

**Ferris Program:** Digital Media Software Engineering

**Degree Type:** Bachelor of Science

**Ferris College:** College of Business

**Transfer School:** Gogebic Community College (GCC)

**Consortium Eligible:** No

**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                   | SPE 101         |
| ENGL 150                               | English 1   | 3                   | ENG 101         |
| ENGL 250                               | English 2   | 3                   | ENG 102         |
| ENGL 311 or<br>ENGL 321 or<br>ENGL 325 | Advanced Technical Writing or<br>Advanced Composition<br>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                   | PHY 251         |
| Varies        | Natural Sciences Elective | Varies              | Varies          |

### 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.

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| 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                   | No Equivalent   |
| 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                   | No Equivalent   |
| SENG 170      | Software Requirements Management                 | 3                   | No Equivalent   |
| SENG 210      | Software Configuration Management                | 3                   | No Equivalent   |

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| Ferris Course           | Ferris Course Title  | Ferris Credit Hours | Transfer Course |
|-------------------------|--|---------------------|-----------------|
| SENG 250 or<br>ISYS 327 | Fundamentals of<br>Operating Systems and<br>Networking or Operating<br>Systems and Network<br>Essentials | 3                   | No Equivalent   |
| SENG 302                | Software Quality<br>Assurance  | 3                   | No Equivalent   |
| SENG 350                | Software Design and<br>Architecture  | 3                   | No Equivalent   |
| SENG 355                | Software Engineering<br>Tools  | 3                   | No Equivalent   |

## Engineering Fundamentals Courses

9 Credits Required.

| Ferris Course                          | Ferris Course Title   | Ferris Credit Hours | Transfer Course       |
|--|---|---------------------|-----------------------|
| ISYS 200 or<br>SENG 225 or<br>ISYS 272 | Database Design and<br>Implementation or<br>Introduction to Database<br>Design or Fundamentals<br>of Database Systems | 3                   | No Equivalent         |
| ECON 201 or<br>ECON 202                | Principles of<br>Microeconomics<br>or Principles of<br>Macroeconomics   | 3                   | ECO 202 or<br>ECO 201 |
| STQM 260                               | Introduction to Statistics  | 3                   | MTH 211               |

## Mathematics Courses

14 Credits Required.

| Ferris Course | Ferris Course Title                   | Ferris Credit Hours | Transfer Course |
|---------------|---------------------------------------|---------------------|-----------------|
| MATH 220      | Analytical Geometry and<br>Calculus 1 | 4                   | MTH 150         |
| MATH 230      | Analytical Geometry and<br>Calculus 2 | 4                   | MTH 151         |
| MATH 322      | Linear Algebra                        | 3                   | No Equivalent   |
| MATH 328      | Discrete Structures                   | 3                   | No Equivalent   |

## Business and Management Courses

9 Credits Required.

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| Ferris Course           | Ferris Course Title  | Ferris Credit Hours | Transfer Course |
|-------------------------|--|---------------------|-----------------|
| PHIL 216                | Introduction to Ethics   | 3                   | No Equivalent   |
| PROJ 320 or<br>DAGD 315 | Project Management<br>Fundamentals or Digital<br>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<br>Industry Certification | 3                   | No Equivalent   |
| SENG 491      | Software Engineering<br>Applied Internship     | 3                   | No Equivalent   |
| SENG 499      | Capstone in Software<br>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<br>or Introduction to Game<br>Design and Development | 3                   | No Equivalent   |
| 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<br>Learning            | 3                   | No Equivalent   |
| SENG 409      | Applied Machine<br>Learning Software           | 3                   | No Equivalent   |
| SENG 410      | Introduction to Big Data<br>Concepts and Tools | 3                   | No Equivalent   |

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| Ferris Course | Ferris Course Title                           | Ferris Credit Hours | Transfer Course |
|---------------|---|---------------------|-----------------|
| SENG 422      | Introduction to Cloud Application Development | 3                   | No Equivalent   |

## PROGRAM CONTACT INFORMATION

School of Digital Media  
(231) 591-2712

## 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.

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.

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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 .