

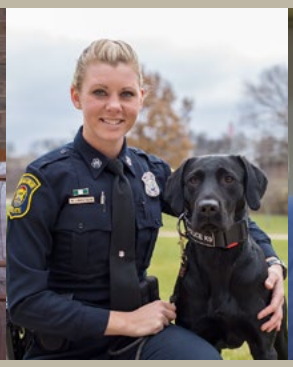

# Five-Year Capital Outlay Plan
# 2021 - 2025

Macomb Community College

Education • Enrichment • Economic Development

Discover. Connect. *Advance.*℠







# Guiding Principles for Macomb Community College

## VISION

Macomb Community College will continue to be a recognized leader of higher education and the community's preferred choice for lifelong learning, cultural enrichment and community development opportunities.

## MISSION

As a publicly funded and community-based institution of higher education, Macomb Community College provides a comprehensive program of high-quality educational, enrichment and economic development experiences designed to promote student success, individual growth and social advancement.

## MISSION STRANDS

### EDUCATION

Provide a learning environment that promotes program completion, graduation, transfer, advanced degree attainment and career success.

### ENRICHMENT

Provide personal enrichment experiences through cultural and arts programming.

### ECONOMIC DEVELOPMENT

Provide education, training and support in developing a skilled workforce and in fostering entrepreneurship to cultivate southeast Michigan's economic vitality.














# Core Values

Since Macomb Community College's founding more than half a century ago, it has developed into a trusted and indispensable community resource. The following values represent the College's deeply held beliefs.

## EXCELLENCE

- In all learning experiences
- In governance and management systems
- In individual and group performance
- In financial stewardship

## CONTRIBUTION

- To the expanding body of knowledge
- To the advancement of our professional knowledge and development
- To the enrichment of our society and the economic vitality of our community

## RESPONSIVENESS

- To changing environments
- To current and emerging students and community needs
- To the capacity of human and technological potential

## DIVERSITY

- In engaging the community as members of a multicultural world
- In welcoming the diversity of faculty, staff and students
- In supporting respect, fairness, dignity and equality for all individuals
- In promoting an inclusive environment that celebrates differences in thought, background, life experiences and varied cultural perspectives

## LEADERSHIP

- In creating a shared vision and mission
- In acting with integrity and professionalism
- In serving the community
- In encouraging an environment of transparency and accountability
- In establishing collaborative purpose, direction and action

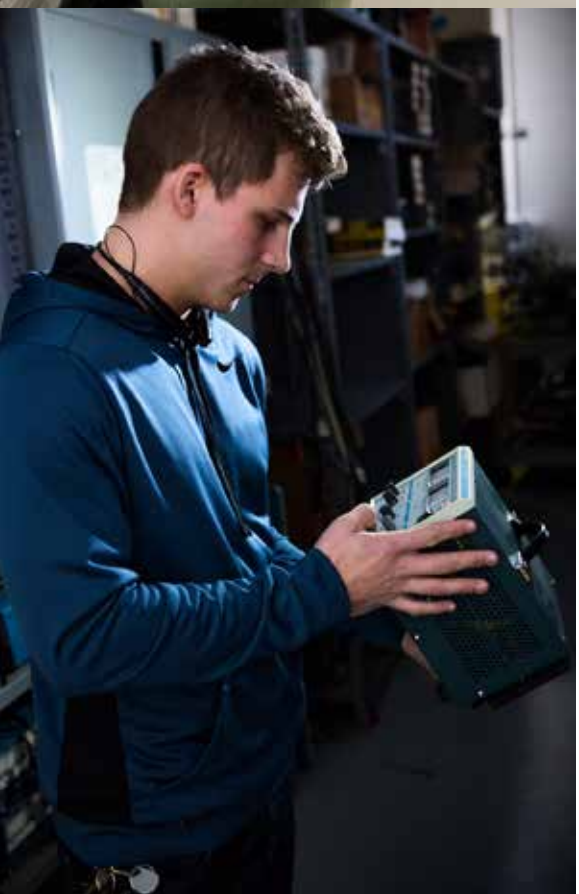
## INNOVATION

- In inspiring creativity and peak performance
- In generating momentum for advancement and continuous improvement
- In strategically shaping the future









# Institutional Priorities

## STUDENT SUCCESS

### Goal

Provide learning opportunities and support services that enable students to achieve their educational goals.

### Objectives

- Improve persistence, course completion and degree attainment resulting in achievement of educational goals
- Develop and implement strategies and models to improve student success
- Ensure accountability through active and continuous data analysis of student persistence, course completion, degree attainment and support services
- Ensure an educational continuum that supports smooth transitions from K–12 to Macomb and that focuses on pathways from Macomb to other institutions
- Support strategies and practices proven to promote quality teaching and increased student learning

## EFFICIENCY AND EFFECTIVENESS

### Goal

Evaluate and manage processes and resources to ensure sound fiscal stewardship of community investment while sustaining a relevant and comprehensive educational institution.

### Objectives

- Ensure continuous process and systems improvements
- Use technology to develop innovative approaches to teaching, learning and support services
- Recruit and retain diverse faculty and staff and support their professional and personal development
- Investment in facilities and equipment to ensure an effective teaching and learning environment that prepares students for advanced education and workplace success
- Encourage data-driven decision-making to ensure continuous improvement, greater effectiveness, and accountability in student learning and administrative outcomes
- Improve communication and collaboration between faculty, staff and students
- Maintain a strategic approach to budgeting that aligns planning with revenue allocations
- Identify other sources of revenue to support the institution beyond traditional funding sources







## COMMUNITY ENGAGEMENT

### Goal

Strengthen partnerships and increase collaboration to better anticipate and respond to community needs, playing a key role in driving dialogue and developing new approaches to address emerging needs.

### Objectives

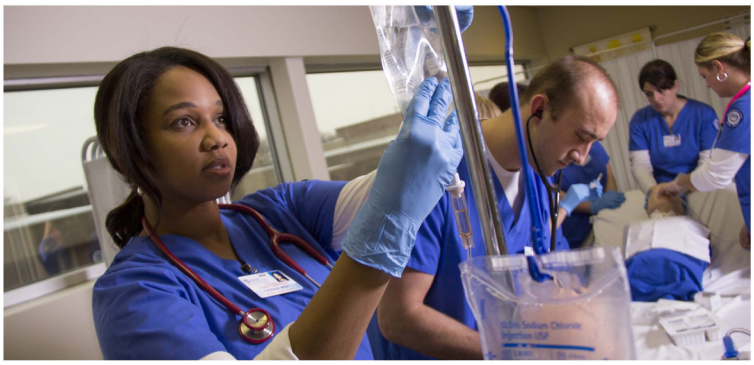
- Enhance outreach efforts with community partners to meet the needs of an increasingly diverse population
- Expand partnerships with other post-secondary institutions to strengthen transfer pathways to advanced degrees
- Partner with K–12 to strengthen students' academic preparation for college
- Strengthen relationships with business and industry to more closely connect education and training to workplace needs
- Present meaningful cultural and arts experiences to support learning and enrichment for community members of all ages
- Enhance the entrepreneurial ecosystem in the region
- Pursue stable funding sources by engaging voters and taxpayers













# Instructional Programming

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# Instructional Programming

Macomb Community College (www.macomb.edu) is one of the nation's leading community colleges, providing learning experiences to nearly 38,000 students annually. As a publicly funded and community-based institution of higher education, Macomb provides a comprehensive program of high-quality educational, enrichment and economic development experiences designed to promote student success, individual growth and social advancement. The college's comprehensive educational programming includes pre-collegiate experiences, university transfer and career preparation programs, bachelor degree completion and graduate degree programs, workforce training, professional education and certification, and continuing education and enrichment opportunities.

**a. Describe 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, etc.)**

For over 60 years, Macomb has earned the reputation of being on the leading edge in program development and course delivery. As a result, Macomb has been able to meet the changing needs of the community and workforce it serves.

Macomb students have the option to take classes 7 days a week, day or night; on campus, online, via hybrid (i.e., online and on ground), and in 8-week, 12-week or 16-week blocks of time. The college has also developed fast-track and accelerated programs and online-facilitated programs. Over 2,700 classes are offered each term at the college's campuses and throughout the county at community education centers. Today's students require greater flexibility and independence for their education and training, which obviously impacts the design and utilization of the college's instructional space and programming.

As with any institution, it is important for Macomb Community College to understand the educational needs in the community and anticipate changes in programming that will be necessary to meet those needs. In Michigan today there is a growing need for a highly skilled workforce to fill the abundance of job openings in advanced manufacturing. It is because of the increasing demand of our employer partners that Macomb continues to focus on the updating and expansion of the Skilled Trades and Advanced Technology Center. In this facility, Macomb trains students for positions such as CNC machine programmers and operators, welders, robotics programmers and operators, land surveyors and other high-demand careers in advanced manufacturing and skilled trades.

The Center is in need of many updates including mechanical and electrical systems that are nearly 40 years old. There are a number of safety issues, capacity concerns and lab updates that are needed in this area as well. It is imperative students are learning on state-of-the-art equipment giving them real experiences that will make them viable candidates to hit the ground running for the employer. The renovation of this complex is necessary to meet the labor market demands in these areas, assist in closing the skills gap, and provide the highest quality education to students in the pipeline and beyond.

Macomb was fortunate to have this project move through the first step of the capital outlay process and remains committed to seeing this priority through. The renovation is essential in order to make sure the College meets our mission of educating today's workforce in areas that can provide our students with sustainable wage jobs.

In addition to that major priority, the administration developed a long-term renovation plan with three phases. Beginning in 2014, the college has made major renovations to South Campus buildings B, C, E, F, G and J and Center Campus buildings A, C, E, F, L, M and N. These buildings serve students in art and science programs, information technology programs, public service - fire and police training, health and human services programs, vet tech programs, libraries and student space and the very critical services of counseling, advising, enrollment and financial aid. The renovations also provide updates to buildings with a variety of classrooms and labs, and bring the technology up-to-date in each of these facilities.

Beginning and 2019 and through 2020, the college is planning major renovations to South Campus building K, as well as Center Campus B. There is also a pending board authorization for 2020 renovation of South Campus D building. After these renovations, the college leadership will reassess facilities and determine the priorities for 2021. This will be largely dependent on the timing of the appropriation for the approve capital outlay renovation of the Skilled Trades and Advanced Technology Center.

**b. Identify the unique characteristics of each institution's mission. For Community Colleges: Two-year degree and certified technical/vocational training, workforce development activities, adult education focus, continuing or lifelong educational programming, partnerships with intermediate school districts, community activities, geographic service delivery area (s), articulation agreements or partnerships with four-year institutions.**

**Certified Technical/Vocational Training/Workforce Development Activities**

**Center for Advanced Automotive Technology (CAAT)**
CAAT is a curriculum resource for other institutions of higher education and local school districts. CAAT has funded 16 seed projects supporting curriculum development related to advanced technologies at middle school, high school and post-secondary institutions. Recognizing that the economy of Macomb County is highly dependent upon a skilled workforce, CAAT introduces students to occupations requiring Science, Technology, Engineering, Arts, Manufacturing and Math (STEAM) through Auto STEAM Days (formerly Robotics, Engineering and Technology Days (RET Days and the Automotive Design and Engineering Career Expo).

**Automotive Technology**
As one of the largest Automotive Technology programs in the state, Macomb strongly supports the automotive industry and the aftermarket in developing technicians for service and development careers. The general Automotive Technology program enables students to pursue certificates and associate degrees aligned with the National Institute for Automotive Service Excellence (ASE) criteria. The college also has a corporate Automotive Technology program. The General Motors ASEP program is a cohort based co-op type program that alternates school and work periods for three years leading to degree completion.

**Digital Sculptor Program**
Macomb Community College created a digital sculptor program to address the specialized needs of the automotive industry at the request of industry leaders and developed with industry experts. This program combines the traditional hand sculpting skills (aka clay modeling) with computer based software to create and manipulate 3-D virtual models. The first clay modeling class was conducted in winter 2014. The certificate and associate degree programs officially began in fall of 2015 and continues to see steady enrollment.

**Michigan Technical Education Center (M-TEC)**
Macomb Community College's M-TEC is a 40,600 square foot, $7.5 million facility on the site of the former Warren Tank Plant. This dynamic learning environment is distinguished by its design, which includes robotic training cells, integrated CAD/CAM and a large flexible high-bay space that can be rapidly adapted to meet any business training requirements.

M-TEC also houses a resource center, computer labs and classrooms offering the most advanced training technologies in automated systems, computer aided drafting and quality management processes. The programs offered are industry-driven, flexible, accessible and designed to address the challenges of today's marketplace. Students are enrolled in pathways that are short-term, fast paced and we have embedded stackable national industry certifications.

The robotic training cells at Macomb's M-TEC are ideal for training a variety of students from maintenance technicians to engineers. These instructional labs offer students the opportunity to learn current, real-world industry applications for robotic handling of materials in fully functional manufacturing cells. Here the student is given the opportunity to apply theoretical knowledge to the robotics and systems actually involved in advanced manufacturing processes, rather than only on desktop trainers or simulators. An investment of over $2,6 Million in new and upgraded state-of-the-art equipment was installed with funding provided through the Department of Labor Trade Adjustment Assistance Community College and Career Training (TAACCCT) grant, the State of Michigan Community College Skilled Trades Equipment Program ,the Make It In America DOL grant and the college itself.

The $2.6 million investment has advanced its capabilities in advanced integrated manufacturing, automated systems and robotics. M-TEC offers training on the latest industry-specific equipment in body-shop, paint, general assembly, stamping and powertrain. In addition, we offer automated systems training that includes FANUC and ABB robots, laser alignment, CMM, RFID, FANUC CNC Robodrill, robot load/unload and vision system, VFD training stations, AB and Siemens PLC training stations, and more. With over 400,000 robots installed, FANUC is the largest supplier of robots worldwide and Macomb's M-TEC is the only community college training center in Michigan scheduled for a FAST designation. In addition the college provides the industry recognized FANUC CERT.

This update allows for our students to learn on equipment exactly like that which they will find in the workplace. Our employer partners express the exceptional positive impact this has on their companies. The students are entering the workplace ready to hit the floor running reducing the amount of training time employers have to allow for.

**Michigan New Jobs Training Program (MNJTP)**
Designed as an economic development tool, the Michigan New Jobs Training Program allows community colleges to provide free training for employers that are creating new jobs and/or expanding operations in Michigan. The training for the newly hired workers is paid by capturing the state income tax associated with the new employees' wages.

Through the program, Macomb Community College has worked with 11 employers, representing a total of $1.7 million in contracts. That translates into 1,161 new jobs, with starting earnings at 175 percent of minimum wage. Macomb has a waiting list of companies as soon as the college is eligible for more training dollars.

**Apprenticeship**

For more than 60 years, Macomb Community College has provided local industry members with cutting-edge instruction designed for registered apprenticeship and other sponsored employee educational programs. In 2015, Macomb Community College, in partnership with Grand Rapids Community College, was awarded the American Apprenticeship Initiative Grant, which enabled the development and implementation of the Michigan Apprenticeship Program Plus (MAP+) to further develop and expand apprenticeship career pathways. The program spans from building awareness, including working with high schools and other organizations to link individuals to opportunities, providing pre-apprentice and apprenticeship training, matching employers and students, leveraging associate degree attainment and creating options for bachelor degree completion. The program offers industry-driven, structured training that allows employers to develop current employees as well as, to interview and hire students. Currently the college has more than 500 sponsored students (registered apprenticeship or employee-in-training) from over 70 companies.

The Macomb MAP+ is focused on manufacturing-related areas such as CNC machining, robotics, tooling, die, mold, welding and industrial maintenance as well as supporting other traditional apprenticeship areas such as construction and climate control. In 2016, MAP+ was recognized by Automation Alley with their Educational Initiative of the Year award.

The college is a member of the Registered Apprenticeship College Consortium (RACC), a national network of colleges and registered apprenticeship programs working together to provide college-to-career opportunities. In addition, the college also has specific articulation agreements with five construction union groups. Under the agreement, union organizations provide credit to apprentice workers for training received by any of the five partners.

The following union organizations are participating:

- Detroit Carpenter Joint Apprenticeship Training Committee
- Local 80 Sheet Metal Training Center
- Michigan Laborers Training & Apprenticeship Institute
- Millwright Local 1102 Apprenticeship Program
- Greater Detroit Cement Masons Joint Apprenticeship Committee

A graduate apprentice can receive up to 32 credit hours at Macomb for completion of the apprenticeship training. The credits apply to an associate of applied science degree. Those who complete engineering and advanced technology courses at Macomb and then enter an apprenticeship program with one of the partners can receive credit of up to one year of related training instruction.

## Adult Education Focus, Continuing or Lifelong Educational Programming

**Center for Teaching and Learning (CTL)**

The major technology enhancements in the area of teaching have significantly improved the ability of the college's faculty to deliver curriculum in a variety of modes reflective of the learning preferences of their students. To support teaching and learning in the classroom, the college created the CTL which is designed to serve as a "one-stop shop" and professional development training center for full-time and adjunct faculty members. The center offers assistance with a wide variety of instructional and professional development topics such as teaching methods, web development,

distance learning, curriculum development, instructional technology and assessment. Training and the sharing of best practices, as facilitated by the CTL, allow the faculty to optimize their utilization of the college's technology resources while enhancing their classroom content deliveries.

**Society of Active Retirees (SOAR) Macomb**
The Society of Active Retirees is a community-based lifelong learning initiative of Macomb Community College. SOAR Macomb offers a range of non-credit enrichment courses covering a variety of topics, providing its members with opportunities for social and cultural enrichment and personal growth. Membership in SOAR Macomb is open to all who are committed to lifelong learning. The program was established in 2014 and has grown to over 500 active members and offers 120 class offerings each year.

**Workforce and Continuing Education (WCE)**
Macomb's Career Academic departments extend the college's tradition of education and service by providing job skills and lifelong learning opportunities that measurably improve the quality of life for individuals in the Macomb County region. Workforce and Continuing Education can be categorized into the following:

- Career Training: Assists individuals seeking immediate employment, new career opportunities, retraining and skill upgrades for the workplace.

- Corporate Training: For businesses seeking to upgrade employee proficiency in technical and professional areas and those seeking to find and train new employees.

- Workforce Assessment: Assessment and test preparation courses that address the workforce development needs of local and regional employers, trade and labor organizations, economic and workforce development organizations and educational systems and institutions.

- Entrepreneurial Training: Geared to small business owners, entrepreneurs and those agencies and individuals involved in economic and job development in the community.

- Personal Enrichment: Opportunities for individuals to pursue special interests in art, language, culture and wellness.

- Professional Development: Provided for those individuals interested in advancing their current career, need training to retain a certification or are ready to enter a new field, Macomb offers many convenient options for professional and career development through both its academic and *Workforce and Continuing Education programs.*

- College 4 Kids – Provides educational opportunities and a college campus connection for students ages 3 to 17. Through fun activities and enriching, memorable experiences, students learn and succeed through personal achievement.

Workforce and Continuing Education programs directly align with academic career programs to enhance non-credit to credit career pathways in Engineering & Advanced Technology, Business & Information Technology and Health & Public Service. This innovation allows Macomb students to

advance through progressive levels of training more efficiently and attain labor market payoffs sooner.

**Reading and Writing Studios**
Given the changing demographic in Macomb County, the college has experienced an increase in underprepared students. Recognizing that their persistence and success is vital to the overall community, Macomb opened a reading and writing studio at both South and Center campuses in 2015. The Reading and Writing Studios offer support for any interested student, including specialized programming for students whose primary language is not English. This service has been incredibly successful thus far with current Macomb students. To date there have been over 15,000 clients who have utilized the studios.

## Partnerships with Intermediate School Districts

**High School Course Transfer (Articulation)**
Macomb has a positive working relationship with all of the county's high schools and technical centers, from which approximately 68% college-bound seniors attend Macomb Community College within five years of their high school graduation; Macomb currently has approximately 185 formal articulations agreements with the local school districts. These agreements create one avenue of earning college credit while in high school, and effectively provide students with the opportunity to "jump start" their college career in the various career and technical fields of study.

**Early College of Macomb - A college access, college ready model**
Macomb Community College and the Macomb Intermediate School District have partnered to provide a countywide program for high school juniors who want to get a jump-start on their college education and their careers. In this three-year program, students participate in an integrated sequence of high school and college courses with no out-of-pocket cost for books, fees and tuition with the potential to graduate with a high school diploma and associate degree at the end of grade 13. In the 8th year of the Early College of Macomb there were 606 high school students enrolled in grades 11 – 13. The fourth cohort had 178 students graduate after year 13. A pilot program sent our Admission Coordinators to 5 targeted middle schools within Macomb county to present on early admit/dual enrollment opportunities at the college.

**New School District Partnership**
As a consortium member in the Macomb Classroom to Career Talent Consortium, Macomb Community College has entered into a five-year agreement to participate in the Marshall Plan for Talent Grant with three Macomb County school districts; Armada, Center Line, and Fraser. Macomb will offer credit for prior learning opportunities to high school students with a clear pathway to an industry recognized certificate in Medical Assisting.

## Partnerships with Four Year Partners

Macomb has over 300 articulation and/or transfer agreements with four-year colleges and universities throughout the state and nation.

List of transfer programs to universities: http://www.macomb.edu/transfer

Macomb established a landmark on the higher education landscape when it built its UC, one of the first community college-driven initiatives in the nation, to provide access to bachelor's degree

completion and master's degree programs. At Macomb's UC, 12 "partner" institutions offer students an opportunity to complete a bachelor's or master's degree in over 75 programs. Students can also earn a doctoral degree in osteopathic medicine through Michigan State University's medical school in the UC. Additional UC partners are Central Michigan University, Davenport University, Ferris State University, Madonna University, Northwood University, Oakland University, Rochester College, University of Detroit Mercy, Walsh College, Wayne State University, and Western Michigan University.

Annually, more than 3,500 students are enrolled in over 400 sections at Macomb's UC, pursuing bachelor's, master's and doctoral degrees in fields from business, computer science, elementary education to engineering, health services, and counseling. This UC is now larger than some of Michigan's smaller community colleges and several of its independent universities.

In the past year, Macomb has signed articulation agreements with Baker College in general business (87 credits available for transfer), Central Michigan University in Nursing (90 Credits), Eastern Michigan University for Physical Therapy Assistant (86 Credits), Oakland University in Applied Health Science (84 Credits), Integrative Studies (88 Credits) and Human Resource Development (64 Credits), as well as Purdue University in which any associate of applied science can be transferred to their Bachelor of Applied Science up to 88 credits.

## Community Activities

### Student Options for Success (SOS)

The SOS program connects students with a variety of community and public benefit organizations to help them with living expenses while pursuing higher education. Academic success is a priority, but many students still struggle with basic expenses such as food, rent, utilities, childcare, and healthcare while in school. The SOS program helps students find resources to support their attainment of educational goals by providing tools for ongoing financial stability and long-term self-sufficiency.

### Community Enrichment

In addition to the 38,000 students who enroll in Macomb's credit and non-credit programs each year, nearly 375,000 people participate in its community service programs.

The Macomb Center for the Performing Arts (MCPA) offers nearly 500 cultural events and hosts more than 128,000 visitors. The MCPA is a center of education and enrichment in Macomb County, offering a variety of cultural experiences to patrons of all ages. In addition to professional staged programs, the center also offers choir and summer workshops for children.

The Sports and Expo Center is Macomb County's largest conference and expo center that boasts 61,000 square feet of space. Families, community, athletic and special events hosted by the college are held in this spacious venue.

The Albert L. Lorenzo Cultural Center has become a place for discovery, creating a venue where people can explore the historical and current experience that shape the community's heritage. The center operates on a philosophy of fostering partnerships and collaboration to augment existing assets already available in the community, while bringing new cultural resources and experiences to

the residents of Macomb County. Programming for the Cultural Center is designed to explore topics from a variety of perspectives, creating multidimensional experiences that provide interactive opportunities for learning, celebration, and entertainment.

In addition to these facilities, Macomb participates in many other activities and organizations throughout each year. Macomb makes a concentrated effort to analyze the communities' needs and helps create solutions. For example, Macomb works closely with the Chaldean Community Foundation to assist Iraqi individuals who are transitioning into our communities. We provide English as a second language (ESL) training at their facility in Sterling Heights assisting them to acclimate within the community.

Finally, each year we have three very important events in conjunction with our K-12 partners. Macomb highlights a very important economic development factor in Macomb County, Lake St. Clair, through the Water Festival that is held annually in May. This year the college hosted 4,000 students to learn about water preservation, conservation and safety.

Secondly, Macomb hosts Auto STEAM days each year where students in grades 6 – 12 are invited to campus to learn about career pathways available in these fields, check out the latest trends in technology, discover the electric vehicle, experience hands on robotics opportunities, and so much more. This is an interactive and fun way to get students interested in these careers as we help Macomb County's engineering and automotive businesses fill their employee pipeline through our programs.

Lastly, for the last four years the college has partnered with One Macomb, the Macomb Intermediate School District, all of the school districts in the county, McLaren Macomb Hospital and others to host a Macomb County Diversity Summit for students in grades 8 – 11. This is an effort to increase awareness and understanding of the many cultures in our county and provide ways for our students to be leaders in these efforts.

In addition to these and the many more community events hosted on Macomb's campuses, the college also partners and supports the following organizations whose activities match our mission:

- ACCESS
- Advancing Macomb
- Academies at Romeo High School
- Anchor Bay Chamber of Commerce
- Anton Art Center
- Automation Alley
- Center for Automotive Research
- Chaldean Chamber/ Community Foundation
- Clinton River Area of Concern Public Advisory Council
- Clinton River Watershed Organization
- Detroit Institute of Arts
- Detroit Regional Chamber (including the Detroit Scholarship Fund)
- Detroit Symphony Orchestra
- Detroit Zoological Society
- Eastpointe-Roseville Chamber of Commerce
- Families Against Narcotics/ Hope Not Handcuffs program

- Inforum
- Interfaith Center for Racial Justice
- Leadership Macomb
- LIFT (Lightweight Innovations for Tomorrow)
- Macomb County Chamber/Macomb Foundation
- Macomb County Water Resources Advisory Council
- Macomb-Oakland University INCubator
- Macomb County Robotics Collaboration and Innovation Center
- Macomb Symphony
- MCREST
- Metropolitan Affairs Coalition
- Michigan Automotive and Defense Cyber Awareness Team
- Michigan Opera Theatre
- Motor City Symphony
- Richmond Chamber
- Romeo/Washington Chamber
- Selfridge Air National Guard Base Community Council
- Southeast Michigan Council of Governments
- Sterling Heights Chamber
- Sterling Heights Community Foundation
- Turning Point
- United Way
- Workforce Intelligence Network Southeast Michigan

**c. Identify other initiatives which may impact facilities usage**

All of the activities listed in the previous section impact facility usage at Macomb. In addition to those ongoing programs and community outreach events, an increase in the skilled trades and advanced manufacturing credit/non-credit training enrollment strains facility usage at South Campus specifically. This is the basis for the capital outlay request. As the skilled trades continues to thrive in Southeast Michigan, more and more jobs go unfilled. Based on the full schedule of classes and our community partnership events there are limited options for finding other space to accommodate the continued expected increase in skilled trades training classes need to do our part in filling the skills gap. The renovation of the Skilled Trades and Advanced Technology Center is the only viable option for Macomb to expand facility usage.

**d. Demonstrate economic development impact of current/future programs (i.e., technical training centers, Life Science Corridor and Tri-Technology Corridor initiatives, etc.)**

**<u>Economic Growth</u>**

Macomb Community College provides significant economic value to Macomb County and the region, with a study completed in 2018 found that the college and its students add $992.4 million in income to the county's economy and provide a return of $5 in benefits for every $1 invested in the college by taxpayers. Emsi, a leading provider of economic impact studies and labor market data to educational institutions, workforce planners and regional developers in the U.S. and internationally, recently

completed the study employing fiscal year 2015-16 academic and financial data. (At the time of the study, the latest year for which complete data was available.)

The $5 of benefit returned to taxpayers for every $1 they invest in the Macomb Community College is comprised of added tax revenue stemming from the college's students higher lifetime earnings, increased output of local businesses and savings to the public sector due to reduced demand for government-funded services.

The study also showed that students receive a substantial 13 percent return on their investment in a Macomb education. For every $1 spent, students gain a return of $3.50 in higher future earnings. During the analysis year, Macomb Community College operations, its students and alumni added $992.4 million in income to the Macomb County economy, approximately equal to 2.5 percent of the county's total gross regional product. This means that more than 16,000 jobs in Macomb County – one out of every 26 -- is supported by the activities of the college and its students.

Macomb Community College is fully committed to addressing the needs of area employers by providing a skilled workforce prepared for the new advanced technology job opportunities. In addition to that commitment and Macomb's many other credit programs, the college is also focused on economic development and has a significant role in these efforts. Macomb continues to be an institution that not only helps existing companies with their workforce needs by educating their current and future employees, but also seeks to be an institution that helps form new companies.

In addition to the overall economic impact, Macomb believes that innovation and entrepreneurship is a vital part of a thriving community. For that reason, the college opened the Center for Innovation and Entrepreneurship which offers educational opportunities to students, faculty and community members around exploring entrepreneurship and taking action on innovative ideas.



# Staffing & Enrollment

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# Staffing and Enrollment

Colleges and universities must include staffing and enrollment trends in the annual 5-year comprehensive master plans. This component should:

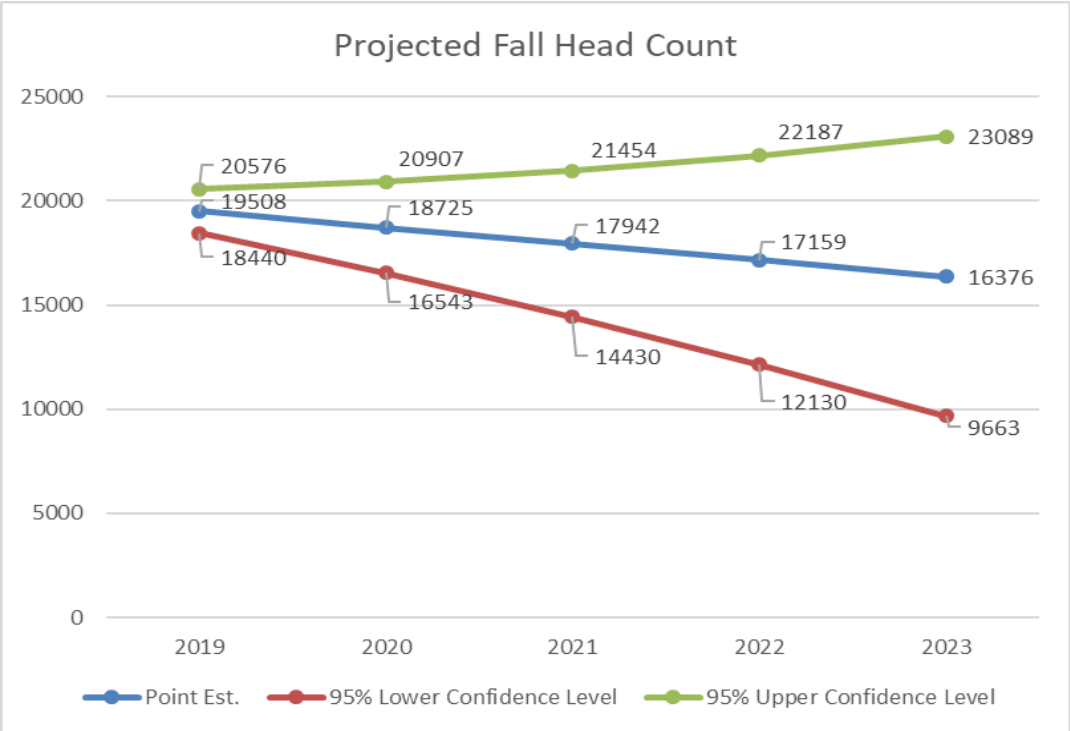
**a. Describe current full and part-time student enrollment levels by academic program and define how the programs are accessed by the student (i.e., main or satellite campus instruction, collaboration efforts with other institutions, Internet or distance learning, etc.)**

As of fall 2018, nearly 13,000 (63%) Macomb students are enrolled in Arts and Sciences programs, primarily focused on transferring to four-year colleges and universities. The next largest group of students, 2,200 (11%), is concentrated in business programs. Roughly, 1,150 students (6%) are enrolled in health service programs, including Nursing, Respiratory Therapy and other health specialties. Over 1,100 (6%) students are enrolled in Engineering Technologies. Approximately 750 students are preparing for Skilled Trades (Automotive, Construction and Manufacturing). Nearly 600 (3%) are studying in Information Technology (Programming, Networking and Security), and lastly, 550 (3%) are preparing for Public Safety fields (Police, Fire and Emergency Medicine).

The majority of Macomb students attend part-time (70%), meaning they take less than 12 credits per term. Only 30% attend full-time (12 or more credits per term).

Of the more than 380,000 total credit hours taken by students in the 2018-19 academic year, 74% were completed at one of the College's two main campuses (Center Campus in Clinton Township and South Campus in Warren). Twenty-four percent attended virtually (on-line via the internet). Only 2% attended at satellite campuses (East Campus, Clinton Township and off-campus).

**b. Project enrollment patterns over the next five years (including distance learning initiatives)**

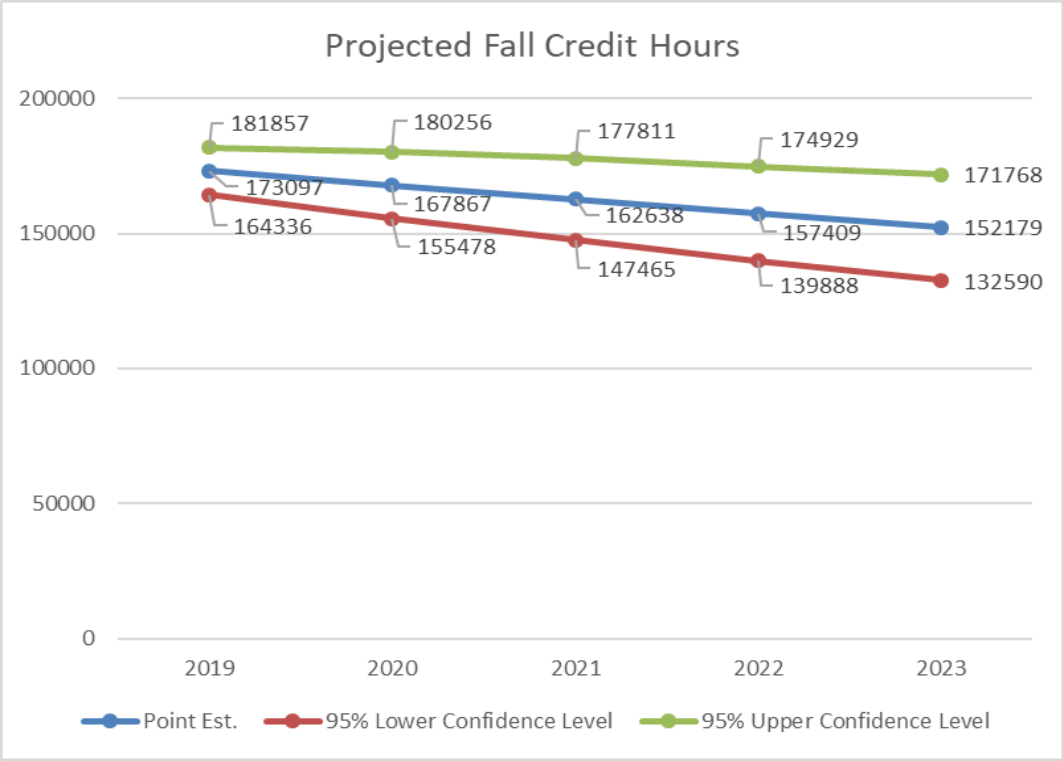


An ensemble of exponential smoothing and Autoregressive Integrated Moving Average (ARIMA) timeseries models were evaluated with respect to the best fit, measured as a function of prediction error, with the head count and credit hours data from fall 2004 through fall 2018. Of the models evaluated, Brown's linear trend (double exponential smoothing) model had the best fit with past head count data and was used to project head count for the fall 2019 through fall 2023 period.

The estimated model for head count accounted for 88.7% of the variation in head count over the 2004 through 2018 period. The average absolute percentage prediction error for the period estimated was 1.6%. The median absolute percentage prediction error was 1.7%. The point estimates for the projected fall head count suggest declining enrollment, with average annual declines of about 4.0% through the 2019 to 2023 period.

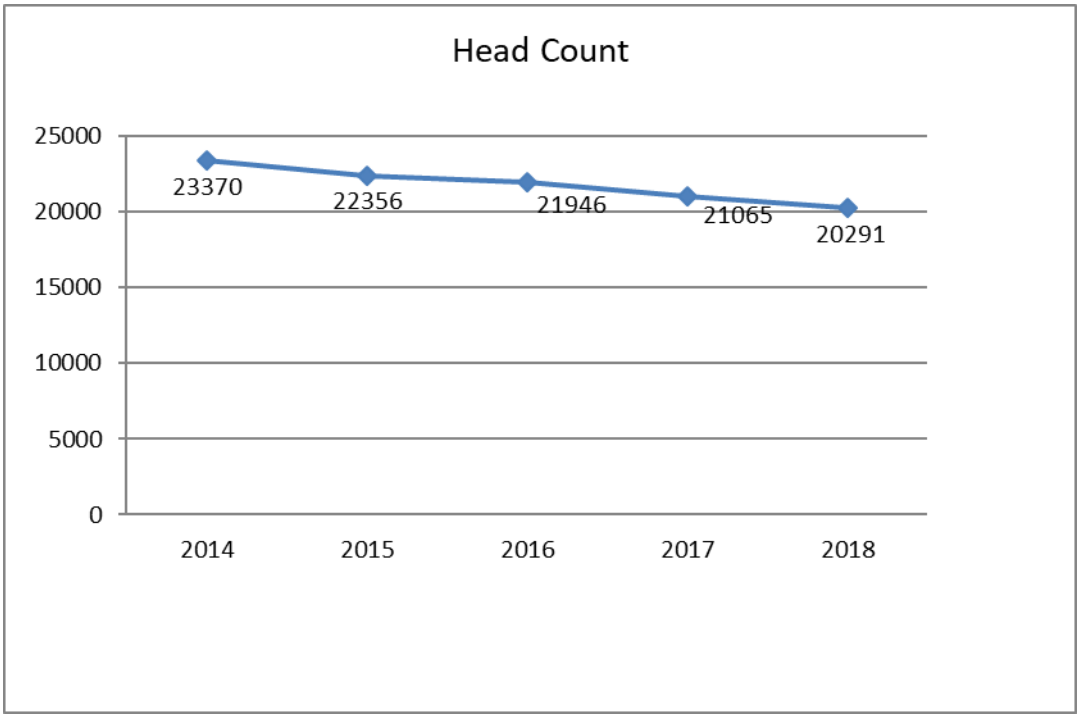
Of the models evaluated, an ARIMA (0,1,0) model had the best fit with past credit-hours data and was used to project credit hours for the fall 2019 through fall 2023 period. The model accounted for 93.9% of the variation in credit hours over the 2004 through 2018 period. The mean absolute percentage prediction error for the period estimated was 1.5%. The median absolute percentage prediction error was 1.2%. The model projects credit hours to decline over the 2019 to 2023 period, at the rate of about 3.2% per year.

The models that were evaluated, and the two that were selected, were univariate models that used only past historical enrollment information to predict future head count and credit hours. Such models can be very accurate if the enrollment data contain no trends or contain trends that change slowly.



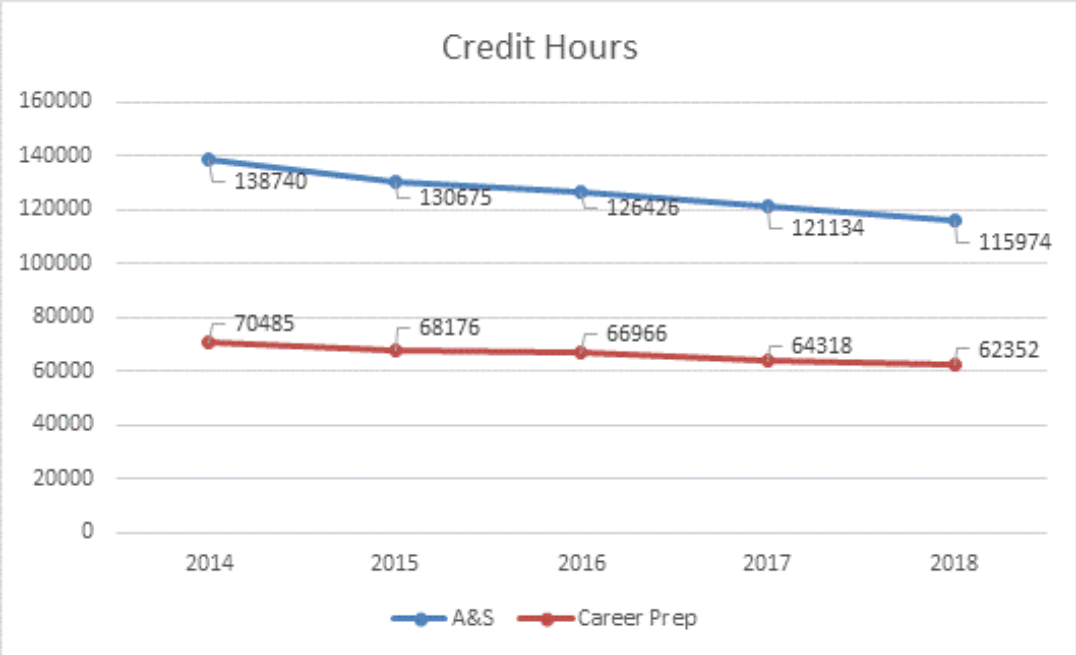
**c. Evaluate enrollment patterns over the last five years**

The College's fall 2018 credit head count was 20,291, which was down 3.7% from the previous fall semester, while total credit hours (178,326) decreased by 3.8%. Since fall 2014, credit head count has decreased by 13.2%, while total credit hours have decreased by 14.8%. The trends over the past five years of declining head count and credit hours reflect the high enrollment earlier in the period that was driven largely by the recent financial recession, followed by the ensuing improvement in the economy and the labor market. They also reflect the impact of demographic trends, which have resulted in decreasing numbers of high school graduating seniors, and an increase in tuition.




Total credit hours in Arts and Sciences courses and in Career and Technical Education courses have each decreased, by 16.4% and 11.5% respectively, since fall 2014, which reflects at least in part the decline in head count over the period, coupled with a decline in average credit-hour load. The proportion of total credit hours accounted for by Arts and Sciences has remained fairly constant at about 65% to 66% since fall 2014.

| | 2014 | 2015 | 2016 | 2017 | 2018 | Change |
|---|---|---|---|---|---|---|
| A&S | 138740 | 130675 | 126426 | 121134 | 115974 | -16.4% |
| Career Prep | 70485 | 68176 | 66966 | 64318 | 62352 | -11.5% |
| Total | 209225 | 198851 | 193392 | 185452 | 178326 | -14.8% |



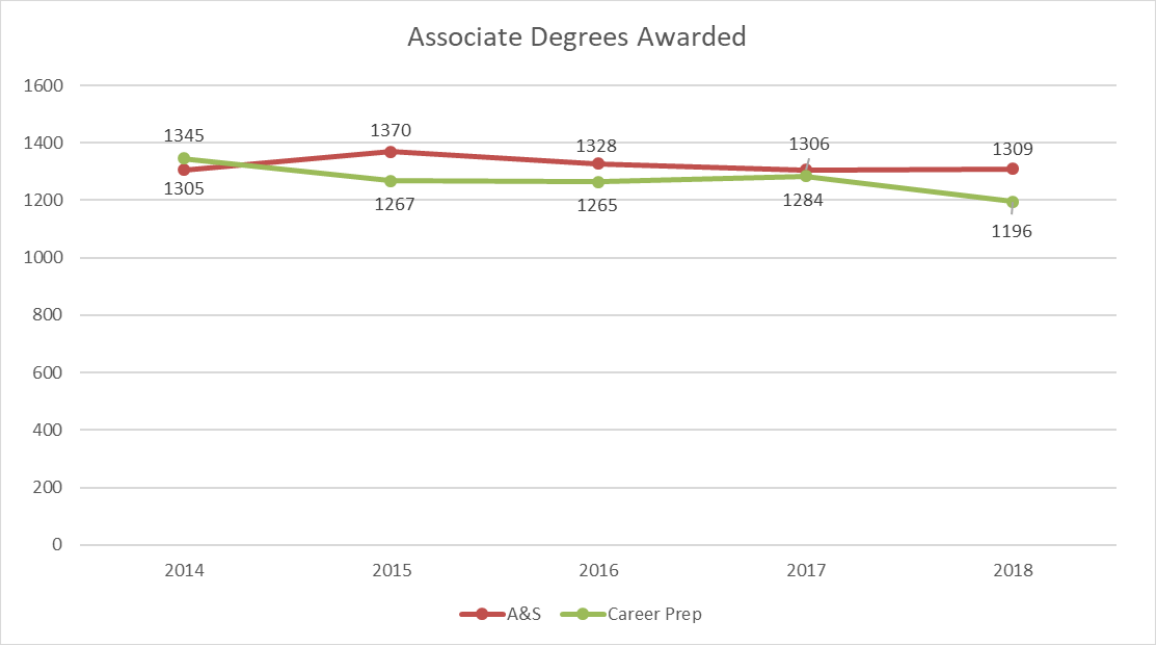

The College's FY 2018-19 non-credit enrollment decreased 3.3% from that of the previous fiscal year and by 12.5% since FY 2014-15. The unusually large increase in non-credit head count in FY2015-16 partly reflects an increase in grant-supported training.

**Non-Credit Head Count**

| Year | Head Count | Change from Previous Year |
|---|---|---|
| 2018-19 | 10,398 | -3.3% |
| 2017-18 | 11,314 | -4.7% |
| 2016-17 | 11,877 | -14.5% |
| 2015-16 | 13,893 | 16.9% |
| 2014-15 | 11,888 | 1.7% |

**Degrees Awarded**

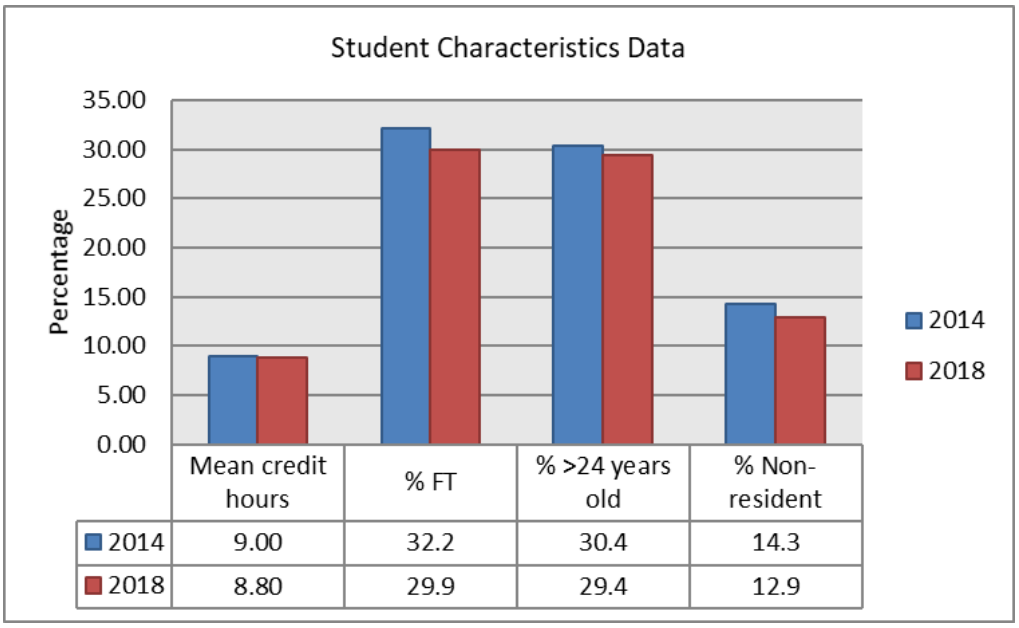
The total number of degrees awarded in the 2017-18 academic year (2,505) decreased by 3.3% from the previous year. The number of degrees awarded in the Arts and Sciences (1,309) was essentially unchanged from the previous year, increasing by less than one-half of one percent, while the number of degrees awarded in Career and Technical education (1,196) decreased by 6.9% from the previous year. The number of degrees awarded in the Arts and Sciences was little changed from the number awarded in the 2013-14 academic year, increasing by 0.3%, while the number of degrees in Career and Technical Education decreased by 11.1% over the same period. The total number of degrees awarded has decreased over the period by 5.5%. The decline in the total number of degrees awarded from the number awarded in the 2013-14 academic year reflects at least in part the decline in head count and the decrease in the average credit-hour load.



**Student Characteristics**

The trend toward an increasingly younger student body at Macomb continues. In fall 2014, 69.6% of Macomb students were 24 years old or younger, while this segment accounted for 70.6% of Macomb students in fall 2018. The proportion of students older than 24 declined 3.3% from fall 2014 to fall 2018. The decline in the proportion of older students over the period reflects at least in part the improvement in the labor market since the recent financial recession and the corresponding increase in the opportunity cost of being a student.

Students at Macomb were on average carrying a slightly smaller credit-hour load in fall 2018 (8.8 credit hours) than in fall 2014 (9.0 credit hours), a decrease of 2.2%. The proportion of students that were full-time (12 or more credit hours) is down 7.1% over the period. The proportion of students that were non-resident declined by 9.8% over the period.




| | Mean credit hours | % FT | % >24 years old | % Non-resident |
|---|---|---|---|---|
| 2014 | 9.00 | 32.2 | 30.4 | 14.3 |
| 2018 | 8.80 | 29.9 | 29.4 | 12.9 |

**d. Provide instructional staff/student and administrative staff/student ratios for major academic programs or colleges**

**Staffing**

In fall 2018, Macomb had 229 full-time and 625 part-time faculty members teaching credit courses and 71 administrators.

**Instructional Staff to Student Ratio (Credit)**

| | Number FT Instructional Staff | Number of Students | Ratio |
|---|---|---|---|
| Fall 2018 | 229 | 20,291 | 0.01 |

**Administrative Staff to Student Ratio (Credit)**

| | Number FT Administrative Staff | Number of Students | Ratio |
|---|---|---|---|
| Fall 2018 | 71 | 20,291 | 0.003 |

**e. Project future staffing needs based on 5-year enrollment estimates and future programming changes**

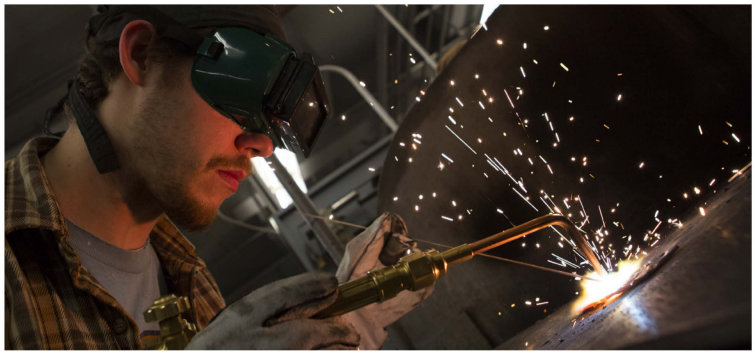
Projected staffing levels are expected to remain approximately the same as the current level over the next five years.

**f. Identify current average class size and projected average class size based on the institution's mission and planned programming changes**

Since average class size is a function of numerous factors—such as head count, average credit hour load and policies and practices regarding the assignment of faculty to classes—each of which can only be estimated with considerable uncertainty, any projections of average class size are inherently uncertain. Given the absence of a clear trend in the most recent five years of data, the average of this most recent data (21.9) represents the best estimate for fall 2019 and beyond.

| Year | Total Number of Lecture Sections | Average |
|---|---|---|
| Fall 2018 | 1,606 | 21.5 |
| Fall 2017 | 1,682 | 22.0 |
| Fall 2016 | 1,814 | 22.1 |
| Fall 2015 | 1,875 | 22.0 |
| Fall 2014 | 2,002 | 22.0 |







# Facility Assessment

Macomb Community College

Education • Enrichment • Economic Development

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# Facility Assessment

A professionally developed comprehensive facilities assessment is required. The assessment must identify and evaluate the overall condition of capital facilities under college control. The description must include facility age, use patterns, and an assessment of general physical condition. The assessment must specifically identify:

**a. Summary description of each facility (administrative, classroom, biology, hospital and etc.) according to categories outlined in "net-to-gross ratio guidelines for various building types," DMB-Office of Design and Construction Major Project Design Manual, appendix 7. If facility is of more than one "type", please identify the percentage of each type within a given facility.**

Macomb Community College hired the services of Hobbs+ Black Associates in 2018 to conduct facility condition assessments of the college's South and Center campuses, respectively. The facility condition assessments are available on the college's public website at links provided below in this section. The assessments include summary descriptions of each facility, functionality of existing structures and space allocation, utility system condition, facility infrastructure condition and adequacy of existing utilities and infrastructure systems in their current state.

**b. Building and /or classroom utilization rates (Percentage of rooms used, and percent capacity). Identify building/classroom usage rates for peak (M-F, 10-3), off-peak (M-F, 8-10 am, 3-5 pm) evening and weekend periods.**

At this time, Macomb Community College does not have an effective way of reporting building and classroom utilization rates from the software currently used to plan for and schedule classes. However, in preparing the schedule of classes each semester, the college is at capacity during certain days and times when classrooms are not available for additional sections. In these instances, online sections may offer additional options.

**c. Mandated facility standards for specific programs, were applicable (i.e., federal/industry standards for laboratory, animal, or agricultural research facilities, hospitals, use of industrial machinery, etc.)**

All of Macomb Community College's programs fully comply with all applicable laws, general industry safety and health standards, construction safety and health standards, and administrative standards authorized by Public Acts and promulgated by OSHA, MIOSHA and other regulatory agencies.

**d. Functionality of existing structures and space allocation to program areas served.**

See facility condition assessment in the links below:
South Center Campus Facility Condition Assessment 2018
Campus Facility Condition Assessment 2018

**e. Replacement value of existing facilities (insured value of structure to the extent available).**

The replacement value of the college's facilities is posted to the college website as the 2015 Policy Property List Report as prepared by the Michigan Community College Risk Management Authority.

**f. Utility system condition (i.e., heating, ventilation, and air conditioning [HVAC], water and sewage, electrical, etc.).**

See facility condition assessment in the links below:
South Center Campus Facility Condition Assessment 2018
Campus Facility Condition Assessment 2018

**g. Facility infrastructure condition (i.e., roads, bridges, parking structures, lots, etc.).**

See facility condition assessment in the links below:
South Center Campus Facility Condition Assessment 2018
Campus Facility Condition Assessment 2018

**h. Adequacy of existing utilities and infrastructure systems to current and 5-year projected programmatic needs**.

See facility condition assessment in the links below:
South Center Campus Facility Condition Assessment 2018
Campus Facility Condition Assessment 2018

**i. Does the institution have an enterprise-wide energy plan? What are its goals? Have energy audits been completed on all facilities, if not, what is the plan/timetable for completing such audits?**

Macomb Community College plans to reduce energy consumption and costs through the renovation of aged facilities as prioritized through the facility condition assessments. Energy audits have not been completed on the facilities as the buildings are not individually metered to track consumption and the cost to do so is significant. The college has researched grant funding for this purpose, but thus far has not found any viable funding sources to assist in this endeavor.

**j. Land owned by the institution, and include a determination of whether capacity exits for future development, additional acquisitions are needed to meet future demands, or surplus land can be conveyed for a different purpose.**

At this time, the land owned by the college is considered to be sufficient for capacity.

**k. What portions of existing buildings, if any, are currently obligated to the State building Authority and when these State Building Authority leases are set to expire.**

The following buildings are currently obligated to the State Building Authority through the following lease expiration dates:
University Center II (Tag CD: 99143); 2019
Emergency Training Center (Tag CD: 99248); 2028
Health Science and Technology (Tag CD: 99249); 2028
C Building; 2051




# Implementation Plan

Macomb Community College

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# Implementation Plan

The 5-year comprehensive master plan should identify the schedule, by which the institution proposes to address major capital deficiencies, and:

**a. Prioritize major capital projects requested from the State, including a brief project description and estimated cost, in the format provided. (Adjust previously developed or prior year's figures utilizing industry standard CPI indexes where appropriate).**

As indicated in this 5 year capital outlay plan, the highest priority is the Skilled Trades and Advanced Technology Center at the college's South Campus.

**b. If applicable, provide an estimate relative to the institution's current deferred maintenance backlog. Define the impact of addressing deferred maintenance and structural repairs, including programmatic impact, immediately versus over the next five years.**

The college's current deferred maintenance backlog (DMB) is in the facility condition assessment reports posted to the college website. Given the current and increasing DMB, the college's board of trustees approved renovation plans through 2019 so that the aging facilities can be renovated in a planned and phased-in approach as it is impossible to address all of the needs immediately while serving the needs of students and the community. Renovations are scheduled as follows and will be funded from the capital projects fund, technology fund and general fund as appropriate. Below are the renovation plans by building through 2019-20.

2019: Authorization received from Board of Trustee for renovation of South Campus K Building (FCI of 30% deficient / poor condition) and Center Campus B Building (FCI of 14% deficient / poor condition).

2020: Pending Board of Trustee authorization for South Campus D Building (FCI 17% deficient/poor condition); Various HVAC, lighting, temperature controls and finishes; safety/agency requirements, site work and exterior and interior work.

**c. Include that status of on-going projects financed with State Building Authority resources and explain how completion coincides with the overall 5-year plan.**

There is currently no state project active at Macomb Community College.

**d. Identify to the extent possible, a rate of return on planned expenditures. This could be expressed as operational "savings" that a planned capital expenditure would yield in future years.**

The college estimates an operational savings of 10 – 15 percent on each renovated facility and updated infrastructure. In addition, deferred maintenance that is addressed in a timely and planned manner is much more cost effective than emergency repairs.

**e. Where applicable, consider alternatives to new infrastructure, such as distance learning.**

The college's long-term plans include renovations of facilities rather than new construction. Distance learning can augment the skilled trades programs, but cannot replace hands-on training and experience offered through classes held in the Skilled Trades and Advanced Technology Center.

**f. Identify a maintenance schedule for major maintenance items in excess of $1,000,000 for fiscal year 2021 through fiscal year 2025.**

See facility condition assessment on website and refer to b above. Administration currently has renovation authorization from the Board of Trustees through 2019-20 as outlined above.

**g. Identify the amount of non-routine maintenance the institution has budgeted for in its current fiscal year and relevant sources of financing**.

Refer to "f" above.