" ... "we hire ACC MLT students that we have seen during clinical rotations. We have NOT hired any other MLTs right out of school." ... "Those we have hired have been very good employees for us."

Number of employers indicating need for more graduates

In the internal survey conducted at the October Advisory Committee meeting, seven of ten members qualified to respond to the question addressing job outlook for MLTs at their facility. Three (42.8%) indicated future outlook as "Excellent", two (28.5%) said "Good", one (14.2%) said "Average" and one (14.2%) said "Poor". The individual whose response indicated "Poor" is from a facility that very rarely hires individuals that do not have a baccalaureate degree.

A number of other Advisory Committee members are not in positions that would know about the hiring practices and choose not to respond to the question.

Provide evidence of SCANS competency integration into course syllabi and programs.

SCANS competency is first introduced in the MLT Student Handbook and examples are provided in every MLT course. The following is from the MLT Student Handbook:

#### Scans Competencies

Recently the U.S. Department of Labor established the Secretary's Commission on Achieving Necessary Skills (SCANS) to examine the demands of the workplace and whether the nation's students are capable of meeting those demands. The Commission determined that today's jobs generally require competencies in the following areas.

1. Resources: Identifies, organizes, plans, and allocates resources
2. Interpersonal: Works with others
3. Information: Acquires and uses information
4. Systems: Understands complex interrelationships
5. Technology: Works with a variety of technologies

The Texas Higher Education Coordinating Board is now requiring all degree plans in institutions of higher education incorporate these competencies and identify to the student how these competencies are achieved in course objectives. The following provides an example of the SCANS competencies being incorporated into the MLAB 2401 - Clinical Chemistry course.

#### COMPETENCY: EXAMPLE

1. Resources: Performs procedures such as reagent preparation and use, color spectrophotometric, coulometric titration, enzymatic, and electrophoretic analyses using only necessary supplies and within a predetermined reasonable amount of time.
2. Interpersonal: Demonstrate an understanding of the profession of Medical Laboratory Technology through ethical behavior when dealing with patients and other members of the health care team, including maintaining a professional appearance to relieve patient anxiety and maintaining patient confidentiality.
3. Information: Evaluate quality control results within preestablished parameters; perform all procedures using approved safety techniques such as Universal Precautions.
4. Systems: Identify / take corrective actions when quality control results do not fall within preestablished parameters. Use problem-solving skills to troubleshoot equipment or procedures that do not fall within standards.
5. Technology : Identify, evaluate, and/or operate a variety of basic and advanced laboratory equipment

How often does the program's advisory committee meet to discuss curriculum issues?

The MLT/Phlebotomy Technician Advisory Committee meets yearly.

When and where are advisory committee minutes maintained and posted?

Minutes are taken and posted on the web.

Evidence of recent review of curriculum by external advisory committee.

The MLT program underwent a re-accreditation review process that included a written self-study, and site visit on April 11-12, 2002. A letter dated October 8, 2002 by the NAACLS Board of Directors informed Dr. Fonte of the reaccreditation for the maximum time allowed, seven years.

Advisory committee validation of entry level skills

The MLT / Phlebotomy Technician Advisory Committee met in October 2003 and indicated approval for the curriculum, and the skills of the MLT graduates.

### **Only Transfer Programs complete the items below.**

Number and percent of graduates who transfer within one year of graduation.

█

Number of articulation agreements with universities and colleges

█

Number of courses that transfer

█

Number of student complaints about problems with course transfer

█

Discuss the results of the most recent Survey/focus group of transfer institutions.

█

Discuss data from transfer institutions if available.

█

Number of students transferring successfully.

█

## **CONCLUSIONS**

Based on the information collected and analyzed during the program review process, what are the major conclusions of this review of the program?

Summarize them here and complete the *Program Status* form.

The Medical Laboratory Technology program at Austin Community College continues to produce skilled certified graduates to meet the needs of area wide employers. The program continues to seek ways to make improvements to its curriculum content and delivery.

### **PROGRAM VISION STATEMENT**

State the program's vision or preferred future for the next five years. The vision statement should provide direction to the program as it makes improvements to enhance its effectiveness and efficiency.

The Austin Community College Medical Laboratory Technology program will continue to produce highly skilled graduates for local employers and also those more distant, by using a blend of current methods of instruction and through innovative distance education technology. To serve current and future applicants, students, graduates and their employers, the program must be constantly vigilant to the need and direction for change.

### **RECOMMENDATIONS**

What does the self-study team recommend for improving or maintaining the quality of the program? Summarize them here and complete the *Quality Improvement Plan* form.

1. Develop a larger pool of MLT applicants for local and distance delivery of the Program's services.
2. Explore and implement new technologies into the MLT curriculum to increase student awareness of the ever changing clinical laboratory testing methodologies and also to increase employer satisfaction.
3. Increase pool of qualified adjunct faculty to provide release time for faculty to learn and incorporate new technologies into the curriculum.

### **ADDITIONAL COMMENTS**



### **APPENDIX**

List all documents that you used in your report:

All documents included in the "Program Review: Medical Laboratory Technology - 2004" binder as provided by Office of Institutional Effectiveness and the MLT Student Handbook.

When you have completed this report, send it via e-mail to the Coordinator for Institutional Assessment ([rwall@austincc.edu](mailto:rwall@austincc.edu)) as an attachment.

## Quality Improvement Plan For **Medical Laboratory Technology**

To be useful, a plan must be based on distinct, measurable tasks or actions that strengthen the program. An action plan is not philosophical or abstract. It can and should include some “what ifs.” “If this equipment is purchased,” “If space is added,” or “If schedules are changed,” are examples.

The template below is intended to assist you in thinking and planning long-term. The College knows that factors can and do change so that some of these projected tasks may not occur—especially those projected for the third year. Furthermore, we know that this plan will need to be revised. Therefore, in one year, OIE will be asking you to update both your progress towards these tasks and to review/revise your tasks for the second and third year of the plan.

**Note on Requests for Funds :** Consider changes that require **one-time** costs (equipment, renovation, etc.) and changes that require **recurring** costs (typically new positions). *All requests for funding should indicate how they will improve learning and meet targeted objectives.*

<b>2004-05</b>				
<b>Goal: 1. Develop on-line MLT Curriculum option</b>				
<b>Estimated completion date: August 2005</b>				
<b>Task or Action</b>	<b>Expected Outcome/ Measure of Success</b>	<b>Estimated Cost(s) with Justification</b>	<b>Consequence if Not Funded</b>	<b>Who is Responsible</b>
1. Submit grant proposal to VCT	1.1 All didactic MLT courses on-line. 1.2 All MLT laboratory courses developed so that distant laboratories could provide instruction. 1.3 All MLT clinical courses developed so that distant laboratories could provide clinical experiences.	1. \$80,000 - release time and associated costs for putting high quality MLT courses on-line.	1. All MLT would continue to be taught in traditional format. Some students, particularly in rural Texas, would not have access to this type of educational opportunity. ACC's MLT enrollment would not expand as needed to fill classes and needs of employers.	1. Terry Kotrla, Project Director Carolyn Ragland, MLT Dept. Chair Grants Development Office staff.
2. Develop more simulated clinical experiences	2.1. Investigate other MLT	2. \$10,000 - cost of	2. MLT enrollment will	2. Full time and adjunct

	<p>programs which do not have off-campus clinical experiences.</p> <p>2.2 Acquire more tutorial and simulated software.</p> <p>2.3 Create a committee of CLS practitioners to develop ideas for simulated clinical experiences.</p>	<p>research of programs known to have quality on-campus clinical experiences and cost of tutorial / simulation software.</p>	<p>continue to be at unexceptable levels.</p>	<p>MLT faculty.</p>
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<b>Goal:2. Increase MLT Program enrollment</b>				
<b>Estimated completion date:August 2005</b>				
<b>Task or Action</b>	<b>Expected Outcome/ Measure of Success</b>	<b>Estimated Cost(s) with Justification</b>	<b>Consequence if Not Funded</b>	<b>Who is Responsible</b>
Increase recruitment of qualified applicants to MLT Program	<p>1. More Capital Idea sponsored students.</p> <p>2. More students applying directly out of highschool.</p> <p>3. Increased number of applications to Program.</p>	<p>\$2,000 - Costs for producing posters, flyers and recruiting materials and for career fair activities. Cost of releasing Program representative to attend career fairs.</p>	<p>MLT enrollment will continue to be at unexceptable levels.</p>	<p>Full time and adjunct MLT faculty.</p>

<b>Goal: Prepare students for the current technically advanced clinical laboratories in which they will be working.</b>				
<b>Estimated completion date: August 2005</b>				
<b>Task or Action</b>	<b>Expected Outcome/ Measure of Success</b>	<b>Estimated Cost(s) with Justification</b>	<b>Consequence if Not Funded</b>	<b>Who is Responsible</b>
<p>1. Replace / upgrade MLT laboratory equipment</p> <p>2. Strengthen curricum in areas of microbiology, hematology / coagulation by hiring of 50% FT faculty.</p>	<p>1. 100% students trained on current technology.</p> <p>2. Increased student evaluations, retention, and completion.</p> <p>3. 100% labs have all necessary supplies.</p>	<p>1. \$45,000 - estimated cost of laboratory equipment.</p> <p>2. \$45,000 - estimated and on-going cost of faculty.</p> <p>3. \$25,000 - estimated and on-going cost of full-time lab assistant.</p>	<p>1. Students have limited assess to more advanced laboratory equipment in MLT lab.</p> <p>2. Program will have to continue to orient new adjunct faculty as the</p>	<p>1. Full time and adjunct MLT faculty.</p> <p>2. MLT Dept. Chair &amp; faculty</p> <p>3. MLT Dept. Chair &amp;</p>

3. Improve quality of laboratory experiences through hiring of full-time lab assistant.	Increased student success due to more individual attention.		continue to come and go. Student satisfaction levels will vary. 3. Program will continue to struggle to keep adequate amounts of fresh appropriate supplies on hand. Student satisfaction levels will vary.	faculty
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<b>2005-06</b>				
<b>Goal: Increase pool of qualified adjunct faculty</b>				
<b>Estimated completion date: Fall 2005 and ongoing</b>				
<b>Task or Action</b>	<b>Expected Outcome/ Measure of Success</b>	<b>Estimated Cost(s) with Justification</b>	<b>Consequence if Not Funded</b>	<b>Who is Responsible</b>
Develop a wider pool of MTs and / MLTs qualified to teach MLT courses.	Have one or more qualified applicants capable of teaching in each MLT program course.	none	Continued difficulty finding adjunct faculty for assistance in specialized areas of instruction.	MLT program faculty.

<b>2006-07</b>				
<b>Goal: Develop Molecular Diagnostics Certificate to meet local clinical laboratory needs.</b>				
<b>Estimated completion date:</b>				
<b>Task or Action</b>	<b>Expected Outcome/ Measure of Success</b>	<b>Estimated Cost(s) with Justification</b>	<b>Consequence if Not Funded</b>	<b>Who is Responsible</b>
1. Determine level of need by area clinical employers. 2. Identify current tests being performed by molecular diagnostic	1. Area employers indicate need for personnel trained in molecular diagnostic testing. 2. Molecular diagnostic	Exact figure not known, estimate @ \$150,000.	Decrease in qualified individuals in workforce.	MLT Program Chair and faculty.

methodology. 3. Develop & implement a curriculum that specifically addresses these testing procedures.	tests currently being used in area clinical labs is identified. 3. 85% graduates seeking employment in field are employed. Employers indicate over-all satisfaction with graduates.			
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<b>Goal:Improve MLT Program faculty development</b>				
<b>Estimated completion date:August 2006</b>				
<b>Task or Action</b>	<b>Expected Outcome/ Measure of Success</b>	<b>Estimated Cost(s) with Justification</b>	<b>Consequence if Not Funded</b>	<b>Who is Responsible</b>
1. Provide MLT faculty opportunities to obtain more useful and relevant continuing education opportunities. 2. MLT faculty will obtain release time to 'shadow' currently practicing technologists in modern area clinical laboratories	1. Improved course evaluations from students. 2. MLT course curriculum will reflect more of the currently used methodologies as used in area clinical labs.	1. Varies with costs of individual workshops and expenses to attend.  2. Varies with cost of replacement instructors.	Program faculty will not acquire necessary skills / knowledge to keep curriculum current with rapidly changing technologies.	MLT faculty