

**Ferris Program:** Digital Media Software Engineering  
**Degree Type:** Bachelor of Science  
**Ferris College:** College of Business  
**Transfer School:** Macomb Community College (MACOCC)  
**Consortium Eligible:** Yes  
**Total Credits Required:** 125  
**Catalog Year:** 2022-2023

**GENERAL EDUCATION REQUIREMENTS – 30 Credits Required**

Students are encouraged to work with an advisor to select appropriate general education courses. Diversity Competency - 2 Courses Required. If not met by courses taken for Culture, Self and Society, or MTA, a student must meet the following: 1 course with the Global Diversity attribute and 1 course with the U.S. Diversity attribute.

Visit the Ferris State for more information.

**Communication Competency**

Ferris Course	Ferris Course Title	Ferris Credit Hours	Transfer Course
COMM 121	Fundamentals of Public Speaking	3	SPCH 1060
ENGL 150	English 1	3	ENGL 1180 or ENGL 1210
ENGL 250	English 2	3	ENGL 1190 or ENGL 1220
ENGL 311 or ENGL 321 or ENGL 325	Advanced Technical Writing or Advanced Composition or Advanced Business Writing	3	No Equivalent

**Quantitative Literacy**

4 Credits Required and is met in College Requirements.

**Natural Sciences Competency**

Two courses are required with a minimum of 6 credits: must have at least one lab course.

Ferris Course	Ferris Course Title	Ferris Credit Hours	Transfer Course
PHYS 241	General Physics 1	5	PHYS 2220
Varies	Natural Sciences Elective	Varies	Varies

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## Cultural Competency

Three courses are required with a minimum of 9 credits: must be from two different disciplines and have at least one at FSU 200 level or higher course. PHIL 216 is met in College Requirements.

Ferris Course	Ferris Course Title	Ferris Credit Hours	Transfer Course
Varies	Culture Electives	6	Varies

## Self and Society Competency

Three courses are required with a minimum of 9 credits: must be from two different disciplines and have at least one at FSU 200 level or higher course, and at least one Self and Society Foundation course. ECON 201 or ECON 202 are met in College Requirements.

Ferris Course	Ferris Course Title	Ferris Credit Hours	Transfer Course
Varies	Self and Society Electives	6	Varies

## COLLEGE REQUIREMENTS – 95 Credits Required

### Software Development Courses

21 Credits Required.

Ferris Course	Ferris Course Title	Ferris Credit Hours	Transfer Course
SENG 101	Computer Programming 1	3	ITCS 1140 or ITCS 2590
SENG 102	Computer Programming 2	3	No Equivalent
SENG 300	Software Data Structures	3	No Equivalent
SENG 301	Programming Languages	3	No Equivalent
SENG 315	Software Component Design	3	No Equivalent
SENG 400	Engineering Enterprise Software Applications	3	No Equivalent
SENG 430	Program Graphical Interfaces	3	No Equivalent

### Foundation Courses

21 Credits Required.

Ferris Course	Ferris Course Title	Ferris Credit Hours	Transfer Course
SENG 160	Software Engineering Methodologies and Processes	3	ITCS 2830

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Ferris Course	Ferris Course Title	Ferris Credit Hours	Transfer Course
SENG 170	Software Requirements Management	3	No Equivalent
SENG 210	Software Configuration Management	3	No Equivalent
SENG 250 or ISYS 327	Fundamentals of Operating Systems and Networking or Operating Systems and Network Essentials	3	No Equivalent
SENG 302	Software Quality Assurance	3	No Equivalent
SENG 350	Software Design and Architecture	3	No Equivalent
SENG 355	Software Engineering Tools	3	No Equivalent

## Engineering Fundamentals Courses

9 Credits Required.

Ferris Course	Ferris Course Title	Ferris Credit Hours	Transfer Course
ISYS 200 or SENG 225 or ISYS 272	Database Design and Implementation or Introduction to Database Design or Fundamentals of Database Systems	3	ITCS 2140 or ITCS 1170 or No Equivalent
ECON 201 or ECON 202	Principles of Microeconomics or Principles of Macroeconomics	3	ECON 1170 or ECON 1160
STQM 260	Introduction to Statistics	3	MATH 1340

## Mathematics Courses

14 Credits Required.

Ferris Course	Ferris Course Title	Ferris Credit Hours	Transfer Course
MATH 220	Analytical Geometry and Calculus 1	4	MATH 1760
MATH 230	Analytical Geometry and Calculus 2	4	MATH 1770
MATH 322	Linear Algebra	3	MATH 2000
MATH 328	Discrete Structures	3	MATH 2200

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## Business and Management Courses

9 Credits Required.

Ferris Course	Ferris Course Title	Ferris Credit Hours	Transfer Course
PHIL 216	Introduction to Ethics	3	PHIL 2100
PROJ 320 or DAGD 315	Project Management Fundamentals or Digital Media Productions	3	No Equivalent
BLAW 321	Contracts and Sales	3	No Equivalent

## Professional Development Courses

9 Credits Required.

Ferris Course	Ferris Course Title	Ferris Credit Hours	Transfer Course
SENG 420	Software Development Industry Certification	3	No Equivalent
SENG 491	Software Engineering Applied Internship	3	No Equivalent
SENG 499	Capstone in Software Engineering	3	No Equivalent

## APPLICATION DOMAIN ELECTIVES – 12 Credits Required

Choose one four-course sequence in an area of interest; other than those listed must be approved by an advisor.

### Game Design and Development

Ferris Course	Ferris Course Title	Ferris Credit Hours	Transfer Course
DAGD 100 or DAGD 150	3D Modeling Animation 1 or Introduction to Game Design and Development	3	MACA 2510 or MACA 2540
DAGD 255	Game Programming 1	3	No Equivalent
DAGD 300	Level Design	3	No Equivalent
DAGD 355	Game Programming 2	3	No Equivalent

### Machine Learning Engineering

Ferris Course	Ferris Course Title	Ferris Credit Hours	Transfer Course
SENG 309	Introduction to Machine Learning	3	No Equivalent
SENG 409	Applied Machine Learning Software	3	No Equivalent

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Ferris Course	Ferris Course Title	Ferris Credit Hours	Transfer Course
SENG 410	Introduction to Big Data Concepts and Tools	3	No Equivalent
SENG 422	Introduction to Cloud Application Development	3	No Equivalent

## PROGRAM CONTACT INFORMATION

School of Digital Media  
(231) 591-2712

(586) 445-7150

(231) 591-2340

## ADMISSION REQUIREMENTS

### New Student Admission Requirements

- 2.70 High School GPA (on a 4.00 scale)
- ACT Composite Score of 19

### Transfer Student Admission Requirements

- Combined college or university GPA of 2.00 (on a 4.00 scale) from all institutions attended. GPA based on completion of 12 transferable semester credit hours or more.

## MORE INFORMATION

Select courses may be delivered online and/or in a mixed delivery format (i.e. a mix of online and face-to-face instruction at the Ferris Main Campus or at a statewide location).

To fulfill the residency requirement for a bachelor's degree a student must earn a minimum of 30 credits from Ferris State University.

## Steps to Apply

- Complete your .
- Submit official transcripts
  - Submit official transcripts from every school attended to
  - Or mail to:  
Ferris State University Admissions Office  
1201 S. State St., CSS 201  
Big Rapids, MI 49307
- Submit test scores (if required)
  - ACT Scores; go to the - Ferris State University School Code: 1994
  - SAT, CLEP and AP Sores; go to the - Ferris State University School Code: 1222

## Advising Notes

It is recommended that potential applicants meet with an advisor to review the degree, course schedule, transfer policies and have any questions answered prior to completing an application. Ferris accepts transfer courses in which the student earned a letter grade of "C" or better. Additional policies such as the Ferris Sunset and Residency Requirement should be discussed with a Ferris advisor. Students who are completing the MTA may have different general education course requirements for the particular degree selected.

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Meeting with a Ferris advisor prior to the selection of general education or elective coursework may reduce the chance of completing a course that will not apply toward the selected degree. Students must work with their Ferris advisor to declare a Minor or Concentration and for the selection of Directed Electives.

Once admitted, students are required to complete an orientation and should continue to meet with an advisor as they work toward graduation.

To schedule an appointment or for additional transfer resources and policies see our .

\*Indicates an approved Ferris course substitution

## **Reverse Transfer Agreement**

Ferris has reverse transfer agreements with several Michigan Community Colleges. Under such agreement, Ferris will provide your official University transcript to a partner school you have attended, so that they may grant you an associate or bachelor's degree upon completion of sufficient and appropriate credit hours from both institutions. In turn, the degree-granting institution will provide Ferris with an updated transcript reflecting the newly earned credential.

## **Michigan Transfer Agreement (MTA)**

Ferris participates in the Michigan Transfer Agreement (MTA). This agreement will facilitate the transfer of general education requirements from one Michigan institution to another. Students may complete the MTA as part of a degree program or as a stand-alone package. The MTA consists of a minimum of 30 general education credit hours as identified by the college or university.

Students transferring to Ferris with the Michigan Transfer Agreement (MTA) and entering a degree program will have met a 30-hour block of lower-level general education courses. However, this does not exempt students from completing program-specific prerequisites or higher-level general education course requirements. Students should contact their advisor regarding classes that meet the MTA.

## **Transfer Equivalencies Tools**

The transfer equivalencies link is located in the Transfer Resources section at .

## **Disclaimer**

Transfer guides are not intended to be a contract with Ferris. The information in this guide is subject to change and is aligned with the catalog year listed above. Students should contact their community college and/or Ferris to keep informed of changes. Students' final responsibility for verifying all transfer information lies with the student. Please refer to the for the most current curriculum.

Partners may contact the Office of Transfer and Secondary School Partnerships with questions or updates at .