

## **Five-Year Capital Outlay – Instructional Programming for FY 2021-2025**

- 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).*

The College offers 35 distinct programs of study at the Associate Degree level and 25 certificate programs. See **Exhibit 1 - Registrar's Official Program Major Listing**.

### **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 campuses in Benton Harbor, Niles, and South Haven. The South Haven and Niles campuses are approximately a half hour drive from the Benton Harbor Campus and serve the northern and southern portions of LMC's district, respectively.

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

#### **Mathematics and Physical Education and Wellness**

##### **Natural Sciences**

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

##### **Rhetoric, Communication, and Foreign Language**

Communications, English, and Foreign Language

##### **Social Sciences, Humanities, and Education**

Child Development, Geography, History, Honors, Humanities, Philosophy, Political Science, Psychology, Sociology, and Teacher Education

##### **Visual and Performing Arts**

Art, Dance, Music, and Theater/ Drama

##### **Transitional Studies (Developmental Education)**

Transitional Studies Math, Transitional Studies English, Transitional Studies Reading, English as a Second Language, and College Life Studies

##### **Wine and Viticulture Technology**

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

##### **Advanced Manufacturing and Energy**

Automation Engineering, Energy Production, Engineering Technology, General Technology, Machine Tool, Mechatronics, Skilled Trades, Welding, and Apprenticeship

**Business, CIS, Culinary, and Hospitality**

Accounting; Business Administration; Business with tracks in Computer Information Systems, Sales and Customer Service, Small Business Management, and Supervisory Skills; Casino Management; Computer Information Systems with tracks in Applications Development, Geospatial Information Science & Technology, Networking, and Web Development; Criminal Justice; Culinary Management; Graphic Design; and Hospitality Management

The **Health Sciences Education** Division is comprised of four departments, with courses and programs in the following disciplines:

**Allied Health**

Certified Nurse Assistant (non-credit), EKG Technician, Emergency Medical Technician, First Aid/CPR (non-credit), Medical Assisting, Pharmacy Technician, and Phlebotomy Technician

**Dental Assisting**

**Medical Imaging**

Computerized Tomography (CT), Diagnostic Medical Sonography, and Radiologic Technology

**Nursing**

**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 labor market analyses and 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 employment and transfer opportunities.

The College's Academic Affairs Division is currently experimenting with alternative delivery modalities—including Virtual Learning Environments (VLE), Virtual Reality (VR), and Augmented Reality (AR)—to enhance learning and provide flexible access to higher education for all those who seek it. Utilizing Virtual Learning Environment (VLE) delivery methods allows for significantly increased accessibility and convenience for students. VLE lessens the impact of scheduling conflicts and travel expenses—while increasing access to instructional materials through both live and recorded classroom lectures—which can be viewed remotely. Virtual Reality (VR) provides a multitude of opportunities for learning that would otherwise require cost-prohibitive travel or consumable resources. VR also allows students to practice safety procedures, such as those required of nursing or manufacturing, without risking any real physical injury. Augmented Reality (AR) can be used to collaborate with other students, faculty, and professionals who are geographically disconnected by

essentially combining the benefits of VLE and VR technologies in real-time. VR and AR are emerging technologies that are still cost-prohibitive for many students. It is vital that we provide students exposure to these emerging technologies as they become more prevalent in our communities and workplaces.

### **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:

<b>Academic Program</b>	<b>Requires Structural Needs</b>	<b>Distance Learning Component Included</b>
Automotive Technology	X	X
Biotechnology/Food Safety	X	X
Brewing	X	X
Cyber Security	X	X
Drone Piloting	X	
Geographic Information Systems (GIS)	X	X
Truck Driving	X	X
Marine Technician	X	X
Physical Therapy Assistant	X	X
Public Health	X	X
Virtual and Augmented Learning	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 154,141 and a workforce of 75,086. The three largest cities include Benton Harbor, Niles, and St. Joseph.
- Lake Michigan College's primary educational sites include the Benton Harbor Campus and branch campuses in Niles and South Haven. Fall 2019, the Niles campus enrolled 408 students; and South Haven/Allegan, 398 students. The Benton Harbor (Napier) Campus enrolled 1931 students. At the current time, the Benton Harbor Campus is the only campus where full degrees can be earned. However, planning is currently underway to identify unique programming in Niles and South Haven to meet the needs of those regions. Niles and South Haven are staffed with a Director, as well as Student Services personnel. Each of these sites provides convenient access to higher education with a wide variety of programming options. Total Fall 2019 unduplicated headcount, including Early College programming, was 3,257.
- In addition, the College has extended its programming into three unserved counties—Ottawa, Allegan, and Van Buren, 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.

- LMC operates a well-established Early College program which accounts for approximately 30% of its total enrollment. For qualified high school students, college credit can be earned by enrolling in direct credit courses (taught by credentialed high school teachers at high school sites) or by enrolling in dual enrollment courses (taught by LMC faculty at a LMC location). LMC also has 5<sup>th</sup> year middle college programs in Berrien, Van Buren, and Allegan counties, which provide opportunities for high school students to defer their high school graduation for one year so they can earn both a high school diploma and an associate's degree or certificate at the conclusion of their 5<sup>th</sup> year of high school. On average, LMC serves over 1,000 early college students in partnership with over 40 K-12 districts and regional ISDs.
- Located on-site at the Benton Harbor Campus, Siena Heights University (SHU) has partnered with Lake Michigan College for over thirty years to offer degree completion programs on the Benton Harbor Campus. The LMC/SHU partnership was the first of its kind in Michigan when it started in 1982. Currently six bachelor's degree programs and four 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.
- The College is in the early stages of building an on-campus University Center that will expand baccalaureate completion program options for students. Partnership discussions are underway with several university partners including Andrews University, Davenport University, Ferris State University, and Saginaw Valley State University.
- LMC is an active participant in the MiTransfer Pathways project. Led by the Michigan Center for Student Success, this statewide initiative aims to build multi-institutional associate to bachelor's degree transfer pathways in some of the largest majors in Michigan. This work began in 2018 and will continue through 2020 in three phases across 12 programs.
- 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 1,105 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.

- 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 Benton Harbor campus, opened in August 2016 and houses the Advanced Manufacturing and Energy programs. The building is designed with new, sustainable energy-efficient systems and is used as a learning tool for students, demonstrating the use of natural building materials and sustainable methods. The building has five classrooms attached to four labs (a Fab Lab, welding lab, and two advanced manufacturing labs), collaboration spaces, and a simulation classroom. The simulation classroom is a state-of-the-art classroom complete with 6'9" x 16' touchscreen and the ability to seat 46 students.
- The Fab Lab -- which is available to students, employees, and the community -- is equipped with laser cutters, vinyl cutters, 3D printers, sewing machines, a woodshop with a CNC router, and various pieces of portable equipment to handle a variety of projects. A design center is available to encourage creativity, entrepreneurialism, and collaboration.
- LMC began a Start to Finish program in 2012, providing intervention for Benton Harbor High School students focused on Advising/Mentoring, Supplemental Instruction, Life Barrier Problem-solving, and Study Skill Development.
- 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 78 high school 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.
- In 2015, Lake Michigan College joined the Guided Pathways Institute offered by the Michigan Center for Student Success. The Guided Pathways initiative helps community colleges create clearer pathways for students from the beginning of their educational journey to degree completion and/or transfer.
- In 2017, the College was awarded a Title III Grant to continue and support our Guided Pathways work. This five-year, \$3 million grant is a pivotal opportunity for the College to focus efforts on improving student success. The defined goal of the grant is to increase the fall-to-fall, 5-year average retention rate from 49% to 63% by fall of 2022.

- The new Welch Center opened August 2019 to support our Wine and Viticulture Technology Program.

*C. Planned initiatives which may impact facilities usage*

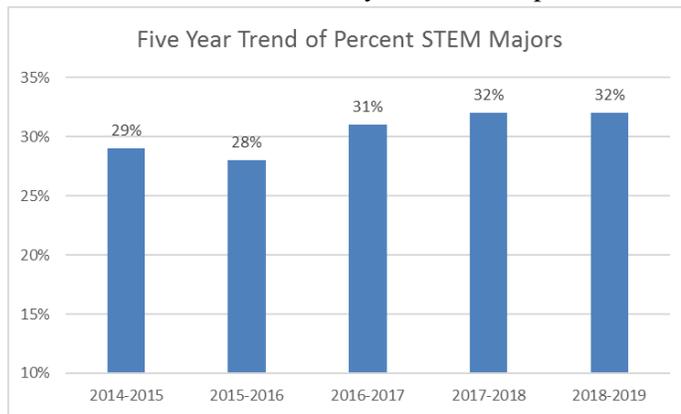
Three current initiatives will have a major impact on use of College facilities and property. The initiatives include:

- Renovation and upgrade of the Benton Harbor Main Building, which is currently under construction and planned to complete March 2020.
- Renovation and upgrade of the Hanson Theatre, primarily used to support student productions, and scheduled for completion December 2019.
- Renovation and upgrade of the Grand Upton Hall in the Mendel Center, along with a complete upgrade of the Mendel Center’s heating and cooling system and auxiliary energy improvements, for completion Spring 2020.

*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. Additionally, see **Exhibit 2 – Economic Impact Study**.

- 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, computer information systems, wine and viticulture, hospitality and culinary, and health sciences are critically needed to expand the economic base of southwest Michigan.



- Updated science and health sciences labs and facilities, made possible by a federal Title III grant and substantial College capital investments, have provided 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.

- New advanced manufacturing technology facilities support the 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.

**Exhibit 1**  
Lake Michigan College  
Registrar's Official Program Major Listing  
Academic Year 2018-19  
03-18-19

**Bachelor of Applied Science**

1. Energy Production & Distribution Management

**Associate Degrees**

1. Associate in Arts
2. Associate in Science
3. Associate in Business Administration
4. Associate in General Studies

**Associate in Applied Science**

5. Accounting
6. Applied Science - General
7. Applications Development
8. Automation Engineering
9. Business
10. Casino Management - Four Winds
11. Child Development
12. Computer Science
13. Criminal Justice
14. Culinary Management
15. Dental Assisting
16. Diagnostic Medical Sonography
17. Electrical Distribution (on Board agenda for review 3/19/19)
18. Energy Production – HPRP
19. Energy Production Technology
20. Engineering Technology
21. General Technology
22. Hospitality Management
23. Machine Tool Technology
24. Magnetic Resonance Imaging
25. Mechatronics Technology
26. Medical Assisting
27. Music
28. Networking
29. Nursing
30. Pharmacy Technician
31. Radiologic Technology
32. Skilled Trades Technology
33. Teacher Education
34. Welding Production Technology
35. Wine and Viticulture Technology

**Advanced Certificate**

1. Casino Management – Four Winds
2. Child Development
3. Cisco
4. Dental Assisting
5. Energy Production Line Worker
6. General Education
7. Hospitality Management
8. Machine Tool Technology
9. Magnetic Resonance Imaging
10. Medical Assisting
11. Pharmacy Technician
12. Skilled Trades Technology

**Certificate of Achievement**

13. Geospatial Information Science and Technology
14. Graphic Design
15. Information Technology
16. Machine Tool
17. Manufacturing Production
18. Mechatronics Technology
19. Phlebotomy Technician
20. Sales & Customer Service
21. Small Business Management
22. Spanish Certification
23. Supervisory Skills
24. Web Development
25. Welding Technology

**Totals Reported to HLC:**

<b>Bachelor</b>	<b>1</b>
<b>Associates</b>	<b>35</b>
<b>Certificates</b>	<b>25</b>

