

BOARD OF HIGHER EDUCATION

REQUEST FOR COMMITTEE AND BOARD ACTION

COMMITTEE: Academic Affairs

NO: AAC 17-19

COMMITTEE DATE: June 13, 2017

BOARD DATE: June 20, 2017

**APPLICATION OF THE MASSACHUSETTS COLLEGE OF LIBERAL ARTS TO
AWARD THE BACHELOR OF SCIENCE IN HEALTH SCIENCES**

MOVED: The Board of Higher Education hereby approves the application of the **Massachusetts College of Liberal Arts** to award the **Bachelor of Science in Health Sciences**.

Upon graduating the first class for this program, the University 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: Winifred M. Hagan, Ed.D., Associate Commissioner for Academic Affairs and Student Success

BOARD OF HIGHER EDUCATION
June 2017
Bachelor of Science in Health Sciences

INTENT AND MISSION

The Massachusetts College of Liberal Arts (MCLA) proposed program for a Bachelor of Science in Health Sciences is expected to align with and fulfill the liberal arts mission of the college and enhance the existing program offerings, which integrate the liberal arts with professional studies. It is planned that the health sciences program and its concentrations (pre-physical therapy, pre-occupational therapy, pre-physician assistant and medical technology) will prepare students who want to pursue careers in allied health fields.

MCLA expects that the program will provide a high-quality education and preparation for graduates to excel in a variety of health-related careers with strong skills in critical thinking, the scientific method and application of fundamental scientific concepts. It is anticipated that students will gain practical skills through laboratory activities and high-impact experiences such as internships and independent research. It is intended that the proposed program will prepare students for graduate study and careers in various health fields, such as physician assistant, physical therapy, occupational therapy, nurse practitioner, nutrition and medical technology.

The proposed program obtained all necessary governance approvals on campus and was approved by the Board of Trustees of MCLA on April 6, 2017. The required letter of intent was circulated on March 7, 2017. No comments were received.

NEED AND DEMAND

National and State Labor Market Outlook

MCLA finds that the need for qualified health care workers has grown dramatically in the past decade. According to the Bureau of Labor Statistics *Occupational Outlook Handbook 2016-17*, the growth outlook for Medical Technicians is 16% with an estimated increase of 51,200 jobs between 2014 and 2024 nationwide. Similarly, the demand for nurse anesthetists, nurse midwives and nurse practitioners is forecast to grow 31% with 53,400 new jobs projected. The demand for Occupational Therapists is projected at 27% with 30,400 new jobs, Physical Therapists at 34% with 71,800 new jobs, and Physician Assistants at 30% with 28,700 new jobs¹. Physical Therapist, Nurse Practitioner, Physician Assistant and Occupational Therapist are listed among the fastest growing occupations in Massachusetts by the state's Executive Office of Labor and Workforce Development². Over the period 2014-2024, it is estimated that an additional 1964 physical therapists, 1549 nurse practitioners, 863 occupational therapists and 642 physician assistants will be hired in the state of Massachusetts.

Looking broadly at health-related opportunities in Berkshire County, Health Care and Social Assistance is the largest industry group, employing over 11,000 people in 2010 (MA Executive

¹ <https://www.bls.gov/ooh/healthcare/> retrieved 2/3/2017

² http://lmi2.detma.org/Lmi/Occupation_Projection_Rank.asp?Area=01000025long retrieved 2/3/2017

Office of Labor and Workforce Development). According to the 2016 report, *“What’s happening in Berkshire County? A Review of Recent Labor Market Conditions”*³, 20% of the workforce is employed in health care and social assistance, compared to 17.8% for Massachusetts.

Student Demand

The steady enrollment increases of the existing concentrations in allied health, physical therapy and medical technology suggest strong interest from students at MCLA. Enrollment grew steadily from 22% in 2012 to 37% in 2015 and 38% in 2016. However, MCLA noted that the biology degree program requirements are not precisely aligned with the employment requirements or advanced study needs in the allied health fields. The proposed health sciences program is expected to more accurately target employer and student needs. MCLA also expects that this will lead to an increase in recruitment and retention of students for the proposed program and contribute to the success of the MA STEM agenda.

OVERVIEW OF PROPOSED PROGRAM

MCLA cites an increase in student interest in health professions, specifically through enrollment in the biology concentrations of allied health, pre-physical therapy, and medical technology. The development of the proposed program is in direct response to this. Other influential factors include employer needs in the region.

Duplication

MCLA’s proposed program is expected to be the only B.S. in health sciences offered by a public institution in the state of Massachusetts. It is planned that introducing this major at MCLA will provide students with affordable access to a program and pathway to a variety of career possibilities. There is no duplication within the public system or in Berkshire County.

Springfield College, a private institution located in Hampden County and 62 miles from MCLA, offers a B.S. in health science. Students in this program must choose a concentration from one of the following: public health, health professions or clinical medicine, with the health professions concentration most closely resembling the proposed health sciences program at MCLA. In-state tuition and fees at MCLA are currently ~\$10K compared to ~\$35K at Springfield.

ACADEMIC AND RELATED MATTERS

Admission

MCLA’s admissions standards are selective, and decisions are made on an individual basis after careful review of all academic credentials. First year applicants are evaluated by their academic performance, the strength of the high school curriculum, standardized test scores and a personal essay. In addition, students submit an official high school transcript, including first-quarter senior grades and any transcripts for college-level courses including dual enrollment or early college. MCLA accepts transfer applications for both fall and spring terms. A student who

³ *Berkshire County Regional Employment Board 2016 Report*

has earned a minimum of 12 semester hours of collegelevel credits from an accredited institution may be considered a transfer student. Transfer applications are evaluated on the basis of the student's previous college work. A minimum grade point average of a 2.5 on a four point scale is recommended for admission as a transfer student, and a maximum of 75 credits may be transferred towards the bachelor's degree. A minimum of 45 credits must be completed at MCLA.

Program Enrollment

Curriculum (Attachment A)

MCLA's core curriculum provides a practical and interdisciplinary education that challenges students to develop themselves as thinkers, readers, writers, communicators and problem solvers. The core curriculum prepares students for a diverse world, for professional and personal success and for lives of civic responsibility. The proposed program is designed such that students will also gain knowledge of human biology, psychology, statistics, chemistry and a variety of biology topics (e.g., microbiology, nutrition, exercise physiology) relevant to health fields.

Internships or Field Studies

It is anticipated that students will gain practical skills through laboratory activities and high-impact experiences such as internships and independent research. MCLA has an internship contract that will be completed by the student and the internship supervisor and must be approved by both the Department Chair and the Dean of Academic Affairs. The internship supervisor will meet regularly with the student interns and will visit the clinical site(s). MCLA expects Berkshire County's diverse health care industry to serve as an important resource for internships and field learning experiences. The County's largest employer, Berkshire Health Systems (BHS), has more than 4,000 employees working within their network of affiliates, that include two acute care hospitals, Berkshire Medical Center and Fairview Hospital; a long-term care associate, Berkshire Healthcare Systems; the Berkshire Visiting Nurse Association; and BHS physician practices. Organizations such as The Brien Center for Mental Health and Substance Abuse Services in North Adams offer mental health services. In addition to these traditional health care settings, Berkshire County has many health providers working independently in private practice or as part of larger wellness organizations.

RESOURCES AND BUDGET

Fiscal (Attachment B)

MCLA's Department of Biology currently offers majors in biology and athletic training. The resources required for the proposed major in health sciences are currently available, including departmental administrative support. The department is currently searching for a full-time tenure-track position in biology with a specialization in community health. Assuming that both this search and an additional ongoing search are successful, MCLA expects that the total number of full-time faculty members in the department will be 10. In addition, the department plans to hire part-time faculty members to teach specialty courses, as needed.

Faculty and Administration (Attachment C)

The Chair of the Biology Department will provide leadership for the program. The Vice President and Dean of Academic Affairs will work with the Department Chair on establishing a budget and coordinating course scheduling.

Facilities, Library and Information Technologies

MCLA plans that the proposed health sciences major will be housed in the recently opened Feigenbaum Center for Science and Innovation, a 65,000 sq. ft. integrated science building. This Center houses state-of-the-art classrooms, laboratories, research space, and student study spaces.

The health sciences major will be housed in the Biology Department, that will staff almost all of the courses in the curriculum. It is expected that new students in the health sciences major can be accommodated within existing course sections with the capacity to add sections of these courses if needed.

MCLA's Freel Library has substantial book and DVD holdings for biology and typically provides faculty members with a yearly allowance for purchase of new library materials. MCLA subscribes to a number of databases with scientific content, including JSTOR and Academic Search Premier. In addition, the library has individual subscriptions to Science and JAMA, the Journal of the American Medical Association. The library administers a biology "LibGuide" that guides students through the process of finding, evaluating and citing scientific literature and hosts the "MCLA Guide to Writing Lab Reports in Biology," two resources that could also be applied to health sciences. The Center for Academic Technology at MCLA is active in promoting the use of technology in the classroom, hosting training sessions for tools such as the course management system Canvas and the eportfolio system Digication, and organizing an annual TechFest to highlight technological tools in undergraduate education. Information Technology Services assists with computers and other equipment in faculty offices and classrooms. Lab space and equipment are currently sufficient to meet the needs of the new program and include access to statistical software such as Minitab and SPSS.

Affiliations and Partnerships

MCLA anticipates developing articulation agreements with Berkshire and other community colleges. The program design is planned to allow students to study for two years at a community college and then attend MCLA for the final two years. The program can also be designed as a "2 + 2" program with a two-year institution. MCLA already has many articulation agreements with community colleges, and will add this program to the list. MCLA currently has articulation agreements with The Sage Colleges in Albany, NY for two programs: M.S. in Nutrition and Doctor of Physical Therapy. These articulations will be adapted to the general Health Sciences major.

PROGRAM EFFECTIVENESS

Goal	Measurable Objective	Strategy for Achievement	Timetable
1. To produce graduates that are competitive in the job market and graduate studies	Strive for 100% placement for students that complete the program, 100% employment or graduate school.	Connect with health providers in Berkshire County. Work with MCLA's career services office and the Alumni office. Work with UMass system for graduate studies	Ongoing from program implementation
2. To implement a system for monitoring program effectiveness	System will provide usable data on student learning, and post-graduation placements/achievements.	Assess a program outcome each semester. Administer surveys to graduating seniors/alumnae to track placements. Complete program review every 7 years.	Assessment of program outcomes implemented during first year of program. Surveys administered to seniors/alumnae with first graduating class. First program review after 7 years.
3. To increase the number of students enrolled in the major	Obtain a total of 30-35 majors (all years of study) in 5 years	Promote the program through admissions and college websites, creation of brochures and working directly with Berkshire County high schools and community colleges	Five years from program implementation
4. To increase the number of clinical sites associated with the major	Offer at least 8 clinical sites for internships within 5 years.	Contact local health care providers, public health groups and other institutions that might be interested in hosting Community Health Education interns.	Five years from program implementation

EXTERNAL REVIEW AND INSTITUTIONAL RESPONSE

The proposed program was reviewed by Gordon L Lerversee, Ph.D., Dean of the School of Sciences and Social Sciences at Keene State College in New Hampshire and David Campbell, Ph.D., Chair and Professor of Health Education in the Division of Sciences, Mathematics, and Health at Concord University in Athens, West Virginia. The review team found the program to have a coherent design characterized by appropriate breadth, and sequential progression with a

clear structure and requirements appropriate for students and career goals. The team noted that the proposed health sciences program and concentrations are built on the strong core of required biology and allied science, and that related courses are characterized by appropriate breadth, depth, continuity, sequential progression and synthesis typical of well-designed undergraduate programs. The effectiveness of the program being tied to successful placements after graduation and surveys of graduates was a positive aspect of continual improvement. A regularly scheduled program review at 7 year intervals was thought to be too long and the team suggested a 4 year cycle of review. MCLA responded positively to the recommendation and noted that the biology department chair will work with the office of Institutional Research, Assessment and Planning to ensure tracking the graduates of the program after 4 years.

STAFF ANALYSIS AND RECOMMENDATION

Staff thoroughly reviewed all documentation submitted by the **Massachusetts College of Liberal Arts** and the external reviewers. Staff recommendation is for approval of the proposed **Bachelor of Science in Health Sciences** program.

ATTACHMENT A: CURRICULUM

<i>Required (Core) Courses in the Major (Total # courses required = 16)</i>		
<i>Course Number</i>	<i>Course Title</i>	<i>Credit Hours</i>
ANTH 395	Community Health	3
BIOL-150 + lab	Introduction to Biology I: Cells	4
BIOL-250	Nutrition	3
BIOL-342 + lab	Anatomy and Physiology I	4
BIOL-343 + lab	Anatomy and Physiology II	4
BIOL-3XX	Epidemiology	3
BIOL 4XX	Research Methods in Epidemiology	3
CHEM-150 + lab	Introduction to Chemistry	4
HLTH-1XX	Intro to Community Health Education	3
HLTH-2XX	Health Promotion & Planning	3
HLTH-540	Internship in Community Health Education	3
MATH-232	Statistics	3
PHED-120	Emergency Medical Response	1
PHED-215	Lifetime Wellness	3
PSYC-100	Introduction to Psychology	3
SOCI-100	Introduction to Sociology	3
	<i>Sub Total Required Credits</i>	50
<i>Elective Courses (Total # courses required = 4)</i>		
Psychology elective from list		3
Psychology elective from list		3
<i>Psychology electives:</i> PSYC 210 Developmental Psychology, PSYC 208 Applied Developmental Psychology, PSYC 230 Social Psychology, PSYC 270 Abnormal Psychology, PSYC 310 Cognitive Psychology, PSYC 316 Behavior Analysis, PSYC 331 Biological Psychology, PSYC 332 Drugs and Human Behavior, PSYC 340 Psych of Children w/ Special Needs, PSYC 355 Human Sexuality, PSYC 356 Psychology of Gender, PSYC 357 Psychology of Women, PSYC 376 Sport Psychology, PSYC 386 Adolescent Development and PSYC 387 Childhood Disorders.		
Sociology elective from list		3
Sociology elective from list		3
<i>Sociology electives:</i> ANTH 345 Culture, Health & Illness, ANTH 346 Disability and Culture, ANTH 395 Global Health, SOCI 201 Social Problems,		

SOCI 210 Families, SOCI 316 Sociology of Sport, SOCI 335 Health and Aging, SOCI 336 Death and Dying, SOCI 337 Aging and the Life Course, SOWK 241 Introduction to Social Work, SOWK 380 Women and Health and SOWK 475 Family Violence.		
	<i>Sub-Total Elective Credits</i>	12
<i>Distribution of General Education Requirements (7 additional courses)</i> Attach List of General Education Offerings (Course Numbers, Titles, and Credits)		# of Gen Ed Credits
Tier I core: Language at the 102 level (3 cr), ENGL 150 English Composition II (3 cr); Math (MATH 232 Intro to Statistics option fulfilled by major requirements)		6
Tier II core: Human Heritage (2 x 3 cr), Creative Arts (2 x 3 cr), Self & Society (PSYC 100 Intro to Psychology and SOCI 100 Intro to Sociology options fulfilled by major requirements), Science & Technology (BIOL 150 Intro to Biology I: Cells and CHEM 150 Intro to Chemistry I options fulfilled by major requirements)		12
Tier III core: Capstone (3 cr)		3
<i>Sub-Total General Education Credits</i> Of the total 37 credits of General Education Requirements (CORE) , 16 credits are satisfied by the major		21
<i>Curriculum Summary</i>		
Total number of courses required for the degree	27	
Total credit hours required for degree	General Education + Major: 83 cr Graduation requirement: 120 cr	
<i>Prerequisite, Concentration or Other Requirements:</i>		

ATTACHMENT B: BUDGET

<i>One Time/ Start Up Costs</i>	<i>Cost Categories</i>	<i>Annual Expenses</i>			
		Year 1	Year 2	Year 3	Year 4
	Full-Time Faculty Salary	\$ 55,000	\$ 55,000	\$ 55,000	\$ 55,000
	35 % Fringe	\$ 19,250	\$ 19,250	\$ 19,250	\$ 19,250
	Part-Time/Adjunct Faculty \$ 5,181 (two sections)	\$ 10,362	\$ 10,362	\$ 10,362	\$ 10,362
	Staff Departmental Assistant in place				
	General Administrative Costs are included in the overall College Operating Budget				
	Instructional Materials, Library Acquisitions	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000
	Facilities/Space/Equipment:				
	Field & Clinical Resources				
	Marketing costs included in MCLA's general college budget				
	Other				
	TOTALS	\$ 86,612	\$ 86,612	\$ 86,612	\$ 86,612

<i>One-Time/Start-Up Support</i>	<i>Revenue Sources</i>	<i>Annual Income</i>			
		Year 1	Year 2	Year 3	Year 4
	Grants				
	Tuition	\$6,180	\$13,905	\$22,660	\$31,415
	Fees	\$53,070	\$119,408	\$194,590	\$269,773
	Departmental				
	TOTALS	\$59,250	\$133,313	\$217,250	\$301,188

ATTACHMENT C: FACULTY

Summary of Faculty Who Will Teach in Proposed Program							
Name of faculty member (Name, Degree and Field, Title)	Check if Tenured	Courses Taught (C) indicates core course. (OL) indicates course currently taught online.	Number of sections	Division or College of Employment	Full- or Part- time in Program	Full- or part-time in other department or program	Sites where individual will teach program courses
TBD PhD Assistant Professor	<input type="checkbox"/>	<ul style="list-style-type: none"> • HLTH 1XX (C) • HLTH 2XX (C) • BIOL 3XX (C) • BIOL 4XX (C) • HLTH 540 (C) 	1 1 1 1 1	Daytime	Full-Time	Full-Time Biology	• Main Campus
Billetz, Ann Ph.D., Biology Associate Professor	<input checked="" type="checkbox"/>	• BIOL-150 (C)	1	Daytime	Part-Time	Full Time Biology	• Main Campus
Curtin, Ed M.A., Sociology Instructor	<input type="checkbox"/>	• SOCI 100 (C)	1	Daytime	Part-Time	Full-Time Sociology	• Main Campus
Dehner, Carolyn Ph.D. Biochemistry Assistant Professor	<input type="checkbox"/>	• CHEM-150 (C)	1	Daytime	Part-Time	Full Time Chemistry	• Main Campus
Goodwin, Anne Ph.D. Experimental Pathology Associate Professor	<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> • BIOL 250 (C) • BIOL 342 (C) • BIOL 343 (C) 	1 1 1	Daytime	Part-Time	Full Time Biology	• Main Campus
Jaysane-Darr, Anna	<input type="checkbox"/>	• ANTH 395 (C)	1	Daytime	Part-Time	Full Time	• Main Campus

Summary of Faculty Who Will Teach in Proposed Program

Name of faculty member (Name, Degree and Field, Title)	Check if Tenured	Courses Taught (C) indicates core course. (OL) indicates course currently taught online.	Number of sections	Division or College of Employment	Full- or Part- time in Program	Full- or part-time in other department or program	Sites where individual will teach program courses
Ph.D., Anthropology Assistant Professor						Sociology/ Anthropology/ Social Work	
Jay, Tim Ph.D., Cognitive Psychology Full Professor	<input checked="" type="checkbox"/>	• PSYC 100 (C)	1	Daytime	Part Time	Full-Time Psychology	• Main Campus
Kiley, Erin Ph.D., Mathematical Sciences Assistant Professor	<input type="checkbox"/>	• MATH 232 (C)	1	Daytime	Part Time	Full-Time Mathematics	• Main Campus
Krzyzanowicz, Ryan Doctor of Athletic Training Assistant Professor	<input type="checkbox"/>	• PHED 120 (C)	1	Daytime	Part Time	Full-Time Biology	• Main Campus
Mickey, Marisa M.S., Exercise Science Instructor	<input type="checkbox"/>	• BIOL-342 (C) • BIOL-343 (C)	1	Daytime	Part Time	Full time Biology	• Main Campus
Sheldon, Lisa M.S., Nutrition Adjunct Professor	<input type="checkbox"/>	• PHED 215 (C)	1	Daytime	Part Time	Part time Biology	• Main Campus