

BOARD OF HIGHER EDUCATION
REQUEST FOR COMMITTEE AND BOARD ACTION

COMMITTEE: Assessment and Accountability **NO.:** AAC 06-16

COMMITTEE DATE: June 8, 2006

BOARD DATE: June 15, 2006

MOVED: The Board of Higher Education hereby approves the request of **Mount Wachusett Community College** to award the **Associate in Science in Clinical Laboratory Science**.

One year after graduating the program's first class, the College shall submit to the Board a status report addressing its success in reaching program goals as stated in the application and in the areas of enrollment, curriculum, faculty, resources and program effectiveness.

Authority: Massachusetts General Laws Chapter 15A, Section 9(b)
Contact: Aundrea Kelley, Associate Vice Chancellor for Academic Policy

BOARD OF HIGHER EDUCATION

June 2006

Mount Wachusett Community College

Associate in Science in Clinical Laboratory Science

INTENT, MISSION AND NEED

Mount Wachusett Community College has submitted a request to reinstate the Associate in Science in Clinical Laboratory Science degree. The proposed Clinical Laboratory Science (CLS) degree is a modified and updated version of the previous CLS program that was terminated in 1999. Discussions between Heywood Hospital of Gardner and MWCC began in the summer of 2005 as a result of an assessment of regional workforce shortages caused by an aging workforce and the closure of most CLS programs in the state. The plan is for the proposed program to begin as a partnership solely with Heywood Hospital, but with the possibility to expand to additional clinical sites as supply and demand dictate.

Students completing the proposed program will be prepared to play a vital role in patient care by performing a wide range of clinical laboratory procedures used in the prevention, detection, diagnosis and treatment of disease. Graduates will develop academic and technical competence in the major areas of clinical laboratory practice – hematology, clinical chemistry, clinical microbiology and immunohematology. MWCC will apply for accreditation from the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), the organization which sets the standards for entry level technicians.

A unique aspect of Mount Wachusett Community College's mission is to assist in the economic development of North Central Massachusetts through the promotion of a skilled workforce for high demand industries including healthcare. The primary mission of the proposed program is to prepare competent clinical laboratory scientists to fulfill professional roles as members of the regional healthcare team and is therefore closely aligned to the institution's overall vision for North Worcester County.

Demand

The proposed program responds to the shortage of qualified clinical laboratory personnel in the greater Gardner community. The need for a clinical laboratory education program in Central Massachusetts has been identified by the local healthcare community. This acute shortage of qualified personnel to work in clinical laboratories is the result of closure of most CLS-AD and CLS-BS programs and an aging workforce that will continue to create a wave of vacancies due to retirement. Nationally, according to the 2006-2007 Bureau of Labor Statistics, job opportunities are expected to be

excellent. Employment of clinical laboratory workers is expected to grow faster than average for all occupations through the year 2014, as the volume of laboratory tests continues to increase with both population growth and the development of new testing methodologies.

Currently, Bristol Community College (BCC) and Springfield Technical Community College (STCC) are the only system colleges offering a CLS major. According to the CLS Director at BCC, inquiries and applications have tripled in recent years. STCC has also experienced application and enrollment increases. MWCC constituents (students, clinical affiliates and employment sites) are distinctly different from regions serviced by STCC or BCC.

CURRICULUM (Attachment A)

The MWCC Clinical Laboratory Science program will consist of 69 credits in general education, life science, mathematics and career related courses that include the theory and practice of laboratory medicine. The sequence of the curriculum is designed as a “1+1” format. In year one, students who declare an interest in CLS will enroll in general education and prerequisite science and mathematics courses in preparation for CLS clinical courses. The second year of the proposed program will be restricted to those students who are selected through a formal CLS admission process. In this clinical year, students will study the various disciplines of clinical laboratory science and develop technical competency through a practical experience in various laboratory departments.

ADMISSION AND ENROLLMENT

MWCC intends to enroll approximately 12-15 students in Introduction to CLS I and Introduction to CLS II in the first year of the program. During this pre-clinical year, students may enroll on a full or part-time basis depending upon previous college experiences. The second year of the program, however, will be limited to six students because of space allocations in the Heywood Hospital laboratory, the need for close clinical supervision of students, and the hiring expectations of the hospital. Only files of students who have successfully completed the first year will be reviewed. It is anticipated that the number of students who qualify to enter the CLS Program during second year will be reduced by attrition (anticipated at 37%) as well as by the fact that part-time students may not have completed all prerequisites before entering the CLS component. The selective admission and limited enrollment of the CLS component will be published in the College catalog and admission material. Provisions will be made for a “wait list” should more students qualify for the CLS component than space allows. Once the program is established, additional clinical laboratory placements will be considered to allow the program to expand to a maximum clinical student enrollment of 12-15.

RESOURCES AND BUDGET (Attachment B)

Human Resources

The reappointed Program Director, a member of the College faculty since the early 1990s, will assume coordination of College related activities and accreditation processes as a normal constituent of her workload.

An Instructional Coordinator will be employed by Heywood Hospital to instruct and coordinate all clinical related courses and assignments during the program's second year. This individual will be qualified by education and experience to offer complete expertise in clinical laboratory science to assure acquisition of standard skills by MWCC's students.

Library and Physical Resources

The two CLS specific courses (CLS I and CLS II) offered in the first year of the curriculum will be delivered with minimal expense to the College in terms of equipment, faculty, and supplies since Heywood Hospital and College resources, including funds from the federal Carl D. Perkins Vocational Allocation, will be allocated to the curriculum's budgetary requirements. The remaining CLS courses to be offered in the second year of the proposed program will not impact College budgets since all lab work will be completed at the Heywood laboratory.

Equipment will include teaching microscopes, phlebotomy chairs and arms, and spectrophotometers. Resources for purchases of equipment will be shared between MWCC and Heywood Hospital. A list of contemporary textbooks and multimedia has been requested from the MWCC library.

PROGRAM GOALS AND OBJECTIVES

The CLS program has identified the following goals and objectives to be achieved in first three years of operation:

Goals by winter 2007

- Recruit and enroll initial pre-CLS class of 12-15 students
- Instruct initial general education and pre-CLS courses
- Host Advisory Board Meeting

Goals by spring 2007

- Initial draft of NAACLS accreditation report completed
- Develop mechanisms for application to CLS clinical year (two)
- Host Advisory Board Meeting
- Recruit students for fall 2007

Goals by fall 2007

- Enroll six students into clinical content courses and laboratory placements at Heywood Hospital
- Expand potential clinical placements to additional laboratory facilities as availability arises (in anticipation of larger pool of qualified students)
- Recruit and enroll second set of “pre-CLS students” into MWCC general education and pre-CLS coursework
- Identify potential dedicated laboratory space, if necessary

Goals by late spring/early summer 2008

- Graduate five of six initial clinical students
- All graduates successfully complete certification examination
- Placement of all graduates in full- or part-time jobs within Heywood laboratories or similar facilities
- Submit full NAACLS report

Goals by fall 2008

- Enroll new (third) freshmen class of 15-20 students
- Continue to expand clinical site options
- Complete formal program evaluation in conjunction with Advisory Board, student graduates, etc
- Host NAACLS site visit
- Review NAACLS’ recommendations on accreditation

LETTER OF INTENT

No responses were received in response to the March 2005 circulation of the letter of intent. However, in the course of the proposal development, the CLS Program Directors from Bristol Community College and Springfield Technical Community College submitted letters of support of the proposed program.

EXTERNAL REVIEW

MWCC will apply for accreditation from the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), the organization which sets the standards for entry level technicians. The NAACLS accreditation process will ensure that the proposed program meets or exceeds accreditation standards. The NAACLS approval process is expected to be complete at or near the time of graduation of the first class of CLS students (May 2008).

STAFF ANALYSIS AND RECOMMENDATION

Following thorough review of all documentation provided, staff recommendation is for approval. One year after graduating the program’s first class, the institution shall submit to the Board a status report addressing its success in reaching program goals as stated in the application and in the areas of enrollment, curriculum, faculty, resources, and program effectiveness.

Attachment A – Curriculum Outline

Year 1

Fall 2006

ENG101	English Composition I	3
MAT126	Topics in Mathematics	3
BIO203	Anatomy and Physiology I	4
CHE203	Introduction to Biochemistry	4
CLS101	Introduction to CLS I	4

Total Semester Credits: 18

January Intersession

CLS103	Urinalysis and Phlebotomy Practicum	2
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Total Semester Credits: 2

Spring 2007

ENG102	English Composition II	3
CIS127	Computer Technologies	3
BIO204	Anatomy and Physiology II	4
CLS102	Introduction to CLS II	3
	Social Science Elective (ANT, PSY, SOC, DSI)	3

Total Semester Credits: 16

Summer 2007

BIO205	Microbiology (7 weeks)	4
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Total Summer Credits: 4

Year 2

Fall 2007

CLS203	Clinical Hematology/Hemostasis I	3
CLS205	Immunohematology I	3
CLS213	Clinical Chemistry I	3
CLS207	Clinical Microbiology I	3
	Humanities Elective (ART, ASL, ENG, HUM, MUS, PHL, SPA, THE)	3

Total Semester Credits: 15

Spring 2008

CLS204	Clinical Hematology/Hemostasis II	3
CLS206	Immunohematology II	3
CLS214	Clinical Chemistry II	3
CLS208	Clinical Microbiology II	3
PER126	Fitness and Wellness	2

Total Semester Credits: 14

Total Credits Required: 69

Attachment B: Budget

<i>One Time/Start Up costs</i>		<i>Annual Expenses</i>		
		Description	Number	Cost
NA	Faculty	Dept Chair	1	Reduced load for faculty member - \$6,000
NA	Staff	NA	NA	NA
\$1,200	Instructional Materials (includes library resources)	Texts and journals	5	\$500
NA	Space	Lab space shared with other biology classes	1	
\$26,707*	Equipment	Equipment to support CLS program		
NA**	Field and Clinical Resources	Heywood Hospital clinical placements	NA	NA
\$27,907	Total Costs:			\$6,500

*supported by the College's Carl D. Perkins Vocational Allocation (federal), Heywood Hospital and College resources

** Heywood Hospital will provide a clinical instructor – anticipated Heywood dollar allocation: \$65,000