

Instructional Programming

- A. *Description of existing academic programs and projected programming changes during the next 5 years, in so far as academic programs are affected by specific structural considerations (i.e., laboratories, classrooms, current and future distance learning initiatives).*

Lake Michigan College (LMC) has served Southwestern Michigan for over fifty years. The College officially offers one baccalaureate degree in Energy Production and Distribution Management and 35 distinct programs of study at the Associate Degree level and prepares students for a wide variety of other academic majors through transfer degree options. The College also offers 34 certificate programs.

Existing Academic Programs

The College's credit academic programs are offered through three instructional divisions (Arts and Sciences Education, Career and Workforce Education, and Health Sciences Education) that serve the Napier Avenue Campus in Benton Harbor as well as two branch campuses: South Haven and Bertrand Crossing. South Haven and Bertrand Crossing are approximately a half hour drive from the Napier Campus and serve the northern and southern portions of LMC's district, respectively.

The Arts and Sciences Education Division consists of five departments, with courses in the following disciplines:

Transitional Studies

Transitional Studies Math, Transitional Studies English, Transitional Studies Reading, and College Life Studies

Natural Sciences

Biology, Chemistry, Physics, Physical Science, Engineering/Manufacturing Engineering, and Natural Science

Rhetoric, Communication, and Foreign Languages

Communication, English, Foreign Languages

Mathematics and Physical Education and Wellness

Mathematics, Physical Education and Wellness

Social Sciences, Humanities, Creative Arts, and Education

Geography, History, Political Science, Psychology, Sociology, Honors, Art, Dance, Drama/Theatre, Humanities, Music, Philosophy, Social Work, Child Development, and Elementary Education

The Career and Workforce Education Division is comprised of six departments, with courses in the following disciplines:

Advanced Manufacturing, Energy, and Information Technology

Apprenticeship, Energy Production, Energy Production – HPRP, General Technology, Skilled

Trades, Welding, Computer Information Systems (Applications Development, Geospatial Information Science & Technology Certificate, Networking, Web Development), Graphic Design

Business, Culinary, and Hospitality

Accounting, Business Administration, Business (Sales and Customer Service, Small Business Management, Supervisory Skills, and Supply Chain Management), Casino Management, Criminal Justice Culinary Management, Energy Production and Distribution Management (BAS), and Hospitality Management

Wine and Viticulture Technology

Enology and Viticulture

The Health Sciences Education Division is comprised of six departments, with courses in the following disciplines:

Health Sciences

Dental Assisting, Healthcare Education (Emergency Medical Technician, First Aid/CPR, Medical Assisting, Phlebotomy Technician, Electrography Technician, and Pathways Education and Training in Certified Nurse Assistant), Medical Imaging (Computerized Tomography, Diagnostic Medical Sonography, Magnetic Resonance Imaging, Radiologic Technology), Nursing, and Pharmacy Technician.

Apprenticeship Training

Forty-five area employers are active partners with LMC in the Apprentice Training Program, which combines classroom study with work-based learning. Over 140 apprentices in thirty-five occupational areas fill much needed area jobs. The Bureau of Apprenticeship and Training, U.S. Department of Labor approves the apprenticeship training programs. Career areas include drafting/design, machine building, maintenance, metalworking, mold making, quality control, and other skilled trade classifications.

Customized Training

Centrally located the Hanson Technology Center in a fully wireless environment, Customized Training uses a non-credit to credit pathway strategy to provide community outreach services, business solutions, and customized training. Customized Training activities are supported by state of the art classrooms, labs, and conference rooms.

The Career and Workforce Education Division also provides outreach activities that support community needs and build important relationships with the College's service area. Staff monitors the needs of business, industry, and community organizations and advocates for workforce development and education by participating in regional advisory boards and public forums and seeking other opportunities to connect and network with the community.

Customized Training staff provides customized training by drawing from the resources of the College and outside individuals with relevant expertise and experience working with business and industry. Programming created through this unit can involve academic credit, with training delivered at the client's location or on-campus. For example, Four Winds Casino is

currently offering classes for academic credit at their sites. Lake Michigan College is also an authorized site for Pearson Vue certifications, WorkKeys assessment testing, and GED testing. Over 100 computer certification exams are available through Pearson Vue Testing.

Other courses and/or services offered by this unit include:

- Advanced Manufacturing Fundamentals: Welding, CNC, Blueprint Reading, Mechanical or Technical Math, and OSHA Safety Training
- Retail Customer Service
- Soft Skills Training
- Leadership and Supervisory Skills
- SHRM Learning System Course for Professional Human Resource Management
- Internships, externships, and job shadowing experiences coordinated through the Director of Workforce Outreach.

Healthcare Education

Created in Fall 2013, the Healthcare Education delivers short-term programming in both credit and non-credit formats. A primary purpose of the Healthcare Education is to create a unit responsible for researching and creating programs that fill gaps in workplace needs for the ever-changing healthcare industry. The design of the Healthcare Education allows for a unique integration of non-credit and experiential learning with more traditional credit offerings, and provides maximum flexibility for students to enter and exit programs as their life circumstances permit. Students can be admitted directly into credit programs in Emergency Medical Technician (EMT) and Medical Assisting, or they can enter Healthcare Education credit programs with CEL (Credit for Experiential Learning) after completing short-term training in Certified Nurse Aide (CNA). All programs offered through the Healthcare Education Institute (HEI) are designed to provide students with opportunities to learn and gain practical experience in a hands-on, interactive environment. Each of these programs also prepares students to sit for a state, national, and/or industry recognized certification.

Auxiliary Academic Support Services

Distance Learning

Recognizing that not all students, especially adult learners, can attend regularly scheduled classes because of conflicting work and family responsibilities, the College has offered distance education courses since 1989. Distance learning has steadily increased in importance as a means of providing access to higher education in Southwest Michigan.

Lake Michigan College was the **first** Michigan community college to offer two-way interactive courses. While the College still maintains an electronic classroom capable of originating and receiving two-way interactive (ITV) classes between all three sites simultaneously, ITV plays a minimal role today in technology-mediated instruction at a distance. Online courses now comprise the largest type of distance learning at LMC, as well as the fastest growing segment of our student population. In Fall 2015, 694 students took at least one online course. These students enrolled in 2,942 billing hours, accounting for 8% of tuition revenue, which is up by 2% from 2 years ago. Online instruction continues to grow.

The College invests significantly in the technical and human resources infrastructure needed

to support distance education. Its newest Learning Management System (LMS), Canvas, was fully implemented in Fall 2013 and is the primary platform for delivering distance education course content. Housed and administered in the Teaching and Learning Center (TLC) on the Napier Campus, Canvas training is provided to both full-time and adjunct instructors by two TLC staff. As the College expands its distance education inventory, involving more faculty, integrating more student service support, and maintaining its focus on a high quality distance education product, the existing TLC space is in considerable need of substantial capital improvements in the near-term to meet student demand for more flexible course offerings.

The Teaching and Learning Center

Created in Fall 1996 with the aid of a federal Title III grant, the purpose of LMC's Teaching and Learning Center is to introduce new teaching methods and classroom technology, to provide training and support for the College's Learning Management System (LMS), and to offer year-round professional development activities for 54 full-time faculty and over 200 adjunct faculty. The Center is staffed by one full-time Director, one full-time Instructional Technologist, and the Director of Distance Education. It is located on the Napier Campus but routinely provides on-site faculty training and support services to the Bertrand Crossing and South Haven campuses. The Center is comprised of a 13-station computer lab, an adjacent gathering room with an additional 6 computing spaces, and three offices. Center staff provides support for a large number of software applications and instructional technologies, including audience response systems, video screen capture and conferencing, plagiarism detection, and webinars, as well as the administration of the College's LMS.

The College's LMS system (Canvas) supports not only traditional classroom teaching, but is also the primary platform for the LMC's distance education program. Demand for distance learning opportunities has steadily grown each year with all online course sections filling first and fastest each term. Enrollments in distance education have grown significantly over the last five years, with FTE and billable hours generated comparable to that of the satellite campuses. As enrollments increased in distance education, the TLC staff became increasingly involved in both the administration and training aspects of a maturing distance education program, leading to the creation of a Director of Distance Education position which was filled in the Fall of 2015. The Director of Distance Education is responsible for all required training on the use of the College's learning management system in online courses and for coordinating and providing all pedagogical and course design training that faculty must complete in order to implement or teach distance learning courses. The Director is also responsible for initiating the course design and review process and for advising and supporting the faculty throughout that process.

Finally, the TLC provides additional professional development activities crucial to assuring student success in LMC classrooms. These activities have included hosting various webinars on a wide variety of instructional topics, topical training requested by individual departments, and meetings or training activities with various publishers (Cengage, McGraw Hill, Pearson) that integrate with Canvas. Spirited discussions, collective problem-solving, and learning the art and science of teaching take place daily in LMC's Teaching and Learning Center.

Career Services

Lake Michigan College offers a variety of services to help students and community members

prepare for the future. Career Services maintains an on-line job board free of charge to employers and job seekers, and posts the jobs in strategic locations listing a variety of available part-time and full-time local jobs. In addition, the Career and Transfer Center provides resources to help individuals choose or reaffirm the career best suited to their interests and talents, assists individuals with Cover Letter and Resume Writing and Interviewing Skills and presents these topics as workshops and in-class presentations. The Career Center facilitates the Work Study program, assists students with Transfer and Articulation and is responsible for helping students who are struggling to access State benefits and wrap-around services. The Career Center has established a laptop loan program where students can borrow a laptop for two weeks at a time and/or TI-84 and TI-34 calculators and digital recorders at no charge to them for the whole semester. As the Career and Transfer Center broadens its services and the number of students served, additional space needs are being identified.

Projected Programming Needs for Next 5 Years

The need for new programs and academic support services are identified in a variety of ways. In addition to environmental scanning conducted during the College's regular strategic planning activities, advisory committees routinely assist the College in identifying regional employment needs and trends. Academic Deans and Faculty also play a key role in proposing new programming by staying abreast of developments in their fields of expertise, helping to assure that LMC students are prepared for the future as well as the present.

Enology, Viticulture, and Culinary Management

Of particular note in emerging programming, the College conducted a series of discussions to develop programs that support regional and statewide economic development efforts in hospitality and tourism. Southwest Michigan, already well known for its robust fruit and vegetable agribusiness industry, is also home to a growing number of vineyards and small wine producers. In states such as Washington, California, Oregon, and New York, the expansion of the wine industry has led to increased tourism and has stimulated significant job creation in agriculture, hospitality, culinary arts, and entertainment. Southwest Michigan is well-positioned for growth in the wine and tourism industries. With its unique combination of climate, soil conditions, and a well-established tourism base, enology and viticulture programming at Lake Michigan College could well be a game-changer for the region's economy. Development of our new Enology and Viticulture Program is complete and we have received Higher Learning Commission approval. The program launched this fall with 13 students.

A natural companion to enology and viticulture is the development of culinary programming. The strong tourism base in southwest Michigan has attracted a number of culinary entrepreneurs eager to capitalize on the thousands of tourists who come to experience the beauty of Lake Michigan and sample the products of a maturing wine industry. Lake Michigan College's existing Hospitality Program is one of the largest and fastest growing majors in our program inventory. The College receives frequent requests to expand the culinary option within that program, but lacks the facilities to respond adequately to the demand. The physical space exists within the current footprint of its Napier Campus; however, the budgetary commitment required to build a teaching kitchen and outfit the instructional area with commercial kitchen equipment is substantial and, thus far, out of reach under current fiscal conditions.

Despite current budgetary constraints, the College has worked diligently with local wine growers,

area restaurateurs, other educational institutions, Kinexus/Michigan Works, and state and local economic development agencies to find a way to bring focus and funding to the planning required to carry out these large scale projects. LMC staff and Board members have held numerous meetings, visited teaching wineries, explored curriculum, and strengthened partnerships with organizations that have similar interests in meeting regional educational needs. The College has invested in renovating space within its Mendel Center for an interim Enology and Viticulture Lab until funds can be identified for a permanent structure.

The College's long-standing relationship with Michigan State University (MSU) is an excellent example of results that can be attained through partnership. LMC has signed an agreement to use MSU's experimental vineyard in Benton Harbor as a laboratory for LMC students to learn to grow and tend vineyards as part of our new Enology and Viticulture Program.

The combined programming of Enology, Viticulture, Culinary Management, and Hospitality — all of which have an existing base at LMC — has enormous potential for economic growth in southwest Michigan. Currently, that potential is only limited by funding for capital improvements.

Baccalaureate in Energy Production and Distribution Management

Lake Michigan College received approval from the Higher Learning Commission in Spring 2014 to offer a new baccalaureate program in Energy Production and Distribution Management. Authorized by the Michigan State Legislature in December 2012, LMC launched this new program in the Fall 2014 Semester. This degree program was heavily requested by local nuclear power producers who helped build the College's associate degree program in Energy Production in 2009. The Associate Degree program provides employers with graduates well-trained in the technical skills required in the energy production industry. The Bachelor's Degree of Applied Science in Energy Production and Distribution Management Program builds upon this strong technical foundation by adding a junior and senior level tier of business-oriented courses that will address an ever-expanding gap in leadership and management skills created in the industry by a record number of retirements. In addition, the United States Energy Information Administration reports that Michigan's natural gas fields are among the largest in the United States. Michigan has the largest residential liquefied petroleum gases (LPG) market in the nation and is a major corn producer with substantial ethanol production capacity. The American Wind Energy Association (AWEA) ranks Michigan tenth in the United States for number of wind related jobs.

Other Emerging and Projected Programming

The following academic and support programs are emerging, proposed, or expected to undergo feasibility studies within the next five years at LMC:

Academic Program	Requires Structural Needs	Distance Learning Component Included
Business		
• Business Education and Resource Center	X	X
Computer/Applications Development	X	X
Wine and Viticulture	X	
Biotechnology/Food Safety		X

Emerging Technologies		
• Engineering Technology	X	
• Geographic Information Systems (GIS)	X	X
• Instrumentation and Process Control	X	
• Mechatronics	X	
Health Sciences		
• Pharmacy Technician	X	
• Physical Therapy Assistant	X	X
• Occupational Therapy Assistant	X	X
• Medical Coding & Billing	X	X
• Surgical Technology	X	
Manufacturing Technologies		
• Advanced Manufacturing	X	X
• Prototype Design	X	
Culinary Management	X	X
Academic Support Programming		
• Career Services		X
• Work-based Learning	X	
• Student Success Center	X	
• Guided Pathways Advising	X	X

B. Unique characteristics of each institution's academic mission

- The College district consists of Berrien County and contiguous Covert Township and South Haven in neighboring Van Buren County. Located in the southwest corner of the State, Berrien County has a population of 161,734 and a workforce of 82,100. The three largest cities include Benton Harbor, Niles, and St. Joseph. In 1997-98, the College expanded its service area to include the northern Indiana counties of Elkhart, St. Joseph, and LaPorte. In 2003, the College added South Haven to its service area.
- Lake Michigan College's primary educational sites include the Napier Campus in Benton Harbor and branch campuses in South Haven and Bertrand Crossing (Niles). As of mid-October, Fall 2016, the Bertrand Crossing campus had enrolled 498 students; and South Haven, 335 students. The Napier Campus had enrolled 2,309 students. The Napier Campus is the only campus where full degrees can be earned. Bertrand Crossing and South Haven are staffed with a Campus Executive Dean, as well as Student Services personnel, and some dedicated full-time faculty. Each of these sites provides convenient access to higher education with a wide variety of programming options. As the Bertrand Crossing and South Haven campuses grow, full degree programs become more viable adding to the facilities issues that LMC must plan for over time.

- In addition, the College has extended its programming into three unserved counties, Ottawa, Allegan and Van Buren outside of South Haven, at their request. Through the Allegan and Van Buren Tech Centers, LMC delivers high quality, career-focused programming through its Early College program. Allegan County signed a formal agreement with LMC in 2013 that acknowledges this on-going relationship and the benefits it provides for its rural communities. The Allegan agreement also provides adult credit classes supported by advising and other student services provided by the South Haven Campus.
- The College participates in a statewide consortium of Magnetic Resonance Imaging programs with four other Michigan community colleges as well as Grand Valley University. This consortium graduated 20 students this year, four of whom were from LMC. Each community college contributes instructors, courses, and collaborates on the development and oversight of clinical experiences for students. LMC has contributed five of the 10 courses developed for use in the consortium.
- LMC operates one of the largest Early College programs in the State. Its purpose is to provide talented high school students with college credit to encourage participation in higher education post-graduation. It also serves to provide extra support to young students in the transition from high school to college with an emphasis on college readiness and student success. Offering direct credit (taught by qualified high school teachers at high school sites) and dual credit (taught by LMC faculty at an LMC facility), the Early College program serves approximately 2,000 students annually in over 40 regional high schools and tech centers. Demand for Early College programs continues to increase. Fall 2014 enrollment data indicates an increase of 15% in unduplicated headcount, a 20% increase in credit hours, and a 23% increase in billing hours for this program.
- Located on-site at the Napier Campus, Siena Heights University (SHU) has partnered with Lake Michigan College for over thirty years to offer a degree completion center on the Napier Avenue Campus. The LMC/SHU partnership was the first of its kind in Michigan when it started in 1982. Currently six bachelor degree programs and two online master's degree programs are available to LMC students and area residents. A unique "3 + 1" academic model allows students to transfer up to 90 semester hours from LMC into their baccalaureate degree with SHU, saving students significant tuition expense. With a focus on meeting the needs of the adult learner, Siena Heights University is an important and valuable partner in raising college education attainment rates in southwest Michigan.
- Western Michigan University (WMU) operates a 40,000 square foot regional center located on the LMC Napier Avenue Campus, known as its Southwest Regional Campus. The facility opened October 25, 2002. WMU-SW offers two undergraduate programs that can be completed at this site, in addition to post-baccalaureate degrees.
- A large part of LMC's service area is comprised of a rural and economically disadvantaged population. The Educational Opportunity Center (EOC) at Lake Michigan College serves a minimum of 1,095 participants each year. The EOC receives funding from the U.S. Department of Education, and serves individuals in the Michigan counties of Berrien, Cass, Van Buren, and Allegan, and the Indiana counties of La Porte and St. Joseph. The EOC provides information and assistance to adults (19 years and above) who are interested in

furthering their education. Services to eligible participants include academic tutoring (in preparation for GED or college assessment testing), career assessment, assistance completing applications toward college entrance, referrals to appropriate adult education centers, and/or community assistance agencies. The goal of the EOC program is to increase the number of adult participants who enroll in postsecondary education institutions.

- In August 2012, the College, the Berrien RESA, and Brandywine Community Schools combined resources, physical locations, and machine tool equipment to provide efficiencies in the career path of students entering machine tool and manufacturing professions. The new LMC at Brandywine provides a space for high school juniors and seniors to earn college credits in the morning, freshmen and sophomores learn about careers in machine tool in the afternoon, and then in the evening college students and apprentices, many of them sponsored by local manufacturers, work toward skilled trade degrees and journeymen cards. Curriculum has been developed so that high school juniors attend two years of manufacturing academy and then complete an associate's degree in just one more year of college at LMC.
- College outreach also extends to the Career Tech Center at Niles High School.

Elementary and middle school students also participate in classes, after school clubs, and team competitions for First Lego League, First Tech Challenge, Vex, SeaPerch and FRC at the Youth Robotics programs.

The Hanson Technology Center located on the Napier Avenue campus opened in August 2016. Programs include Apprenticeship, Energy Production Technology (General Energy Production, Health Physics/Radiation Protection), Welding, CAD/CAM, Industrial Maintenance, Machine Tool (CNC, Rigging), and Electronics (Hydraulics, Pneumatics). Newly targeted programs made possible through the construction of this 38,997 square foot facility include Robotics, Engineering Technology, Prototype and Design Technology, Creative Welding, Innovations and Fabrications, Mechatronics, and a Bachelors of Applied Science program in Energy Production and Distribution Management.

The technology building is designed with new, sustainable energy-efficient systems. The facility itself will be used as a learning tool for students, demonstrating the use of natural building materials and sustainable methods. Five classrooms attached to four labs (a fab lab, welding lab, and two advanced manufacturing labs), collaboration spaces, along with a simulation classroom are available for students. The simulation classroom is a state-of-the-art classroom complete with 6'9" x 16' touchscreen and the ability to hold up to 46 students.

The LMC Fab Lab is located within the Hanson Technology Center on the Napier Campus. The Fab Lab will be accessible to students, employees, and the community via memberships. Equipment for the Fab Lab includes laser cutters, vinyl cutters, 3D printers, a woodshop with a CNC router, and various pieces of portable equipment to handle a variety of projects. A design center is also included to encourage creativity, entrepreneurialism, and collaboration.

- Niles Community Schools created a "school within a school" at their high school in 2011. The first class of this Niles New Tech Entrepreneurial Academy incorporates many college credits for those who are college ready. Currently 89 students are taking at least two college classes

each per semester at the Bertrand Crossing campus.

- The College annually hosts the Business Professionals of America (BPA) Region 10 District Competition on its Napier Avenue campus. Over 500 students from fourteen regional high schools compete to advance to the BPA state competition. Not only is the College privileged to assist these students in developing their business acumen; but it also offers the opportunity to introduce potential College students to our campus and programs.
- Lake Michigan College continues to apply best-practices, derived from national (Achieving the Dream) and state (MCAN) initiatives, to move students from college entrance to high quality degree or credential completion. LMC is determined to combine greater 'access' with better student 'preparedness' to achieve student outcomes. The following summary outlines our efforts to support and enhance the access afforded students through the Benton Harbor Promise Zone.
 - 2011 – Data Gathering - The implementation of the Benton Harbor Promise Zone (BHPZ) brought a 73% increase in students from Benton Harbor to Lake Michigan College. As the Fall 2011 semester ended, there was anecdotal feedback from College faculty and staff that this cohort of students was struggling to engage in behaviors linked to college success. Following the spring semester, an assessment of this cohort's college outcomes revealed an achievement gap that begged for the College's development of innovative interventions and new energy to address this success gulf. The College applied for grant resources from the Upton Foundation to develop a pilot, the 'Start to Finish' program, to bring best practices for college access and completion to BHPZ students.
 - 2012 – Start to Finish Pilot – First Interventions and Early Success – 45 students from the Benton Harbor Promise Zone became the pilot cohort for the Start to Finish program. Interventions were focused on Advising/Mentoring, Supplemental Instruction, Life Barrier Problem-solving, and Study Skill Development. Results at the conclusion of the first year of the pilot suggested some impact on student success for the 2012 BHPZ cohort, as compared to the 2011 cohort after their first year at the college.
 - The Start to Finish Program includes, as support services:
 - Summer Success 2-Credit Intensive College Preparation Course
 - Intervention and Success Building
 - Early Placement Testing with designing "catch up" plans
 - Financial Aid Planning
 - Career Exploration and Planning
 - "College 101" Content (for building understanding/confidence with College Culture)
 - Lifeworks Skill Building
 - Start to Finish 2013 – Present – Across all measures of student success, including attendance, course completions, retention fall-to-spring, progression fall-to-fall, transitional course progression, and certificate/degree completion, the participants (now numbering approximately 130 students) have shown positive gains each year. Most notable is the dramatic increase of students progressing to degree completion. In May, 2015, 16 students were awarded degrees and certificates, nearly three times

as many students as had completed degrees from these targeted schools in the previous six years.

- The College has a Student Support Services program through a five-year U.S. Department of Education grant. Designed to help 200 students overcome class, social, academic, and cultural barriers to higher education, the program is intended to help first generation, low income students and students with a disability persist until they earn a certificate or associate degree; or earn a certificate or associate degree and transfer to a four-year institution to complete a baccalaureate degree or higher.
- The College partners with Benton Harbor Area Schools to serve 73 students in the Upward Bound Program. The Upward Bound Program focuses on preparing high school students to graduate from high school, enroll in, and complete a program of postsecondary education. Benton Harbor High School is the target school.
- Lake Michigan College joined the Guided Pathways Initiative offered by the Michigan Center for Student Success in September 2015. The intent of this initiative is to improve student completion and success. Lake Michigan College's work has focused on developing "meta-majors" to help entering students choose a program of study, which includes identifying critical courses and other milestones that students are expected to attain as they progress through their education. Faculty in conjunction with advisors are developing a sequence of appropriate pathways to follow via "meta-majors". Their focus has been on four (4) types of students: college ready; not college ready; transfer; non-transfer. There are intervention points along the way, whereby faculty and advisors can meet with the student to ensure he/she is progressing on their education path. At present, Lake Michigan College is working on course sequencing via a new digital pathway tool that faculty, advisor, and students will use. Current areas that are being focused on to ensure student success are: mapping pathways to student end goals; helping students enter a pathway; keeping student on a path; ensuring that students are learning. Outcomes from these areas will allow team members to adjust/enhance the Guided Pathway process.

C. Planned initiatives which may impact facilities usage

Two planned initiatives will have a major impact on use of College facilities and property. The initiative includes:

- Renovation and upgrade of the Napier Avenue Campus Academic Facility
- Introduction of Enology, Viticulture and Culinary Programs

A summary of the two projects follows.

Renovation and Upgrade of the Napier Avenue Campus Academic Facility

This project is **identified as our #1 FY '18 Capital Outlay Request**. An investment in a 45+ year existing facilities and infrastructure (scoring criteria a), the project includes a sustainable design (scoring criteria d) which will save approximately \$320,000 in energy costs annually (scoring criteria g). Project will address current safety deficiencies caused by regular HVAC system breakdowns (scoring criteria b). The Napier Avenue Campus Academic facility is operating at capacity, making temporary space rental necessary at our WMU-SW partner's facility on our

campus and at an offsite facility (scoring criteria c). We are also restricted currently from adding additional programs and services, including a planned Student Success Center, Business Education and Resource Center, and a Faculty Service Center. Estimated cost for this project is \$16,954,646 (scoring criteria e), of which the College can assume 50% of the cost (scoring criteria f). Operating costs would decrease with the efficiencies achieved through this renovation, both in energy and rental expenses (scoring criteria g). We do not anticipate any increase in tuition due to this project (scoring criteria h). Besides the immediate positive job impact due to construction, we anticipate energy production and distribution program and regional growth supported by the new HVAC system serving as a learning laboratory and employment support due to the expansion of a Career and Transfer Center. Additionally, the College's Academic Plan focuses on new and updated program development directly tied to area projected job creation (scoring criteria i). Lake Michigan College has not received any State of Michigan capital funding for **13** years (scoring criteria j).

A summary of this project follows.

FY '18 CAPITAL OUTLAY PROJECT REQUEST



Project Request: \$17.0 million
State Funding: \$8.5 million
College Share: \$8.5 million

The College's classrooms have been little changed in more than 40 years and no longer support current teaching, learning and student communication methods.

NOTE: In the past five years, the College invested \$7.3 million in general funds to renovate its science labs. This project closed the over four decade gap between current classroom spaces and the spaces needed to deliver classroom content in a fast paced, multi-media and technology driven world. The project helped double the retention rate of students enrolled in the sciences, from 35% to 70%.

PROJECT REQUESTS

1. Classroom Modernization and Infrastructure Upgrades \$12.4 million

The College proposes modernizing 50 classrooms and 2 lecture halls in its 46-year-old classroom facility along with several areas for student engagement and learning. **The project will complement a 3-year, \$7.3M College funded renovation** of its science laboratories in support of our Science, Technology, Engineering and Math (STEM) initiative.

Classroom and Lecture Lab features will include:

- Flexible seating to accommodate multiple teaching and learning strategies
- Smart Boards
- White Boards
- Access to power outlets for Internet and mobile technology
- Improved heating, ventilation and acoustics
- Safety features on doors, connected to emergency communication network
- Average classroom capacity: 24/Lecture Lab capacity: 80-100
- Lecture and lab educational spaces designed to serve as Business Education Center that will support College business classes, entrepreneurial education, and corporate training, as well as business education events, such as guest speakers sharing business experiences and expertise with students and community members.

2. Energy Infrastructure Installation: \$4.6 million

With the replacement of the 45+ year HVAC system annual energy savings are projected to be nearly \$320,000 in today's dollars. Project elements include replacement of mechanical infrastructure and support systems with new sustainable, energy- efficient mechanical and support systems, including heating, cooling, air distribution, building control systems, supporting electrical and ceiling systems, fire alarm system, and security systems.

Instructional impact:

Incorporated into the Energy project is a plan to use the College's physical plant as a learning laboratory. Energy simulation modeling through campus redesign will allow for buildings to serve as teaching tools, technology, operations and maintenance tools, educational and policy outcomes learning tools.

*The last Capital Outlay project was more than 13 years ago and was used to support the construction of the College's South Haven Campus. That campus now enrolls nearly 500 students.

During the past seven years (FY 2009-FY 2016) the College has invested more than \$38 million of College resources to address critical infrastructure and facility improvement needs.

Introduction of Enology, Viticulture and Culinary Arts Program

Evidence of Need

Enology and Viticulture:

Michigan is home to over 100 wineries, producing more than 1.3 million gallons of wine annually, primarily from grapes grown in Michigan. According to Michigan's Grape and Wine Industry Council, Michigan has 15,000 acres of vines, making Michigan the fourth-largest grape producing state, with 2,650 acres devoted to wine grapes, making Michigan the fifth state in wine grape production in the United States.

The wine industry contributes more than \$300 million annually to Michigan's economy. The population centers geographically adjacent to Michigan create a viable market for the growth of Michigan tourism catalyzed by the expansion of the wine industry.

The workforce within the current wine industry is primarily self-taught, with very few formally trained individuals. Local industry representatives have expressed their belief in the value of an educational program that would provide concrete, practical, performance-based training to prepare individuals for jobs in the wine industry, including certificates and degrees in enology and viticulture. In response to this call to action from the local wine industry, Lake Michigan College has developed an Associate in Applied Science degree in Enology and Viticulture and hopes to serve as a catalyst for the growth of the wine, hospitality, and tourism industries in Southwest Michigan.

Hospitality and Culinary Management

There are 415,500 Michigan jobs available in hospitality and culinary in 15,982 restaurants alone. Lake Michigan College has offered both certificate and associate degree programs in Hospitality Management for over 30 years. Graduates of our hospitality, tourism and casino management programs can be found applying their skills in quality restaurants, hotels, wineries, and gaming establishments throughout the country. There is great interest among K-12 partners in culinary management. The local economy has renewed its focus on tourism and restaurant operations, increasing the need for students with the skills and abilities to be proficient in these areas.

In 2013, LMC developed the Associate degree in Applied Science – Culinary Management to meet the overwhelming need for highly qualified food service personnel including kitchen managers, sous chefs, and line cooks.

The Culinary Management program provides students with a hands-on education in culinary arts with an added focus on business-related topics. In addition to commercial cooking and dining room service instruction, students learn about marketing, human resource management, legal requirements, and financial analysis specific to the culinary industry. Traditional classroom instruction is enhanced by aligned work-based learning activities, including special events and internships. To meet the culinary needs of our region, students must be able to gain industry experience in a professional environment site previously approved by the full time culinary arts instructor or academic advisor.

Proposal

There is a natural synergy between these programs; therefore, the College is proposing the design and construction of a stand-alone Wine and Culinary Education Center.

Besides meeting the needs of our current students, the Wine and Culinary Education Center will provide the ideal scenario to host a variety of non-credit classes including communication education opportunities and work-force training.

Enrollment Projections

Lake Michigan College launched its Culinary Management program in 2013 with a cohort of 7 students. In Fall 2014, the unduplicated headcount grew to a 29-student cohort, which continues in Fall 2015. This growth is without significant promotion or a professional culinary kitchen. In addition, the College has 40 Hospitality Management students, along with 15 in its first Enology and Viticulture cohort.

Based on Michigan community colleges similar in location and size to LMC, the College can conservatively project 100-120 students in Culinary Management, in addition to our continued Hospitality Management enrollment of 40. At full capacity, LMC expects 24 first year students and 24 second year students annually in Enology and Viticulture.

These College programs are already approved by the Higher Learning Commission. A summary of this project follows.

Reutilization of Existing Structure (Historic Barn) on Napier Avenue Campus

Design Program – Overall concept: The existing 110 year old barn has been deconstructed and the structural members have been stored for reuse. The barn's heavy timber wood structure can support reutilization as the architectural focal point of a new Wine and Culinary Education Center. The agriculturally focused compound of architecturally sympathetic contemporary structures will be interconnected with covered open and enclosed walkways and will overlook a display vineyard.

Existing Conditions – 110 year old barn is structurally sound but needs more analysis of the footings and foundations. The heavy timber wood structure can support reutilization.

Access – Building site has good access from Empire Avenue; access possible to the south from Yore Avenue using the existing lane off of the Mendel Center north parking.

Interior:

Structure - Existing aged timbers provide incredible character. The system of post and beams are in a workable pattern providing fourteen by twenty foot bays sixteen feet high with horizontal beams at twelve and sixteen feet both on the center bays and six feet on the west bay and seven and a half feet on the east bay (supporting the loft area).

Design Considerations:

The complex is to provide space for the Lake Michigan College Viticulture, Enology and Culinary Arts Center. LMC is in a unique position to combine its wine program with those of hospitality and tourism. The center's main purpose is to provide a state of the art educational facility for LMC's Viticulture and Wine Technology degree, a program that emphasizes hands on experience in all aspects of winemaking and vineyard management, along with shared space for Culinary Management. The center will house classrooms and lab area; culinary kitchen and student restaurant lab, winemaking lab, aging rooms, wine storage, crush pad, bottling and labeling

rooms. The overall site development includes an adjacent rotating vineyard with vines in stages of production, a kitchen garden and in-ground wine storage facility. The reuse of LMC's historic barn as an attraction for visitors to learn about wine making, tasting, and food paring is a special opportunity to integrate the Hospitality and Culinary Arts Program with enology. At the heart of southwest Michigan's wine trails, just off I-94, the ability to offer light meals or catered events is a special feature.

Budget:

a. Land Acquisition	\$ 0
b. Construction Costs	\$5,184,642

D. Demonstration of economic development impact of current/future programs

The economic impact of current and projected academic programming at Lake Michigan College is substantial and critical to the growth of southwest Michigan's regional economy.

- Current and projected programming described in this document is designed to create a workforce prepared to meet the needs of the existing employers as well as to attract new jobs, businesses, and industries to our area. Studies have repeatedly revealed the availability of an educated workforce as a primary factor in the decisions of employers to create jobs or to relocate and/or expand their business or service organizations. Highly qualified graduates in manufacturing, energy, computer information systems, enology and viticulture, hospitality and culinary, and health sciences are critically needed to expand the economic base of southwest Michigan. Eighty-five percent (85%) of LMC graduates currently remain employed locally, boosting Michigan employment.
- Updated science and health sciences labs and facilities, made possible by a federal Title III grant and substantial College capital investments, produced state-of-the-art science facilities for LMC students over the past five years. As a result, the College has seen an increase in the number of STEM majors. As the number of students who successfully complete rigorous science and math courses increase, LMC's service region will greatly benefit from a steady stream of qualified and skilled workers able to contribute to needed change processes and emerging technologies.
- The baccalaureate degree in Energy Production and Distribution Management will significantly impact the availability of workers in a targeted industry for both our region and our state. Local plants will have a larger pool of locally qualified candidates for needed positions and improve the competencies of incumbent workers now on the job site.
- New advanced manufacturing and energy technology facilities will support the College's opportunities to offer proposed programs in Advanced Manufacturing and Engineering Technology. Manufacturing growth has been identified as one of the key factors to economic recovery in Michigan. Creation of well-equipped and safe learning environments for students engaged in these programs is necessary to support manufacturing growth in our region.
- New instructional programs in enology, viticulture, and culinary will support the growing wine and tourism economies in southwest Michigan. In states such as Washington, California, Oregon, and New York, the growing wine and tourism economies have stimulated significant

job creation in agriculture, hospitality, tourism, and entertainment. Southwest Michigan, which is already a well-established tourist destination, has great wine sector growth potential. New enology, viticulture, and culinary programs at Lake Michigan College are needed to support and stimulate regional economic growth in wine cluster sectors.