

# FERRIS STATE UNIVERSITY

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**FERRIS FORWARD**

## Five-Year Capital Outlay Plan FY 2021 – FY 2025

October 2019



**Ferris State University**  
**Five-Year Capital Outlay Plan**  
**FY 2021 – FY 2025**

**TABLE OF CONTENTS**

I.	Mission Statement.....	1
II.	Instructional Programming.....	1-4
III.	Staffing and Enrollment.....	4-5
IV.	Facility Assessments.....	5-6
V.	Implementation Plan.....	6-7

FERRIS STATE UNIVERSITY  
Five-Year Capital Outlay Plan  
FY 2021 – FY 2025

**I. Mission Statement**

*Ferris State University prepares students for successful careers, responsible citizenship, and lifelong learning. Through its many partnerships and its career-oriented, broad-based education, Ferris serves our rapidly changing global economy and society.*

**II. Instructional Programming**

- a) Ferris' Academic Plan is provided in response to this item. The information can be found on Ferris' Academic Affairs website under Resources and then [Academic Affairs Strategic Plan](#).

That plan describes academic program planning, including distance education, at the University. Ferris intends to pursue growth with our online graduate level programs, such as our Doctorate in Nursing Practice, which was approved by the Higher Learning Commission (HLC) on October 31, 2016 – and began August of 2017. We are continuing the work started as part of former Governor Snyder's Marshall Plan by developing a certificate in cloud computing and an Associate of Applied Science in Cloud Computing. Building on our work in Information Security and Intelligence, Bachelor of Science degrees in Project Management and also Artificial Intelligence are in development.

- b) Unique characteristics of Ferris State University include its focus on career-oriented, technical and professional programming. With the merger of Kendall College of Art and Design, Ferris has both the largest colleges of design and technology in the region. Ferris also serves a statewide function to share expertise in the areas of career decision-making and workforce development. Ferris partners with twenty-three community colleges across Michigan and teaches in their college facilities to provide bachelor degrees to students who are place bound so they can continue their education without relocating to Big Rapids. These programs are of special assistance to working adults looking to increase career prospects or to transition into a new field.

Ferris offers programs from certificate and associate degree levels, through the first professional and doctoral degrees. In addition to our extensive bachelor, graduate and professional programs, Ferris serves a community college function for its five-county area through participation in Federal Perkins programming, the State Tuition Incentive Program, as well as through curricular offerings.

- c) Initiatives which may impact facilities usage:

– *Digital Media*

Digital Media (DM) includes Ferris' Digital Animation and Game Design program, which is ranked among the top 20 programs in the country by the Princeton Review. DM also includes programs in Digital Media & Software Engineering, and Television & Digital Media Production. Alumni work in businesses, industry and virtual design studios, television stations, education institutions, and firms specializing in virtual, electronic and video representation. This is the age of electronic animation, video and virtual reality. This program brings together studies in digital video, digital

animation and game design, and software engineering. The exponential growth of YouTube and other online video sites highlights the relevance of Ferris' Digital Media program.

– *Artificial Intelligence*

A Bachelors in Artificial Intelligence degree is currently in process. The proposed degree heavily leverages existing Information Security & Intelligence (ISI) and Data Analytics (STQM) courses, and will require eight new courses in Artificial Intelligence. The degree will be more data-science focused and will lightly utilize the College of Business core courses. A target implementation date has been set for Fall 2020.

– *Virtual Learning*

Ferris offers charter schools, teacher education, and a doctorate in community college leadership. There is a strong need to embed virtual learning within each of these fields in both the delivery and preparation. This will require a significant update to education facilities and development of new classrooms and learning laboratories which enable and take advantage of this technology.

Ferris has a strong and growing online presence. Currently we offer 36 degrees and certificates available entirely online. These degrees, along with the flexibility online courses provide, give students at multiple campuses with busy schedules, work responsibilities, and/or family commitments, the opportunity of an education. We are able to extend educational opportunities to a larger audience.

– *Career and Technical Education*

For many years Ferris State University has been the State leader for Career and Technical Education programs, hosting many of these resources in Michigan. There is a strong need to enhance this educational component, connecting it with technical education programs at the community college, tech center and secondary levels. Within Michigan there is a strong need for leadership to promote this kind of education to help fill existing and future job opportunities with qualified workers. This aligns with the current State initiatives to promote technical and apprenticeship education in the State.

– *Information Security and Intelligence (ISI)*

The Information Security & Intelligence program (ISI), which is annually ranked among the top 25 programs in the nation, is considered the premier program in the State and is one of only six programs in the country to be designated as a Center of Excellence by the National Security Agency in all information assurance areas. Additionally, the program holds the National Center for Digital Forensic Academic Excellence designation from the Department of Defense Cyber Command Center (DC3) and the Air Force Office of Special Investigations. ISI is the first university program in the country to receive DC3 and Air Force Office of Special Investigations Center designation as a National Center of Digital Forensics Academic Excellence. As such, Ferris' ISI program facilitates national-level security expertise in business, industry and government operations. Cyber security and data analytics are frequently cited among the fastest-growing career fields.

- *Master of Science in Social Work*  
Ferris created a Master’s Degree in Social Work and is working with its sixth cohort of students. Additionally, a School Social Work Certificate began with its Fall 2019 class. Additional space is needed for classes and faculty offices.
  - *Scientific and Pharmaceutical Research*  
Ferris is a national leader in providing career training to our students in a variety of fields. Students in the sciences and pharmacy have impactful research experiences with faculty solving real-world problems (e.g., microbial resistance). Faculty and students have been awarded National Institutes of Health (NIH) grants and National Science Foundation (NSF) grants to fund their research. The teacher-scholar model has been adopted in the College of Pharmacy with increased research efforts in several programs and colleges. There are three major needs to continue this work:
    1. emergency power back-up for the Science Building and the Hagerman Pharmacy building laboratories as well as the animal care facilities
    2. alarm systems for the Science Lab walk-in refrigeration unit and the sub-zero refrigeration unit renovation of laboratory spaces in the Science and Pharmacy Buildings to accommodate cutting-edge interdisciplinary research with students
    3. modernization of research laboratory facilities across campus with emphasis in colleges with substantial research efforts
  - *Development of University-Wide Initiatives*  
As part of the University’s regional reaccreditation visit by the Higher Learning Commission during the fall of 2020, the colleges and other academic affairs units developed and are implementing quality initiative projects to address learning, retention, and the learning environment. The primary goal of the quality initiative is to create an increasingly effective Ferris environment that is focused on holistic student development, innovative pedagogy, and commitment to students’ success in all areas of literacy in support of their capabilities to be effective. These in turn will lead to more learning, higher completion, and higher satisfaction with the learning environment. At the center of these efforts is the Center for Academic Literacies that has been developed in the University’s FLITE library. These projects are underway, and results will be reported to HLC in the spring of 2020, in advance of the reaffirmation of accreditation visit the following fall.
- d) Economic development impact of current/future programs:
- As a career-oriented University, Ferris is a major driver of the economy in West Michigan and throughout the State. Each of the technical programs previously mentioned represents areas of present and future economic growth. Ferris’ hands-on engineering programs—architecture and facilities management; automotive technology; CAD drafting and tool design; computer networks and systems; construction management; electrical\electronics technology; heating, ventilation, air conditioning and refrigeration; heavy equipment technology; industrial technology and management; manufacturing; mechanical technology; plastics; product design technology; quality technology; rubber engineering technology; surveying; welding—provide technical fields for new professionals, but also provide retraining and upgrades for current professionals.

- Ferris’ educational leadership in charter schools, teacher preparation, and a doctorate in community college leadership continues to provide the resources needed to develop the educated workforce for a knowledge-based, technological economy.
- Programs in health professions provide numerous opportunities for employment and support the growing field of healthcare. In the last four years, the University has started master’s level programs in Health Administration and also Public Health. In addition to professional doctoral programs in Pharmacy and Optometry, Ferris launched a Doctorate in Nursing Practice in August 2017.
- The Ferris State University process of Academic Program review and new academic program development is a national leader in best practice. Ferris faculty are committed to developing new programs to support developing trends and needs. The nimbleness of these academic initiatives created more than 25 new academic programs in the past six years. At the same time, an equal or greater number of academic programs have been eliminated.

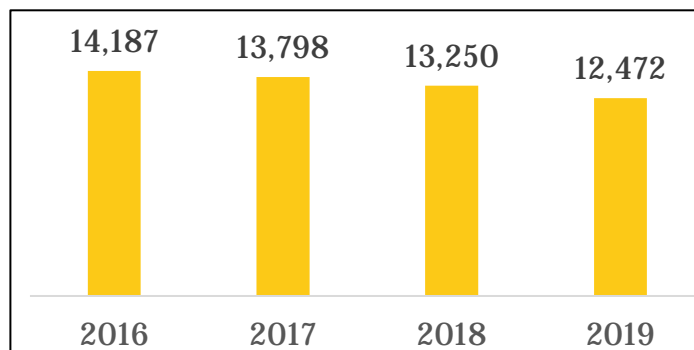
### III. Staffing and Enrollment

- a) Ferris’ academic mission - to provide hands-on career oriented instruction that meets the business and industry needs of our State - continues to attract students to our institution. While recent enrollment at the University reflects the impact of declining high school graduates, we are confident that our programs will continue to attract new and transfer students.

Ferris continues to attract students to the Big Rapids campus for the hands-on, career-focused instruction that requires specialized equipment and face-to-face instruction. The University provides bachelor degree completion to place-bound students throughout the State through strong partnerships with community colleges, offering upper level program opportunities to students in the communities where they live. In this we utilize the facilities of the community college and ladder a bachelor’s degree on top of the associate degrees offered at the site. These partnerships continue to expand. At the same time, Ferris continues to increase its online offerings to provide an alternative instruction opportunity to students where this type of delivery method is favorable. Specific enrollment information by program and site can be found in our online [Fact Books](#). This may be accessed from the Ferris’ home page, by typing Fact Books in the search engine.

- b) Since 2016 Ferris has experienced a decline in enrollment due to the decrease of Michigan high school graduates.

#### Fall Headcount Enrollment



- c) Ferris projects between a two and four percent decline in enrollment over the next five years due to the impact of declining Michigan high school graduates. We are preparing for this, not only by a new branding and marketing campaign, but by implementing various recruiting initiatives such as: expanding our online offerings, increasing our athletic rosters, developing an eSports program, and expanding our relationships with community colleges. In addition, a Winter-mester is now offered (began December 2018) where students can take online classes between fall and spring semester (over the December/January break).
- d) Depending upon the academic program area, student-to-faculty ratios will vary based upon whether the course is a hands-on, equipment dependent laboratory, or a general lecture class. The 2018-2019 University student-to-faculty ratio of 16 to 1 indicates that classroom space has been, and continues to be, a major planning factor for the University. This is due to our unique programming mix requiring small class sizes dictated by the equipment-intensive nature of many of our programs. Our total University student-to-employee ratio has remained a ratio of approximately seven to one over the last few years.
- e) Staffing levels will decline as a result of enrollment change. Our operating discipline is to reduce budgets so that expenses and revenues are balanced.
- f) Current average class size for fall of 2019 is 17 students per class. Again, this small class size reflects the University's mission of providing hands-on education.

#### **IV. Facility Assessments**

- a) Ferris completed an update to the facility Master Plan in May 2015. It is the University's intent to update the facility Master Plan in 2020. The Master Plan can be found on Ferris' [Strategic Planning](#) page. In addition, an updated Facility Condition Assessment Report was completed in May 2018 and may be found on the Physical Plant's page under [Planning Documents](#).
- b) Ferris' classrooms are highly utilized. The unique programming requirements of our curricula make cross-utilization of some facilities challenging. Many hands-on laboratories (automotive, welding, HVAC, etc.) are specifically designed with the special equipment these disciplines require.
- c) The University believes all special laboratory and specialty classrooms conform to federal/industry standards and hired a Director of Laboratory Safety to ensure safe practices and compliance in our classroom and research laboratories.
- d) The functionality of existing structures is addressed in the Master Plan document.
- e) The replacement value of existing facilities is detailed in the Current Facilities Property Value report. A copy of this report is available on Ferris' website by going to the transparency reporting button located near the bottom of Ferris' homepage, clicking information located on the left, and going to [Current Facilities Property Value 2018/2019](#).

- f) The University completed a comprehensive assessment of its underground sanitation and waste water system during 2016 as part of the Michigan DEQ SAW Grant Program. A copy of this report is available upon request.
- g) In most cases the most up-to-date information we have on facility infrastructure is detailed in the 2005 Utility Infrastructure Study which is available through hard copy in multiple three-ring binders. Some of this information is also available on the Physical Plant's GIS System.
- h) Existing utilities and infrastructure systems are sufficient and adequate to support the five-year Master Plan.
- i) Ferris approved an Energy and Water Use Policy June 2012. The policy can be found on Ferris' website under the [Business Policies>Facilities](#) page.
- j) The Master Plan document also provides detail as to land use and capacity.
- k) Detail on the bonded indebtedness of our facilities is included in the financial statements.

## V. Implementation Plan

The Master Plan document comments on specific needs of the various facilities.

- a) Ferris' top priority for capital projects is noted below:

### Priority One: ***Center for Virtual Learning***

The Center for Virtual Learning received planning authorization in 2018. The University has now completed necessary planning for this facility and seeks funding to begin construction of this much needed, state-of-the-art, high-tech building. It is especially important and fiscally prudent for the State to take advantage of the current historic low interest rates and provide final authorization for this project. We very much seek and appreciate your support in this.

- b) The backlog of current deferred maintenance projects is included in the 2018 campus Facility Condition Assessment report. The report is located on Ferris' website on the Physical Plant's page under [Planning Documents](#). The University maintains a comprehensive facilities assessment database that identifies the deferred maintenance costs for each building.
- c) Ferris continues to expect significant return on planned capital expenditures.
- d) Ferris continues to upgrade its technology infrastructure. This includes conventional network infrastructure, wireless capacity, and capacity for additional online learning.
- e) Ferris currently offers twelve Bachelor's, six Master's, one Doctorate and 18 certificates online. For fall 2019, the count of students enrolled in programs that are presented entirely online was 1,345. Many courses at Ferris are presented in a hybrid



format, which requires some attendance on campus, but where the majority of the work is completed online. Ferris plans to accommodate growth in online offerings which will continue to evolve. The proposed Center for Virtual Learning is a critical component of this online future. However, in doing so, we also recognize that hands-on instruction in some career-oriented academic disciplines is not suited to distance learning technologies at this time.

- f) Ferris major maintenance items in excess of \$1 million include (but are not limited to):
- Automotive Technology Center. This facility was constructed in 1956 and requires a major renovation to keep pace with the electrical and digital nature of the profession. The University funded and completed Phase 1 of a \$1.5 million investment three years ago for South Wing improvements to faculty offices, classroom enhancements, and a modern fuels lab.
  - Center for Athletics Performance. Fundraising is underway for a \$9.0 million addition to and partial renovation of our Sports Complex. The strength and conditioning space in the Sports Complex is undersized and underequipped, and in many cases is less than our student athletes used in high school. This project also includes an expanded women’s volleyball arena and renovation to outdated locker room facilities.
  - Hagerman Pharmacy Building. This building was constructed in 1972. Phase 1 renovations will be completed in Fall 2019. A second phase, supported by a capital fundraising campaign, is planned for approximately 2021.
  - Information Technology. Information technology is primarily located in the West Building, a structure completed in 1952, which has a facility condition index of 72.1%, the second poorest on the Big Rapids campus. Current plans are to construct a new building of 18,500 sq. ft. and to raze the current building. Estimated cost for this project is \$7 million with construction beginning during 2020.
  - Kendal HVACR. The Kendall College of Art Design Fountain Street Building in Grand Rapids consists of two structures that have been combined together. One half of this building uses a refrigerant, R22, that will be phased out in 2020 because of environmental concerns. This requires a complete replacement of the HVACR and associated systems. The estimated cost for this project is \$4.1 million and the intent is to begin renovation in 2020.
  - Miller Hall. Miller Hall is a residence hall constructed in 1953. Plans are to renovate the community shared spaces in this facility in a similar fashion to the work completed on Clark Hall during summer 2018. The estimated cost of this project is \$2 million and the intent is to do this renovation during summer 2020.
  - Rock Dining Facility. This building has not been updated since a major renovation in 2009. The intent is to accommodate persons with food allergies and sensitivities. The estimated cost of this project is \$1 million with construction to begin in 2020.
- g) Ferris is in its third, five-year (FY18-FY22) capital renewal and deferred maintenance plan and has approved funding for the first three years to date. Annual funding includes \$1,800,000 annual general fund support and \$700,000 annual housing and dining funds, for a planned combined total over five years of \$12,500,000.