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Educational Policies Committee Program Proposal, Other, August 27, 2010

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August 18, 2010

MEMORANDUM

TO: State Board of Regents

FROM: William A. Sederburg

SUBJECT: Utah State University-College of Eastern Utah-Associate of Applied Science Degree
Medical Laboratory Technician-Action Item

Issue

Utah State University-College of Eastern Utah (USU-CEU) requests approval to offer an Associate of Applied Science (AAS) Degree in Medical Laboratory Technician, beginning Fall Semester 2010. This program has been approved by the College of Eastern Utah Institutional Board of Trustees.

Background

The Medical Laboratory Technician program is designed to prepare students for careers as certified medical laboratory technicians. Those successfully completing the program will receive an Associate of Applied Science Degree and will be qualified to sit for the national certification examination with the American Medical Technologists Association.

The primary reason for requesting this program is to address the workforce shortages currently being experienced by the health care industry nationally, and specifically in the service region of the college. It is a proactive effort to offset the growing shortages for skilled health care workers projected into the next decade.

Employment of clinical laboratory workers is expected to grow 14 percent between 2006 and 2016 (U.S. Dept. of Labor, Bureau of Statistics). This is faster than average for all occupations. The volume of laboratory tests continues to increase with an aging population, population growth, and development of new tests. Laboratory science education and training programs are graduating only 4,800 students nationally per year, creating a critical shortage compared to the 12,400 needed. While this data reflects an ongoing challenge for the Wasatch Front, the situation for rural southeastern Utah is exacerbated by isolation and no available training outlet within 325 miles to serve the local population and local workforce. Graduates from the program have opportunity in the local area for employment at medical facilities in the southeastern Utah and in the Four Corners area. (See Appendix D)

Policy Issues

Other Utah System of Higher Education institutions have reviewed this proposal, have given input, and are supportive of USU-CEU offering this degree.

Commissioner's Recommendation

The Commissioner recommends that the Regents approve USU's request to offer an Associate of Applied Science Degree in Medical Laboratory Technician, effective Fall Semester, 2010.



William A. Sederburg, Commissioner

WAS/GW
Attachment

Academic, Career and Technical Education and Student Success Committee

Action Item

Request to Offer an Associate of Applied Science in
Medical Laboratory Technician

Utah State University-College of Eastern Utah

Prepared for
William A. Sederburg
by
Gary Wixom

August 18, 2010

SECTION I: The Request

Note: This request was prepared in advance of the creation of USU-CEU. All references to the College of Eastern Utah (CEU) now refer to (USU-CEU.)

College of eastern Utah requests approval to offer an Associate of Applied Science in Medical Laboratory Technician effective Fall Semester 2010. The program has been approved by the institutional Board of Trustees on 11 April 2008.

SECTION II: Program Description

Complete Program Description

The Medical Laboratory Technician program is designed to prepare students for careers as certified medical laboratory technicians. Those successfully completing the program will receive an Associate of Applied Science and will be qualified to sit for the national certification examination with the American Medical Technologists Association.

Medical laboratory technicians examine and analyze body fluids, tissues, and cells. They look for bacteria, parasites and other microorganisms; analyze the chemical content of fluids; match blood for transfusions; and test for drug levels in the blood to show how a patient is responding to treatment. They use automated equipment and instruments capable of performing a number of tests simultaneously, as well as microscopes, cell counters, and other sophisticated laboratory equipment. Test results are analyzed and relayed to physicians.

Clinical laboratory personnel need good analytical judgment and the ability to work under pressure. Close attention to detail is essential, because small differences or changes in test substances or numerical readouts can be crucial for patient care.

Job duties will vary according to employment environments, which can vary from large hospitals to clinics and physicians' offices. Job opportunities are expected to be excellent, because the number of job openings is expected to continue to exceed the number of job seekers. Although hospitals are expected to continue to be the major employer of clinical laboratory workers, employment is expected to grow faster in medical and diagnostic laboratories, offices of physicians, and other ambulatory health care services including blood and organ banks (U.S. Dept. of Labor, 2005).

The complete program is outlined in Appendix B.

The Medical Laboratory Technician (MLT) program is a complementary addition to the health care careers programs offered by the College of Eastern Utah – San Juan Campus including the Certified Nursing Assistant (CNA), Licensed Practical Nurse (LPN), Registered Nurse (RN), and Medical Assistant (MA) program.

Purpose of Degree

The primary reason for requesting this program is to address the workforce shortages currently being experienced by the health care industry nationally, and specifically in the service region of the college. It is a proactive effort to offset the growing shortages for skilled health care workers projected into the next decade.

A secondary reason is to create a meaningful certification program that will contribute to efforts to increase student enrollment by increased program offerings on the CEU campus.

The third reason for development of the Medical Laboratory Technician program is to fulfill partial requirements of the federal community-based job-training grant (CBJT) awarded to the college.

Institutional Readiness

The existing administrative structures of the College of Eastern Utah are established and capable of proper administration of the program, which is an A.A.S. degree. The College administers and confers a wide variety of A.A.S., A.S., and A.A. degrees as well as a number of certificates. The only new organizational structure will be the inclusion of a lead program instructor, which was included in the U.S. Department of Labor, Community-based Job Training Grant that served as a catalyst for the development of the program, and has now been fully funded with hard funds.

The Medical Laboratory Technician (MLT) program will have no adverse effect on any other program at the College. The Medical Laboratory Technician program is closely aligned with the Certified Nurse Assistant (CNA), Medical Assistant (MA), LPN, and RN programs to complement the health care and allied health programs offered by the College. Scheduling will require accommodation of 10 additional courses not currently offered by the College of Eastern Utah. However, the program requires some courses already in the roster of established offerings presented by the College. Increased enrollment in those established courses is anticipated and can be accommodated as students enter the medical laboratory technician program.

National employment indicators for health care and allied health careers indicate a serious current shortage of qualified employment candidates and potential for even more drastic circumstances during the next decade. As many potential students look to health care professions, it is a consistent challenge to accommodate the number of applicants with the limited number of student slots inherent by the nature of many programs such as nursing programs.

Faculty

In addition to the current tenure-track and regular adjunct faculty team, one part-time contract instructor has been hired to be the principal instructor and oversight director for the MLT program. This instructor/director is currently a hospital laboratory director for Blue Mountain Hospital, located a few blocks from the college. This provides a symbiotic partnership bridging the real-world applications of the training with the classroom theory. This oversight professional will be providing practical and "current art" guidance to the professional training as well as teaching some of the program courses. This instructor is credentialed in medical technology as well as possessing the necessary academic credentials. No other new instructor additions are projected for the first five years of the program.

Edward York (partnered faculty and program director)

-This contract faculty member, funded by the community-based job training grant and the local hospital (Blue Mountain Hospital) during the first year will serve as program director and faculty member. Faculty member has 30+ years experience in vocational field of medical technology and has been a trainer in military and civilian clinical laboratories. The faculty member has a bachelors degree in Allied Health and is a registered medical technologist as well as being a certified blood bank specialist. Mr. York is "highly qualified."

Funding Source = E&G

Dr. Carla Endres (full time, tenure track)

-Ph.D. in Microbiology with post-doctoral research. Faculty member is lead biology instructor and teaches majority (~80%) of the biology courses. This instructor will provide instructional support with assigned courses.

Funding Source = E&G

Dr. Lawrence Guymon (long term adjunct)

-Ph.D. in Microbiology with post-doctoral research. Adjunct faculty member has been teaching for the college for approximately two decades. This instructor will provide instructional support with assigned courses.

Funding Source = E&G

Virgil Caldwell (long term adjunct)

-M.S. in Cell Biology and Registered Medical Technologist with over 15 years scientific and administrative experience in biomedical field. Currently in dissertation phase of Doctorate in Education. Adjunct faculty member has been teaching for the college for approximately one decade and is the principal designer of the MLT program.

Funding Source = E&G

Peggy Denton (full time faculty member)

-The faculty member is a registered nurse (BSN) and is currently in a Master of Science program for a Nurse Practitioner credential. The faculty member is experienced in teaching nursing courses, nursing assistant courses and has extensive healthcare industry experience in clinical case assessment.

Funding Source = E&G

Staff

The institution is well-prepared to accommodate the program and the additional ten MLT courses the program requires. The College has an academic support system with experience in providing tutoring and instructional augmentation for health care students in the other health care programs currently offered by the institution. The College has an established learning center complex that is staffed by two masters-level, experienced instructors. The complex contains a tutoring center and a computer-assisted learning laboratory. Any additional laboratory aide needs will be satisfied with work study candidates.

Library and Information Resources

The established CNA and Nursing programs, along with the Medical Assistant program provide an excellent based of existing library materials for health care and allied health careers to support the Medical Laboratory Technician program. There will be minimal needs for additional books and periodicals specific to the Medical Laboratory Technician program. In addition, free-source, Internet-based materials will provide a rich enhancement to the library component of the learning experience. The program will be housed in the new Health Science Library building on the San Juan Campus. The library facility is over 5100 square feet with over 18,000 books and approximately 90 current periodicals.

Current estimates for additional library resources are modest.		
	First Year	Second Year
Number of new books needed	12	4
Number of new periodical subscriptions needed	2	2
Estimated cost	\$1200	\$600

Admission Requirements

The MLT program is not necessarily subjected to the same cohort-based management as nursing programs. Therefore, admissions will be based on an incoming GPA of 2.75 from either high school transcripts or prior college records of at least 12 credit hours or permission from the lead MLT instructor and the campus senior administrator. The MLT program is complete in providing pre-MLT coursework and the sequential nature of the core classes will provide the step-by-step growth required for the professional preparedness.

Student Advisement

Student advisement for the MLT program will begin with the initial student contact for those students demonstrating interest in the program. The initial recruitment contact will lead directly to an intake counseling session with one of the College's full-time academic counselors and a consultation with the lead MLT faculty member. Throughout the student's educational experience in the program the faculty advisor will maintain advisement sessions each semester with each student to ensure accurate progress reviews. The faculty advisor will also maintain current orientation of the students with the American Medical Technologist (AMT) Association, the national certification agency that will provide the certification examination upon the successful completion of the program.

Justification for Graduation Standards and Number of Credits

The program is designed to satisfy the requirements of the College for an A.A.S. credential and the national certification agency, American Medical Technologist (AMT) Association. The program consists of 68 semester hours with 31 of those semester hours in specific MLT courses.

External Review and Accreditation

The principal designer of the program is a member of the CEU-San Juan Campus administration team. The program was designed after extensive research and review of eight separate programs nationally, including the two programs located in Utah along the Wasatch Front, located at Weber State University and Salt Lake Community College. The principal designer holds an M.S. degree in Cell Biology, and is a registered medical technologist with over 15 years of experience in the biomedical field. The principal designer is also indicated as the project director for the Department of Labor, Community-based Job Training Grant that served as the catalyst for the program. The principal designer is currently completing work for a Doctorate in Education. The initial design work was subjected to review and input over a three-month period with a committee including the CEU Biology Department Chair (Ph.D. in Biochemistry), the lead biology instructor for the San Juan Campus (Ph.D. in Microbiology), and the long-time biology adjunct (Ph.D. in Microbiology).

Prior to initiation of development, the principal designer consulted extensively with the American Medical Technologist (AMT) national liaison regarding standards and expectations for qualification for certification.

*****Explanation of faculty time commitment below*****

It is very important to realize the following chart of projected enrollment and # of faculty represents a hypothetical scenario based on the constraints of the analysis table. The A.A.S. program consists of 31 credit hours of medical laboratory technician (MLT) courses. Based upon a four-semester system, this equates to just fewer than eight credit hours of specific MLT courses per semester. This also is hypothetical as the linearity of the program is asymmetrical in specific MLT course offerings per semester due to needs of prerequisites, A.A.S. credential requirements and consideration for the institution's relative small size. There is not the same number of MLT course credits each semester.

In addition, the currently operating Medical Assistant (MA) program at the College contains four MA courses that are "sister program" courses specifically developed under the same Community-based Job Training Grant that has developed the MLT program. The cost effective goals are to have one lead instructor/director funded only in a part-time capacity by the college and partnered with the local hospital. This key position will then be supported and augmented by the highly qualified faculty described prior. Commitment to direct and instruct the MLT program specific courses and the sister MA program courses is 12 credit hours per semester average. Again, these credits are not symmetrically distributed. The support faculty described will provide the support, as specific semesters require. Raw numbers would indicate 12 credit hours of instruction equates to 0.8 full time instruction. However, some of these healthcare courses have integrated, intense laboratory and real-world learning experiences.

Considering the asymmetric semester loads and the dynamics outlined, the faculty resource assumption provided in the "projected enrollment" section below is reasonable for initial purposes.

Projected Enrollment

Year	Student Headcount	# of Faculty	Student-to-Faculty Ratio	Accreditation Req'd Ratio
1	15	1	1:15	n.a.
2	20	1	1:20	n.a.
3	20	1	1:20	n.a.
4	20	1	1:20	n.a.
5	20	1	1:20	n.a.

Expansion of Existing Program

The program is new for the College and not an expansion of a previous program.

SECTION III: Need

Program Need

The College of Eastern Utah – San Juan Campus was awarded a grant through the U.S. Department of Labor for community-based job training. The application involved expansion of the Nursing program as well as developing and instituting offerings for a Medical Assistant program and a Medical Laboratory Technician program. As part of that grant application, letters of support were provided from the Utah Department of Workforce Services, U.S. Indian Health Services (IHS), Utah Navajo Health System, San Juan Health Services District, San Juan County Commission, Northeast Arizona Technological Institute of

Vocational Education, San Juan School District, and the Utah Office of Vocational Rehabilitation. Those letters are provided with the original application package. In addition, this program provides a viable and practical alternative into the healthcare career tracks for those students who will not be successfully competing with the extremely limited number of student slots available in the nursing programs.

Labor Market Demand

According to the Occupational Outlook Handbook, 2010-11 Edition, published by the U.S. Bureau of Labor Statistics, employment of clinical laboratory workers is expected to grow by 14 percent between 2008 and 2018, faster than the average for all occupations. The volume of laboratory tests continues to increase with both population growth and the development of new types of tests.

Although hospitals are expected to continue to be the major employer of clinical laboratory workers, employment is expected also to grow rapidly in medical and diagnostic laboratories, offices of physicians, and all other ambulatory healthcare services.

Job opportunities are expected to be excellent because the number of job openings is expected to continue to exceed the number of jobseekers. Although significant, job growth will not be the only source of opportunities. As in most occupations, many additional openings will result from the need to replace workers who transfer to other occupations, retire, or stop working for some other reason. Willingness to relocate will further enhance one's job prospects. (See Appendix D for a list of local medical facility sites)

Student Demand

Each year, the College can accept only a minority percentage of the applicants desiring to enter the nursing programs. This is due to the required nature of the cohort design necessary to meet accreditation standards for nursing programs. Clinical experience components of the nursing program limits numbers of students who can be accepted due to regulations as to the ratio of clinical instructors to students as well as the type of facility required for nursing program clinical experience.

The Medical Laboratory Technician program provides a viable and realistic career path for students seeking a job training opportunity that enables participants to earn significant salaries usually positioned between those of an LPN or MA and an RN.

It is reasonable to project a qualified demand for the program. There is a high job market demand as indicated by U.S. Bureau of Labor data for essentially all health care careers. A majority of student applicants unable to join nursing program cohorts but desire higher levels of career responsibility than CNA, MA, or LPN career tracks can find the MLT program a realistic option. In addition, students who desire a career in laboratory science can realize a viable career option most have previously not considered or been aware of even outside the direct health care employment market demands.

Similar Programs

There are two similar, but not identical programs offered in the State of Utah, at Salt Lake Community College and Weber State University. Both are located in metropolitan areas along the Wasatch Front.

-Salt Lake Community College offers an Associate of Applied Science for medical laboratory technicians and contains 75 credit hours over 5 semesters. The program has 41 credit hours of medical laboratory

technician courses. While a robust program, it goes beyond credentialing requirements for the career outcome.

- Weber State University, which is commonly recognized in the state as a flagship institution for all the allied health career programs offers an Associate of Applied Science in the career field that contains 69 credit hours over 4 semesters. The program has 36 credit hours of medical laboratory technician courses.

- The College of Eastern Utah program for an Associate of Applied Science for medical laboratory technicians has 68 credit hours over 4 semesters. The program has 31 credit hours of medical laboratory technician courses and meets requirements to allow participation in the national credentialing examination.

- The Medical Laboratory Technician program proposed is currently designed specifically for the College of Eastern Utah - San Juan Campus. A significant consideration for offering the Medical Laboratory Technician program at the San Juan Campus is the regional isolation and expressed need by the local health care industry. The original Community-based Job Training Grant application was driven by input from local industry and the expressed needs industry has presented. The San Juan Campus service region is over 325 miles from the MLT programs located along the Wasatch Front. It is commonly understood that the best practice for retaining health care workers in the region is to provide local training opportunities as expressed in the Community-based Job Training Grant that initiated and assisted in the development and funding of this program.

Collaboration with and Impact on Other USHE Institutions

The programs located at Salt Lake Community College and Weber State University were thoroughly reviewed. The programs located at these two Wasatch Front institutions are much larger in scope and infrastructure and geared to serve the urban area of the state. The program proposed by the College of Eastern Utah is tailored to the service region of the College. The program projects no impact on the existing similar programs in the state. This was verified in a recent (spring, 2009) conversation with Director of the Salt Lake Community College medical laboratory technician program, Dr. Karen Brown who is a pathology professor at the University of Utah. Dr. Brown informed this project that the students in the Salt Lake Community College program served their second year at the University of Utah. The University decided to expand its own program and thus ended the relationship with Salt Lake Community College. Dr. Brown also informed this program that job placement for graduates is "not a problem." Their students are hired before they graduate.

In the rural service area of the College of Eastern Utah - San Juan Campus, the local health care industry has been supportive in the Community-based Job Training Grant in part because the industry has a very difficult time recruiting qualified job candidates to medical laboratory positions. The goal of the program is "grow local talent."

Benefits

The College of Eastern Utah and USHE will benefit from the MLT program in three significant ways. First, it is recognized that the health care industry is an area experiencing critical shortages of incoming skilled and semi-skilled workers. In addition, Utah and the nation are at the beginning of a significant demographic shift in incumbent workers as the baby boomer population wave begins retiring. The MLT program is a proactive response to serve the training needs of the service region of the College. A second consideration involves the fulfillment of part of the strategic plan for the College and San Juan Campus to have a well-round series of educational options for students in a variety of health care occupations. Finally, the new

MLT program provides a viable route to increasing enrollments and FTE through offering a program that addresses proven industry demands.

Consistency with Institutional Mission

The Medical Laboratory Technician program fits well with the mission of the college to "...prepare students through certification, degrees, and transfer programs and seeks to provide a complete campus experience for both traditional and non-traditional students....The College is committed to respond to the educational needs of the communities it serves...." The MLT program is a direct response to training needs of the service region. In addition, the MLT program is complementary to the health care programming already established with the institution.

SECTION IV: Program and Student Assessment

Program Assessment

Academic assessment will have measures based on:

1. the number of students successfully completing the program, and;
2. the number of students successfully passing the AMT certification examination.

Operational/fiscal assessment will be based on maintaining expenditures during the life of the Community-based Job Training Grant. Post-grant, the assessment will be based on FTE and tuition revenue generation compared to cost of program sponsorship/operation.

Expected Standards of Performance

Medical laboratory technicians examine and analyze body fluids, tissues, and cells. They look for bacteria, parasites, and other microorganisms; analyze the chemical content of fluids; match blood for transfusions; and test for drug levels in the blood to show how a patient is responding to treatment. They use automated equipment and instruments capable of performing a number of tests simultaneously, as well as microscopes, cell counters, and other sophisticated laboratory equipment. Test results are analyzed and relayed to physicians.

Clinical laboratory personnel need good analytical judgment and the ability to work under pressure. Close attention to detail is essential, because small differences or changes in test substances or numerical readouts can be crucial for patient care.

The 10 new courses contained within the MLT program address the training needs of the occupational description above. These standards and competencies were chosen to meet the national standards of this health care occupation and satisfy the needs of the American Medical Technologists Association certification requirements.

Instruction will be a blend of traditional classroom lectures and student laboratory exercises but will be enriched with practical applications in clinical laboratory science including human specimen collection, processing, analysis, and clinical interpretation. In addition, the program will provide an external professional experience through a practicum course where students will be placed in local health care laboratory facilities to shadow and work under the supervision of professionals in the career field.

Formative assessment measures will be conducted throughout the MLT courses including intensive practice and instructor feedback on critical analytical and diagnostic procedures during the learning phases

of activity. Student self-critique and class discussions of clinical cases and specific findings will be conducted in a learning forum context. Class teamwork with multi-step assignments/projects will be employed to provide formative learning and simulate the real-world clinical laboratory environment.

Instruments for summative assessment will be employed periodically for timely feedback to the learners and provide cumulative grading. Summative assessments will be used for specific, identified learning segments and learning endpoint measures for the critical information expected in mastery assessment.

SECTION V: Finance

Budget

Explanation of FTE rationale in Finance Section

By the proposed two year, four semester program, the FTE calculation was done on a "per semester" basis and on the participant projections with the stated number of credit hours taken. For explanation:

A. Year 1. 15 students (initial group). Semester 1 curriculum = 17 cr hr. Semester 2 curriculum = 17 cr hr. 17 cr hr + 17 cr hr = 34 cr hr. 15 students x 34 cr hr/student = 510 cr hr. 510 cr hr/15 cr hr/FTE = 34 FTE

B. Year 2. 20 in first year rotation = 20 students x 34 cr hr/student = 680 cr hr. 15 students advanced to year 2 rotation. Semester 3 curriculum = 16 cr hr. Semester 4 curriculum = 18 cr hr. 16 cr hr + 18 cr hr = 34 cr hr. 15 students x 34 cr hr/student = 510 cr hr. 680 cr hr + 510 cr hr = 1190 cr hr. 1190 cr hr/15 cr hr/FTE = 79 cr hr.

C. Year 3. 20 students in each year of rotation. 680 cr hr + 680 cr hr = 1360 cr hr. 1360 cr hr/15 cr hr/FTE = 90 FTE

Semester-oriented FTE reasoning was based on semester enrollment tracking traditionally used for institutional performance each semester.

Financial Analysis Form for All R401 Documents					
Students	Year 1	Year 2	Year 3	Year 4	Year 5
Projected FTE Enrollment	34	79	90	90	90
Cost Per FTE	4426	4426	4426	4426	4426
Student/Faculty Ratio	15	20	20	20	20
Projected Headcount	15	35	40	40	40
Projected Tuition	Year 1	Year 2	Year 3	Year 4	Year 5
Gross Tuition	\$33,624	\$78,456	\$89,664	\$89,664	\$89,664
Tuition to Program	\$0	31,382	35,866	35,866	35,866
5 Year Budget Projection					
Expense	Year 1	Year 2	Year 3	Year 4	Year 5
Salaries & Wages	22,400	23,072	23,764	24,477	25,211
Benefits	2162	2226	2293	2360	2433
Total Personnel	24,562	25,298	26,057	26,837	27,644
Current Expense	1500	1000	1000	1000	1000

Travel	2000	2000	2000	2000	2000
Capital	5000	0	0	0	0
Library Expense	1200	600	600	600	600
Total Expense	\$34,262	\$28,898	\$29,657	\$30,437	\$31,244
Revenue	Year 1	Year 2	Year 3	Year 4	Year 5
Legislative Appropriation	0	0	0	0	0
Grants & Contracts	66,776	0	0	0	0
Donations	0	0	0	0	0
Reallocation	0	0	0	0	0
Tuition to Program	0	31,382	35,866	35,866	35,866
Fees	0	0	0	0	0
Total Revenue	\$66,776	\$31,382	\$35,866	\$35,866	\$35,866
Difference					
Revenue-Expense	\$32,514	\$2484	\$6209	\$5429	\$4622

Funding Sources

Funding for the MLT program is essentially covered by the Department of Labor, Community-based Job Training (CBJT) Grant for the first year. All infrastructure and equipment were acquired and installed through the CBJT programming and local industry donations. Tuition during the first year of programming can be recovered to the institution.

Reallocation

No internal reallocation is indicated.

Impact on Existing Budgets

No impact of existing budgets are indicated

Appendix A: Program Curriculum

All Program Courses

List all courses, including new courses, to be offered in the proposed program by prefix, number, title, and credit hours (or credit equivalences). Use the following format:

Course Prefix & Number	Title	Credit Hours
Core Courses	MLT 1010 Medical Laboratory Techniques	3
	MLT 2240 Hematology	3
	MLT 2230 (Clinical Practice)	2
	MLT 2270 Immunology/Serology	3
	MLT 2430 Clinical Chemistry I	3
	MLT 2570 Clinical Microbiology I	3
	MLT 2450 Clinical Chemistry II (endocrine)	3
	MLT 2580 Clinical Microbiology II	4
	MLT 2280 Immunohematology	4
	MLT 2550 Practicum in Medical Technology	3
	Sub-Total	31
Elective Courses	CHEM 1000 Intro to Chemistry Lab	1
	CHEM 1010 Intro to Chemistry	3
	ENGL 1010 Intro To Writing	3
	BIOL 1010 Principles of Biology	3
	BIOL 1015 Biology Lab (Virtual)	1
	PSY 1010 Intro to Psychology	3
	CHEM 1110 Elementary Chemistry	3
	CHEM 1130 Elementary Chemistry Lab	1
	ENGL 2010 Intermediate Writing	3
	NURS 1008 Medical Terminology	2
	BIOL 1500 Anatomy and Physiology	3
	MATH1050 College Algebra	4
	BUSN 2390 Org. Behavior, or	
	COMM 2110 Interpersonal Comm., or	
	COMM 2120 Group Comm.	3
	MATH 2470 Intro to Statistics	4
	Sub-Total	37
Track/Options (if applicable)		
	Sub-Total	
	Total Number of Credits	68

New Courses to be added in the Next Five Years

All courses required for the new program have been developed and approved by the institution.

Appendix B: Program Schedule

New courses developed and approved by the College Curriculum and Instruction Committee are indicated with an (*).

Semester 1

Course	Cr Hr
CHEM 1000 Intro to Chemistry Lab	1
CHEM 1010 Intro to Chemistry	3
ENGL 1010 Intro to Writing	3
BIOL 1010 Principles of Biology	3
BIOL 1015 Biology Lab (Virtual)	1
PSY 1010 Intro to Psychology	3
MLT 1010 Medical Laboratory Techniques*	3

Total	17
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Semester 2

CHEM 1110 Elementary Chemistry	3
CHEM 1130 Elementary Chemistry Lab	1
ENGL 2010 Intermediate Writing	3
NURS 1008 Medical Terminology	2
BIOL 1500 Anatomy and Physiology	3
MLT 2240 Hematology*	3
MLT 2230 Clinical Practice (other body fluids)*	2

Total	17
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Semester 3

MATH 1050 College Algebra	4
BUSN 2390 Organizational Behavior, or	3
COMM 2110 Interpersonal Communication, or	
COMM 2120 Group Communication	
MLT 2270 Immunology/Serology*	3
MLT 2430 Clinical Chemistry I (routine)*	3
MLT 2570 Clinical Microbiology I *	3

Total	16
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Semester 4

MATH 2470 Intro to Statistics	4
MLT 2450 Clinical Chemistry II (endocrine)*	3
MLT 2580 Clinical Microbiology II*	4
MLT 2280 Immunohematology*	4
MLT 2550 Practicum in Medical Technology*	3

Total	18
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Total Credits in Program	68
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Appendix C: Faculty

In addition to the current tenure-track and regular adjunct faculty team, one part-time contract instructor has been hired to be the principal instructor and oversight director for the MLT program. This instructor/director is currently a hospital laboratory director for Blue Mountain Hospital, located a few blocks from the college. This provides a symbiotic partnership bridging the real-world applications of the training with the classroom theory. This oversight professional will be providing practical and "current art" guidance to the professional training as well as teaching some of the program courses. This instructor will be credentialed in medical technology as well as possessing the necessary academic credentials. No other new instructor additions are projected for the first five years of the program. The quorum of full time and adjunct faculty listed are currently part of the existing allied health team. The partnered faculty/director is the only new addition.

Edward York (partnered faculty and program director)

- This contract faculty member, funded by the community-based job training grant and the local hospital (Blue Mountain Hospital) during the first year will serve as program director and faculty member. Faculty member has 30+ years experience in vocational field of medical technology and has been a trainer in military and civilian clinical laboratories. The faculty member has a bachelors degree in Allied Health and is a registered medical technologist as well as being a certified blood bank specialist.

Dr. Carla Endres (full time, tenure track)

- Ph.D. in Microbiology with post-doctoral research. Faculty member is lead biology instructor and teaches majority (~80%) of the biology courses. This instructor will provide instructional support with assigned courses.

Dr. Lawrence Guymon (long term adjunct)

- Ph.D. in Microbiology with post-doctoral research. Adjunct faculty member has been teaching for the college for approximately two decades. This instructor will provide instructional support with assigned courses.

Virgil Caldwell (long term adjunct)

- M.S. in Cell Biology and Registered Medical Technologist with over 15 years scientific and administrative experience in biomedical field. Currently in dissertation phase of Doctorate in Education. Adjunct faculty member has been teaching for the college for approximately one decade and is the principal designer of the MLT program.

Peggy Denton (full time faculty member)

- The faculty member is a registered nurse (BSN) and is currently in a Master of Science program for a Nurse Practitioner credential. The faculty member is experienced in teaching nursing courses, nursing assistant courses and has extensive healthcare industry experience in clinical case assessment.

Appendix D

Potential employers of Medical Laboratory Technicians and other Allied Health workers in the College of Eastern Utah – Blanding Campus service area. 08/17/10

Facility	Hospital	Clinic	Nursing Homes	City	State
Blue Mountain Hospital	X			Blanding	UT
UNHS, Blanding Family Practice		X		Blanding	UT
Blanding Clinic		X		Blanding	UT
Blanding 4 Corners Rest Home			X	Blanding	UT
Allen Memorial Hospital	X			Moab	UT
UNHS, Montezuma Creek Clinic		X		Montezuma Creek	UT
San Juan County Hospital	X			Monticello	UT
UNHS, Monument Valley Clinic		X		Monument Valley	UT
UNHS, Navajo Mountain Clinic		X		Navajo Mountain	UT
Southwest Memorial Hospital	X			Cortez	CO
Vista Grande Inn			X	Cortez	CO
PASCO/SW Inc			X	Cortez	CO
Mercy Hospital	X			Durango	CO
Chinle Nursing Home -			X	Chinle	AZ
IHS, Chinle Comprehensive Health Care Facility	X			Chinle	AZ
IHS, Fort Defiance Indian Hospital	X			Fort Defiance	AZ
Sage Memorial Hospital	X			Ganado	AZ
IHS, Kayenta Health Center		X		Kayenta	AZ
IHS, Pinion Health Center		X		Pinon	AZ
IHS, Inscription House Health Center		X		Shonto	AZ
IHS, Tsaile Health Center		X		Tsaile	AZ
IHS, Tuba City Indian Medical Center	X			Tuba City	AZ
IHS, Winslow Health Center		X		Winslow	AZ
IHS, Dziłth-Na-O-Dith-Hle Health Center		X		Bloomfield	NM
IHS, Crownpoint Health Care Facility	X			Crownpoint	NM
IHS, Gallup Indian Medical Center	X			Gallup	NM
IHS, Northern Navajo Medical Center	X			Shiprock	NM
IHS, Tohatchi Health Care Center		X		Tohatchi	NM